

Mark Scheme (Results)  
June 2012

GCE Applied ICT (6957)  
Using Database Software

## **Edexcel and BTEC Qualifications**

Edexcel and BTEC qualifications come from Pearson, the world's leading learning company. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information, please visit our website at [www.edexcel.com](http://www.edexcel.com).

Our website subject pages hold useful resources, support material and live feeds from our subject advisors giving you access to a portal of information. If you have any subject specific questions about this specification that require the help of a subject specialist, you may find our Ask The Expert email service helpful.

[www.edexcel.com/contactus](http://www.edexcel.com/contactus)

## **Pearson: helping people progress, everywhere**

Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at:

[www.pearson.com/uk](http://www.pearson.com/uk)

Summer 2012

Publications Code UA031681

All the material in this publication is copyright

© Pearson Education Ltd 2012

## 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																								
<b>Activity 1</b>	Understanding the problem																										
<b>1 (a)</b>	<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																									
<b>A1</b>	Input column correct	<b>1</b>	<b>(3)</b>																								
<b>A2</b>	Process column correct	<b>1</b>																									
<b>A3</b>	Output column correct	<b>1</b>																									
<b>1 (b)</b>	Presence check	<b>1</b>	<b>(1)</b>																								
<b>1 (c)</b>	<p>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.</p> <p>Use a query(1) allowing user to enter dates they want(1)  A combo box/drop down list to pick the run(1) and display the results (1)</p>	<b>2</b>	<b>(2)</b>																								
<b>TOTAL FOR ACTIVITY 1</b>			<b>6</b>																								

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

Activity	ANSWER	POSS MARK	MAX
<b>2 (c)</b>	<b>Validation</b>		
	Only award marks for screenshots where validation type is correctly identified by the candidate. Allow use of (i)-(iv). <b>Note the same field can be used to show more than one of these.</b>		
<b>(i) C1</b>	Any suitable format check For example: OfficialPostcode - >LL0\ 0LL RunID - >LL0000\ -0000	<b>1</b>	
<b>(ii) C2</b>	Any suitable range check For example: DifficultyLevel BETWEEN 1 AND 5	<b>1</b>	
<b>(iii) C3</b>	Any suitable presence check RunnerForename RunnerSurname RunnerDOB	<b>1</b>	
<b>(iv) C4</b>	Any suitable List Check or Lookup For example: Role – "Race Manager"; "Timer"; "Registrar"; "Number Allocator"; AgeCategory – "Junior"; "Adult"; "Senior"; DifficultyLevel 1;2;3;4;5; All foreign keys acceptable Composite key acceptable  MUST have: limit to list yes unless a list box	<b>1</b>	<b>(4)</b>
<b>2 (d)</b>			
<b>D1</b>	Official - 14	<b>1</b>	
<b>D2</b>	Location - 3	<b>1</b>	
<b>D3</b>	Runner - 57	<b>1</b>	
<b>D4</b>	Run – 166	<b>1</b>	
<b>D5</b>	Result -1799	<b>1</b>	<b>(5)</b>
	<b>TOTAL FOR ACTIVITY 2</b>		<b>21</b>

Activity	ANSWER	POSS MARK	MAX
<b>Activity 3</b>	Sign up Form – <b>DESIGN view AND FORM view</b>		
<b>3 (a) (i)</b>	<b>Form includes (from any view)</b> RunnerID RunnerForename RunnerSurname RunnerDOB Gender AgeCategory Age PersonalBest TotalRuns	<b>1</b>	<b>(1)</b>
<b>3 (a) (ii)</b>	<b>Mark from DESIGN view</b> RunnerID generated  For Example: Max([RunnerID])+1 DMax("RunnerID","Runner")+1  If AutoNumber used in table must have screenshot here	<b>1</b>	<b>(1)</b>
<b>3 (a) (iii)</b>	<b>Mark from DESIGN view</b> RunnerAge generated  =DateDiff("yyyy",[RunnerDOB],Date()) =DateDiff("d",[RunnerDOB],Date())/365	<b>1</b>	<b>(1)</b>
<b>3 (a) (iv)</b>	<b>Mark from DESIGN view</b> AgeCategory generated on form or in a query		
	If statement used	<b>1</b>	
	Check made on one of the three Junior – between 0 and 19 Adult – between 20 and 60 Senior >60	<b>1</b>	
	All correct eg =IIf([age] Between 0 And 19,"Junior",IIf([age] Between 20 And 60,"Adult","Senior"))	<b>1</b>	<b>(3)</b>
<b>3 (a) (v)</b>	<b>Mark from FORM view</b> TotalRuns set to 0	<b>1</b>	<b>(1)</b>
<b>3 (a) (vi)</b>	<b>Mark from FORM view</b> PersonalBest set to 05:00:00	<b>1</b>	<b>(1)</b>

