

Cambridge TECHNICALS LEVEL 3

IT

Cambridge
TECHNICALS
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MAPPING GUIDE

Unit 6 Application Design

Version 1



INTRODUCTION

Prodigy are delighted to work with OCR, a progressive Awarding Organisation, who share the ambition of providing high-quality qualifications, learning solutions that are industry-led and reliable and valid assessment. The Cambridge Technicals in IT qualifications provide 'future-ready' skills for a learner to further their ambitions, whether that is in terms of further academic study, enter an apprenticeship or as a springboard to gaining employment.

Prodigy Learning (Prodigy) is an award-winning EdTech business providing digital skills certifications and learning solutions for a range of technologies including Adobe, Autodesk and Microsoft. Established in 2000, Prodigy now have offices in Dublin, London and Sydney. Having worked closely with Microsoft since 2000, Prodigy is a Microsoft Authorised Education Gold Partner and a MS Global Training Partner supporting academic institutions utilise Microsoft Imagine Academy, Microsoft certifications and other Microsoft Education solutions.

Historically, the UK has thrived on a rich research and technology base and has been at the forefront of global technology innovation. Enthusing young learners about following exciting careers in science, technology, engineering and mathematics (STEM) subjects is fundamental to maintaining this success. However, currently the UK has a widely acknowledged skills gap in the pipeline of talent studying computing-related disciplines. Therefore, providing high quality, engaging and relevant qualifications that equip learners with current technical knowledge and skills is essential to encourage more young people into the computing discipline, and moreover to ensure they progress to jobs in the sector.

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3. Understanding General Software Development

	3.1. Understand application life cycle management. This objective may include but is not limited to:	3.1.1 phases of application life cycle management	3.1.2 software testing	3.2. Interpret application specifications. This objective may include but is not limited to: reading and translating application specifications into prototypes, code, and components
1.1.1 Application development models divide the process of development into distinct phases. These vary depending on the model but all include, in some form stages: requirement analysis	X	X	X	
1.1.2 Application development models divide the process of development into distinct phases. These vary depending on the model but all include, in some form stages: design	X	X	X	
1.1.3 Application development models divide the process of development into distinct phases. These vary depending on the model but all include, in some form stages: implementation/coding	X	X	X	
1.1.4 Application development models divide the process of development into distinct phases. These vary depending on the model but all include, in some form stages: testing	X	X	X	
1.1.5 Application development models divide the process of development into distinct phases. These vary depending on the model but all include, in some form stages: deployment	X	X	X	

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	3.1. Understand application life cycle management. This objective may include but is not limited to:	3.1.1 phases of application life cycle management	3.1.2 software testing	3.2. Interpret application specifications. This objective may include but is not limited to: reading and translating application specifications into prototypes, code, and components
1.1.6 Application development models divide the process of development into distinct phases. These vary depending on the model but all include, in some form stages: maintenance	X	X	X	
1.2.1 Characteristics and features of application development models: waterfall model	X	X	X	
1.2.2 Characteristics and features of application development models: iterative model	X	X	X	
1.2.3 Characteristics and features of application development models: agile development model	X	X	X	
1.2.4 Characteristics and features of application development models: rapid application development (RAD) model	X	X	X	
1.2.5 Characteristics and features of application development models: spiral model	X	X	X	
1.2.6 Characteristics and features of application development models: prototype model	X	X	X	X
4.4.1 Prototyping - purpose of prototyping				X
4.4.2 Prototyping - features of prototyping				X
4.4.3 Prototyping - interviewing and questioning techniques				X
4.4.4 Prototyping - development formats				X

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5. Understanding Desktop Applications

	5.1.1 application lifecycle	5.1.3 visual inheritance	5.1.4 UI design
3.1.3 The use of diagrams to represent aspects of the design of an application - user interface designs (e.g wireframe diagrams and graphical mock-ups)	X	X	X

6. Understanding Databases

	6.1.2 database design	6.1.3 Entity Relationship Diagrams (ERDs)	6.1.4 normalization concepts
3.1.2 The use of diagram to represent aspects of the design of an application - processing and data handling (e.g flowcharts, data flow diagrams, class diagrams, object diagrams, entity relationship diagrams)	X	X	X

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3. Format the User Interface by Using CSS

	3.1.1 separating presentation from content –create content with HTML and style content with CSS	3.1.2 managing content flow - inline vs. block flow	3.1.3 managing positioning of individual elements – float vs. absolute positioning	3.1.4 managing content overflow – scrolling, visible, and hidden	3.1.5 basic CSS styling	3.2.1 using flexible box and grid layouts to establish content alignment, direction, and orientation	3.2.2 proportional scaling and use of “free scale” for elements within a flexible box or grid	3.2.3 ordering and arranging content	3.2.4 concepts for using flex box for simple layouts and grid for complex layouts	3.2.5 grid content properties for rows and columns; using application templates
3.2.5 Standardisation of design - standard interface widgets (appearance of buttons, dropdown menus, hyperlinks)	X	X	X	X	X	X	X	X	X	X
3.2.6 Standardisation of design - common user interface layouts, icons and labels throughout application	X	X	X	X	X	X	X	X	X	X

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	3 .3.1 regions and using regions to flow text content between multiple <div> sections – content source, content container, dynamic flow, flow-into, flow-from, msRegionUpdate, msRegionOverflow, msGetRegionContent()	3.3.2 columns and hyphenation and using these CSS settings to optimize the readability of text; using “positioned floats” to create text flow around a floating object	3.4. Manage the graphical interface by using CSS. This objective may include but is not limited to:	3.4.1 graphics effects -rounded corners, shadows, transparency, background gradients, typography, and Web Open Font Format	3.4.2 2D and 3D transformations – translate, scale, rotate, skew, and 3D perspective transitions and animations	3.4.3 SVG filter effects; Canvas
3.2.5 Standardisation of design - standard interface widgets (appearance of buttons, dropdown menus, hyperlinks)	X	X	X	X	X	X
3.2.6 Standardisation of design - common user interface layouts, icons and labels throughout application	X	X	X	X	X	X



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