

Mark Scheme (Results)

Summer 2011

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)	A1	Award 1 mark for each correct COLUMN (do not award if more than one column identified in a row)	3																													
	A2	<table border="1"> <thead> <tr> <th>Task</th> <th>Administrator - Charlotte</th> <th>Potential Member</th> <th>Member</th> </tr> </thead> <tbody> <tr> <td>Register</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Review a film</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>			Task	Administrator - Charlotte	Potential Member	Member	Register		X		Review a film			X																
		Task			Administrator - Charlotte	Potential Member	Member																									
		Register				X																										
	Review a film					X																										
A3	Track payments	X																														
	Print film reviews	X																														
1 (b)	1 mark for identification and 1 mark for explanation (must have both) Cannot have 3 identifications Any reasonable answer related to differentiate access can be credited	4																														
	B1	Passwords certain database objects (e.g. tables, reports, forms) could be password protected	2																													
	B2	Profiles/access rights- different access rights / permissions given to different users (read only, read/write)	2																													
	B3	Switchboards/user interfaces/menus - different users can see different forms, different versions load for different users	2																													
1 (c)	C1	Award 1 mark for each correct column(do not award if more than one column identified in a row)	3																													
	C2																															
	C3	<table border="1"> <thead> <tr> <th>Process</th> <th>Input</th> <th>Generated</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Add amount paid</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Add payment date</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Display messages</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>Select Film</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Select Member</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Store payment details</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>			Process	Input	Generated	Output	Add amount paid	X			Add payment date		X		Display messages			X	Select Film	X			Select Member	X			Store payment details			X
Process		Input			Generated	Output																										
Add amount paid		X																														
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Select Film	X																															
Select Member	X																															
Store payment details			X																													
Total for Activity 1				10																												

Activity 2

2 (a)	Structure		
A1	Member (table)	1	(8)
A2	Film (table)	1	
A3	Review (table)	1	
A4	Payment (table)	1	
A5	1:M Member - Review	1	
A6	1:M Member - Payment	1	
A7	1:M Film - Review	1	
A8	1:M Film - Payment	1	
2 (b)	Data Types		
B1	Evidence of correct primary keys Table Member- UserName Table Review - ReviewID Table Payment - PaymentID Table Film - FilmID	1	(3)
B2	Evidence of correct data types DOB - Date/Time Accepted - Yes/No DatePaid - Date/Time AmountPaid - Currency	1	
B3	Comments - Memo	1	
2 (c)	Validation		
C1	Any suitable format check	1	(5)
C2	Any suitable range or validation rule	1	
C3	Any suitable presence check (not on primary key)	1	
C4	List Check or Lookup (accept lookup on UserName, FilmID in Review or Payment table) limit to list yes	1	
C5	Password of 'teapot' /DatePaid = Date()	1	
	Note the same field can be used to show more than one of the above.		

2 (d)			
D1	Member - 246	1	
D2	Film - 8	1	
D3	Payment - 35	1	
D4	Review - 33	1	(4)
	Total for Activity 2		20

Activity 3		Registration Form - DESIGN view AND Form view		
3 (a) (i)	A1	Fields include (from any view) FirstName LastName AddressLine1 Town County PostCode DOB	1	
3 (a) (ii)	A2	Calculate age and any formula that would work e.g. DateDiff("yyyy",[DOB],Date()) DateDiff("d",[DOB],Date())/365	1	
3 (a) (iii)		Field added to generate UserName and formulae that would give correct results eg Left([FirstName],3) & Left([LastName],2) & Max(Right([UserName],4))+1	4	
		OR		
	A3	Uses first three letters of first name. Max 1 mark if in wrong order	1	
	A4	Uses first two letters of last name. Max 1 mark if in wrong order	1	
	A5	Find the highest number	1	
	A6	+1 to highest number (follow through if highest number is incorrect)	1	
3 (a) (iv)		Looking for suitable customisation		
	A7	Any one of: <ul style="list-style-type: none"> • suitable title • instructions how to use • grouping of fields logically • suitable background 		
	A8	any one of: <ul style="list-style-type: none"> • suitable labels • disabling fields that are generated • asterisks on fields they have to enter data into 	2	(8)

3 (b)	B1	Create/Save Account button added	1	(8)
	B2	Method of checking Age is 15 or over that would work	1	
	B3	Suitable error message if under 15	1	
	B4	Macro /code tests that the date of birth, first name and last name are completed and produces an error message if this is not	1	
		(Allow follow through)		
	B5	The record would save	1	
	B6	Save message displayed	1	
	B7	All actions associated with one event	1	
	B8	Form reopens at new record/form cleared after save (screenshot of either Macro or code) Bound form has to have evidence of going to new record; unbound form closing and reopening is enough	1	
		Add Payment Form - DESIGN view and FORM view		
3 (c) (i)	C1	Must include all these fields: UserName FilmID DatePaid AmountPaid	1	(4)
3 (c) (ii)	C2	Correct calculation of new PaymentID =Max([PaymentID])+1 in DESIGN view or (New) in FORM view or something that would work	1	
3 (c) (iii)	C3	PaymentDate correctly set to current date e.g. =Date() in DESIGN view or actual date in FORM view Any that works	1	
3 (c) (iv)	C4	Looking for suitable customisation <ul style="list-style-type: none"> • drop down boxes used for at least one field 	1	
3 (d)	D1	Saving Payment details A valid record would save	1	(3)
	D2	Appropriate save message would display	1	
	D3	All actions associated with one event	1	

