

Mark Scheme (Results)

Summer 2013

GCSE ICT (5IT03/01) Unit 3: Exploring Digital Design

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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.
- Candidate can be credited where they have given two or more correct responses in a single answer space, but have given incorrect or blank responses elsewhere.
- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:
  - i) ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear
  - ii) select and use a form and style of writing appropriate to purpose and to complex subject matter
  - iii) organise information clearly and coherently, using specialist vocabulary when appropriate.

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (a) (i)	<ul> <li>Use graphical buttons</li> <li>Make buttons larger</li> <li>Use easier to read font/make text bigger</li> <li>Less text / more graphics / use of graphics to help understanding / picture of artist / album art</li> <li>Use images/icons/font styles suitable for age range e.g. 'cartoon' style</li> <li>Use more simple language (e.g. back rather than previous button)</li> <li>Use bright colours</li> <li>Add features that make it easier to use (e.g. drop down lists)</li> </ul>	'Easier to use' unless justified with an example of how to make it easier.  'Colour' on its own.  'Voice over' - this would not be a suitable feature on this type of App.  'Change font' on its own.		2
	183			3

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(a) (ii)	(A)	Home	Video	
	Candidates to provide a sketch of a video screen layout  Award <b>one</b> mark for inclusion of each of the following:  • 'Video' window • 'Play' button • 'Home' button  Award <b>one</b> mark for appropriate sizing of elements within diagram.  (1x3) + 1		To award a mark, elements must be clearly recognisable or have an appropriate label.  The video player window should clearly be the largest element and appropriately sized in the design and buttons should have appropriate relative size.	4

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (a) (iii)	<ul> <li>Any two reasons from:</li> <li>Saves space on screen / reduces scrolling</li> <li>Works well with a touch screen interface</li> <li>Designer can provide a list of options / avoid free data entry</li> <li>Speed up data entry / reduces amount of typing required / shortens process / no need for sub pages</li> <li>Avoid/reduce errors on data entry</li> </ul>	'Easier to use' or 'easier' without further explanation.		2

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (a)	Any three from:			
(iv)				
	<ul> <li>Apply consistent font (settings)</li> <li>Apply consistent colour scheme</li> <li>Similar approach to style of images/buttons (all real/all cartoon style)</li> <li>Common elements (e.g. navigation buttons) in same place/same size on all screens</li> </ul>			
	1x3			3

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
1 (b)	Award <b>one</b> characteristic of a vector from:			
(i)	Small file size			
	<ul> <li>Do not lose quality/does not pixelate</li> </ul>			
	when resized			
	<ul> <li>Based on calculations/formula</li> </ul>			
	1x1			1

Question Number		Answer	Do not accept	Additional Guidance	Mark
1(b) (ii)	Award <b>one</b> mark for a suitable reason why identified feature of vector makes it suitable for use on tablets and smartphones.  Reason:  Small file  • Can be downloaded on		'Image quality' on its own. Must have reference to quality not affected by re-sizing.	Reason given should be appropriate for the characteristic identified in 1 (b) (i).	
	size	<ul> <li>Call be downloaded on mobile connections</li> <li>Phone might have a smaller amount of storage space</li> </ul>			
	Do not lose quality/ pixelate when resized	<ul> <li>Devices have different screen size/resolution so graphic is not distorted</li> <li>Use of 'zoom' is common (to help read smaller screen size)</li> </ul>			
	Based on calculations /formula	Doesn't lose quality/resolution when resized  1x1			1

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (a) (i)	<ul> <li>A way to express 'visual' ideas / demonstrate the 'feel' of the product</li> <li>Establishes clear likes/dislikes of the client</li> <li>Will help the designer identify features for the 'house style'/allows designer to easily identify colour combinations</li> <li>Early designs (storyboards etc) will more likely meet client's ideas / improves accuracy and suitability of early design process /saves time because less re-drafting of designs will be needed</li> </ul>		To award 'saves time' mark there must be a clear justification of how/why it saves time.	2

