

INTERNATIONAL ADVANCED LEVEL

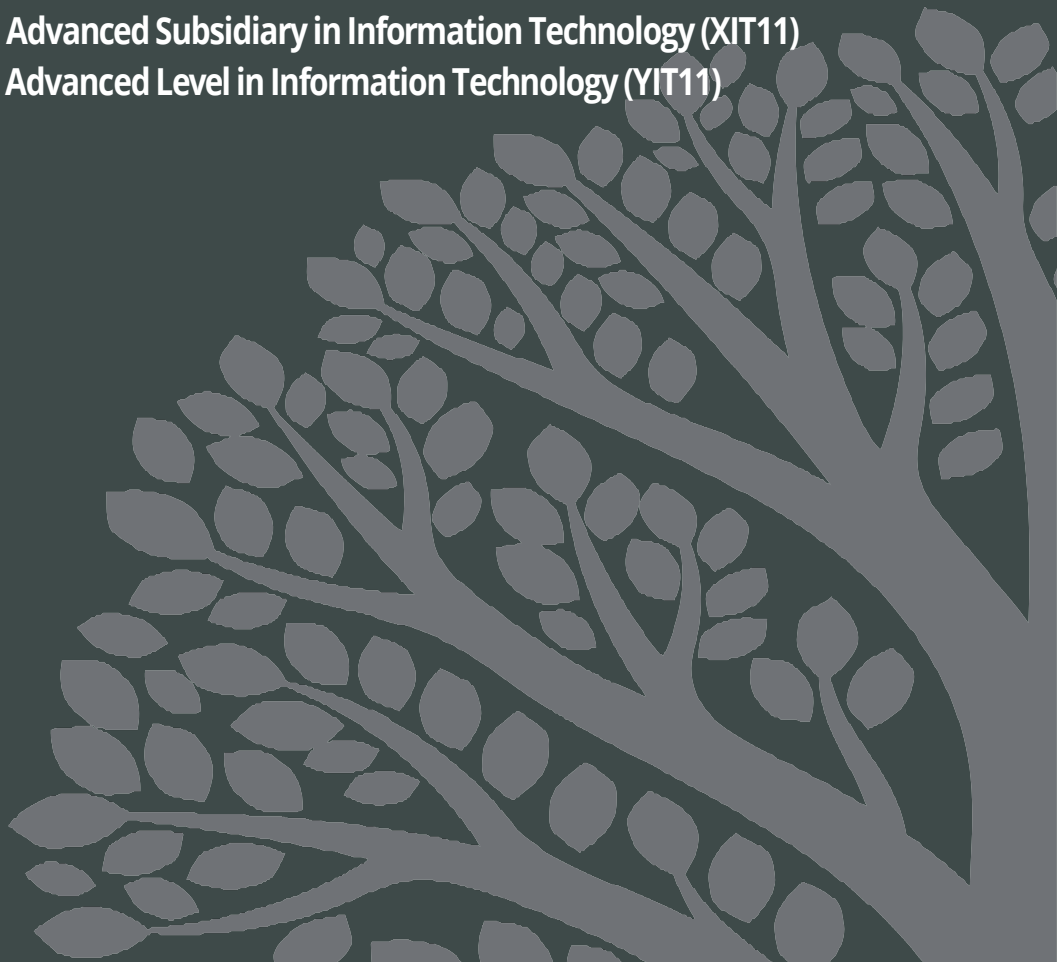
INFORMATION TECHNOLOGY

**Exemplars with examiner
commentaries
Unit 4 (WIT14)**

Pre-first assessment materials based on additional SAMs

Pearson Edexcel International Advanced Subsidiary in Information Technology (XIT11)

Pearson Edexcel International Advanced Level in Information Technology (YIT11)



Introduction

1.1 About this booklet

This booklet has been produced to support teachers delivering the Pearson Edexcel International Advanced Level in Information Technology specification. These exemplar materials will enable teachers to guide their students in the application of knowledge and skills required to successfully complete this course. The booklet looks at questions from the additional Sample Assessment Materials (additional SAMs) for Unit 4, showing example responses to questions and how examiners will apply mark schemes to demonstrate how candidate responses should be marked.

1.2 How to use this booklet

Additional Sample Assessment Materials have been used with exemplar responses, and each question contains:

- Question number and question in full
- Mark scheme for each question
- Exemplar responses for the selected questions
- Exemplification of the marker decision based on the additional SAMs mark scheme, accompanied by examiner commentary and guidance on how the answer could be improved where needed.

The exemplification highlights the achievement of the Assessment Objectives alongside exemplifications of the new format for long answer assessment through levels-based assessment bands, which centres are required to review carefully.

Centres should utilise the commentaries to support their internal assessment of students and embed exam skills into the delivery of the specification.

1.3 Further support

A range of materials is available to download from the Information Technology page of the Pearson website to support you in planning and delivering the new specifications.

Centres may find it beneficial to review this document in conjunction with: [Additional Sample Assessment Materials](#), [Getting Started Guide](#) and the [Specification](#).

Command words shown in red are further explained in Appendix 6: Taxonomy, in the specification.

The additional sample assessment materials use this context:

Mobin owns a company that provides dog walkers. The dog walkers visit the homes of people who want their dogs taken out for a walk.

Owners can request visits between:

- one and five days a week
- one and three times a day.

The walk durations depend on the number of visits each day.

If the owner requests:

- one visit each day, then the walk duration is 60 minutes
- two visits each day, then each walk duration is 30 minutes
- three visits each day, then each walk duration is 20 minutes.

The total walk duration is always 60 minutes each day.

Staff are employed on either a full-time or a part-time basis and work five days a week.

Full-time staff work 40 hours a week.

Part-time staff work from 22 to 32 hours a week.

All staff take 20 days holiday a year.

Mobin keeps a list of owners in a single table within the database Dog Walking.

Mobin uses the Staff spreadsheet to keep a record of the staff and the owners of the dogs they walk.

Mobin is finding it increasingly difficult to keep track of:

- the dogs and their owners
- the staff who are walking the dogs
- staff holidays.

He wants a solution that will allow him to manage the system more effectively and reduce the number of errors in record keeping.

Question 1(a) uses this context:

The owner table in the dog-walking database needs to be improved.

1(a)(i)	<p>The postcode field in this database will use this format:</p> <p>2 uppercase letters 1 digit 1 space 1 digit 2 uppercase letters</p> <p>Set up a format check so that only postcodes in this format are accepted.</p> <p>Screenprint the table in Design view, making sure that the format check can be clearly seen.</p> <p>Paste the screen print into the appropriate place in the template.</p> <p>Re-save your template.</p> <p style="text-align: right;">(1)</p>
1(a)(ii)	<p>Set up a range check on the field NumberWalksPerDay so that only 1, 2 or 3 dog walks per day are accepted.</p> <p>Screenprint the table in Design view, making sure that the range check can be clearly seen.</p> <p>Paste the screen print into the appropriate place in the template.</p> <p>Re-save your template.</p> <p style="text-align: right;">(3)</p>

Mark scheme**Note to examiners**

Where example screenshots are included, these are indicative content only and not a definitive answer. Students should receive credit based on the marking instructions in the answer column.

Question number	Answer	Additional Guidance	Mark
1(a)i	Suitable input mask or validation rule for OwnerPostcode Input mask >LL0\ 0LL		1
1(a)ii	Award one mark for each of: <ul style="list-style-type: none"> • Range check added to NumberWalksPerDay field (1) • Range is correct <ul style="list-style-type: none"> Between 1 and 3 >0 and <4 >=1 and <=3 (1) • Validation text provides suitable error message (1) 		3

Sample response 1 with examiner commentary

Field Name	Data Type
OwnerID	AutoNum
OwnerFirstname	Short Text
OwnerSurname	Short Text
OwnerAddress	Short Text
OwnerPostcode	Short Text

General	
Field Size	7
Format	@
Input Mask	> LL0\ 0LL

(i) One mark was awarded for a suitable input mask. (1)

Field Name	Data Type
OwnerAddress	Short Text
OwnerPostcode	Short Text
NumberWalksPerDay	Number

General	
Field Size	Integer
Format	
Decimal Places	Auto
Input Mask	
Caption	
Default Value	
Validation Rule	Between 1 And 3
Validation Text	Number of walks must be at least 1 and no greater than 3.

(ii) Two marks awarded.

Validation rule would limit entry to the correct range. (1)

Validation text has been added that would provide an appropriate error message. (1)

Total for 1(a): 3 marks

Sample response 2 with examiner commentary

Field Name	Data Type
OwnerID	AutoNumber
OwnerFirstname	Short Text
OwnerSurname	Short Text
OwnerAddress	Short Text
OwnerPostcode	Short Text

General	
Field Size	7
Format	@
Input Mask	>LLO\OLL

(i) **One** mark was awarded for a suitable input mask (1)

Field Name	Data Type
OwnerPostcode	Short Text
NumberWalksPerDay	Number
WalkDurationMins	Number

General	
Display Control	Combo Box
Row Source Type	Value List
Row Source	1;2;3
Bound Column	1
Column Count	1
Column Heads	No
Column Widths	
List Rows	16
List Width	Auto
Limit To List	Yes

(ii) **Two** marks.

In this example, a value list combo box has been used to evidence a range check.

The *Row Source* shows that only the values 1, 2 and 3 will appear in the combo box. By itself this would not be enough to ensure only those values could be selected. However, *Limit to List* has been set to *Yes*. (1)

Whilst there is no validation text, by default, an error message would appear with an appropriate error message telling the user the value they have tried to input is not in the list and the list would be shown for them to choose from it. This is the only type of control that gives an **appropriate** error message by default. (1)

Total for 1(a): 3 marks

Sample response 3 with examiner commentary

Field Name	Data Type
OwnerID	AutoNumber
OwnerFirstname	Short Text
OwnerSurname	Short Text
OwnerAddress	Short Text
OwnerPostcode	Short Text

General	
Field Size	7
Format	
Input Mask	LLO\OLL

(i) No mark awarded as this input mask would not format the letters to uppercase. > is missing. (0)

Field Name	Data Type
OwnerAddress	Short Text
OwnerPostcode	Short Text
NumberWalksPerDay	Number

General	
Field Size	Integer
Format	
Decimal Places	Auto
Input Mask	
Caption	
Default Value	
Validation Rule	>=1 And <=3
Validation Text	Number of walks must be at least 1 and no greater than 3.
Required	No

(ii) Two marks awarded.
 Validation rule would limit entry to the correct range. (1)
 Validation text has been added that would provide an appropriate error message. (1)

Total for 1(a): 2 marks

1(b)	<p>Mobin needs a form to enter data about an owner who has asked to use the dogwalking service.</p> <p>The form must:</p> <ul style="list-style-type: none"> • open ready for data entry • allow data entry of: <ul style="list-style-type: none"> ➤ owner details ➤ dog details ➤ walk details • ensure the automatic generation of the walk duration using these rules: <ul style="list-style-type: none"> ➤ 1 walk per day is a 60-minute walk ➤ 2 walks per day is 30 minutes each walk ➤ 3 walks per day is 20 minutes each walk • provide a button to save the entered and generated data in the table.
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(9)

Mark scheme

Question number	Answer	Additional Guidance	Mark
1(b)	<p>Award one mark for each of:</p> <ul style="list-style-type: none"> • Data entry form displayed is empty (1) • All fields from owner table included in form (1) • OwnerID is disabled (1) • One from: <ul style="list-style-type: none"> ○ Form labels are appropriate (not database field names) ○ Form has meaningful title ○ Entry boxes on form are resized appropriately to reflect the data they will be used to enter (1) • WalkDurationMinutes correctly generated, one from: <ul style="list-style-type: none"> ○ 1 walk - iif(NumberWalksPerDay = 1,60) ○ 2 walks - iif(NumberWalksPerDay = 2,30) ○ 3 walks - iif(NumberWalksPerDay = 3,20)(1) • WalkDurationMinutes for all three walks correctly generated Iif(NumberWalksPerDay = 1,60,iif(NumberWalksPerDay = 2,30,20)) (1) • Button present (1) • Code/macro to save data to the table <ul style="list-style-type: none"> ○ At least 3 presence checks from: <ul style="list-style-type: none"> ▪ OwnerSurname ▪ OwnerAddress ▪ OwnerPostcode ▪ NumberWalksPerDay ▪ DaysToWalk ▪ DogBreedAndName (1) • Record would save in the correct table (1) 		9

Sample response 1 with examiner commentary

Form view – this form is bound to the owner table

The form has a meaningful title that clearly indicates what the form will be used for. The labels are suitable. The first letter is capitalised for each word, there is a space between each word, and they are aligned sensibly. Data entry boxes are suitably sized for the data they contain. (1)

The form is clear ready for data entry. (1)

The DaysToWalk field is missing so not all fields from the owner table have been included. (0)

In this paper, there are no marks for the instructions telling the user how to use the form, the asterisks (*) to show where data entry is required or that the walk duration has been disabled as the contents of that field are generated. However, these form part of good interface design and may be awarded marks in future papers.

