

Mark Scheme (Results)
June 2012

GCE Applied ICT (6957)
Using Database Software

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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.

Activity	ANSWER	POSS MARK	MAX																								
Activity 1	Understanding the problem																										
1 (a)	<table border="1"> <thead> <tr> <th>Step</th> <th>Input</th> <th>Process</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Determine age category</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Display message</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>Get personal details</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Generate age</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Generate RunnerID</td> <td></td> <td>X</td> <td></td> </tr> </tbody> </table>	Step	Input	Process	Output	Determine age category		X		Display message			X	Get personal details	X			Generate age		X		Generate RunnerID		X			
	Step	Input	Process	Output																							
	Determine age category		X																								
	Display message			X																							
	Get personal details	X																									
	Generate age		X																								
Generate RunnerID		X																									
A1	Input column correct	1	(3)																								
A2	Process column correct	1																									
A3	Output column correct	1																									
	Do not award marks for crosses in more than 1 column																										
1 (b) B1	Presence check	1	(1)																								
1 (c)	Identification of the fact that a parameter query could be used so user can type the date required or combo box to pick date from.																										
C1 / C2	Use a parameter query(1) allowing user to enter criteria to search for the run(1) A combo box/drop down list (1) to pick the run(1)	1,1	(2)																								
	TOTAL FOR ACTIVITY 1		6																								

Activity	ANSWER	POSS MARK	MAX
Activity 2			
2 (a)	Structure		
A1	Officials (table)	1	(9)
A2	Location (table)	1	
A3	Runners (table)	1	
A4	Runs(table)	1	
A5	Results (table)	1	
A6	1:M Location - Official	1	
A7	1:M Location – Run	1	
A8	1:M Run – Result	1	
A9	1:M Runner– Result (or their equivalent)	1	
	Tables may have different names. Use the fields in the table rather than the name of the table		
2 (b)	Data Types and Primary Keys		
B1	Evidence of correct primary keys Table Official - OfficialID Table Location – LocationID Table Run – RunID Table Runner – RunnerID	1	(3)
B2	Table Results – RunID, RunnerID as composite key	1	
B3	Evidence of correct data types Min 2 date/time, 1 number correct Date/time RunnerTime – Date/Time, DOB – Date/Time, PersonalBest – Date/Time, RunDate – Date/Time Number TotalRuns – Number, DifficultyLevel – Number	1	

Activity	ANSWER	POSS MARK	MAX
2 (c)	Validation		
	Only award marks for screenshots where validation type is correctly identified by the candidate. Allow use of (i)-(iv) or in the order of the paper. Note the same field can be used to show more than one of these.		
(i) C1	Any suitable format check For example: OfficialPostcode - >LL0\ 0LL	1	
(ii) C2	Any suitable range check For example: DifficultyLevel BETWEEN 1 AND 5	1	
(iii) C3	Any suitable presence check RunnerForename RunnerSurname RunnerDOB	1	
(iv) C4	Any suitable List Check or Table Lookup For example: Role – "Race Manager"; "Timer"; "Registrar"; "Number Allocator" AgeCategory – "Junior"; "Adult"; "Senior" DifficultyLevel 1;2;3;4;5 LocationCity - "Newcastle"; "Sunderland"; "Middlesbrough" All foreign keys acceptable Composite key acceptable MUST have: limit to list 'yes' unless a list box	1	(4)
2 (d)			
D1 – E	Official - 14	1	
D2 – E	Location - 3	1	
D3 – E	Runner - 57	1	
D4 – E	Run – 166	1	
D5 - C	Result -1799	1	(5)
	TOTAL FOR ACTIVITY 2		21

Activity	ANSWER	POSS MARK	MAX
Activity 3	Sign up Form – DESIGN view AND FORM view		
3 (a) (i) A1	Form includes (from any view) RunnerID RunnerForename RunnerSurname RunnerDOB Gender AgeCategory Age PersonalBest TotalRuns	1	(1)
3 (a) (ii) A2	Mark from DESIGN view RunnerID generated For example: Max([RunnerID]) + 1 DMax("RunnerID", "Runner") + 1 Max(str(format([runnerID]) + 1)) Str(Max([RunnerID]) + 1) If AutoNumber used in table must have screenshot here	1	(1)
3 (a) (iii) A3	Mark from DESIGN view RunnerAge generated For example: =DateDiff("yyyy", [RunnerDOB], Date()) =DateDiff("d", [RunnerDOB], Date())/365 =left(DateDiff("d", [RunnerDOB], Date())/365, 2) =(Now() - [RunnerDOB])/365	1	(1)
3 (a) (iv)	Mark from DESIGN view AgeCategory generated on form or in a query Note: many alternatives are possible		
A4	If statement used (or equivalent method that works)	1	
A5	Check made on one of the three. eg Junior – between 0 and 19, Adult – between 20 and 59 Senior >60	1	
A6	All correct eg =IIf([age] Between 0 And 19, "Junior", IIf([age] Between 20 And 59, "Adult", "Senior"))	1	(3)