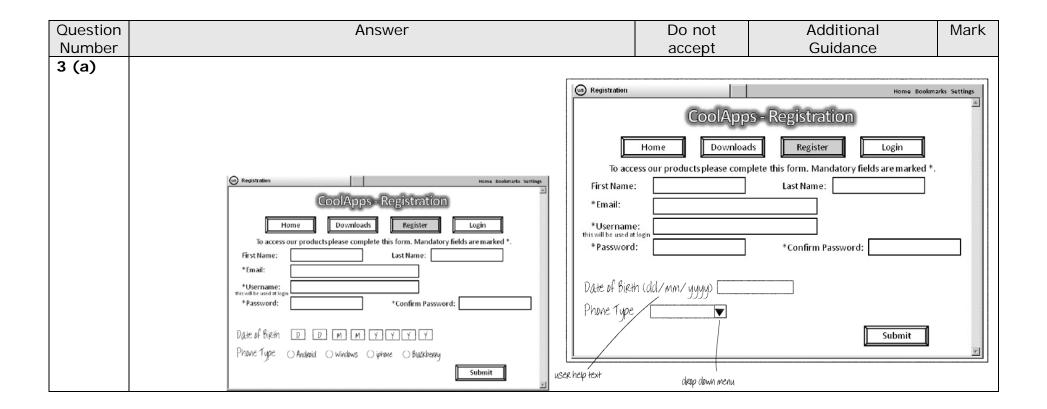
Question Number	Answer	Do not accept	Additional Guidance	Mark
2(a) (ii)	<ul> <li>Any three from:</li> <li>Produce/create flowchart/sitemap/ structure chart</li> <li>Create an audience profile/interview members of target audience</li> <li>Research similar products</li> <li>Discuss initial ideas with client/ produce design specification/project proposal</li> <li>Get feedback</li> <li>Write script</li> <li>Create pre-viz</li> <li>Create mockup</li> </ul>	'Market research' on its own.	Order of tasks in time line does not have to be specific to gain marks.	3

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
2(a)	Any <b>two</b> from:	'Size' on its own. Must identify		
(iii)	<ul> <li>Specify icons/images (to be used)</li> <li>Show font size/style</li> <li>Give sizes/dimensions of buttons</li> <li>Give more accurate shade of colour/use colour code</li> <li>Give details of any additional/interactive features (e.g. rollovers/alt-text) for buttons</li> </ul>	which feature they refer to.		
	2x1			2

Question Number	Answer		Do not accept	Additional Guidance	Mark	
2(b) (i)	Award 1 mark for each license/permission identified and 1 further mark for its affect on the image's use.			Mark for how use of image is affected can be gained even when		
	Image	License/ permission	How use of image affected		correct license/ permission is not	
	1	Creative commons	Image may be used and changed/may have to credit original source/may not need to contact the author for permission /depends on permission specified by original creator		given.	
	2	Copyright	Must seek permission from copyright holder/may have to pay to use it			
			(1+1) x 2			4

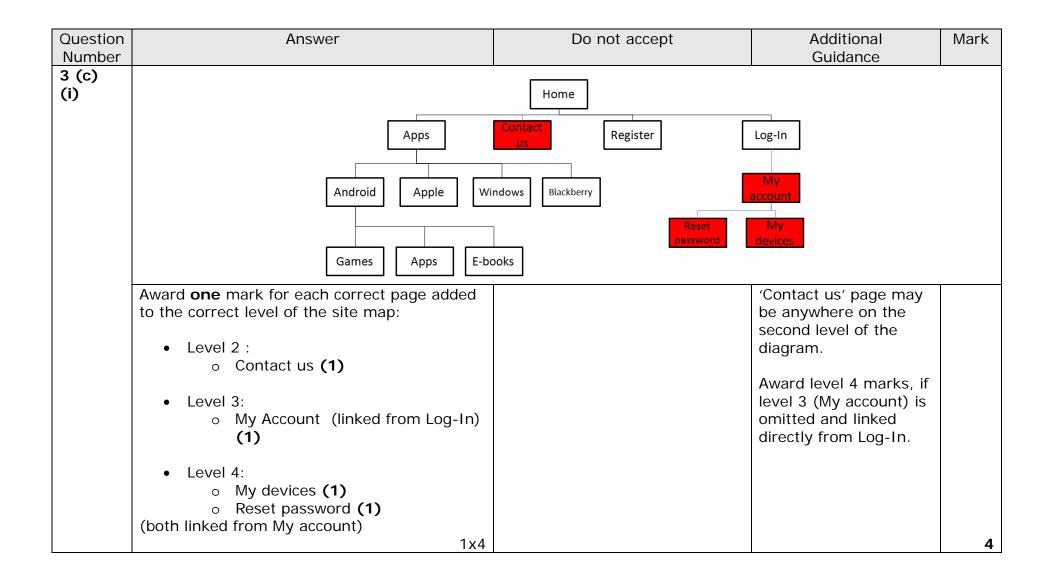
Question Number	Answer	Do not accept	Additional Guidance	Mark
2(b) (ii)	<ul> <li>Any two benefits from:</li> <li>Quicker than creating/developing images from scratch</li> <li>Access to a large selection of images</li> <li>Will be organised by category/search facility will make finding what he wants easier</li> <li>Licences/permissions will be clearly stated</li> <li>Obtaining permission to use images will be easier</li> </ul>	'Copyright does not apply' (or similar).  'Saves time' without further explanation.	Images on a photo sharing site will still be subject to copyright laws, but it is likely that permission has already been given/permissions stated by the creator when uploading the image.	2

