



Mark Scheme (Results)

Summer 2018

GCE International Applied ICT (WIT04)
Unit 4: Using Database Software

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June 2018

Publications Code [WIT04_01_1806_MS](#)

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

IAL - Mark Scheme - June 2018- Version 1 - QPEC							
		ANSWER				POSS. MARK	MAX
Activity 1		Understanding the problem					
a)		Step	Input	Process	Output		
		Check availability		X			
		Select client	X				
		Display availability message			X		
		Get date	X				
		Get start time	X				
		Generate end time		X			
		Select treatments	X				
		Generate total duration		X			
		Only one X per step					
	A1	Input column correct				1	
	A2	Process column correct				1	
	A3	Output column correct				1	
							(3)
b)	B1- B3	Makes it easy to <u>navigate</u> through the system				1	
		Ensures the user knows where input needs to occur				1	
		Ensures the user knows where data will be generated				1	
		Prevents the user making input errors where possible				1	
		Any other sensible reasons					
		Max 3					(3)

c)	C1 C2	Any two of: Eliminate update anomalies - or example Eliminate insert anomalies - or example Eliminate deletion anomalies - or example Eliminate data inconsistency - or example Minimise <u>data</u> duplication <u>Eliminate data</u> redundancy Improves integrity of data	1,1	
				(2)
		Total for Activity 1		8

Activity 2	Structure		
a)	<pre> erDiagram tblCategory --} tblTreatment : "1:M" tblTreatment --} tblAppointmentDetails : "1:M" tblAppointment --} tblAppointmentDetails : "1:M" tblClient --} tblAppointment : "1:M" </pre>		
A1	Category (table) (T1)	1	
A2	Treatment (table) (T2) Client (table) (T3) Appointment (table) (T4)	1	
A3	Appointment Details (table) (T5)	1	
A4	1:M Category - Treatment (T1-T2)	1	
A5	1:M Client - Appointment (T3-T4)	1	
A6	1:M Treatment - Appointment Details (T2-T5)	1	
A7	1:M Appointment - Appointment Details (T4-T5)	1	
		(7)	
b)	Data Types		
B1	Evidence of at least three correct primary keys Table Category - CategoryID Table Client - ClientID Table Appointment - AppointmentID Table Treatment - TreatmentID	1	
B2	Table Appointment Details - AppointmentID, TreatmentID as composite key	1	
B3	Evidence of correct data types Date - Date/Time StartTime - Date/Time EndTime - Date/Time DurationMins - Number Price - Currency Min of 1 Date/Time, 1 Number, 1 Currency	1	
		(3)	

c) (i)	C1	Any suitable format check. For example Postcode >LL0\ 0LL or LL0\ 0LL MobileTelephone 00000000000	1	
(ii)	C2	Any suitable presence check Do not accept: Any primary keys EndTime	1	
(iii)	C3	Foreign or part composite key only Treatment table - CategoryID Appointment Details table - AppointmentID Appointment Details table - TreatmentID Appointment table - ClientID MUST have: limit to list yes	1	
d)				(3)
	D1	Appointment 167	1	
	D2	Appointment Details - 376	1	
	D3	Category - 9	1	
	D4	Client - 49	1	
	D5	Treatment - 37	1	
				(5)
		Total marks for Activity 2		18

Activity 3			
a)		New Client form	
(i)	A1	Fields include (from any view) Firstname Lastname Street Postcode MobileTelephone	1
			(1)
(ii)	A2	ClientID (design view) Any formula/method that is correct For example =Max(ClientID)+1 = DMax("ClientID", "tblClient")+1 Query sorted into descending order then ClientID+1 Screen print of table showing AutoNumber for ClientID Screen print of form in form view showing (New) for AppointmentID	1
			(1)
(iii)		Customisation (any view)	
	A3	Any one from Suitable title Suitable label Field width Instructions Asterisk Disabled field	1
			(1)