Activity	ANSWER	POSS MARK	MAX
3 (a) (v) A7	Mark from FORM or DESIGN view TotalRuns set to 0	1	(1)
3 (a) (vi) A8	Mark from FORM or DESIGN view PersonalBest set to 05:00:00	1	(1)
3 (a) (vii)	Mark from FORM or DESIGN view Looking for suitable customisation		
A9	One of: <ul style="list-style-type: none"> suitable title – e.g. Registration Form/Add Runner instructions how to use logical grouping of fields – e.g. surname and first name grouped suitable background – readable suitable labels – e.g. RunnerSurname changed to Surname – MUST have min 2 changed textboxes suitable for the data in them 	1	(2)
A10	One of: <ul style="list-style-type: none"> disabling fields that are generated – RunnerID asterisks on fields they have to enter data into – RunnerForename, RunnerSurname, DOB 	1	
3 (b) (i) B1	All fields must be shown in Query and Query used in MACRO Query or method to append new details	1	(2)
B2	Macro/code would display a save message OR save message displayed	1	
3 (b) (ii) B3	Save button added – allow default button	1	(2)
B4	Button properties show macro attached to "OnClick" event	1	
	Add Run Form– Design View		
3 (c) (i) C1	If entering: LocationID present If selecting: LocationID, LocationName, or LocationCity present	1	(1)
3 (c) (ii) C2, C3, C4, C5	RunID generated - uses meaningful name to do with location =[LocationID] & "-" & Max(Right([RunID],4))+1	4	(4)
	OR		

Activity	ANSWER	POSS MARK	MAX
C2	Uses LocationID	1	
C3	Finds the highest number - MAX()	1	
C4	+1 to highest number (follow through if highest number is incorrect) – MAX()+1	1	

Activity	ANSWER	POSS MARK	MAX
3 (c) (iii) C6, C7, C8, C9	RunDate generated correctly (7 days added to latest date for a particular location) eg =DMax("RunDate","tblRuns","LocationID="" & [LocationID] & """)+7 Award C9 for fully correct formula	4	
	OR		
C6	Finds the highest RunDate for any location	Do not award C9 if not fully correct	1
C7	Adds 7 to any date		1
C8	Links to LocationID		1
			(4)
3 (d)	Saving Run details		
D1	Query or method to append details - if query used must see it being used in the macro or code to award mark	1	(1)
3 (e) (i)	Add Results		
E1	Query that allows Tracy to enter RunID eg RunID=[Please enter the RunID] or linked to RunID on form Or LocationCity=[Enter a location city] AND RunDate=[Enter a run date] or linked to LocationCity and RunDate on form Or Location=[Enter a location] AND RunDate=[Enter a run date] or linked to Location and RunDate on form	1	
3 (e) (ii)	Add Results form (any view)		
	One mark for each correct form.		
E2	Mainform RunID RunDate RunLocation		
E3	Subform RunnerID RunnerForename RunnerSurname Gender AgeCategory RunnerTime	2	(3)

Activity	ANSWER	POSS MARK	MAX
3 (f) (i) F1	Total runs would get one added to it Could be query, generated on form, code or macro. Anything suitable so long as works eg [TotalRuns]+1	1	
3 (f) (ii) F2	PersonalBest would be updated if time is faster. Could be query, generated on form then hidden, code or macro. Anything suitable so long as works eg IIf([PersonalBest] < [Forms]![frmResults]![sfrmResults].[Form]![RunnerTime], "PersonalBest", [Forms]![frmResults]![sfrmResults].[Form]![RunnerTime])	1	(2)
	TOTAL FOR ACTIVITY 3		29

Activity	ANSWER	POSS MARK	MAX								
Activity 4	Testing										
	Registration form Stephen Meek DOB: 20/07/1964 Gender: Male										
4 (a) (i) A1	Entered on form correctly	1	(4)								
4 (a) (ii) A2	Fields shown above correctly stored (must agree with data entered on form and have a RunnerID (>21000) and correct AgeCategory of Adult)	1									
A3	Only award if A2 given Message telling user it has been saved	1									
A4	A blank form	1									
4 (b) B1	Suitable error message about DOB being missing – DOB is required field (may mention other required fields)	1	(1)								
	Create Run Form										
4 (c) C1	NE0001 entered on form correctly	1	(4)								
C2	RunID correct NE0001-1278	1									
C3	RunDate correct 28/04/2012	1									
C4	Stored in Run table (or equivalent) correctly.	1									
	Results form RunID NE0002-1174										
	<table border="1"> <thead> <tr> <th>RunnerID</th> <th>RunnerTime</th> </tr> </thead> <tbody> <tr> <td>20774</td> <td>00:19:03</td> </tr> <tr> <td>20775</td> <td>00:29:15</td> </tr> <tr> <td>20776</td> <td>00:17:00</td> </tr> </tbody> </table>	RunnerID	RunnerTime	20774	00:19:03	20775	00:29:15	20776	00:17:00		
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4 (d) D1	Data on form correct ALL 3 runners on one subform	1	(3)								
	Do not award D2 or D3 unless data is shown on form /s										
D2	Stored in Results (or equivalent) table correctly	1									
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20774	00:19:03										
20775	00:29:15										
20776	00:17:00										