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (c)	В			
	1x1			1



• Date	mark for inclusion of each data entry field:  of birth	To award data entry field sketch must include label <b>and</b> text
Award one	e type  additional mark for inclusion of data entry feature that entry easier/more accurate for each field:	entry box.
• Date o o o Phon	of birth  Data entry boxes e.g. [] [] /[][]/[][][][]  Guide text eg DD/MM/YYYY  Drop down menus/rollers e type	
0	Drop down menu for phone types Radio buttons Clear annotation showing possible use of validation rule	
	(1+1) x 2	4

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
3 (b)	<ul> <li>Use easier to read font/make text bigger/same (consistent) font on buttons and body text</li> <li>Make page so it doesn't scroll sideways/improve spacing/position of top navigation bar / reposition title</li> <li>Reposition/make adverts/images smaller</li> <li>Use graphical buttons</li> <li>Improve contrast on buttons</li> </ul>		Credit only responses that suggest an improvement, not just identify a problem.	
	1x3			3



Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
3 (c) (ii)	An Explanation of why a structure diagram is used:	Number of pages (rather than content).		
	Can identify (at a glance) the pages/overall content of the site (1) and shows how pages are linked together (1)			
	2x1			2

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
3 (d)	D			
	1x1			1

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
3(e)	<ul> <li>Award any two from:         <ul> <li>Rename assets folder / give new folder name</li> <li>Group assets of a similar type (e.g. images / button etc.)/create sub-folders</li> <li>Use consistent file types for similar assets</li> <li>Give files meaningful filenames/names that describe the content/purpose</li> <li>Convert banner to a more common file type</li> <li>Delete duplicate files</li> </ul> </li> </ul>	Group assets by <b>software</b> type.		2
	1 x 2			2

Any three from:  Extended typing on mobile device/smartphone/tablet may be difficult Typing (in the commands) may restrict users with impaired motor skills Pop-up/onscreen keyboard would obscure some of the screen The instructions might not work/game may not respond correctly if command is typed incorrectly User may have to learn a wide range of commands/unsure what to type in (due to open ended question) Users with poor literacy would not be able to use the game Users may find too much typing boring	Question Number	Answer	Do not accept	Additional Guidance	Mark
(and not use the game)  1x3		<ul> <li>Extended typing on mobile device/smartphone/tablet may be difficult</li> <li>Typing (in the commands) may restrict users with impaired motor skills</li> <li>Pop-up/onscreen keyboard would obscure some of the screen</li> <li>The instructions might not work/game may not respond correctly if command is typed incorrectly</li> <li>User may have to learn a wide range of commands/unsure what to type in (due to open ended question)</li> <li>Users with poor literacy would not be able to use the game</li> <li>Users may find too much typing boring (and not use the game)</li> </ul>			3

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
4 (b)	<ul> <li>Description of logic of flow chart.</li> <li>Any four from: <ul> <li>Game displays a description of surroundings and a picture(1)</li> <li>Game checks if player has collected required key (1)</li> <li>If yes puzzle is displayed, if not message telling player to find key is displayed (1)</li> <li>Player types in an answer to puzzle (1)</li> <li>Game checks if player has entered correct answer(1)</li> <li>If yes door open message is shown and player advances, if not player is taken back to puzzle to try again (1)</li> </ul> </li> </ul>		The explanation points provided must be in a logical order for maximum 4 marks. For points not in logical order, award maximum 2 marks.	4
	1 x 4			4

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (c)	Award <b>one</b> mark for identification of one	Sound	Galdarice	
		Souria		
(i)	multimedia feature:			
	Text			
	<ul><li>Image/graphics/picture</li></ul>			
	1x1			1

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
4 (c) (ii)	Award <b>one</b> mark for identification of one interactive feature.	Hyperlink		
	<ul> <li>Game controls</li> <li>Direction controls</li> <li>Mute button</li> <li>Menu button</li> <li>OK button</li> </ul>			1
	1x1			1