Design view macros, code etc.

Design view of the form shows that the fields are bound to the fields in the owner table.

This also shows that the form is **bound** and is ready for **data entry** as *Allow Additions* has been set to Yes. The mark for this was awarded on the previous page.

Form			
Format	Data	Event	Other
Record Source	tblOwner		
Recordset type	Dynaset		
Fetch Defaults	Yes		
Filter			
Filter On Load	No		
Order By			
Order By On Load	Yes		
Wait for Post Proc	No		
Data Entry	Yes		
Allow Additions	Yes		

```
Private Sub NumberWalksPerDay_AfterUpdate()
    If NumberWalksPerDay = 1 Then
        WalkDurationMins = 60
    ElseIf NumberWalksPerDay = 2 Then
        WalkDurationMins = 30
    Else
        WalkDurationMins = 20
    End If
End Sub
```

The *WalkDurationMins* is correct for each of the *NumberWalksPerDay* rules. One mark awarded for one of them being correct. (1) One mark awarded for all three being correct. (1)

At least three presence checks have been applied (*OwnerFirstname*, *OwnerSurname*, *OwnerAddress*, *OwnerPostcode*, *NumberWalksPerDay*, *DogDetails*) and there is a suitable error message. (1)

```
Private Sub cmdSave_Click()
    If IsNull(OwnerFirstname) Or IsNull(OwnerSurname) Or IsNull _
        (OwnerAddress) Or IsNull(OwnerPostcode) Or IsNull(NumberWalksPerDay)
        Or IsNull(DogDetails) Then
        MsgBox "You must enter data where * appears", vbOKOnly
    Else
        DoCmd.Save
        DoCmd.GoToRecord , , acNewRec
        MsgBox "The Owner has been saved", vbOKOnly
    End If
End Sub
```

The record would save in the correct table i.e. the form is bound to the owner table and the 'Save' command has been used. (1) The form would clear ready for data entry and a suitable message would appear, which is good practice. Whilst in this paper there are no individual marks for associated to these actions, there could be in future papers as all of the actions work together to form an efficient, automated save process.

Total for 1(b): 8 marks

Sample response 2 with examiner commentary

Form view – this form is bound to the table

The form has a meaningful title that clearly indicates what the form will be used for. The labels are suitable. The first letter of each word is capitalised, there is a space between each word, and they are aligned sensibly. Data entry boxes are suitably sized for the data they contain (though slight weakness for the owner ID and walk duration field – too wide). (1)

The screenshot shows a web form titled "Add New Owner Details" with the following fields and annotations:

- Owner ID:** Input field with value "53". A red box highlights the field, and a red arrow points to it from the text "The OwnerID field has been disabled (1)".
- Owner Firstname:** Input field with value "Andrew".
- Owner Surname:** Input field with value "Rogers".
- Owner Address:** Input field with value "47 High Street".
- Owner Postcode:** Input field with value "BB12CC".
- Number of Walks Per Day:** Dropdown menu with value "2".
- Walk Duration Mins:** Input field with value "30".
- Days to Walk:** Dropdown menu with value "3".
- Dog Details:** A section titled "Please enter Breed and Name for each dog to be walked" containing three rows of "Dog Breed" and "Dog Name" input fields. The first row has "Lakeiano Terrier" and "Bobby". The second row has "Chihuahua" and "Nigel". The third row has "Toton Terrier" and "Buster". A red box highlights the "Dog Breed" labels, and a red arrow points to them from the text "Data entry boxes are suitably sized for the data they contain...".
- Save Button:** A blue button labeled "Save". A red arrow points to it from the text "A button has been added. (1)".

Additional annotations include:

- A red box around the "Owner ID" field and a red arrow pointing to it from the text "The OwnerID field has been disabled (1)".
- A red box around the "Dog Breed" labels and a red arrow pointing to them from the text "Data entry boxes are suitably sized for the data they contain...".
- A red box around the "Save" button and a red arrow pointing to it from the text "A button has been added. (1)".
- A red box around the "Owner ID" field and a red arrow pointing to it from the text "The OwnerID field has been disabled (1)".
- A red box around the "Dog Breed" labels and a red arrow pointing to them from the text "Data entry boxes are suitably sized for the data they contain...".
- A red box around the "Save" button and a red arrow pointing to it from the text "A button has been added. (1)".

A button has been added. (1)

The form is not clear ready for data entry. (0)

All fields from the owner table have been included. (1)

There are no marks for the instructions telling the user how to use the form, the asterisks (*) to show where data entry is required or that all generated fields have been disabled. However, these form part of good interface design and may be awarded marks in future papers.

This form goes beyond requirements, i.e. recognising the weakness in the owner table in terms of non-atomic values (dog breed and name). It made the creation of the automated process far more complex than required. There is no requirement for candidates to correct shortcomings such as this in the pre-built table, though they may be asked questions about it.

Design view, macros, code, queries and/or properties screenprints

Design view of the form show that it is a bound form.

WalkDurationMins is correct for each of the NumberWalksPerDay rules. Mark awarded for one of them being correct (1). Mark awarded for all three being correct. (1)

At least three presence checks have been applied. (1) In this example, they have been applied to the properties of the field on the form. It is worth noting that this method of applying a presence check is only suitable for a form that is bound to the table and would not attract marks on an unbound form. The control source for the fields show that this is a bound form.

This section of the code is above requirements. There was no need to have separate breed fields etc. and then concatenate. A presence check on the DogBreed AndName field would have

```
Private Sub cmdSave_Click()  
Dim tempDogDetails As String, Response As Integer  
  
If (txtBreed1 <> "") Then  
tempDogDetails = txtBreed1 & " - " & txtDog1  
If (txtBreed2 <> "") Then  
tempDogDetails = tempDogDetails & ", " & txtBreed2 & " - " & txtDog2  
If (txtBreed3 <> "") Then  
tempDogDetails = tempDogDetails & ", " & txtBreed3 & " - " & txtDog3  
End If  
End If  
End If  
  
txtDogBreedAndName = tempDogDetails  
WalkDuration = cboWalkDuration  
Response = MsgBox("Owner Details Saved", vbOKOnly)  
  
DoCmd.Close acForm, Me.Name  
DoCmd.OpenForm  
FormName = "frmAddOwner"  
view = acNormal  
DataMode = "Add"  
End Sub
```

been enough. However, without it, this particular form would not save correctly.

This is part of the save process, without it the WalkDuration would not have a value.

This is also part of the save process. It closes and opens the form in order to add the record to the table.

There is enough to award the 'save in the correct table'

mark. (1) The save message does not have a specific mark attached to it nor does setting the DataMode to 'Add'; however, they could in future papers as they are both part of an efficient save process.

Total for 1(b): 8 marks

Sample response 3 with examiner commentary

Form view screenprint – this form is unbound

The form does not have a meaningful title. The labels are not suitable. There are no spaces between words and there is inconsistent use of uppercase letters for the beginning of words. Data entry boxes are not suitably sized for the data they contain. The first name field is too wide in comparison to the surname field (they would tend to hold around the same amount of characters). The postcode field is too wide considering it is 7 characters long. The number of walks per day and walk duration fields are too wide considering they will only hold numbers. (0)

There is no OwnerID field present and the DaysToWalk field is also missing, therefore the mark for disabling it cannot be awarded (0), nor can the mark for including all of the fields from the owner table. (0) Whilst the OwnerID is an AutoNumber field, it should still be shown/generated on the form.

There is a button present but the caption is not appropriate, therefore the mark cannot be awarded. (0)

The form is not clear ready for data entry. (1)

Macros, code, queries and/or properties screenprints

The form is unbound, i.e. the fields are not bound to the fields in the owner table.

There is an attempt to generate the walk duration. However, the formula has been truncated so it cannot be determined whether it is correct. (0)

A macro and append query have been used for the save process in this example.

A presence check has been applied to three appropriate fields including a suitable error message. (1)

An append query is called in order to append the data from the form to the table. Design view of the query clearly shows the fields that will be appended. None are inappropriate and there is no truncation. There is no attempt to append the OwnerID. However, this is an AutoNumber field meaning it would be generated automatically. There is enough to determine the record would save in the correct table. (1)

Field:	OwnerFirstname	OwnerSurname	OwnerAddress	OwnerPostcode	NumberWalksPerDay	WalkDurationMins	DaysToWalk	DogBreedAndName
Table:	tblOwner	tblOwner	tblOwner	tblOwner	tblOwner	tblOwner	tblOwner	tblOwner
Total:	Group By	Group By	Group By	Group By	Group By	Group By	Group By	Group By
Sort:								
Append To:	OwnerFirstname	OwnerSurname	OwnerAddress	OwnerPostcode	NumberWalksPerDay	WalkDurationMins	DaysToWalk	DogBreedAndName
Criteria:								

Total for 1(b): 3 marks

1(c)	<p>A data entry form should include user interface components that support users.</p> <p>Assess the extent to which the data entry form you created in question 1(b) does this.</p> <p>Type your response in the appropriate place in the template.</p> <p>Do not include any screen prints.</p> <p>Re-save your template.</p>	(9)
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Mark scheme

Question number	Answer	Additional Guidance	Mark
1(c)	<p>Indicative content</p> <p>Factors to consider</p> <ul style="list-style-type: none"> • selecting/omitting fields • appropriate help text • meaningful error messages • sensible and meaningful data entry field names • data entry features • dropdown • restricting editing • intuitive layout <p>Consideration and significance</p> <p>Assessment of how well their data input form uses interface components that support users and judgements about their significance/importance</p> <ul style="list-style-type: none"> • good title so user can easily identify what the form is used for • clear instructions telling the user how to use the form so reduces likelihood of data entry errors and makes it easier to use from the start • logical grouping of fields so that related information is grouped together • labels have spaces etc to make them clear to read • asterisks to show where data entry should occur to ensure completion of all information • drop down box for number of walks so impossible to enter an invalid number • drop down box for days to walk so impossible to enter an invalid number • walk duration automatically calculated so no chance of incorrect calculation • field width appropriate to data that will be shown/entered so not to waste space on the form and give an indication of the length of data to be entered • OwnerID automatically generated to prevent duplicates/or having to look in the table to see what the next ID should be • disabled fields to prevent accidental amendments/deletion of data • tab order of fields if the user does not wish to use the mouse or to miss out disabled fields • clear indication of what the button will do so that the user knows the process of saving is automatic 		9

Level	Mark	Descriptor
	0	No Awardable content
Level 1	1-3	<ul style="list-style-type: none"> • Applies understanding with limited coherence, showing limited understanding of the given issue. • Assessment of solution is superficial or unbalanced, and judgements lack support from evidence.
Level 2	4-6	<ul style="list-style-type: none"> • Applies understanding to make some coherent connections, showing some understanding of the given issue. • Assessment of solution is partially developed, but this may be unbalanced, using evidence to support some judgements.
Level 3	7-9	<ul style="list-style-type: none"> • Applies understanding coherently, showing a thorough understanding of the given issue. • Assessment of solution is balanced and developed, using evidence to support judgements throughout.