3 (e) (i)	E1	Login Form (DESIGN view) fields include UserName Password	1	(1)
3 (e) (ii)	E2	Check that determines both UserName and Password are present	1	
	E3	Suitable error message if either one missing. One message incorporating both is fine.	1	
	E4	Check to see if UserName and Password exist in Member table	1	
	E5	Check to see if Password matches UserName. Can be part of above or separate.	1	
	E6	Suitable error message if it does not (can be part of the same message)	1	
	E7	Check to see if password is 'teapot'	1	
	E8	Message to change password if it is 'teapot'	1	
	E9	Message to say logged in	1	
Total for Activity 3				32

Activity 4		Testing		
		Registration Form Shelley Crowther 133 Seymour Gardens Heartfield Moreshire HE3 4EE DOB - 01/08/1995		
4 (a) (i)	A1	Entered on form correctly	1	(3)
4 (a) (ii)	A2	Message telling user it has been saved - Do not award if form and table do not match	1	
	A3	Fields shown above correctly stored (must agree with data entered on form and have a username)	1	
4 (b)	B1	Member too young DOB - 15/06/1998 Suitable error message about age (can credit other dates of birth as long as it means members are too young)	1	(1)
4 (c) (i)	C1	Payment Form User: spech4266 FilmID: 1234 Payment £4 Entered on form correctly (do not award if form and table do not match)	1	(1)
4 (c) (ii)	C2	Message telling user it has been saved	1	(2)
	C3	Stored in payment table correctly (must agree with data entered on form). Payment ID should be at least 1603.	1	
		Total for Activity 4		7

Activity 5		Producing Film Review Report		
5 (a)	A1	Criteria correct, would find only the films between January and April, e.g. like Jan or Feb or Mar or Apr	1	(1)
		B1 - B5, B8: evidence in DESIGN view; B6-B7:evidence in any view		
		Must have DESIGN View of Report to award these marks		
5 (b) (i)	B1	Grouped by one of these: FilmMonth, Title, FilmID	1	
	B2	Suitable title	1	(2)
5 (b) (ii)	B3	Group Header should show these fields: <ul style="list-style-type: none"> FilmMonth FilmID Title Genre 		
5 (b) (ii)	B4	Labels - anywhere suitable: <ul style="list-style-type: none"> FirstName LastName Comments StarRating. 		
5 (b) (iii)	B5	Detail section (or group created for User) should show: <ul style="list-style-type: none"> FirstName LastName Comments StarRating 	1	
5 (b) (iv)	B6	Number of reviews calculated with any suitable formula e.g. =Count([FirstName]) - can be count of any suitable field No. Reviews Jan = 5 Feb = 4 March = 2 April = 3	1	
	B7	Average StarRating calculated with any suitable formula e.g. =Avg([StarRating]) Average Star Rating Jan = 2 Feb = 1 March = 1 April = 5	1	
	B8	Both calculations in Group header or footer (follow through if formula incorrect, must match B1)	1	(3)
		Marked from Report View		
5 (b) (v)	B9	Any one of: <ul style="list-style-type: none"> an attempt to customise (i.e. not just default layout) average review with 0 decimal places no truncation on Comments field 	1	(1)
		Total 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

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

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

Registration

Charlotte wants the students to be presented with a registration screen which will allow them to apply to join. The registration process should include:

- a. checking that they are old enough to join
- b. the generation of a unique user name, which combines letters from the students name with a sequential number that is always one more than the highest currently in use
- c. storing the member details if all requirements are met. A default password (teapot) should be set
- d. displaying messages to the user so they know what is happening.

Login

Charlotte wants the members to be able to log in. Only some aspects of the log in process will be implemented in this prototype version. The login process should include:

- a. members entering their username and password
- b. checking that the username and password are valid
- c. a warning if the default password has not been changed
- d. a successful login if the details are present and valid.

Tracking Payments

This is a task of Charlotte's. The members have to pay £10 for each film and Charlotte collects the money. Members can make more than one payment per film if they want to spread the cost but the payments must be between £3 and £10. The payment tracking process should include:

- a. selecting a member and film
- b. entering the amount paid
- c. automatically assigning the payment date
- d. storing the payment details
- e. providing a suitable message for Charlotte so that she knows what is happening.

Printing Film Reviews

Charlotte should be able to print film review reports.

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

- Some form of differentiating between members and Charlotte when logging in - Charlotte all access, members less access
- Could have ensured NewPassword was confirmed in case a mistake is made typing password in
- Password hints - if they forget password or being able to email details
- Successful registration should let the members know what their username and password is. They never get to know what the password is in the current prototype
- Could have had a main menu (expect examples of what should be on it - should be different for the two different types of user)
- System only good for one year - month field in film means you cannot differentiate between years.
- Archiving/deleting data when old
- Method of adding reviews as the prototype does not have it

Any sensible if not those above

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	The candidates will make basic comments on what they did and how this produced a solution. Some screenshots may be provided as evidence. Comments on possible improvements will be made but unsupported and at a basic level. Descriptive rather than evaluative. 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	4-6	Addresses both evaluation and identification of future improvements. Gives subjective, but realistic, comments about improvements but these are not always well supported. Evaluative comments about the database (not what they did) with weaknesses as well as strengths noted. 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	7-9	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.) 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 for Paper		90

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