Now test yourself: answers

Unit 2: Digital authoring concepts
Page 48
1. Advantages (maximum of two):
   - User requirements are clearly established and understood by all parties as there is constant feedback from the end user.
   - User involvement means problems might be identified earlier in the development process, reducing the cost of correction.
   - Involving the end user in the development process gives them ownership of the application and they are more likely to buy into it.

Disadvantages (maximum of two):
   - May increase development time as the end user may have more ideas on requirements.
   - Users may get too involved and interested in one part of the application and other parts may be ignored.
   - Users might be disappointed if all features displayed in the prototype are not included in the final solution.

2. Any three from:
   - Requirements which are necessary for the effective operation of the system.
   - Requirements which are easily measured.
   - Requirements which are easily understood by the customer.
   - Number requirements.
   - Requirements which are easily met given the budget or technological restrictions of the project.

3. An application which can easily be developed by another party using the designs provided.

Page 51
1. Windows – an area on a computer desktop which is presented to the end user showing actions being performed by an application at that moment in time.
   Icons – a small picture presented to the user on screen which represents a shortcut to a task or application.
   Menu – a way of grouping similar or related tasks together in a user interface.
   Pointer – an on-screen icon which moves around on screen in response to the user’s movements of a mouse or tracker pad.

2. Any two from:
   - Makes interaction with applications more realistic.
   - Allows inexperienced users to interact with the application with very little training.
   - Can be used to support interaction for users with limited fine motor control.

3. Any two from:
   - Uses intuitive actions such as tapping or swiping.
   - Supports easy enlargement of content.
   - Supports data input using enlarged keyboards.
4. Any two from:
   - Cross-platform applications support operations across a range of hardware and software platforms. Amendments may be needed to application design in order to ensure it works correctly on different platforms.
   - When versioning applications for different platforms, look to see which parts can be reused and which need to be redeveloped for each platform.
   - Applications should be tested on all target platforms.

5. Any two from:
   - The application should be fully tested on all target platforms.
   - Links to any appropriate plugins etc. should be provided to ensure the application will run on the target platform.
   - Regular updates should be provided to ensure the application is compatible with updated versions of the platform’s operating system.

Page 15
1. Interactive features – any three from:
   - Virtual tours.
   - Memes.
   - Live interactive video or chats.
   - Links to other pages or websites.
   - Twitter feeds.
   (not an exhaustive list)

Multimedia features – any three from:
   - Video clips.
   - Sound clips.
   - Thumbnail images.
   - Animated graphics.

2. Advantages – any three from:
   - Wide range of media for sharing thoughts and ideas.
   - Provides fast and effective means of sharing feelings and ideas about others posts, for example ‘like’ buttons.
   - Provision of hyperlinks between posts allows for easy sharing of content.
   - Often supports interactive messaging and sharing of ideas.

Disadvantages – any three from:
   - Can be slow to load.
   - Can be data heavy in terms of download.
   - Additional plugins may be required to view content.

3. Any three from:
   - Product review.
   - Watch lists.
   - Product/seller ratings.
   - Search facilities.
   - Secure online payment methods.
   - Live bidding and alert systems.
   - Image display tools.
• Shopping carts.

4. Any three from:
   • High quality graphics and sound can support the gaming experience, making the game more realistic.
   • Continued provision of feedback in a range of formats helps keep users interested in the game progress.
   • 3D interaction methods allow users to perform a range of tasks making the game more realistic.
   • Users can customise game characters and settings to make the game more personal to them.
   • Users can adjust camera angles to improve their view of game scenarios and help improve their interaction with the game.