Sample response 1

These are the factors I am going to take into account:

1. The form should only include fields that are relevant, and they should have sensible and meaningful field names.
2. The form should have a sensible layout so that it is easy to use.
3. The user should know how to use the form and get useful error messages if they do something wrong.
4. Data entry should be simplified as much as possible.

This is my assessment:

1. The form does not have any fields that are not relevant. All of the fields from the owner table were included as all of them were necessary in order to get a full record. I made sure I put spaces between the words in each label to make sure they were easy to read and that the names reflected the data the user would have to put in **so that they knew what data would need to be put in each field.**
2. I think this is one of the most important considerations. The form I have created has a title, that I think, clearly tells the user what the form is for. **They can instantly tell it is to add owners because this is what the title says. I think this is a very important component to include. The user could use the form without it but, especially the first time they use the form, it could take them a while to work out what the form is for.**
The form would be very difficult to use if the layout was not logical. I think that my form does have a logical layout. I have grouped the owner information together and the dog information together. The boxes around them show a clear divide between the two. I think it is sensible that the owner information comes before the dog information because that is what the user would tend to want to enter first. I also think having the save button at the bottom of the form is logical as that is what they will do last.
3. I think this is also a very important consideration. **If the user was not guided on how to use the form, then they could end up not using the form at all.** I think my instructions telling them what is generated is a very good point **because they could be confused as to why they are greyed out and why they cannot click in them.** I think using the asterisks to show where to enter data is also a very good thing that I have done. They are standard on forms and known internationally **so any user should instantly recognise what they mean. I think my instructions and asterisks help minimise the data input errors they could make.**
4. I think this is probably the most important consideration if data entry is over **complicated or the user has to do too much then they could become frustrated and stop using it.** I think my form simplifies data entry quite well. I have an input mask on the postcode **so the user cannot possibly enter a postcode in the wrong format.** However it could be a bit better as it does not have an error message or guidance to tell them the pattern. The form has a combo box for the number of walks per day that is very useful. **If the user has forgotten that there can only be between 1 and 3 walks per day then it doesn't matter as they can only possibly pick between 1 and 3 from the box.** I also think the form really simplifies how long the walk will be as it does it automatically when the user picks the number of walks from the combo box. **This saves them time and prevents them making a mistake.**

Total for 1(c): 9 marks

Examiner commentary

This is a levels-based question. This means that marks are allocated using the levels descriptors shown in the mark scheme. The command word is **assess**; this means that there should be careful consideration of all the factors or events that apply and identification which are the most important or relevant. There should also be judgements about significance/importance.

In this response, the factors that will be considered are clearly given as a numbered list. There is no requirement to do this though it does make clear the factors the candidate thinks are the most important and it can help with structuring their response. The response also has a clear section in terms of judgements/assessment.

The response fully meets level 3. A thorough understanding has been shown of the issue. This can be gathered from the factors they have given and their assessment of each factor. The assessment is balanced and fully developed **including an assessment on the effect to the user**. Evidence from their own solution is given to support judgements throughout.

Sample response 2

These are the important factors I am going to consider:

- which fields to include
- the size of the fields for data entry
- instructions to the user
- disabled fields for system-supplied data
- message confirming successful save
- validation on input data with error messages
- use of selection rather than typing to reduce errors
- order of fields on form
- clear title and field name labels
- use of separate text boxes for up to 3 dogs' details automatically formatted
- presence checks on most fields

This is my assessment:

The fields I have included are all important for the user to see. **The user is not required to enter duration of walk, but it is shown on the form as a visual confirmation of the number of walks per day.**

The size of the boxes for data entry is appropriate for the expected data.

There are clear instructions to the user to ensure all the required data is entered.

The fields for OwnerID and Duration of Walk are disabled as the information in them is automatically supplied by the system. The OwnerID field is AutoNumber and the form is opened in Add mode. **The has reduced the chance of user error in calculating the next OwnerID.**

A message is displayed to inform to the user that the data has been added and an empty form is displayed.

Combo boxes have been used instead of text boxes for the fields NumberOfWalksPerDay and

DaysPerWeek as there are validation rules in place on both, limiting the values that can be selected. No data can be typed in so values that are not on the list cannot be entered.

The fields are in a logical order on the form **so that the user can easily complete the owner details, the required service and then the dog details.**

The form has a clear title which **explains its purpose** and the labels for each field have been **edited to be clear and easily understood.**

As up to three dogs can be entered for each owner (from the supplied data), **rather than ask the user to format the data to match the current records,** I have used six text boxes to collect the data for up to three dogs. On pressing the clearly labelled Save button this data is automatically formatted and saved into the single field in the table.

Presence checks on most fields will cause a message to be displayed if the field is left blank. The message states which data needs to be input. There are no presence checks on the fields for data about second and third dogs as these will not be required in every case.

I think the form is clear and user friendly. It has made it straightforward for the user to enter data without data input errors and uses label and messages to communicate with the user.

Total for 1(c): 7 marks

Examiner commentary

This is a levels-based question. This means that marks are allocated using the levels descriptors shown in the mark scheme. The command word is **assess**; this means that there should be careful consideration of all the factors or events that apply and identification which are the most important or relevant. There should also be judgements about significance/importance.

In this response, the factors that will be considered are clearly given as a bulleted list. There is no requirement to do this though it does make clear the factors the candidate thinks are the most important and it can help with structuring their response. The response also has a clear section in terms of judgements/assessment.

The response partially meets level 3. There is a thorough understanding of the issue. This can be gathered from the factors they have given and their assessment of each factor. However, assessment of the solution is not fully balanced as **the effect on the user** is not taken into account in some places or is quite vague. Evidence from their own solution is given to support judgements throughout.

Sample response 3

The owner form has a clear title ensuring the user knows where they are in the system.

There are clear instructions on how to use the form and how to save the details entered.

All the labels are clear and understandable.

Text box sizes have been adjusted to ensure all the data can be seen, there is no truncation and they are not too large for the shorter information.

Asterisks have been placed at the end of text boxes where information must be entered.

The OwnerID is generated automatically using Auto number as the data type in the owner table. This ensures the integrity of the database is not compromised as the OwnerID number will not be duplicated. This field is locked so it cannot be accidentally edited.

A combo box for the number of walks has been added to the form. This will only allow either one, two or three to be entered. This will reduce any data entry errors.

The duration of the walks is automatically generated. This field is locked and cannot be amended by the user.

The save button has a macro attached which ensures all the text boxes are completed. If they the text boxes are null the macro is set to show a clear error message explaining which field need to be completed. When all the text boxes are completed the macro runs an append query to save the record to the table. Finally the macro closes and reopens the Owner form on a new record so the next owner details can be entered.

Total for 1(c): 7 marks

Examiner commentary

This is a levels-based question. This means that marks are allocated using the levels descriptors shown in the mark scheme. The command word is **assess**; this means that there should be careful consideration of all the factors or events that apply and identification which are the most important or relevant. There should also be judgements about significance/importance.

This response includes factors that are considered to be important and there is an attempt at an assessment of each. However, there is little to no specific assessment on the effect to the user who is the most important factor really. Some coherent connections are present, and assessment is partially developed. It is unbalanced as does not clearly take into account the user.

1(d) Mobin currently uses the staff spreadsheet to keep a record of the staff and the dog walks for which they are responsible.

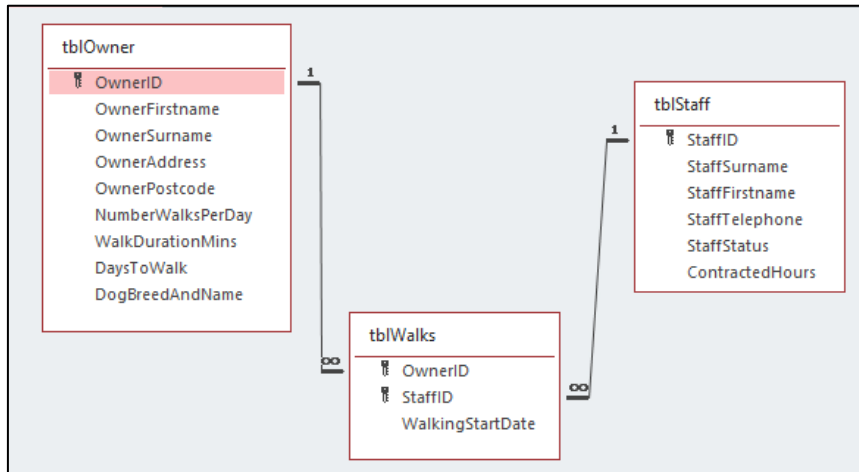
Develop the dog-walking database to add this functionality. You must create an efficient data structure that minimises data duplication, uses correct data types and primary keys, and enforces referential integrity. Produce a screen print that clearly shows the relationships including table names, field names, and primary keys. Produce screen prints showing the field names and data types in the tables **you** have created. Paste the screen prints into the appropriate places in the template. Re-save your template.

(9)

Mark scheme

Question number	Answer	Additional Guidance	Mark
1(d)	<p>Award one mark for each of:</p> <ul style="list-style-type: none"> • Use of appropriate field names and naming conventions (1) • Staff table is present (1) • Walk table is present (1) • 1:M relationship between Owner – Walks (1) • 1:M relationship between Staff – Walks (1) • Appropriate Primary Key used for Staff table – StaffID (1) • Composite key used in Walks table – OwnerID and StaffID (1) • Date/time is used for WalkingStartDate (1) • Any integer data type is used for ContractedHours (1) 		9

Sample response 1 with examiner commentary



- Appropriate naming conventions have been used. tbl prefix and all fields consistently use an uppercase letter at the beginning of each word. The keys all use uppercase ID. (1)
- The staff table is present. (1)
- The walk table is present. (1)
- There is a one to many relationship between the owner table and the walk table. (1)
- There is a one to many relationship between the staff table and the walk table. (1)
- The staff table has a suitable primary key *StaffID*. (1)
- The walk table uses a composite key *OwnerID, StaffID*. (1)

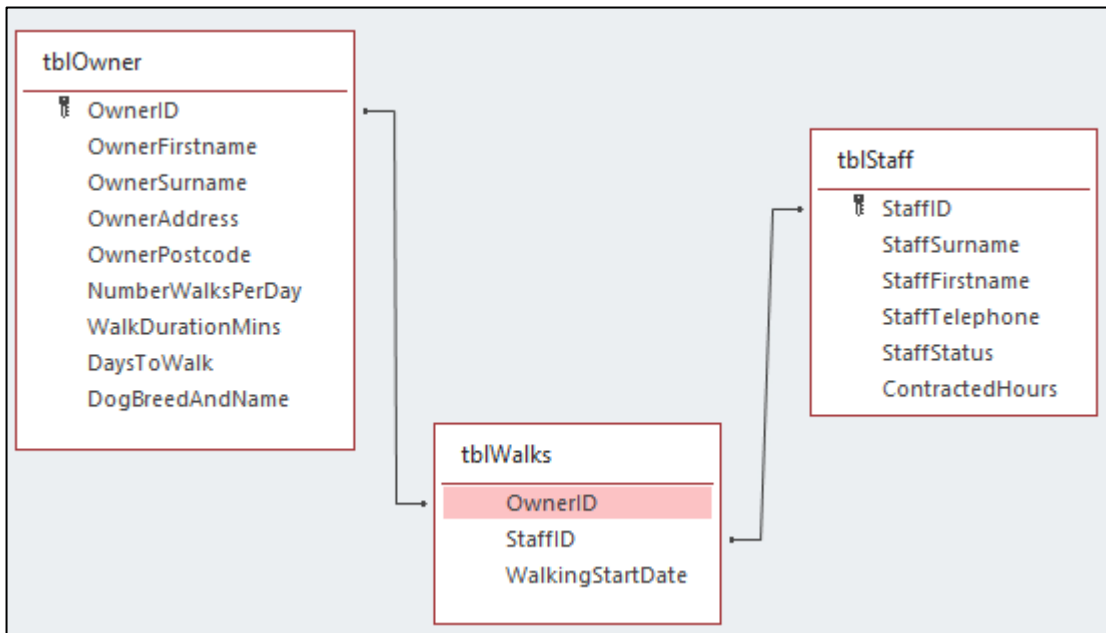
Field Name	Data Type
StaffID	AutoNumber
StaffSurname	Short Text
StaffFirstname	Short Text
StaffTelephone	Short Text
StaffStatus	Short Text
ContractedHours	Number