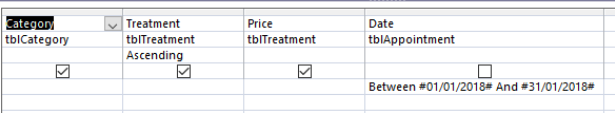
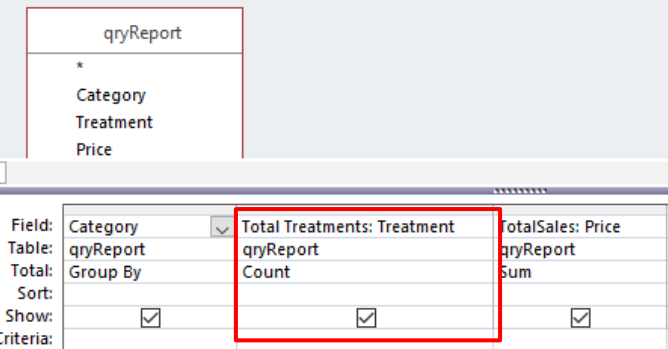
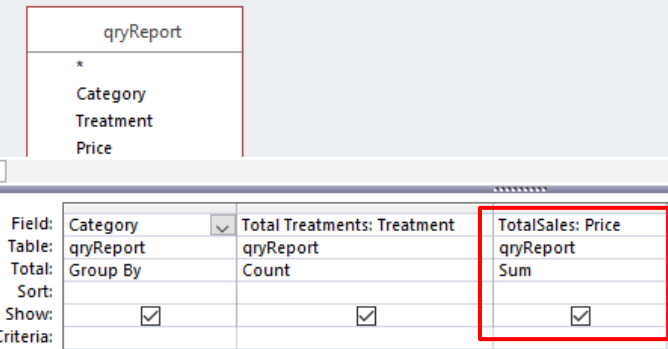
b)		Saving client details																																																								
	B1	Check to ensure at least two from: Firstname Lastname Street Postcode MobileNumber are present	1																																																							
	B2	Client saved All fields must be shown in Query in full and Query used in Macro	1																																																							
				(2)																																																						
c)		Making Appointments (any view)																																																								
(i)	C1	Treatment list box present	1																																																							
	C2	Treatment list box is multi-select	1																																																							
	C3	Appointment details section present	1																																																							
	C4	End time and Total time disabled	1																																																							
	C5	Can select client	1																																																							
	C6	Treatment list source shown	1																																																							
	C7	Unavailable time section source shown	1																																																							
				(7)																																																						
(ii)		Unavailable appointments and end time																																																								
		Example Query to find appointments on the date on the form <table><tr><td>Field:</td><td>Date</td><td>StartTime</td><td>End: DateAdd("n",20,[EndTime])</td><td>EndTime</td></tr><tr><td>Table:</td><td>tblAppointment</td><td>tblAppointment</td><td></td><td>tblAppointment</td></tr><tr><td>Sort:</td><td></td><td>Ascending</td><td></td><td></td></tr><tr><td>Show:</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td></tr><tr><td>Criteria:</td><td>[forms]![frmMakeAppointment]![Date]</td><td></td><td></td><td></td></tr><tr><td>or:</td><td></td><td></td><td></td><td></td></tr></table> Query to find clashes <table><tr><td>Field:</td><td>Date</td><td>StartTime</td><td>End</td></tr><tr><td>Table:</td><td>qryAppointmentByDate</td><td>qryAppointmentByDate</td><td>qryAppointmentByDate</td></tr><tr><td>Sort:</td><td></td><td></td><td></td></tr><tr><td>Show:</td><td>☒</td><td>☒</td><td>☐</td></tr><tr><td>Criteria:</td><td>[forms]![frmMakeAppointment]![Date]</td><td><= [forms]![frmMakeAppointment]![endtime]</td><td>>= [forms]![frmMakeAppointment]![starttime]</td></tr><tr><td>or:</td><td></td><td></td><td></td></tr></table>	Field:	Date	StartTime	End: DateAdd("n",20,[EndTime])	EndTime	Table:	tblAppointment	tblAppointment		tblAppointment	Sort:		Ascending			Show:	☒	☒	☒	☒	Criteria:	[forms]![frmMakeAppointment]![Date]				or:					Field:	Date	StartTime	End	Table:	qryAppointmentByDate	qryAppointmentByDate	qryAppointmentByDate	Sort:				Show:	☒	☒	☐	Criteria:	[forms]![frmMakeAppointment]![Date]	<= [forms]![frmMakeAppointment]![endtime]	>= [forms]![frmMakeAppointment]![starttime]	or:					
Field:	Date	StartTime	End: DateAdd("n",20,[EndTime])	EndTime																																																						
Table:	tblAppointment	tblAppointment		tblAppointment																																																						
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Criteria:	[forms]![frmMakeAppointment]![Date]	<= [forms]![frmMakeAppointment]![endtime]	>= [forms]![frmMakeAppointment]![starttime]																																																							
or:																																																										
	C8	Unavailable appointment section linked to date selected on the form	1																																																							
	C9	Unavailable section updates after date selected	1																																																							

