



**Australian Government**

# **ICTPRG410 Build a user interface**

**Release: 1**

# ICTPRG410 Build a user interface

## Modification History

| Release   | Comments                                                                                                     |
|-----------|--------------------------------------------------------------------------------------------------------------|
| Release 1 | This version first released with ICT Information and Communications Technology Training Package Version 1.0. |

## Application

This unit describes the skills and knowledge required to design, build, and test a user interface (UI) to specification, including command-line interfaces (CLI), graphical user interfaces (GUI), web user interfaces (WUI) and natural user interfaces (NUI).

It applies to individuals who work as user-interface designers, and are responsible for specifying the layout and style of the desired user interface. They may be developers working in the area of user interface design and implementation.

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. Build a prototype user interface (UI)         | 1.1 Gather the requirements for the UI<br>1.2 Determine the application development language for writing the UI<br>1.3 Build a prototype, using the prototyping tools available in the determined language<br>1.4 Review the UI prototype with the client, and edit as required |
| 2. Design the UI                                 | 2.1 Formulate the application content flow<br>2.2 Design the UI components                                                                                                                                                                                                      |

| ELEMENT                                       | PERFORMANCE CRITERIA                                                                                                                                  |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               | 2.3 Define UI actions<br>2.4 Itemise UI events                                                                                                        |
| 3. Build the UI                               | 3.1 Determine the appropriate language<br>3.2 Build the UI with the required functionality                                                            |
| 4. Test the UI                                | 4.1 Test the UI for overall functionality, according to requirements<br>4.2 Iterate the UI design, or build, until the test results meet requirements |
| 5. Document the UI and obtain client sign-off | 5.1 Document the user requirements<br>5.2 Document the UI<br>5.3 Obtain client sign-off to the completed UI                                           |

## Foundation Skills

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

| Skill                      | Performance Criteria                 | Description                                                                                                                                                                                                                                                                                              |
|----------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading                    | 3.2                                  | <ul style="list-style-type: none"> <li>Applies appropriate strategies in order to construct meaning from complex texts, when reading technical data</li> </ul>                                                                                                                                           |
| Writing                    | 5.1-5.3                              | <ul style="list-style-type: none"> <li>Displays a knowledge of structure and layout, employing a broad vocabulary, grammatical structure and the conventions appropriate to text</li> </ul>                                                                                                              |
| Numeracy                   | 2.2                                  | <ul style="list-style-type: none"> <li>Selects from, and applies, an expanding range of mathematical and problem-solving strategies</li> </ul>                                                                                                                                                           |
| Navigate the world of work | 5.1-5.3                              | <ul style="list-style-type: none"> <li>Recognises and follows explicit, and implicit, protocols, and meets expectations associated with own role when documenting user requirements, and gaining sign-off</li> </ul>                                                                                     |
| Interact with others       | 1.4                                  | <ul style="list-style-type: none"> <li>Participates in complex formal and informal conversations relevant to own role, initiating and taking the lead where appropriate</li> </ul>                                                                                                                       |
| Get the work done          | 1.1-1.4, 2.1-2.4, 3.1, 3.1, 4.1, 4.2 | <ul style="list-style-type: none"> <li>Uses a combination of formal, logical planning processes, and an increasingly intuitive understanding of context, to identify relevant information and risks, identify and evaluate alternative strategies, and resources, when gathering requirements</li> </ul> |

|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  | <ul style="list-style-type: none"><li>• Uses systematic, analytical processes, setting goals, gathering relevant information, and identifying, and evaluating options against the agreed criteria</li><li>• Uses analytical processes to decide on a course of action, establishing the criteria for deciding between options</li><li>• Actively identifies systems, devices and applications with the potential to meet current and/or future needs</li><li>• Utilises a broad range of features within applications to improve personal productivity, optimising software functions</li></ul> |
|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Unit Mapping Information

| Code and title<br>current<br>version   | Code and title<br>previous<br>version   | Comments                                                    | Equivalence<br>status |
|----------------------------------------|-----------------------------------------|-------------------------------------------------------------|-----------------------|
| ICTPRG410<br>Build a user<br>interface | ICAPRG410A<br>Build a user<br>interface | Updated to<br>meet<br>Standards for<br>Training<br>Packages | Equivalent<br>unit    |

## Links

Companion Volume implementation guides are found in VETNet -

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

# Assessment Requirements for ICTPRG410 Build a user interface

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## Performance Evidence

Evidence of the ability to:

- design a fully functional user interface (UI) in consultation with the user, using the determined language
- create a prototype UI
- review the prototype with the user
- build the UI
- test that the UI is complete, consistent and functional
- document the user requirements, UI and client sign-off.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

## Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- apply a range of basic mathematical strategies
- use object-oriented programming
- use open-source development tools
- describe the process of small-size application development.

## Assessment Conditions

conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the programming and software development industry, and include access to:

- the internet, to use the online tools available for prototyping and UI design
- an integrated development environment (IDE) for the determined language
- specific tools and licenses available, depending on the particular platform including:
  - Windows

- Linux
- Unix
- Mac
- Google Chrome.

Assessors must satisfy NVR/AQTF assessor requirements.

## **Links**

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