Field Name	Data Type
OwnerID	Number
StaffID	Number
WalkingStartDate	Date/Time

- The data type Date/Time has been used for the field *WalkingStartDate*. (1)
- The data type Number has been used for the field *ContractedHours*. (1)

Total for 1(d): 9 marks

Sample response 2 with examiner commentary



- Appropriate naming conventions have been used. tbl prefix and all fields consistently use an uppercase letter at the beginning of each word. The keys all use uppercase ID. (1)
- The staff table is present. (1)
- The walk table is present. (1)
- There is no one to many relationship between the owner table and the walk table. Referential integrity needs to be enforced in order to see the relationship clearly. (0)
- There is no one to many relationship between the staff table and the walk table. Referential integrity is missing. (0)
- The staff table has a suitable primary key *StaffID*. (1)
- The walk table does not have a suitable primary key. (0)

Field Name	Data Type
StaffID	AutoNumber
StaffSurname	Short Text
StaffFirstname	Short Text
StaffTelephone	Short Text
StaffStatus	Short Text
ContractedHours	Short Text

Field Name	Data Type
OwnerID	Number
StaffID	Number
WalkingStartDate	Date/Time

- The data type Date/Time has been used for the field *WalkingStartDate*. (1)
- The data type Short Text for the field *ContractedHours* is not appropriate for an integer number. (0)

Total for 1(d): 5 marks

1(e)	<p>Mobin wants to ensure that the data in the database is valid.</p> <p>You can assume that, for each field, the sample data provided in the staff spreadsheet contains all the options that should be considered.</p> <p>Apply validation to the data in the tables you have created.</p> <p>Produce a screen print in Design view of:</p> <ul style="list-style-type: none"> • one length check • one value lookup • one table lookup. <p>Paste the screen prints into the appropriate places in the template.</p> <p>Make sure the validation can be clearly seen.</p> <p>Re-save your template.</p> <p style="text-align: right;">(4)</p>
-------------	---

Mark scheme

Question number	Answer	Additional Guidance	Mark
1(e)	<p>Award one mark for each of:</p> <ul style="list-style-type: none"> • Suitable length check applied to any text field (1) • Value lookup used for StaffStatus Combo box "full time"; "part time" (1) • One table lookup used in Walk table: StaffID - Staff table OwnerID - Owner table (1) • Limit to list set to 'yes' on table lookup (1) 		4

Sample response 1 with examiner commentary

Field Name	Data Type
StaffTelephone	Short Text
StaffStatus	Short Text

General Lookup	
Display Control	Combo Box
Row Source Type	Value List
Row Source	"Full Time";"Part Time"
Bound Column	1
Column Count	1
Column Heads	No
Column Widths	2.54cm
List Rows	16
List Width	2.54cm
Limit To List	Yes

A suitable value lookup has been applied.
A combo box has been used. The correct values "Full Time" and "Part Time" have been used. (1)

Field Name	Data Type
StaffTelephone	Short Text
StaffStatus	Short Text

General Lookup	
Field Size	13

A suitable length check has been specified. (1)

A suitable table lookup has been applied to a foreign key. The combo box is looking up to the owner table (1) and limit to list has been set to 'Yes'. (1)

Field Name	Data Type
OwnerID	Number
StaffID	Number

General Lookup	
Display Control	Combo Box
Row Source Type	Table/Query
Row Source	SELECT [tblOwner].[OwnerID], [tblC
Bound Column	1
Column Count	3
Column Heads	No
Column Widths	1.826cm;2.778cm;2.646cm
List Rows	16
List Width	7.249cm
Limit To List	Yes

Total for 1(e): 4 marks

Sample response 2 with examiner commentary

Field Name	Data Type
StaffFirstname	Short Text
StaffTelephone	Short Text
StaffStatus	Short Text

General		Lookup	
Display Control	Combo Box		
Row Source Type	Value List		
Row Source	"Full Time";"Part Time"		
Bound Column	1		
Column Count	1		
Column Heads	No		
Column Widths	2.54cm		
List Rows	16		
List Width	2.54cm		
Limit To List	Yes		

A suitable value lookup has been applied. A combo box has been used. The correct values "Full Time" and "Part Time" have been used. (1)

Field Name	Data Type
StaffID	Auto
StaffSurname	Short Text
StaffFirstname	Short Text

General		Lookup	
Field Size	50		

A suitable length check has been specified. (1)

Field Name	Data Type
OwnerID	Number
StaffID	Number
WalkingStartDate	Date/Time

General		Lookup	
Display Control	Combo Box		
Row Source Type	Table/Query		
Row Source	SELECT [tblWalks].[OwnerID] FROM tblWalks;		
Bound Column	1		
Column Count	1		
Column Heads	No		
Column Widths	2.54cm		
List Rows	16		
List Width	2.54cm		
Limit To List	Yes		

A table lookup has been applied; however, it is not suitable. It is looking up into the walk table (where it is a foreign key) when it should be looking up into the owner table (where it is a primary key). (0) Limit to list has been set to 'Yes'. (1)

Total for 1(e): 3 marks

1(f) **Import** the data from the staff spreadsheet into the dog-walking database.

Produce screen prints of the tables **you** have created showing at least five records and the full record count. (If the fields are too wide to fit on one page, truncated data is allowed.)
 Paste the screen prints into the appropriate places in the template.
 Re-save your template.

(2)

Mark scheme

Question number	Answer	Additional Guidance	Mark
1(f)	Award one mark for each of: <ul style="list-style-type: none"> • Staff table – 6 records (1) • Walk table – 36 records (1) 		2

Sample response 1 with examiner commentary

OwnerID	StaffID	WalkingStartDate
1	1	17/01/2017
2	3	25/09/2017
3	1	17/01/2017
4	3	24/10/2017
5	3	26/03/2017

Record: 1 of 36

StaffID	StaffSurname	StaffFirstna	StaffTeleph	StaffStatus	Contracted
1	Meek	Gillian	(88) 34014302	Full Time	40
2	Islam	Mobin	(88) 29180189	Part Time	25
3	Garcia	Isabella	(88) 27565251	Full Time	40
4	Taylor	Claire	(88) 19944361	Part Time	22
5	Longstaff	Alan	(88) 98655079	Part Time	32
6	Dubois	Louis	(88) 31543057	Full Time	40

Record: 1 of 6

The walk table has 36 records, which is correct. (1)

The staff table has 6 records, which is correct. (1)

Total for (f): 2 marks

Sample response 2 with examiner commentary

OwnerID	StaffID	WalkingStartDate
1	1	17/01/2017
2	3	25/09/2017
3	1	17/01/2017
4	3	24/10/2017
5	3	26/03/2017

Record: 1 of 36

The walk table has 36 records, which is correct. (1)

StaffID	StaffSurname	StaffFirstna	StaffTeleph	StaffStatus	Contracted
1	Meek	Gillian	(88) 34014302	Full Time	40
2	Islam	Mobin	(88) 29180189	Part Time	25
3	Garcia	Isabella	(88) 27565251	Full Time	40
4	Taylor	Claire	(88) 19944361	Part Time	22
5	Longstaff	Alan	(88) 98655079	Part Time	32

Record: 1 of 5

The number of records is not showing for the staff table. Therefore it is impossible to determine whether it has 36 records. (0)

Total for 1(f): 1 mark

Question 2(a) uses this context:

Mobin wants information about part-time staff.

2(a)(i) **Create** a query that will display the names and contracted hours of part-time staff.

The information should be displayed in alphabetical order of first name within highest to lowest contracted hours.

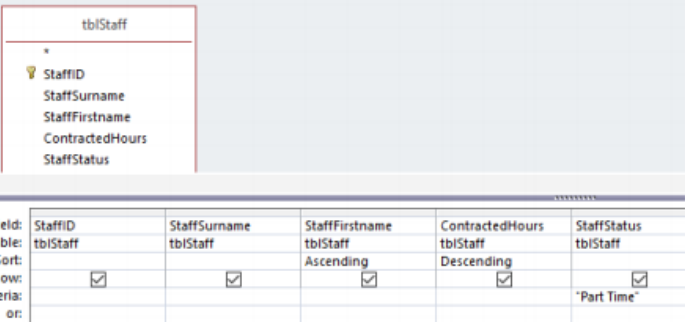
Screenprint your query in **Design** view, making sure that all required tables, fields and criteria can be clearly seen.

Paste the screen print into the appropriate place in the template.

Re-save your template.

(7)

Mark scheme

Question number	Answer	Additional Guidance	Mark
2(a)(i)	 <p>Award one mark for each of:</p> <ul style="list-style-type: none"> • Correct table ONLY (1) • Appropriate fields included in query (StaffSurname, StaffFirstname, ContractedHours) if criteria for ContractedHours Or (StaffSurname, StaffFirstname, StaffStatus) if criteria for StaffStatus (1) • StaffStatus field uses correct criteria "part-time" <>"full-time" Or ContractedHours field uses correct criteria <40 <33 <=32 (1) • Only appropriate fields displayed (1) • ContractedHours has descending sort (1) • StaffFirstname has ascending sort (1) • Correct nesting of sorts StaffFirstname within ContractedHours (1) 		7

Sample response 1 with examiner commentary

tblStaff

- * StaffID
- StaffSurname
- StaffFirstname
- StaffTelephone

Only the staff table has been included in the query (1)

Field:	ContractedHours	StaffSurname	StaffFirstname	StaffStatus
Table:	tblStaff	tblStaff	tblStaff	tblStaff
Sort:	Descending		Ascending	
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:				"part time"
or:				

Only suitable fields have been included, contracted hours for the descending sort, both names and the StaffStatus in order to find part time staff. (1)

StaffStatus uses correct criteria in order to find part time staff. (1)

Only ContractedHours, StaffSurname and StaffFirstname will be displayed. This is appropriate but could also have chosen to display StaffStatus. (1)

Contracted hours show a descending sort (1) and StaffFirstName has an ascending sort. (1)
The descending sort takes place before the ascending sort giving the correct nesting. (1)

Total for 2(a)(i): 7 marks

Sample response 2 with examiner commentary

tblStaff

- * StaffID
- StaffSurname
- StaffFirstname
- StaffTelephone
- StaffStatus

tblWalks

- * OwnerID
- StaffID
- WalkingStartDate

The walks table should not be included as it is irrelevant to the query. (0)

Field:	StaffSurname	StaffFirstname	WalkingStartDate	ContractedHours
Table:	tblStaff	tblStaff	tblWalks	tblStaff
Sort:		Ascending		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				Not 40
or:				

WalkingStartDate should not have been included in the query grid. It is irrelevant. (0)

Criteria would find those who work part time. (1)

The WalkingStartDate should not be displayed. It is irrelevant. (0)

Contracted hours cell does not have a descending sort. (0)
StaffFirstName has an ascending sort. (1)

One of the sorts is missing therefore the correct nesting cannot be achieved. (0)

Total for 2(a)(i): 2 marks

2(a)(ii) **Export** your query as an html document.

