

Year 10 BTEC Technical Award in Digital Information Technology

Preview Sheet

Exam Board: Pearson

Component 1: Exploring user interface design principles and project planning techniques

Learning Aim A: Investigate user interface design for individuals and organisations

A1 What is a User Interface?

- Types of UI
- Range of uses
- Hardware and Software

A2 Audience needs

- User skills and demographics
- Accessibility
- Factors affecting the choice of a UI

A3 Design principles

- Colours, Font, Language
- Amount of information
- Layout

- User perception
- Retaining attention
- Intuitive design

A4 Designing an efficient UI

- Shortcuts
- Informative feedback
- Buttons
- Making objects stand out

Learning Aim B – Use project planning techniques to plan and design a user interface

B1 Project planning techniques

- Project planning methodologies
- Project planning tools

B2 Create a project plan

- SMART aims/objectives:
- Audience and purpose
- Project requirements
- Timescales

- Constraints
- Risks

B3 Create an initial design

- Sketches and storyboards
- Include design principles listed in Section A3; user requirements, software requirements; test strategy

Learning Aim C: Develop and review a UI

C1 Develop the UI

- Use the design to produce a UI

C2 Refining the UI

- Get users to test your design
- Make changes from feedback received and document them

C3 Review

- Was it successful? - Strengths and weaknesses of UI design and project planning techniques used

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Component 2 Collecting, Presenting and Interpreting Data

Learning Aim A: Investigate the role and impact of using data on individuals and organisations

A1 Characteristics of data and information

- Converting data into information

A2 Representing information

- Creating simple and complex spreadsheets
- Using text, numbers, tables, charts, infographics)
- Using formula and functions to make calculations (e.g. If, WHATIF, SUM, VLOOKUP, COUNTBLANK, COUNTIF)
- Designing a dashboard
- Linking multiple spreadsheets
- Cell comments
- Conditional formatting
- Hiding cells
- Freezing panes
- Filtering
- Charts to present data

A3 Ensuring data is suitable for processing

- Use validation (range, type, lookup, data type, presence and length)

A4 Data collection

- Collection methods (primary and secondary)
- Data collection features
- Big Data

A5 Quality of information and its impact on decision making

- Factors affecting quality (e.g. collection method, age, accuracy, completeness, amount of detail, format, volume)

A6 Sectors that use data modelling

- Types of sectors (e.g. transport, retail, banking)
- Data modelling in decision making (e.g. which customers to target for advertisements, where to deploy staff during busy periods)

A7 Threats to individuals

- invasion of privacy
- fraud
- targeting vulnerable groups of people
- inaccurate data could be stored