Page 61
1. Good content and folder management means multimedia content is well organised, so if content needs to be updated it can easily be located.
2. Data which describes other data in a multimedia application. For example, in a html document metadata is defined inside the <head> </head> tag.
3. Advantages – any two from:
   • Easy to understand and use and most developers are familiar with it.
   • All browsers support html.
   • It can be used at no cost.
Disadvantages – any two from:
   • It can take a lot of html to produce a basic web page.
   • Html can only be used to create static web pages.
   • If images or other elements are moved between folders then referencing hyperlinks must be updated by the developer.
4. Static web pages end in the extension .htm or .html and the content does not change once it is published.
Dynamic web pages end in the extension .php, .asp or .jsp and the content changes based on input from a user.
5. Cascading style sheets.
6. Any two from:
   • The script can be incorporated into the body of the html between <script> </script> tags.
   • A link to an external script file with a .js extension could be provided in the html for the application.
   • The script could be placed in the <head> section of a html document and it could be activated from within the <body> section of the document.
7. (a) Any two from:
   • Lines of code run one after another from beginning to end.
   • All lines of code are executed.
   • Code is executed in the order it is presented.
(b) Used where only some lines of code need to be executed and only if a particular condition is met. (A suitable example should be included).
(c) Any two from:
• Lines of code to be executed again and again
• Lines of code are held within a loop structure
• It can be repeated a fixed number of times or depending on a condition
• A suitable example must be included.

8. End user’s interactions (mouse click/key press/selection of an option) determines how the application is presented to the user.

Page 70
1. When data is repeated unnecessarily.
2. Accuracy and consistency of data stored in a database.
3. One-to-one; one-to-many; many-to-many.
4. A key field from one table which is included in a secondary table to create a relationship/link between the two tables.
5. Total Fee Due = SUM([Game Rental Fee]) / SUM([GameRentalFee])
   Overall Fee Payable = SUM([Total Fee Due]) / SUM([TotalFeeDue])

Page 74
1. Any three from:
   • Analysis.
   • Design.
   • Implementation.
   • Testing.
   • Installation.
   • Review.
2. Any three from:
   • Task is broken down into smaller, more manageable tasks.
   • Each task undergoes its own life cycle.
   • At the end of each life cycle the builds will be reviewed and changes built into the next iteration.
   • Allows the completed solution to ‘evolve’.
3. Waterfall model – testing does not take place until after the system has been implemented.
   Iterative model – testing is carried out at each stage in the development process or after the development of each iteration.
4. System testers should provide information on any two from:
   • The area of an application they are testing.
   • Steps taken which led to any errors which occurred.
   • How often the error occurred.
   • Any error messages which occurred.
   • Steps taken to resolve the error.
5. See answer for question 3.
6. Any two from:
   • Correct.
   • Incorrect.
   • Null.
   • Extreme.
7. Alpha testing – any two from:
   • Involves simulating the real-world environment an application has been designed for.
   • Those involved are not normally involved in the development process.
   • Carried out before beta testing.

Beta testing – any two from:
   • Carried out after alpha testing and before the final version is released.
   • Invites feedback from the users.
   • Carried out on bugs presenting during the real-world use of the application.

8. (a) Underlying structure of the application is unknown to the tester. Test data is based on user requirements.
   (b) Tests the design structure of the application, and the code is tested to ensure correct output is produced.
   (c) Carried out when all components of the application have been developed and tested as standalone elements. Ensures all individual components work together correctly.

9. Any three from:
   • Navigation.
   • Multimedia asset operation.
   • Load times.
   • Scripted elements.

Page 78

1. Any three from:
   • Purpose of the evaluation.
   • Date and time the evaluation took place and how long it is meant to take.
   • Any previous evaluations of the product and details of the findings of these evaluations.
   • Who was/is involved in the evaluations and what their role is.
   • The stage in the development process the evaluation occurred.

2. Documented results of testing; questionnaires, checklists, transcripts from interviews to show how well user requirements have been met; observations of end users interacting with the application, and end user entries into logs documenting their interactions with the application.

3. To identify any improvements which can be made to a product being developed or to a product which has already been developed. Throughout the design process it helps determine changes needed at an early stage in development.

4. Qualitative requirements relate to the quality of the solution and are subjective (include a suitable example).
   Quantitative requirements relate to the performance of the solution and are easily measured (include a suitable example).

5. A solution which can handle valid data and exceptional data.