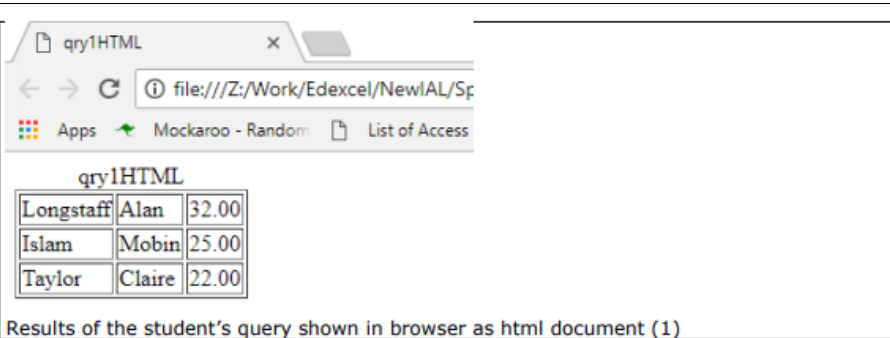
Screenprint the browser window showing the contents of your html document.

Paste the screen print into the appropriate place in the template.

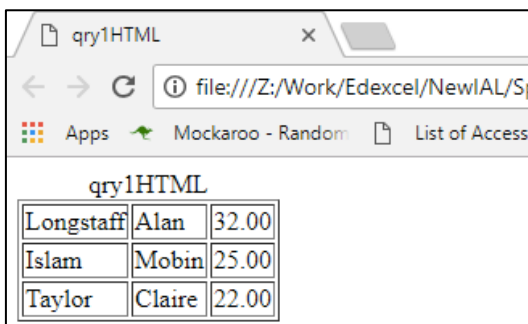
Re-save your template.

(1)

Mark scheme

2(a)(ii)		Query results do not have match those shown 1
-----------------	--	--

Sample response 1 with examiner commentary



The results of the query have been exported. The browser can be seen. (1)

Total for 2(a)(ii): 1 mark

Sample response 2 with examiner commentary

qry1HTML		
Longstaff	Alan	32.00
Islam	Mobin	25.00
Taylor	Claire	22.00

The browser cannot be seen. Therefore, it is impossible to know whether the export has taken place correctly. (0)

Total for 2(a)(ii): 0 marks

Sample response 3 with examiner commentary

qAppOwner

C:/Users/gillm/Documents/Edexcel/IAL/SpecimanPaper/Unit4/8_Exemplar/qAppOwner.html

Index of /papers/A... GCSE Computer Sci... W5 How to Meet WCA... Mockaroo - Rando... List of Access valida... Whitley Bay weathe... ear mark HMRC services: sig... pension TP er ART AN

qAppOwner						
OwnerFirstname	OwnerSurname	OwnerAddress	OwnerPostcode	NumberWalksPerDay	WalkDurationMins	DaysToWalk
Abigail	Lewis	10 Belsay	BB7 2ID	3	20	5
Adam	Bateman	42 Bridge Street	LB1 7ES	1	60	5
Alexander	Johnson	39 Pleasant Pioneer Pike	WR9 8KR	2	30	5
Anita	Ali	2 Cornwall Avenue	DL8 9RX	2	30	3
Ava	Roberts	8 Blossom Circle	OA4 3TX	1	60	1
Calvin	Smith	18 Kent Gardens	ME2 5SF	1	60	3
Charlie	George	62 Hamilton Street	DL2 4TG	3	20	1
Chloe	Clarke	23 The Grove	BB6 9MZ	1	60	5
Colin	Teneur	15 The Grove	ME25RU	3	20	3
Curtis	Jones	17 Kent Gardens	ME2 5SF	2	30	4
David	Baker	14 Deans Lane	PY2 3HT	3	20	3
David	Popal	11 Walnut Drive	FE2 2LT	3	20	2
Emily	Khan	5 East Street	WT2 8PW	2	30	1
Ethan	Smith	48 Silver Shadow Terrace	IR5 3EB	3	20	1
Fiona	Cousins	14 Albert Road	ME3 2GF	2	30	5
Ian	Kell	7 Godber Place	FE3 1LM	1	60	5
Jacob	Brown	21 Green Forest Glade	UG6 0GR	3	20	2
James	Meek	23 Dilmouth Road	FE3 1LJ	1	60	5
Jane	Austin	29 Carr Avenue	ME2 2DF	1	60	5
Jayden	Jones	32 Little Leaf	BTO 1QR	3	20	3
Laura	Dodds	3 King Street	LB1 1HX	2	30	5
Lisa	Little	39 Buchan Drive	DL8 9QW	1	60	5
Lucas	Briggs	75 Broughton Road	PY2 3KU	2	30	2
Madison	Jackson	16 Fallen Dale Estates	LR4 9VZ	2	30	3
Mia	James	15 Emerald Creek Edge	AF4 5UD	1	60	2
Michael	Metcalfe	12 Holmes Road	DL4 2FD	1	60	2
Michael	Patel	2 Blue Apple Arbor	WJ2 6UU	3	20	2
Noah	Taylor	51 Sunny Timber Vale	HRS 6MU	3	20	4
Olivia	Thomas	14 Easy Dell	IG61CI	2	30	5
Philip	Trust	5 Meriton Road	DL5 1ES	3	20	5
Sam	Swann	78 East Street	ME2 5MU	1	60	3
Sean	Deehan	5 Cross Way	ME3 1EC	1	60	2
Stuart	Catterill	18 Hillview Road	DL2 4ER	1	60	5
Susan	Phillips	37 Noble Park	JMO 0JB	3	20	1
Tom	Bailey	20 Clifton Row	DL8 9QA	1	60	5
William	Williams	36 Oak Orchard	OR0 7SE	3	20	5

The results of a query has been exported. The browser can be seen. The query is not the query required. However, it is the skill of being able to export a query as HTML that is being tested so the mark has been awarded. (1)

Total for 2(a)(ii): 1 mark

Question 2(b) uses this context:

Mobin wants information about part-time staff.
Mobin charges owners £15.00 a day for the dog-walking service.
Staff members give weekly invoices to the owners.

Mobin wants to use the standard invoice in Figure 1. This will use information from the database.

Weekly Invoice											
Owner:	Anita Ali										
Address:	2 Cornwall Avenue DL8 9RX										
Invoice date:	17/03/2018										
Your weekly dog walking payment is now due.											
<table border="1"><tbody><tr><td>Number of walks per day:</td><td>2</td></tr><tr><td>Duration of each walk:</td><td>30 minutes</td></tr><tr><td>Number of days:</td><td>3</td></tr><tr><td>Cost per day:</td><td>£15.00</td></tr><tr><td>Weekly cost:</td><td>£45.00</td></tr></tbody></table>		Number of walks per day:	2	Duration of each walk:	30 minutes	Number of days:	3	Cost per day:	£15.00	Weekly cost:	£45.00
Number of walks per day:	2										
Duration of each walk:	30 minutes										
Number of days:	3										
Cost per day:	£15.00										
Weekly cost:	£45.00										
Please pay within 7 days.											
Thank you for your continued custom.											
Mobin											

Figure 1

2(b)(i) **Create** a query that will extract appropriate data from the database for a staff member of Mobin's choice.

Screenprint your query in **Design** view, making sure that all required tables, fields, criteria and parameters can be clearly seen.
Paste the screen print into the appropriate place in the template.
Re-save your template.

(5)

Mark scheme

Question number	Answer	Additional Guidance	Mark
2(b)(i)	<p>Award one mark for each of:</p> <ul style="list-style-type: none"> • Correct related tables added (staff, owner and walks) (1) • Staff member uses parameter(s) e.g. Surname: [] Firstname: [] StaffID: [] (1) • Sensible parameter message e.g. Surname: [Enter staff surname] Firstname: [Enter staff first name] StaffID: [Enter staff ID] (1) • Correct expression used to calculate weekly cost - Expression – 15*DaysPerWeek Or DaysPerWeek*15 (1) • Weekly cost has suitable field name (1) 		5

Sample response 1 with examiner commentary

Correct related tables added. (1)

A parameter has been added that would allow the staff member to be found (1) and the input message is sensible. (1)

There is no attempt to calculate the weekly cost. If the calculation could have been seen in 2(b)(ii) then the mark would have been awarded. However, it cannot be seen there. (0)

The weekly cost field has not been generated so there is no name to check in the query. However, the label on the report evidence in 2(b)(ii) was suitable 'Weekly Cost' so the mark can be awarded. (1)

Total for 2(b)(i): 3 marks

Sample response 2 with examiner commentary

Field:	StaffID	Owner: [OwnerFirstname] & " " & [OwnerSurname]	OwnerAddress	OwnerPostcode
Table:	tblStaff		tblOwner	tblOwner
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	[Please enter the StaffID]			

Field:	WalkingStartDate	NumberWalksPerDay	WalkDuration(Mins)	NumberOfDays	WeeklyCost	15*[NumberOfDays]
Table:	tblDogWalks	tblOwner	tblOwner	tblOwner		
Sort:						
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:						

The evidence does not show which tables were included in the query so a judgement cannot be made as to whether they are the correct related tables. (0)

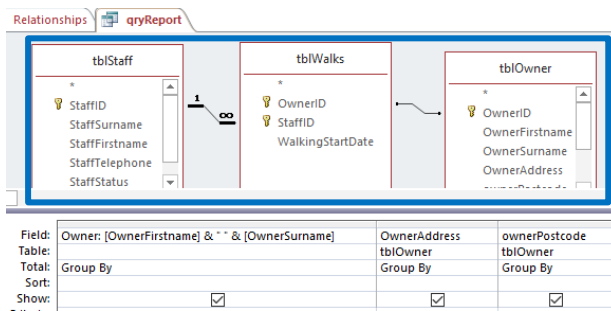
A parameter has been added that would allow the staff member to be found (1) and the input message is sensible. (1)

The WeeklyCost has been calculated using a suitable expression (1) and it has a suitable field name. (1)

Total for 2(b)(i): 4 marks

Sample response 3 with examiner commentary

Correct related tables added. (1)



WeeklyCost generated correctly. (1)

Field:	Owner: [OwnerFirstname] & " " & [OwnerSurname]	OwnerAddress	ownerPostcode
Total:	Group By	Group By	Group By
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

WalksPerDay	WalkDurationMins	DaysToWalk	WeeklyCost	15*[DaysToWalk]
tblOwner	tblOwner	tblOwner		
Group By	Group By	Group By	Expression	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Generated field has suitable field name. (1)

Parameter added to suitable field (1) with an appropriate input message. (1)

StaffSurname
tblStaff
Group By
<input type="checkbox"/>
[Enter surname of the staff member you want to find]

Total for 2(b)(i): 5 marks

Sample response 4 with examiner commentary

Correct related tables added (1)

Field:	OwnerFirstname	OwnerSurname	OwnerAddress	OwnerPostcode	NumberWalksPerDay	WalkDurati	DaysToWalk	WeeklyCost	StaffSurname
Table:	tbiOwner	tbiOwner	tbiOwner	tbiOwner	tbiOwner	tbiOwner	tbiOwner	tbiOwner	tbiStaff
Sort:									
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:									[Enter surname of the
or:									

WeeklyCost truncated so cannot determine whether it has been generated correctly. (0)
 However, it does have a suitable field name. (1)

Just enough evidence to suggest a parameter has been added to the correct field. (1) However, not enough evidence to award the mark for an appropriate input message as it has been truncated. (0)

Total for 2(b)(i): 3 marks

Question 2(b)(ii) uses this context:

Mobin plans to print one invoice per page.