		<i>Total time method</i>		
	C10	Treatment IDs held (for example in temp table) or equivalent	1	
	C11	Duration summed For example =DSum("[Duration]", "tblTempTreatment")	1	
		<i>End time generated</i>		
	C12	=[starttime]+[totalTime]	1	
	C13	Convert total time into minutes of the day For example [totalTime]/1440	1	
				(6)
(iii)		Check appointment availability		
	C14	Date linked to date on the form	1	
	C15	20 minutes travel time added	1	
	C16	Start time checked for clashes	1	
	C17	End time checked for clashes	1	
	C18	Count used to determine how many appointments clash For example DCount(";", "qryCheckAvailability")	1	
	C19	Check made to see if appointment clashes are >= 1 and error message displayed if true For example If DCount(";", "qryCheckAvailability") >= 1 Then Error message displayed	1	
	C20	Save button enabled if appointment is available	1	
				(7)
(iv)		Saving appointment and treatments		
	C21	AppointmentID automatically generated For example =DMax("AppointmentID", "tblAppointment")+1 Screen print of table showing autonumber for AppointmentID Screen print of form in form view showing (New) for AppointmentID	1	
	C22	Events are triggered on the click of the save button	1	
	C23	Appointment would be appended	1	
	C24	Appointment treatment details would be appended	1	
				(4)

		Total marks for Activity 3		29

Activity 4		Testing													
a)		Register client form													
	A1	Details correct <table border="1"><tr><td>First name</td><td>Sian</td></tr><tr><td>Last name</td><td>Kirvan</td></tr><tr><td>Street</td><td>12 The Grove</td></tr><tr><td>Postcode</td><td>BB1 1BB</td></tr><tr><td>Mobile telephone</td><td>1111222222</td></tr></table>		First name	Sian	Last name	Kirvan	Street	12 The Grove	Postcode	BB1 1BB	Mobile telephone	1111222222	1	
First name	Sian														
Last name	Kirvan														
Street	12 The Grove														
Postcode	BB1 1BB														
Mobile telephone	1111222222														
	A2	Fields shown above correctly stored (must agree with data entered on form and have ClientID at least 51)		1											
					(2)										
b)		Invalid client													
	B1	Suzanne Chaplin, 129 Hill View Crescent, RY1 9QT Suitable error message shown		1											
					(1)										
(c)		Treatments, client, date and start time selected													
(i)	C1	Details correct Treatments 1 and 7 ClientID: 14 Date: 18/02/2018 Start Time: 17:20													
					(1)										
(ii)		Checking availability													
	C2	Total Duration: 130		1											
	C3	End Time: 19:30 or 19:50		1											
	C4	Available message appears		1											
					(3)										
(iii)		Saving appointment													
	C5	Appointment saved in appointment table AppointmentID at least 177 ClientID 14 Date 18/02/2018 Start Time 17:20 End Time 19:30 or 19:50		1											
	C6	Appointment Treatment Details correctly stored in Appointment Details table TreatmentIDs 1 and 7 AppointmentID matches C5 for both treatments		1											
					(2)										

d		Appointment unavailable		
(i)	D1	Details correct Treatment 2 ClientID: 3 Date: 16/02/2018 Start Time: 18:40	1	
				(1)
(ii)	D2	Screen print of message that appears	1	
				(1)
		Total marks for Activity 4		11