Activity	ANSWER	POSS MARK	MAX		
D3	Correct updates		1		
	RunnerID	TotalRuns			PersonalBest
	20774	23			00:19:03
	20775	23			00:29:13
20776	23	00:17:00			
	TOTAL FOR ACTIVITY 4			11	

Activity	ANSWER	POSS MARK	MAX
Activity 5	Producing Results		
5 (a)	Award one mark for each correct criterion		
A1	Date RunDate #21/04/2012# Must not be in speech marks (" ")		
A2	LocationIDs LocationID "NE0002" OR "NE0003" If LocationID criteria split over two rows RunDate #21/04/2012# must be on second row too	2	(2)
5 (b)	Report in design view		
	B1 to B8: evidence in design view		
B1	Grouped by Location eg Location or LocationID	1	
B2	Suitable title in page header	1	
B3	Group header should show <ul style="list-style-type: none"> • Location • RunDate 	1	
B4	Group header should show labels for <ul style="list-style-type: none"> • RunnerSurname • RunnerForename • Gender • AgeCategory • RunnerTime 	1	
B5	Detail section should show <ul style="list-style-type: none"> • RunnerSurname • RunnerForename • Gender • AgeCategory • RunnerTime 	1	
B6	Total runners calculated in Location footer eg =Count(RunnerForename)	1	
B7	Fastest time calculated in Location footer eg =Min(RunnerTime)	1	
B8	Overall number of runners calculated in report footer eg =Count(RunnerForename)	1	(8)
5 (c)	C1 Not just the default layout. Must have nothing truncated and suitable labels.	1	(1)
	TOTAL FOR ACTIVITY 5		11

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

How the prototype is fit-for-purpose and the evidence you have used to reach this conclusion

Evaluation of fitness for purpose based on Tracy's requirements:

- 1 Registration, which involves:
 - the input of personal details
 - ensuring name and date of birth are present
 - generating the age of the runner
 - determining the age category of the runner
 - generating a unique RunnerID, which is a sequential number that is always one more than the highest currently in use
 - storing the runner's details if all requirements are met
 - providing a suitable message for Tracy so that she knows what is happening.

- 2 Creating Runs, which involves:
 - entering or selecting one of the three run locations
 - automatic generation of the run date
 - generating a unique code for the run, which combines letters from the location of the run with a sequential number that is always one more than the highest currently in use
 - storing the run details.

- 3 Recording Results, which involves:
 - searching for a particular run
 - displaying details of the run
 - entering the runners and their times
 - storing the results
 - updating the total number of runs for each runner
 - updating their personal best time if necessary.

- 4 Printing Results – A printout of the results including location, run and runner details.
The printout will need to look professional and be easy to read.

Recommendations for extra functionality

For mark band 1 and 2 additional functionality could be based on what has not been done or only partly achieved.

e.g.

- Calculations not working that should work
- Queries that did not work that should etc etc

For mark band 3 should include some improvements beyond the initial brief.

e.g

- Runners never get any results. Email addresses added so can be emailed
- As above but suggestions for online database
- The run dates could be automatically generated without Tracy needing to pick a location eg main menu with button that runs append query that creates all three runs each week
- No need to update total runs or personal best

- Difficulty levels never taken into account
- Age category for each race

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<p>The candidates will make basic comments on what they did and how this produced a solution. Some screenshots may be provided as evidence.</p> <p>Comments on possible improvements will be made but unsupported and at a basic level. Descriptive rather than evaluative.</p> <p>The candidate uses everyday language and the response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.</p>
Level 2	4-6	<p>Addresses both evaluation and identification of future improvements. Gives subjective, but realistic, comments about improvements but these are not always well supported.</p> <p>Evaluative comments about the database (not what they did) with weaknesses as well as strengths noted.</p> <p>The candidate uses some terms and shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.</p>
Level 3	7-9	<p>Addresses both evaluation and identification of future improvements in some depth. Future improvements will extend the original specification. (Technical solutions for suggested improvements are not necessary.)</p> <p>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.</p>
TOTAL FOR ACTIVITY 6		9

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

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