He will use the report format shown in Figure 1.

Use your query from question 2(b)(i) to extract the data for the report.

The invoice date must be set to the current date automatically.

There must be a page break after each invoice.

2(b)(ii) **Create** the report.

Screenprint:

- your report in **Design** view
- your method of ensuring there is a page break after each invoice
- the first page of your report in Print Preview view.

Paste the screen prints into the appropriate places in the template.

Re-save your template.

(6)

Mark scheme

Question number	Answer	Additional Guidance	Mark										
2(b)(ii)	<p style="text-align: center;">Weekly Invoice</p> <hr/> <p>Owner: Anita Ali Address: 2 Cornwall Avenue DL8 9RX</p> <p>Invoice Date: 17/03/2018</p> <p>Your weekly dog walking payment is now due.</p> <table border="1"><tr><td>Number of walks per day:</td><td>2</td></tr><tr><td>Duration of each walk:</td><td>30 minutes</td></tr><tr><td>Number of days:</td><td>3</td></tr><tr><td>Cost per day:</td><td>£15.00</td></tr><tr><td>Weekly cost:</td><td>£45.00</td></tr></table> <p>Please pay within 7 days.</p> <p>Thank you for your continued custom.</p> <p style="text-align: center;">Mobin</p> <hr/>	Number of walks per day:	2	Duration of each walk:	30 minutes	Number of days:	3	Cost per day:	£15.00	Weekly cost:	£45.00	Accept any currency format. Accept any date format.	6
Number of walks per day:	2												
Duration of each walk:	30 minutes												
Number of days:	3												
Cost per day:	£15.00												
Weekly cost:	£45.00												
	<p>Award one mark for each of:</p> <ul style="list-style-type: none">• Title is in the page header – mark from design view only (do not accept title in detail section) (1)• Layout is as given with no truncation (1)• Standard text and labels are as given (1)• Today's date automatically generated (1)• Page break forced in suitable location (e.g. detail section) (1)• Monetary amounts display with currency and 2 decimal places (1)												

Sample response 1 with examiner commentary

Weekly Invoice

Owner: Owner
Address: OwnerAddress
ownerPostcode
Date: =NOW()

Your weekly dog walking payment is now due.

Number of walks per day:	NumberW _d
Duration of each walk:	WalkDurat
Number of days:	DaysToWal
Cost per day:	15.00
Weekly cost	WeeklyCos

Please pay within 7 days.
Thank you for your continued custom.
Mobin

Title is in the page header. (1)

The date is automatically generated. (1)

Weekly Invoice

Owner: Adam Bateman
Address: 42 Bridge Street
LB1 7ES
Date: 14/01/2020

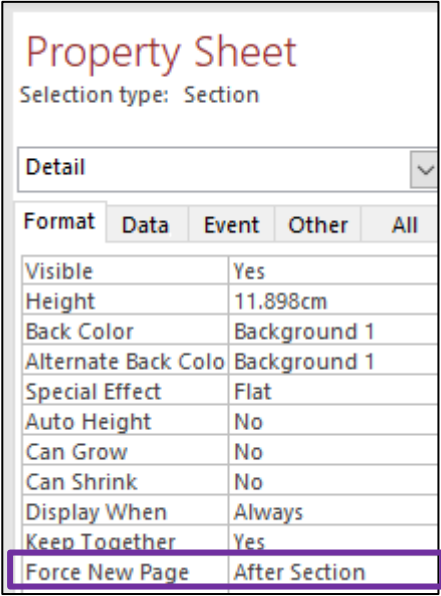
Your weekly dog walking payment is now due.

Number of walks per day:	1
Duration of each walk:	60
Number of days:	5
Cost per day:	£15.00
Weekly cost	£75.00

Please pay within 7 days.
Thank you for your continued custom.
Mobin

Monetary amounts are displayed as currency with two decimal places. (1)

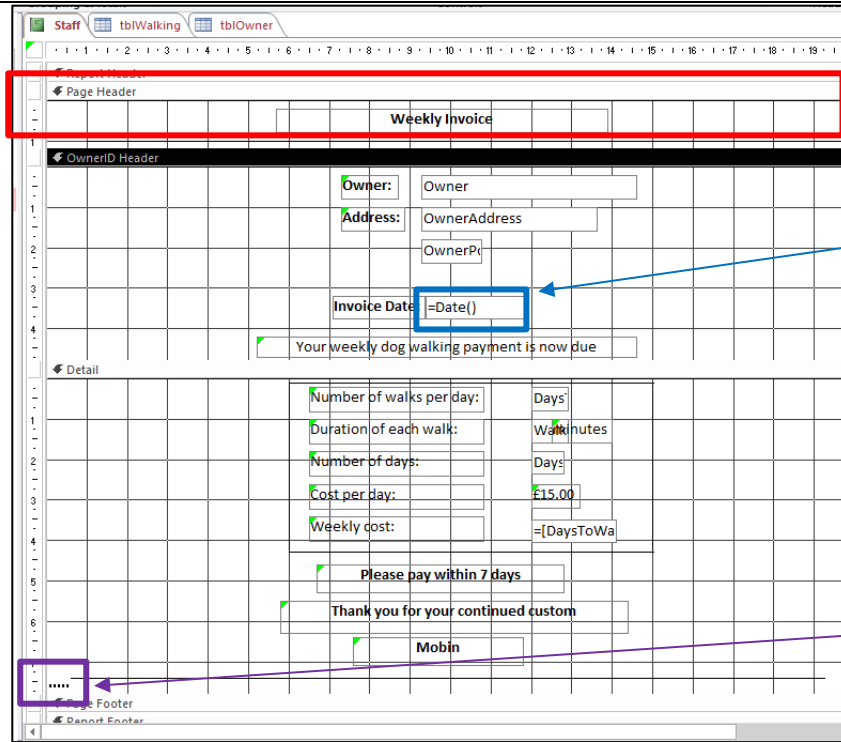
Layout is as given with no truncation. (1)
Standard text and labels are as given. (1)



The page break has been forced after the detail section, which is a suitable location. (1)

Total for part 2(b)(ii): 6 marks

Sample response 2 with examiner commentary



Title is in the page header. (1)

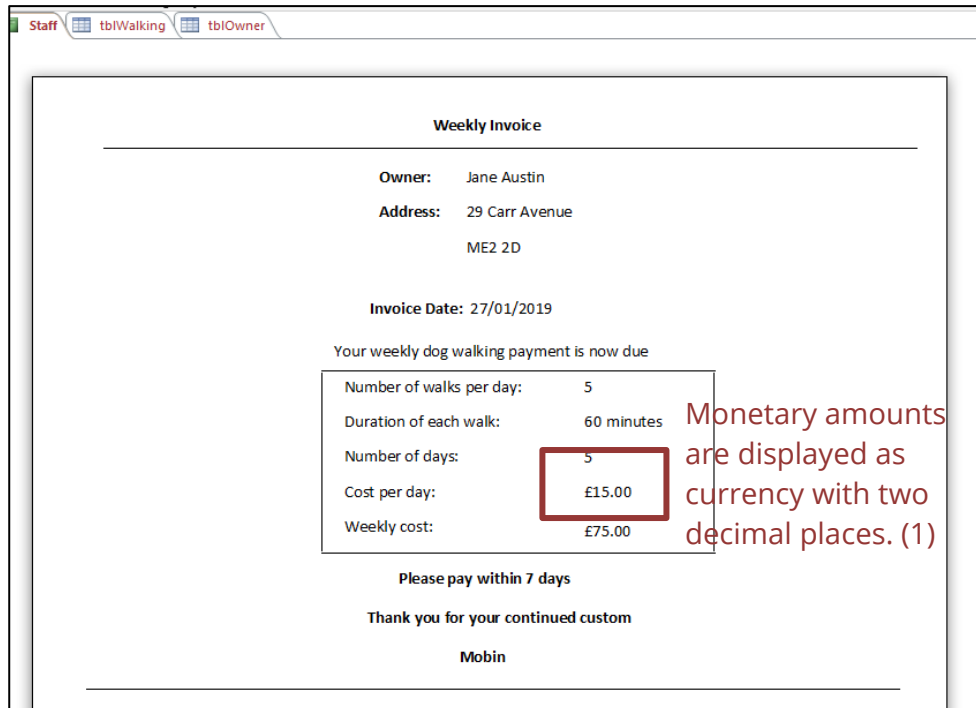
The date is automatically generated. (1)

Page break has been added in a suitable place. (1)

Layout is as given with no truncation. (1)

Standard text and labels are as given. The last three lines of text have been emboldened. (1)

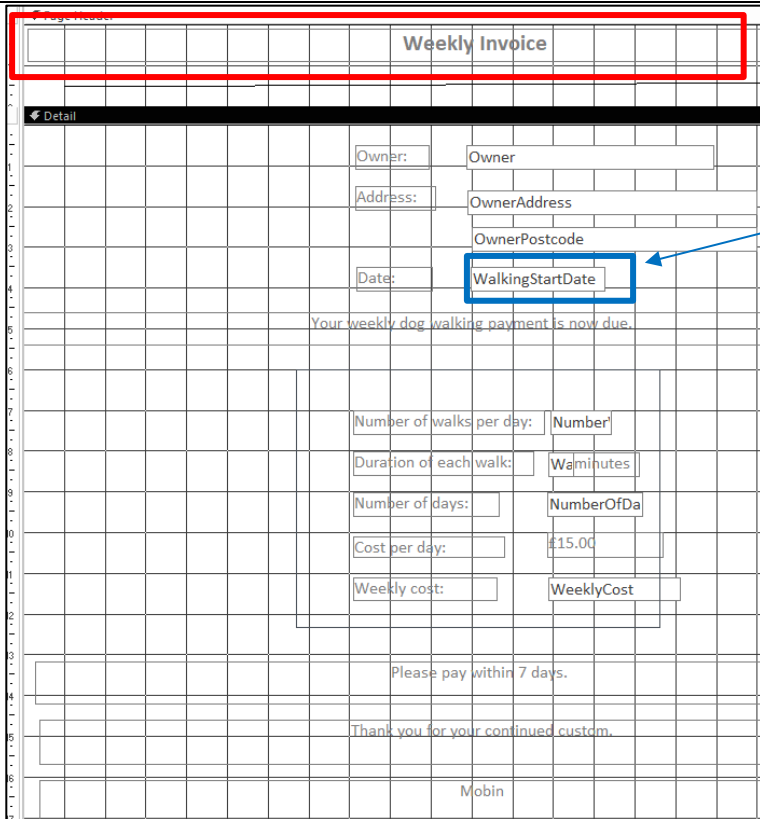
However, this is a minor difference so the mark has been awarded. (1)



Monetary amounts are displayed as currency with two decimal places. (1)