Activity 5	Printing total treatment and sales		
A1	Filters to between 01/01/2018 and 31/01/2018 Could use query for this  Any method that works	1	
A2	Total treatments calculated Could use another query based on query used in A1  Any method that works	1	
A3	Total sales values calculated  Any method that works	1	

		Total Sales between 01/01/2018 and 31/01/2018				
		Category	Total Treatments	Total Sales		
		Biosculpture	21	\$388.00		
		Electrolysis	4	\$48.00		
		Eye Treatments	25	\$324.00		
		Facials	25	\$835.00		
		Make Up	7	\$335.00		
		Nail Extensions	5	\$150.00		
		Nails	21	\$504.00		
		Packages	3	\$150.00		
		Waxing	62	\$896.00		
		Overall Sales		£3,630.00		
		A7 mark from design view only The rest mark from report view Overall Sales and Total Sales do not have to match those shown				
	A4	Each category only shown once on report			1	
	A5	No individual treatments shown on report just Total Treatments			1	
	A6	Overall sales generated E.g. =Sum(TotalSales)			1	
	A7	Overall Sales in report footer			1	
	A8	Total Sales formatted to currency			1	
	A9	Total Sales formatted to 2 decimal places			1	
	A10	Matches design given and Category label and data left aligned Total Treatments and data centre aligned Total Sales and data centre aligned			1	
		Total marks for Activity 5				10

Activity 6	Evaluation
Note: Place student in correct mark band based on content. QWC adjustment can only reduce mark within band. This must be based on the expectation within the mark band. Marks cannot be added and the adjustment cannot put the mark in a different mark band.	
Indicative content	
The client registration form How user friendly Should be discussing their • their layout • logical placing of fields • instructions • automatic generation of ClientID • validation applied and how useful.	
Make appointment form Design provided Should be discussing • exactly what had to appear and where • what controls should have been used • what fields would be automatically generated • what the buttons should do • that multiple selects should be allowed in the list box.	
How approach would have been different Anything sensible. For example: • May have used more than one form: ◦ Could have used a form for appointment date and time ◦ Form for treatments etc. • May have used a different database structure where appointment times for each day are automatically appended to appointment table. Form could then show available appointment times rather than unavailable times.	
Sales Report How helpful Should be discussing • only showing 1 month's sales • only shows categories and relevant totals as a whole • good summary about uptake of categories so can see popularity.	
Improvements Should be discussing • filters to any date range specified • filters to any category or treatment specified • could choose to view the report as a chart.	

Level	Mark	Descriptor
0	0	No rewardable material.
Level 1	1-4	Description of what candidate did during tasks (possibly using screen shots) Description of what candidate did not manage to complete or what does not work. Evaluative comments limited. The candidate uses everyday language and the response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.
Level 2	5-8	Candidate may address some points. In terms of client form may be: Clear title makes it easy for the user to see what the form will be used for. Clear instructions telling user how to use form makes it less likely for human errors to occur. ClientID disabled so user cannot try to insert one. Fields logically follow one another name, address, telephone. Asterisks present to clearly show what information has to be present. Tab order follows the fields on screen so that if they use the tab key they go to the next logical field. Presence checks in the code to ensure all required fields have data with a user friendly message. Clear message to say save has taken place. Will discuss these and have some evaluative comments about them. In terms of the make appointment form should be addressing the points listed above. Alternatives may not be fully sensible. There will be some evaluative comments The candidate uses some terms and shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.
Level 3	9-12	Will be evaluative throughout. In terms of client form will address the same points as in MB2 but will be fully evaluative throughout. In terms of the make appointment form will address all listed items and will have sensible suggestions for alternatives and will be fully evaluative. The candidate uses a range of appropriate terms and shows good focus and organisation. Spelling, punctuation and the rules of grammar used with considerable accuracy.

SWW1		Administration details on each page	1	
SWW2		Required printouts only assembled correctly	1	
		Total Marks for Standard Ways of Working		2
		Total Marks for Paper		90