Activity	ANSWER	POSS MARK	MAX
3 (a) (vii)	<b>Mark from FORM or DESIGN view</b> Looking for suitable customisation		
	One of: <ul style="list-style-type: none"> <li>• suitable title – e.g. Registration Form/Add Runner</li> <li>• instructions how to use</li> <li>• logical grouping of fields – e.g. surname and first name grouped</li> <li>• suitable background – readable</li> <li>• suitable labels – e.g. RunnerSurname changed to Surname – MUST have min 2 changed</li> <li>• textboxes suitable for the data in them</li> </ul>	<b>1</b>	
	One of: <ul style="list-style-type: none"> <li>• disabling fields that are generated – RunnerID</li> <li>• asterisks on fields they have to enter data into – RunnerForename, RunnerSurname, DOB</li> </ul>	<b>1</b>	<b>(2)</b>
3 (b) (i)	Query or method to append new details	<b>1</b>	
	Macro/code would display a save message OR save message displayed	<b>1</b>	<b>(2)</b>
3 (b) (ii)	Save button added – allow default button	<b>1</b>	
	Button properties show macro attached to "OnClick" event	<b>1</b>	<b>(2)</b>
	Add Run Form– <b>Design View</b>		
3 (c) (i) E	LocationID present	<b>1</b>	<b>(1)</b>
3 (c) (ii)	RunID generated =[LocationID] & "-" & Max(Right([RunID],4))+1	<b>4</b>	
	<b>OR</b>		
	Uses LocationID	<b>1</b>	
	Finds the highest number - MAX()	<b>1</b>	
	+1 to highest number (follow through if highest number is incorrect) – MAX()+1	<b>1</b>	<b>(4)</b>

Activity	ANSWER	POSS MARK	MAX
<b>3 (c) (iii)</b>	RunDate generated correctly (7 days added to latest date for a particular location) eg =DMax("RunDate","tblRuns","LocationID=" & [LocationID] & ""))+7	<b>4</b>	<b>(4)</b>
	<b>OR</b>		
	Finds the highest RunDate	<b>1</b>	
	Adds 7 to it	<b>1</b>	
	Links to LocationID	<b>1</b>	
<b>3 (d)</b>	<b>Saving Run details</b>		
	Query or method to append details	<b>1</b>	<b>(1)</b>
<b>3 (e) (i)</b>	<b>Add Results</b>  Query that allows Tracy to enter RunID eg  RunID=[Please enter the RunID]	<b>1</b>	<b>(3)</b>
<b>3 (e) (ii)</b>	<b>Add Results form (any view)</b> One mark for each correct form. <b>Mainform</b> RunID RunDate RunLocation  <b>Subform</b> RunnerID RunnerForename RunnerSurname Gender AgeCategory RunnerTime	<b>2</b>	
<b>3 (f) (i)</b>	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	<b>1</b>	<b>(2)</b>
<b>3 (f) (ii)</b>	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].[F	<b>1</b>	

Activity	ANSWER	POSS MARK	MAX
	orm][RunnerTime], "PersonalBest", [Forms][frmResults][sfrmResults].[Form][RunnerTime])		
	<b>TOTAL FOR ACTIVITY 3</b>		<b>29</b>