Question	Answer	Do not accept	Additional	Mark	l
Number			Guidance		l
4 (d)	Any <b>one</b> type of audio from:				l
(i)					l
	<ul> <li>Music/soundtrack</li> </ul>				l
	<ul> <li>Sound effect</li> </ul>				l
	1x1			1	l

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
4 (d)	An explanation such as:			
(ii)	·			
	Specialist equipment might be needed			
	(1) which could be expensive to buy (1)			
	(1) Which could be expensive to buy (1)			
	He might not have specialist/high			
	quality equipment (1) which could			
	result in poor sound recording/			
	background noise (1)			
	<ul> <li>Recording your own sound may be time</li> </ul>			
	consuming (1) which could affect			
	overall timings of the project (1)			
	<ul> <li>Editing the raw sounds would require</li> </ul>			
	specialist software (1) which may take			
	time to learn/be expensive to buy(1)			
	time to learn be expensive to buy(1)			
	The recorded sound might not be as			
	<u> </u>			
	good quality (1) may make the sound			
	difficult to hear/have a negative impact			
	on user experience (1)			
	1+1			2

Question	Number	Indicative Content
4 (e)		References design considerations that affect colour in digital products such as:  Accessibility Colour combinations Media being used to present Gender of audience (e.g. stereotypically boys prefer blue and girls prefer pink) Age of audience - younger audiences prefer brighter/primary colours Purpose of product – a formal product would use more sedate colours Theme/topic – (e.g. A product about wildlife/nature may use more 'earthy' colours such as greens and browns) House style of company that product is for Feelings – Red = angry etc Cultural influences
Level	Mark	Descriptor
	0	No awardable content
1	1-2	Using a number of simple statements the candidate identifies a limited number of design decisions which affect the use of colour. Responses will be general and will most likely focus on audience preference. At this level the candidate is unlikely to give any explanation or examples.  The student uses everyday language but their response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.
2	3-4	The candidate provides a range of examples of how design decisions affect the use of colour when designing a product. The candidate's responses are supported by explanations of how colour is used. The candidate's responses are mostly accurate.  The student uses some specialist terms and their response shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.
3	5-6	The candidate provides a wide range of well chosen examples of how design decisions affect the use of colour when designing a product. The candidate's responses are supported by accurate explanations of how colour is used and the affect it has on audience and purpose of digital products.  The student uses appropriate specialist terms consistently and the response shows good focus and organisation. Spelling, punctuation and the rules of grammar are used with considerable accuracy.

Question	Answer		Do not accept	Additional	Mark
Number				Guidance	
5 (a) (i)	<ul> <li>Any two from:</li> <li>Listen to this page</li> <li>Resizable font</li> <li>Screen reader support</li> <li>ALT text</li> </ul>		'Sound'/'narration' without reference to accessibility function. E.g. to read/explain what is on screen		
	<ul><li>Adjustable fonts</li><li>Alternative colour scheme</li></ul>	1x2			2

Question			Do not accept	Additional	Mark
Number				Guidance	
5 (a)	Award <b>one</b> mark for indentifying a feature and		'Easier to read'	Mark for explanation	
(ii)	one mark for explanation	on:		cannot be gained if a	
				valid feature has not	
	Feature	Explanation		been identified.	
	Font 1 is a sans serif	Easier to tell letters			
	font /has greater	apart.		Accept the reverse	
	letter spacing			wording for feature and	
		Can identify		explanation in relation	
	The letters on font 1	individual		to font 2 (eg 'Font 2 is	
	are not joined	letter/characters		stylised (1) therefore	
		more easily.		harder to tell the	
	The non-cursive style			letters apart (1)').	
	of font 1	More likely to be			
		compatible with			
		screen reader			
	Font 1is non-stylised	software.			
		1+1			2

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
5 (a)	Disability Discrimination Act		Accept: 'Disability	
(iii)	• DDA		Discrimination'	
	1x1			1

Question	Answer	Do not accept	Additional	Mark
Number			Guidance	
5 (a)	Any <b>one</b> benefit from:	'Not getting fined' or any other		
(iv)		answer related to the law.		
	<ul> <li>Allows wider range of users to access their product</li> <li>Product may be more popular as more people can use it</li> <li>Good for company image if products are accessible</li> </ul>			
	1x1			1