Total for part 2(b)(ii): 6 marks

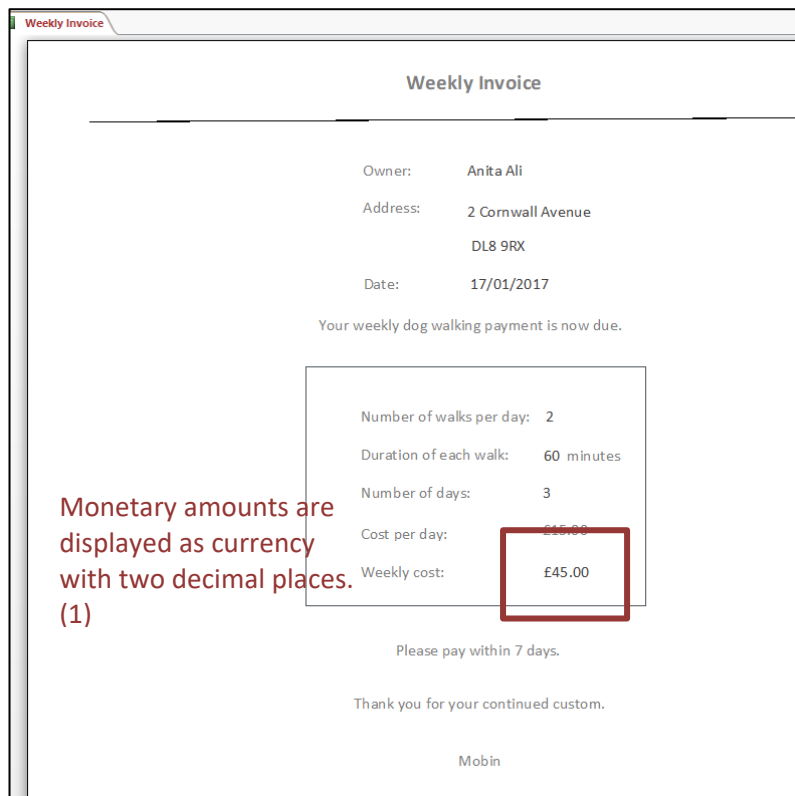
Sample response 3 with examiner commentary



Title is in the page header. (1)

It does not make sense to have the WalkingStartDate as the date for the invoice. It is a weekly invoice so needs to be the current date. (0)

There is no evidence of ensuring each invoice prints on a separate page. (0)



Monetary amounts are displayed as currency with two decimal places. (1)

There is a line missing from beneath the word Mobin and the line underneath the title is not straight. There is not enough evidence to award layout mark. (0)

Standard text and labels are as given. (1)

Total for part 2(b)(ii): 3 marks

Question 3 uses this context:

Mobin needs to know the number of owners per staff member.

3(a) **Create** a query that will extract the staff name and the total number of owners for each staff member.

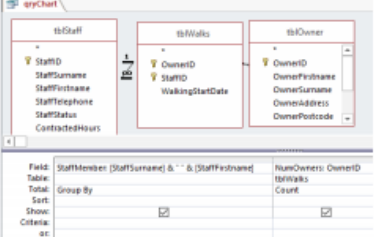
Screenprint your query in **Design** view, making sure that all required tables, fields and criteria can be clearly seen.

Paste the screen print into the appropriate place in the template.

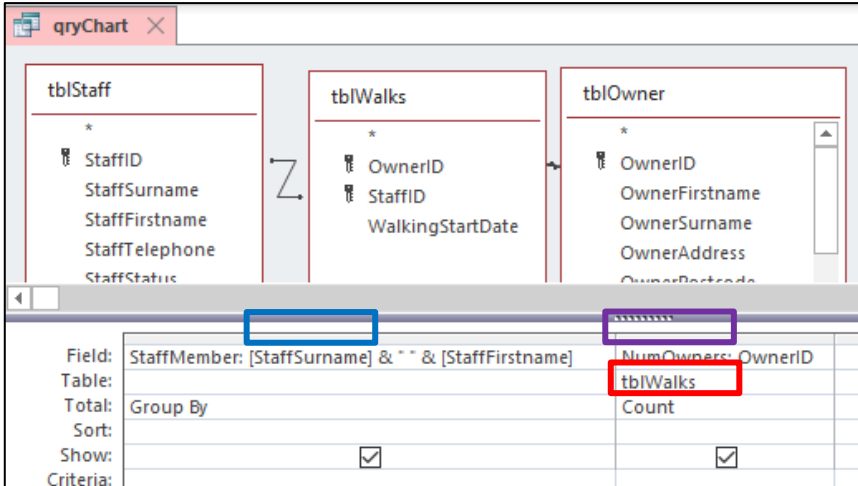
Re-save your template.

(3)

Mark scheme

Question number	Answer	Additional Guidance	Mark
3a	 <p>Award one mark for:</p> <ul style="list-style-type: none"> • Staff name (StaffSurname or StaffFirstname or both) (1) • Owners counted (1) • Generated field named sensibly (1) 		3

Sample response 1 with examiner commentary



The screenshot shows the Access Design view for a query named 'qryChart'. Three tables are visible: 'tblStaff', 'tblWalks', and 'tblOwner'. The 'tblStaff' table has fields: StaffID, StaffSurname, StaffFirstname, StaffTelephone, StaffStatus. The 'tblWalks' table has fields: OwnerID, StaffID, WalkingStartDate. The 'tblOwner' table has fields: OwnerID, OwnerFirstname, OwnerSurname, OwnerAddress, OwnerPostcode. The query design grid shows a calculated field 'StaffMember: [StaffSurname] & " " & [StaffFirstname]' with 'tblWalks' as the table and 'Count' as the total. The 'Show' checkbox is checked for the calculated field and the 'tblWalks' table. A blue box highlights the calculated field name, and a purple box highlights the 'tblWalks' table name in the design grid.

StaffSurname (or StaffFirstname) is present. (1)

There is a count on OwnerID, which would give the number of owners. (1)

The generated field has a sensible name. (1)

Total for 3 (a): 3 marks

Sample response 2 with examiner commentary

Field:	StaffID	StaffFirstname	StaffSurname	OwnerID
Table:	Staff	Staff	Staff	tblWalking
Total:	Group By	Group By	Group By	Count
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

StaffSurname (or StaffFirstname) is present. (1)

There is a count on OwnerID, which would give the number of owners. (1)

The generated field has been left at default; this means it will be unsuitable when the query is executed. (0)

Total for 3(a): 3 marks

3(b) Mobin would like the information in chart format to make it easier to read.

The chart needs to clearly show the information from the query you created in question 3(a).

Create a report that displays this information as a chart.
 Screenprint your report in Report view.
 Paste the screen print into the appropriate place in the template.
 Re-save your template.

(6)

Mark scheme

3b	<p>Award one mark for:</p> <table border="1"> <thead> <tr> <th>Bar/Column</th> <th>Pie Chart</th> </tr> </thead> <tbody> <tr> <td>Chart created (1)</td> <td>Chart created (1)</td> </tr> <tr> <td>Meaningful chart title used (1)</td> <td>Meaningful chart title used (1)</td> </tr> <tr> <td>Axis shows staff names (1)</td> <td>Legend is the staff names (1)</td> </tr> <tr> <td>Axis shows full staff names (1)</td> <td>Legend shows full staff names (1)</td> </tr> <tr> <td>Axis contains suitable scale Or Data values are shown (1)</td> <td>Data values are shown (1)</td> </tr> <tr> <td>Fit for purpose: <ul style="list-style-type: none"> No legend Appropriate sizing of elements on page (e.g. title larger than axis labels, data labels) (1) </td> <td>Fit for purpose: Appropriate sizing of elements on page (e.g. title larger than legend labels, data labels) (1)</td> </tr> </tbody> </table>	Bar/Column	Pie Chart	Chart created (1)	Chart created (1)	Meaningful chart title used (1)	Meaningful chart title used (1)	Axis shows staff names (1)	Legend is the staff names (1)	Axis shows full staff names (1)	Legend shows full staff names (1)	Axis contains suitable scale Or Data values are shown (1)	Data values are shown (1)	Fit for purpose: <ul style="list-style-type: none"> No legend Appropriate sizing of elements on page (e.g. title larger than axis labels, data labels) (1) 	Fit for purpose: Appropriate sizing of elements on page (e.g. title larger than legend labels, data labels) (1)		6
Bar/Column	Pie Chart																
Chart created (1)	Chart created (1)																
Meaningful chart title used (1)	Meaningful chart title used (1)																
Axis shows staff names (1)	Legend is the staff names (1)																
Axis shows full staff names (1)	Legend shows full staff names (1)																
Axis contains suitable scale Or Data values are shown (1)	Data values are shown (1)																
Fit for purpose: <ul style="list-style-type: none"> No legend Appropriate sizing of elements on page (e.g. title larger than axis labels, data labels) (1) 	Fit for purpose: Appropriate sizing of elements on page (e.g. title larger than legend labels, data labels) (1)																

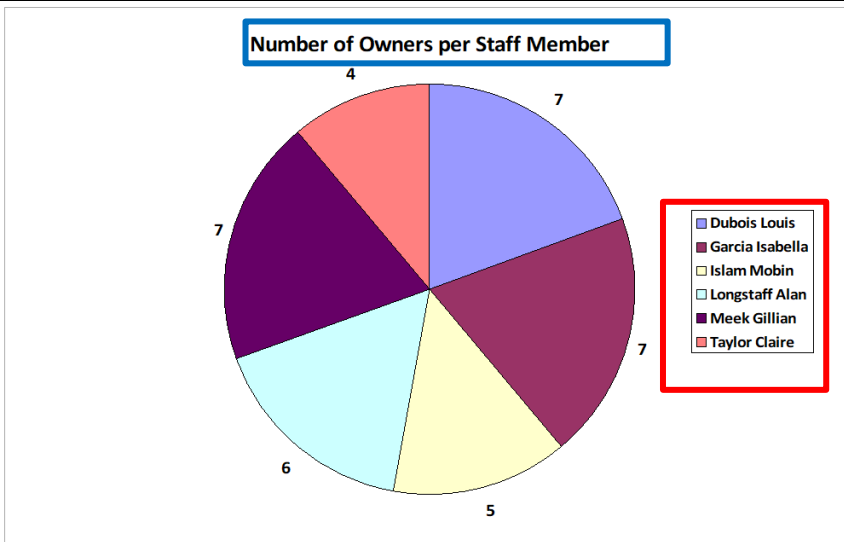
Sample response 1 with examiner commentary

	<p>Suitable chart has been created. (1)</p> <p>Meaningful chart title has been used. (1)</p> <p>Staff names are shown on X axis. (1)</p> <p>Full names of staff are shown. (1)</p> <p>Data values are shown. (1)</p>
--	--

The chart is fit for purpose. There is no legend and the elements have been sized appropriately. (1)

Total for 3(b): 6 marks

Sample response 2 with examiner commentary



Suitable chart has been created. (1)

Meaningful chart title has been used. (1)

Staff names are shown in the legend. (1)

Legend shows full names of staff are shown. (1)

Data values are shown. (1)

The chart is fit for purpose. There is a legend and the elements have been sized appropriately. (1)

Total for part 3(b): 6 marks

4	<p>The database must be tested to check that the solution meets the specified requirements.</p> <p>One of the specified requirements in the scenario is that owners can request visits between one to five days a week. You should plan tests that will prove only values within the range will be accepted. Do not test for non-numerical values. Do not test for null values. Complete the table given in the template to plan the tests for this requirement. Re-save your template.</p>	(6)
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Mark scheme

Question number	Answer	Additional Guidance	Mark
4	Award one mark for: <ul style="list-style-type: none"> • Test for a normal value (2 or 3 or 4) (1) • Test for a boundary (1 or 5) (1) • Test for extreme (0 or 6) (1) • Type of test matches value in all cases (1) • Expected results match value in all cases (1) • 1 and 5 tested as boundary, 0 and 6 as extreme (1) 		6

Sample response 1 with examiner commentary

		Comments
Test Number	1	
Test Data	1	Suitable test data for boundary testing though should really include the field name (DaysToWalk). (1)
Test Type	Boundary	Type of test named correctly.
Expected Results	Data accepted	Expected results correct.
		Comments
Test Number	2	
Test Data	5	Suitable test data for boundary testing though should really include the field name (DaysToWalk) (mark already awarded).
Test Type	Boundary	Type of test named correctly.
Expected Results	Data accepted	Expected results correct for the test data.
		Comments
Test Number	3	
Test Data	0	Suitable test data for extreme testing though should really include the field name (DaysToWalk). (1)
Test Type	Extreme	Type of test named correctly.
Expected Results	Error message displayed; field cleared	Expected results are correct for test data and type of test.
		Comments
Test Number	4	
Test Data	6	Suitable test data for extreme testing though should really include the field name (DaysToWalk) (mark already awarded).
Test Type	Extreme	Type of test named correctly.
Expected Results	Error message displayed; field cleared	Expected results are correctly for test data and type of test.

