Australian Government

Department of Education, Employment and Workplace Relations

ICAPRG407A Write script for software applications

Release: 1

INDUSTRY SKILLS COUNCILS

Creating Australia's Future

ICAPRG407A Write script for software applications

Modification History

Release	Comments
Release 1	This Unit first released with *ICA11 Information and Communications Technology Training Package version 1.0*

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to plan, design and build scripts using a scripting language to construct a highly interactive and automated software application.

Application of the Unit

This unit applies to individuals who build and integrate interactive applications or websites for internal and public sites.

These individuals may work as an application developer, application support, programmer specialised in a scripting language, web application programmer, and web developer.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	**Performance Criteria**
Elements describe the essential outcomes of a unit of competency.	*Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.*

Elements and Performance Criteria

1. Determine the requirements of building script	1.1 Identify the main characteristics of ***scripting languages*** 1.2 Identify and use a ***framework*** and ***integrated development environment*** (IDE) to build script using the chosen scripting language 1.3 Identify the ***protocols*** and ***object model*** used in the chosen scripting language
2. Design script	2.1 Create pseudo code to describe the logic needed in the script 2.2 Review pseudo code for missing logic and error
3. Write script	3.1 Translate pseudo code into scripts incorporating the use of ***basic language elements*** 3.2 Create internal documentation in the script 3.3 Incorporate ***item*** manipulation using the chosen scripting language 3.4 Review, debug, and document script

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
  - liaise with developers on programming matters
  - seek requirements and information from business and technical experts
- literacy skills to:
  - read and interpret program specifications developed by business and technical experts
  - read and interpret technical documentation
  - write a basic documentation
- problem-solving skills to apply basic debugging techniques in the context of software and application development
- research skills to:
  - locate and interrogate complex and varied sources of information
  - source information
- technical skills to:
  - develop a small scale application
  - perform basic operations of a computer system.

Required knowledge

- overview knowledge of:
  - computing platforms
  - copyright and intellectual property
  - software development life cycle
- processes and techniques related to small-size application development.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • design, write, and integrate scripts into software solutions to accommodate specified requirements, such as data manipulation and data automation • use a framework and IDE in developing scripts.
Context of and specific resources for assessment	Assessment must ensure access to: • requirements of the brief, including those relating to client and functionality • runtime environment, such as a scripting engine to execute and test script • development environment to create and debug script • scripting language, such as application programming interface (API) • appropriate learning and assessment support when required • modified equipment for people with special needs.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • evaluation of ability to create: • dynamic (web) application with automatic elements generation, interactive user input, and persistent information storage • macros to automate routine manual tasks such as report generation.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate. Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be

	combined with targeted questioning to assess required knowledge.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Scripting languages may include:	• application scripting language: • visual basic for applications (VBA) • web scripting languages: • client-side scripting languages: • ActionScript • JavaScript • Jscript • VBScript • server-side scripting languages: • ASP.NET • ColdFusion • JSP • Perl • PHP • Python.
Framework may include:	• catalyst • django • flex • jQuery • mach-II • .NET framework • spring • struts • yii.
Integrated development environment may include:	• FlashBuilder • Microsoft Office • NetBeans • Visual Studio • .NET.
Protocols may include:	• file transfer protocol (FTP) • file transfer protocol secure (FTPS) • hypertext transfer protocol (HTTP) • hypertext transfer protocol secure (HTTPS)

	• secure sockets layer (SSL).
Object model may include:	• component object model (COM) • data-access object (DAO) model • document object model (DOM) • VBA object model.
Basic language elements must include:	• data flow statements such as conditional statements and iteration statements • data types • expressions • functions • operators • variables.
Item may include:	• browser • cookie • database • device • text file • spreadsheet • eXtensible markup language (XML) documents.

Unit Sector(s)

Programming and software development