



Australian Government

ICTPRG535 Build advanced user interfaces

Release: 1

ICTPRG535 Build advanced user interfaces

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to design, build and test an advanced user interface (UI), including interaction techniques, rich controls, improved client-side validation, customisation and personalisation, graphics and multimedia.

It applies to individuals who work as user-interface designers and software developers and are responsible for managing and implementing complex UI design.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Programming and software development

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan UI design	1.1 Determine client technology, development tools, and platforms according to UI solution 1.2 Review conceptual design with required personnel and seek and respond to feedback 1.3 Design and document UI layout and structure according to UI requirements
2. Implement interaction techniques	2.1 Apply interaction design patterns according to UI design plan 2.2 Implement client-side validation according to UI requirements 2.3 Demonstrate alignment of implement interactions against UI design plan
3. Build customisable and	3.1 Build customisable UI and allow users to select their own

ELEMENT	PERFORMANCE CRITERIA
personalised UI	customised version of the underlying application 3.2 Build personalised UI according to UI design plan task requirements 3.3 Demonstrate alignment of personalised UI to UI design plan 3.4 Implement required updates and confirm improvement to user experience
4. Implement graphics and multimedia	4.1 Create and display the graphics according to UI requirements 4.2 Add required multimedia content to the application 4.3 Demonstrate alignment of implementing graphics against UI design plan

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Numeracy	Selects from, and applies, an expanding range of mathematical and problem-solving strategies in a range of contexts, when designing layout and structure
Reading	Interprets, and critically analyses, complex texts and applies the required strategies to construct meaning from complex texts, when reading and interpreting technical information, and determining suitable technology and tools
Writing	- Prepares documentation, expressing ideas and exploring complex issues using relevant industry language - Writes and edits computer code, and technical data using correct syntax and logical flow
Planning and organising	Uses nuanced knowledge of context to demonstrate knowledge of anomalies and subtle deviations to normal expectations, focusing attention and remedying problems as they arise
Problem solving	Understands the key principles and concepts underpinning the design, and operation, of digital systems and tools, and applies these when troubleshooting existing technology
Technology	Seeks to understand the potential of new technology, in the context of implementing interaction, and customisable features, and graphics and multimedia, into the UI

Unit Mapping Information

Supersedes and is equivalent to ICTPRG505 Build advanced user interface.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTPRG535 Build advanced user interfaces

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- design and build an advance UI design.

In the course of the above the candidate must:

- determine an organisation's technology, development tools, and UI platform
- apply advanced techniques in order to create a complex user interface (UI).

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- concepts of programming that may be used to build advanced user interfaces, including:
 - client-side programming
 - object-oriented programming
 - web design programming in hypertext markup language (HTML), cascading style sheet (CSS), and JavaScript
- UI prototyping techniques and purpose.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- integrated development environment (IDE)
- the client system, and the server system
- multimedia tools

- a solution to apply UI design
- required interface and hardware device
- required tools, software and licences required for UI implementation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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