



Australian Government

Assessment Requirements for ICTPRG532 Apply advanced object-oriented language skills

Release: 1

Assessment Requirements for ICTPRG532 Apply advanced object-oriented language skills

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 4.0.

Performance Evidence

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

- Plan, implement, test, and handover one application, using two object-oriented languages, including the ability to:
 - implement nested classes
 - design and implement dynamic data structures including a doubly linked list and a binary tree
 - design and implement a data structure utilising a hash function
 - compare three sorting algorithms
 - select and implement a sorting algorithm and a comparator
 - compare three search algorithms
 - select and implement a search algorithm
 - implement two inter-process communication mechanisms
 - select and implement a search algorithm
 - implement a graphical user interface with:
 - drag and drop
 - help files
 - 2D graphics
 - utilise an architectural framework and third party library
 - implement a client-server application including data transfers
 - create tests and debug an application
 - document code
 - utilise a version control system for code and documentation management
 -

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

- Architectural framework for web-enabled application development
- Inter-process communication mechanisms
- Development methodologies for large-size applications
- Testing techniques as applied to distributed application development
- Design patterns
- Graphical user interface design principles
- Client-server model
- Dynamic data structures and associated space and time complexities
- Hash functions and data structures using hash functions and associated space and time complexities
- Sorting algorithms and associated time complexities
- Search algorithms and associated time complexities
- Programming language features and syntax
-

Assessment Conditions

Skills must be demonstrated in a workplace or simulated environment where conditions are typical of those in an ICT working environment or ICT workplace. This includes:

- Database management system (DBMS)
- Networked computers
- Integrated development environment
- Debugging tools
- System specifications including problem descriptions
- Organisational code conventions
- Organisational documentation conventions
- Individual user
- Access to third party libraries and related documentation
- Access to architectural frameworks and related documentation
- Access to version control system

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

Links

Companion Volume Implementation Guides are available from VETNet -

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