5 (b) Explanation of how to test stability. Any four from:  • If product requires data entry enter  extreme/incorrect data (1) to test validation (1)  Test users' without suitable reference to their purpose in the testing of stability	Question Number	Answer	Do not accept	Additional Guidance	Mark
<ul> <li>Intentionally try to perform actions that are not expected by the product (1) to see if planned error message appears/product continues to function (1)</li> <li>Run/load program at same time as other programs (1) to check for resource conflicts (1)</li> <li>Employ test users of varying skill level (1) high skilled user who will intentionally try to 'break' product (1) and low skill user to check that they don't unintentionally cause it to 'break' (1)</li> <li>Get a number of people to the product simultaneously (stress/load testing) (1) to see if the product can continue to function without error (1)</li> </ul>		<ul> <li>If product requires data entry enter extreme/incorrect data (1) to test validation (1)</li> <li>Intentionally try to perform actions that are not expected by the product (1) to see if planned error message appears/product continues to function (1)</li> <li>Run/load program at same time as other programs (1) to check for resource conflicts (1)</li> <li>Employ test users of varying skill level (1) high skilled user who will intentionally try to 'break' product (1) and low skill user to check that they don't unintentionally cause it to 'break' (1)</li> <li>Get a number of people to the product simultaneously (stress/load testing) (1) to see if the product can continue to function without error (1)</li> </ul>	suitable reference to their purpose in the testing of stability		4

Question Number	Answer	Do not accept	Additional Guidance	Mark
5(b) (ii)	<ul> <li>Any two reasons from:</li> <li>Check change/improvement has been successful</li> <li>Check changes made have not effected functionality of other elements</li> <li>Check no corruption/errors have occurred when saving/exporting latest version</li> </ul>			
	1x2			2

Ouestian Number	Indicative Content
Question Number 5 (c)	Candidate provides an explanation of how profiling and background research would be used when designing a website:  Background research:  Investigate existing websites of the same topic/purpose the designer could for example:  Look at websites with similar content in order to see if there are common ways of presenting and using technical language  Identify common elements in style of the websites to ensure the feel of the site is familiar to the user and so provides a good user experience/ or so they can be radically different to create a greater impact on the user  types of functionality in a website could be investigated to ensure that the website they produce is competitive and provides the type of functionality expected by users of this type of site  Either through investigating existing companies or by carrying out market research (polls, questionnaires etc)  Identify the types of device that may access the site, and identify suitable file types that could be used, for example they may need to produce the same app in a format that is suitable for Blackberry, windows, android and iphone.  Identify connection types that would typically be used by users and identify criteria for ensuring your product is accessible for example, will you require a mobile version of your site? What sort of optimisation of webpages and elements will be required?  Investigate how products (apps etc) can be distributed from your site for example will the file download directly to the target device (via site or via a client), or will the user be sent an email containing a link to download the app/file in order to provide a number of possible mirror sites to aid with managing high volume of user traffic,  Investigate typical and expected downloads/number of hits ensure your host and server can

## Profiling

- Either through investigating existing companies or by carrying out market research (polls, questionnaires etc of their targeted market)
  - Identify typical users of the site and their requirements from the site such as:
    - o Description (age, gender, education/skill level etc)
    - Characteristics What is the nature of the user (e.g. younger users may be more likely to get bored so they will require more multimedia content, will require faster loading times etc)
    - o Potential reasons for visiting the site
    - User interests
    - Experiences and expectations Is the user likely to be skilled or unskilled? Are there
      other sites of a similar type out there?
    - o Are particular devices and methods of connecting to the site more popular with a particular or targeted audience group (e.g. does your targeted group make more use of tablets, PC or phone? If so will you optimise the site for access/use on this type of device or connection?
  - The designer would use these to identify design and functionality features of the product for example the style and functionality of the site might be radically different if aimed at young people as opposed to adults.

Level	Mark	Descriptor	
	0	No awardable content	
1	1-2	Using a number of simple statements the candidate identifies ways in which research or profiling is us to ensure a website is fit for purpose. At this level the candidate may just provide features that profili and research could identify with no explanation as to why. No distinction will be made between profilir and research. Little or no reference will be made to the given scenario.	
		The candidate uses everyday language but their response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.	
2	3-4	The candidate identifies some ways that the outcomes of profiling and research could be used to ensure the website is fit for purpose. The candidate provides some description, using examples, of how the outcomes would affect the final product.  The candidate uses some specialist terms and their response shows some focus and organisation.	
		Spelling, punctuation and the rules of grammar are used with some accuracy.	
3	5-6	The candidate identifies a range of ways that the outcomes of profiling and research could be used to ensure the website is fit for purpose. The candidate clearly explains, using well-chosen examples, how each would affect the final product.	
		The candidate uses appropriate specialist terms consistently and the response shows good focus and organisation. Spelling, punctuation and the rules of grammar are used with considerable accuracy.	

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