Activity	ANSWER	POSS MARK	MAX											
<b>Activity 4</b>	Testing													
	<b>Registration form</b> Stephen Meek DOB: 20/07/1964 Gender: Male													
<b>4 (a) (i)</b>	Entered on form correctly	<b>1</b>	<b>(4)</b>											
<b>4 (a) (ii)</b>	Message telling user it has been saved	<b>1</b>												
	Fields shown above correctly stored (must agree with data entered on form and have a RunnerID (>21000) and correct AgeCategory of Adult)	<b>1</b>												
	A blank form	<b>1</b>												
<b>4 (b)</b>	Suitable error message about DOB being missing – DOB is required field (may mention other required fields)	<b>1</b>	<b>(1)</b>											
	<b>Create run Form</b>													
<b>4 (c)</b>	NE0001 entered on form correctly	<b>1</b>	<b>(4)</b>											
	RunID correct NE0001-1278	<b>1</b>												
	RunDate correct 28/04/2012	<b>1</b>												
	Stored in Run table (or equivalent) correctly.	<b>1</b>												
<b>4 (d)</b>	<b>Results form</b>  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					
RunnerID	RunnerTime													
20774	00:19:03													
20775	00:29:15													
20776	00:17:00													
	Data on form correct	<b>1</b>	<b>(3)</b>											
	Stored in Results (or equivalent) table correctly	<b>1</b>												
	Correct updates <table border="1"> <thead> <tr> <th>RunnerID</th> <th>TotalRuns</th> <th>PersonalBest</th> </tr> </thead> <tbody> <tr> <td>20774</td> <td>23</td> <td>00:19:03</td> </tr> <tr> <td>20775</td> <td>23</td> <td>00:29:13</td> </tr> <tr> <td>20776</td> <td>23</td> <td>00:17:00</td> </tr> </tbody> </table>	RunnerID		TotalRuns	PersonalBest	20774	23	00:19:03	20775	23	00:29:13	20776	23	00:17:00
RunnerID	TotalRuns	PersonalBest												
20774	23	00:19:03												
20775	23	00:29:13												
20776	23	00:17:00												
<b>TOTAL FOR ACTIVITY 4</b>			<b>11</b>											

Activity	ANSWER	POSS MARK	MAX
<b>Activity 5</b>	Producing Results		
<b>5 (a)</b>	Award one mark for each correct criteria <b>Date</b> RunDate #21/04#2012  <b>LocationIDs</b> LocationID "NE0002" OR "NE0003"  If LocationID criteria split over two rows RunDate #21/04/2012# must be on second row too	<b>2</b>	<b>(2)</b>
<b>5 (b)</b>	<b>Report in design view</b>		
	<b>B1 to B8: evidence in design view</b>		
<b>B1</b>	Grouped by Location eg Location or LocationID	<b>1</b>	<b>(8)</b>
<b>B2</b>	Suitable title in page header	<b>1</b>	
<b>B3</b>	Location header should show <ul style="list-style-type: none"> <li>• Location</li> <li>• RunDate</li> </ul>	<b>1</b>	
<b>B4</b>	Location header should show labels for <ul style="list-style-type: none"> <li>• RunnerSurname</li> <li>• RunnerForename</li> <li>• Gender</li> <li>• AgeCategory</li> <li>• RunnerTime</li> </ul>	<b>1</b>	
<b>B5</b>	Detail section should show <ul style="list-style-type: none"> <li>• RunnerSurname</li> <li>• RunnerForename</li> <li>• Gender</li> <li>• AgeCategory</li> <li>• RunnerTime</li> </ul>	<b>1</b>	
<b>B6</b>	Total runners calculated in Location footer eg =Count(RunnerForename)	<b>1</b>	
<b>B7</b>	Fastest time calculated in Location footer eg =Min(RunnerTime)	<b>1</b>	
<b>B8</b>	Overall number of runners calculated in report footer eg =Count(RunnerForename)	<b>1</b>	
<b>5 (c)</b>	not just the default layout	<b>1</b>	<b>(1)</b>
	<b>TOTAL FOR ACTIVITY 5</b>		<b>11</b>

**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

**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

Level	Mark	Descriptor
	0	No rewardable material.
<b>Level 1</b>	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>
<b>Level 2</b>	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>
<b>Level 3</b>	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>
<b>TOTAL FOR ACTIVITY 6</b>		<b>9</b>

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

Further copies of this publication are available from  
Edexcel Publications, Adamsway, Mansfield, Notts, NG18 4FN

Telephone 01623 467467  
Fax 01623 450481  
Email [publication.orders@edexcel.com](mailto:publication.orders@edexcel.com)  
Order Code UA031681 Summer 2012

For more information on Edexcel qualifications, please visit our website  
[www.edexcel.com](http://www.edexcel.com)

Pearson Education Limited. Registered company number 872828  
with its registered office at Edinburgh Gate, Harlow, Essex CM20 2JE

Ofqual  




Llywodraeth Cynulliad Cymru  
Welsh Assembly Government



6957 -1206