		Comments
Test Number	5	
Test Data	3	Suitable test data for normal testing though should really include the field name (DaysToWalk). (1)
Test Type	Normal	Type of test named correctly.
Expected Results	Data accepted	Expected results are correct.

The type of test is correct in all tests. (1)

The expected results are correct in all tests. (1)

Values 1 and 5 were tested as boundary and 0 and 6 as extreme. (1)

Total for 4: 6 marks

Sample response 2 with examiner commentary		
		Comments
Test Number	1	
Test Data	Number of Walks per Day = 0	The question did not ask for testing on the NumberWalksPerDay field, it wanted the DaysToWalk field testing. However, this is also a field that includes a range, so it has been accepted as being suitable test data for an extreme test on the field given. Good that the field name has also been given otherwise some of the test data would not have been suitable when compared to the mark scheme. (1)
Test Type	Extreme	Type of test named correctly.
Expected Results	Error message	Expected results are correct.
		Comments
Test Number	2	
Test Data	Number of Walks per Day = 6	Suitable test data for extreme testing (mark already awarded).
Test Type	Extreme	Type of test named correctly.
Expected Results	Error message	Expected results are correct.
		Comments
Test Number	3	
Test Data	Number of Walks per Day = 1	Suitable test data for boundary testing. (1)
Test Type	Boundary	Type of test named correctly.
Expected Results	Accepted and the Walk Duration (Mins) calculates and updates to 60	Expected results are correct. The field tested means the expected results are more complicated than what was required for testing the DaysToWalk field. If a value is accepted, then the WalkDuration should automatically calculate and it would be expected that this would be identified, and the value would be given.
		Comments
Test Number	4	
Test Data	Number of Walks per Day = 3	Suitable test data for boundary testing (mark already awarded).
Test Type	Boundary	Type of test named correctly.
Expected Results	Accepted and the Walk Duration (Mins) calculates and updates to 20	Expected results are correct. The field tested means the expected results are more complicated than what was required for testing the DaysToWalk field. If a value is accepted, then the WalkDuration should automatically calculate and it would be expected that this would be identified, and the value would be given.
		Comments
Test Number	5	
Test Data	Number of Walks per Day = 2	Test data is fine for normal testing (it is the type of test that is incorrect). (1)
Test Type	Boundary	Type of test is incorrect. This is normal testing.
Expected Results	Accepted and the Walk Duration (Mins) calculates and updates to 30	Expected results are correct. The field tested means the expected results are more complicated than what was required for testing the DaysToWalk field. If a value is accepted, then the WalkDuration should automatically calculate and it would be expected that this would be identified, and the value would be given.
<p>Type of test does not match value in all cases (test number 5, value is normal testing, type of test identified as boundary). (0)</p> <p>The expected results match the all cases. (1)</p> <p>Values 1 and 5 were tested as boundary and 0 and 6 as extreme. (1)</p>		
Total for 4: 5 marks		

5

Mobin wants to track staff holidays in the dog-walking database.

Figure 2 shows an extract from the spreadsheet he uses at present.

Staff ID	Holiday Start Date	Holiday End Date	Annual Days	Num Days	Num Hols Left	Num Hours To Cover	Comments	Cover Arranged
1	06/03/2017	10/03/2017	20	5	15	40		Yes
1	15/05/2017	19/05/2017	20	5	10	40		Yes
1	17/07/2017	28/07/2017	20	10	0	40		Yes
3	06/03/2017	10/03/2017	20	5	20	40	Cannot take as Gillian is already off	No
3	13/03/2017	17/03/2017	20	5	15	40		No
5	12/06/2017	16/06/2017	20	5	15	32		Yes

Figure 2

Mobin wants the dog-walking database to:

- ensure that only one member of staff can take a holiday at any one time
- show whether a temporary member of staff has been arranged to cover the holiday
- track the number of days holiday each member of staff has used
- track the number of days holiday each member of staff has left to take.

Analyse why the present database structure does not allow the four identified tasks to be carried out.

Recommend how the database structure could be modified to carry out the four identified tasks.

Type your response in the appropriate place in the template.

Re-save your template.

(9)

Mark scheme

Question number	Answer	Additional Guidance	Mark
5	<p>Indicative content</p> <p>Analysis</p> <ul style="list-style-type: none"> staff table has primary key of StaffID. This means the StaffID is unique and can only appear in the table once. staff can take more than one holiday in a year so StaffID would repeat staffID would not be suitable as a primary key. even if another ID were introduced there would still be repeating groups of attributes i.e. StaffSurname, StaffFirstname, StaffTelephone, StaffStatus, ContractedHours. <p>Recommendations</p> <ul style="list-style-type: none"> holiday table could be created suitable unique primary key suitable foreign key to maintain link to staff table AnnualDays could stay in the staff table or be removed altogether as it is always 20 NumHoursToCover would not need to be stored as information is in staff table but named ContractedHours HolidayStartDate, HolidayEndDate, Comments and CoverArranged would move to the holiday table NumDays, and NumHolsLeft would not need to be stored as they can be calculated from the AnnualDays and the holiday dates new field could be added called HolidayAgreed, which would be a Boolean field to show when holidays have been approved form could be used for holidays. Input start and end dates then query to check no other members of staff are on holiday query could be used to see whether cover has been arranged. Parameters could be used to find the staff member and holiday dates only for the holidays that have been agreed calculations could be used to show how many days holiday have been taken and remain. These could be on a form, in a query or on a report. Holiday start and end dates would be used to determine how many holidays have been taken and these would be subtracted from the annual days to determine how many are left. 		9

Level	Mark	Descriptor
	0	No Awardable content
Level 1	1-3	<ul style="list-style-type: none"> Analysis is flawed or superficial, containing simple statements that show limited understanding of the subject matter. Solution may contain some aspects that are appropriate, but is generally ineffective.
Level 2	4-6	<ul style="list-style-type: none"> Analysis is sound, containing minor inaccuracies or omissions, showing some understanding of the given issue. Solution is workable but may have minor issues.
Level 3	7-9	<ul style="list-style-type: none"> Analysis is sound and developed, containing ideas that are linked together in a fluent and logical way, showing a thorough understanding of the given issue. Solution is appropriate and workable.

Sample response 1

Analysis of structure:

The staff table has primary key of StaffID. This means the StaffID is unique and can only appear in the table once. The extract shows that staff take more than one holiday in a year so there would be a need to repeat the StaffID which means it would no longer be suitable as a primary key. Even if another ID were introduced there would still be repeating groups of attributes i.e. StaffSurname, StaffFirstname, StaffTelephone, StaffStatus, ContractedHours.

Recommendations for improvements:

A new holiday table could be created. This could have HolidayID as a primary key. StaffID would be a foreign key so that a holiday could be associated with a member of staff. AnnualDays could stay in the staff table as the information is only needed to be recorded once. NumHoursToCover would not need to be stored at all as the information is already in the staff table but named ContractedHours. HolidayStartDate, HolidayEndDate, Comments and CoverArranged would move to the holiday table as they are different for each holiday the member of staff takes. NumDays, NumDays and NumHolsLeft would not need to be stored as they can be calculated from the AnnualDays and the holiday dates. A new field could be added called HolidayAgreed which would be a Boolean field. This would show whether the member of staff has been given the holidays.

This would mean that once holiday start and end dates have been input on a form a query could be used to check whether any member of staff is off during those times. It would use the dates as criteria and only for holidays that have been agreed.

A query could be used to see whether cover has been arranged. Parameters could be used to find the staff member and holiday dates only for the holidays that have been agreed.

Calculations could be used to show Mobin how many days holiday have been taken and remain. These could be on a form, in a query or on a report. The holiday start and end dates would be used to determine how many holidays have been taken and these would be subtracted from the annual days to determine how many are left.

Total for 5: 9 marks

Examiner commentary

This is a levels-based question. This means that marks are allocated using the levels descriptors shown in the mark scheme. The command words are **analyse** and **recommend**; this means that the response should examine elements in detail and provide support for a course of action.

The first section of the response includes a clear analysis of the perceived problems. There is no requirement to do this, but it can help candidates focus on the problem and then ensure they focus on recommendations specifically relate to the problem.

The analysis section clearly shows understanding of shortcomings of the current structure in terms of what Mobin wants the database to do. The recommendations given do relate to solving the identified shortcomings and they are fully developed. The response is fluent and logical throughout.

The recommendations would lead to an appropriate, workable solution.

Sample response 2

My analysis:

Another table would need to be added to the structure. These fields cannot be added to the staff table as the StaffID, primary key, will not allow duplicates and the 20 days holiday allowance will not be all taken at the same time.

Recommendations for improvements:

The new table would need to be linked to the staff table in a one to many relationship. The table would need to have a clearly identifiable name, e.g. tblHoliday. It would need a primary key to ensure no data duplication and a foreign key of StaffID to allow the one to many link.

A form needs be created to make entering and saving the holidays more efficient.

Fields required:

- HolidayID which will be generated automatically either with an expression or simply using AutoNumber in the table. This field would be locked to prevent accidental amendment.
- StaffID will be a drop-down list which is limited to list with a clear error message in-case of data entry error.
- Holiday start date and holiday end date fields would be formatted to a date field to avoid incorrect data entry. A query would need to be run when these fields have been completed to check the dates have not already been booked. If the dates have been booked a clearly worded error message will appear,
- Num Days will be generated using a date function to calculate the number of days between the holiday start date and the holiday end date. This field will be locked as no data entry will be required.
- Num Hols Left will also be generated using an expression. A calculation would be needed to work out the total number of days taken and subtract this from 20, therefore an Annual Days text box/field would not be required. This field would be locked.
- Number of hours to cover would not be needed as this information is already stored in the staff table.
- Cover Arranged will be a Yes/No, Boolean field.
- A macro will be created which will be attached to a save button. The macro will ensure all fields are completed and if not will send a clearly worded error message to the user. It will run an append query to save all the fields barring fields to the Holiday table.

A holiday report could also be generated using similar fields/expressions as Mobin will need to know whether all the dog walks are covered, and which members of staff will be walking the dogs. It may be that if cover cannot be arranged for the dates required, he may want to ask the member of staff to take their holidays at another time. Leading to the need for a field to say whether the holiday has been approved or declined.

Total for 5: 9 marks

Examiner commentary

This is a levels-based question. This means that marks are allocated using the levels descriptors shown in the mark scheme. The command words are **analyse** and **recommend**; this means that the response should examine elements in detail and provide support for a course of action.

The first section of the response includes an analysis of the perceived problems. However, reference to 'these' fields is quite vague. The fields could have been given to make it clearer and to judge whether there is, indeed, a problem with them.

The recommendation of a new table is valid and the identification of the relationship, etc. Again, it could be perceived to be lacking in terms of the fact it does not really say what fields would be in the table, etc. However, the recommendations for the form are very detailed and the fields that would be in the table can be taken from here. There are some really good ideas for the form including calculated fields, user input aids and how the save would take place. The save does indicate which fields are in the table.

Analysis could be slightly better in that it is not fully clear which fields are causing the problems etc. The recommendations are sound and developed. The recommendations would lead to an appropriate, workable solution.

This response would be awarded full marks but for different reasons compared to response 1. Response 1 analysis is very detailed, recommendations are workable but would need development. Response 2 has weaker analysis but fully developed recommendations.

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