



Australian Government

ICTGAM420 Produce interactive games

Release: 1

ICTGAM420 Produce interactive games

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 produce interactive games using an industry standard authoring tool.

It applies to individuals who work in the game development industry and support the design, development and programming of basic digital games as part of a larger development team.

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

Unit Sector

Game 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. Identify game requirements and component assets	1.1 Obtain project brief and documents 1.2 Identify industry standards and organisational guidelines applicable to game production 1.3 Identify technical specifications and game-production assets needed according to creative and production requirements 1.4 Discuss and evaluate asset formats and issues of asset integration with required personnel 1.5 Select and save all digital assets in required format and store according to organisational procedures 1.6 Determine development sequence of a beta version prototype 1.7 Create a production and testing schedule according to

ELEMENT	PERFORMANCE CRITERIA
	organisational procedures 1.8 Determine strategies in monitoring production progress against schedule
2. Identify, evaluate and select game-engine software and tools	2.1 Identify and review a range of industry standard game-engine software and development tools available 2.2 Assess and evaluate game-engine software and tools applicable to specified game concepts and play requirements with required personnel 2.3 Select the game-engine software and tools according to game and production requirements
3. Create a game-play sequence and prototype using game-engine software	3.1 Load a game engine including sound and game play 3.2 Create and name a new file according to specified task 3.3 Display and use software tools and features required in game production process 3.4 Achieve a unique function using a custom created code 3.5 Import and assemble game-play assets in required sequence, according to creative and technical requirements 3.6 Create and check game-play elements according to creative and technical requirements 3.7 Test and run game-play sequence as a presentation and confirm sequence meets creative, production and technical requirements 3.8 Export to game engine and create a prototype 3.9 Save in required file formats according to organisational procedures
4. Evaluate and reiterate game prototype	4.1 Demonstrate and present initial prototype to required personnel 4.2 Evaluate against criteria including achievement of a creative and user-friendly product 4.3 Discuss and agree on required changes and amend prototype accordingly 4.4 Assist in tests and user trials 4.5 Evaluate feedback from user trials 4.6 Confirm endorsement from required personnel to develop the prototype into a complete product

ELEMENT	PERFORMANCE CRITERIA
5. Transform prototype into a final proof-of-concept prototype	5.1 Make required changes as indicated by user trials and develop prototype into complete product 5.2 Integrate all game elements as required by specifications 5.3 Review and perform final checks, confirming all sequences conform to the navigation design 5.4 Save into specified storage systems according to organisational procedures 5.5 Obtain final sign-off from required personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	• Uses positive and negative whole numbers, decimals, degrees and percentages when setting measurement, scale, coordinates, colour, shading, timing and other parameters in development of interactive games
Oral communication	• Uses listening and questioning techniques to elicit views, obtain information and presenting solutions using industry language for intended audience
Reading	• Interprets and comprehends information in diagrams, storyboards, objects and images and identifies required software, resources, assets and user needs • Identifies signs, symbols, pictures, jargon, abbreviations, computer generated text, numbers, letters and coding syntax required in operating game engines
Writing	• Prepares documentation expressing strategies and game design using appropriate structure, layout and technical programming language
Teamwork	• Cooperates with others and contributes to work practices where joint outcomes are required
Initiative and enterprise	• Uses creativity and initiative in design
Problem solving	• Assesses, tests and modifies product according to client and technical requirements
Self-management	• Makes routine decisions and implements standard procedures in routine tasks

SKILL	DESCRIPTION
	• Uses formal decision-making processes in more complex and non-routine situations • Identifies importance of secure information in relation to own work and takes responsibility for data integrity, storage and management
Technology	• Uses digital systems and tools and completes routine tasks

Unit Mapping Information

Supersedes and is equivalent to ICTGAM401 Produce an interactive game.

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 ICTGAM420 Produce interactive games

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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:

- create an interactive game using an industry standard game-engine software and development tools.

In the course of the above, the candidate must:

- follow applicable industry standards and organisational guidelines
- apply a variety of strategies in game trialling and testing
- implement game development and production strategies
- maintain the integrity of design brief and game design document
- save final product and obtain sign-off from required personnel.

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:

- basic programming techniques that may be used for interactive game development
- game engine capabilities and constraints
- industry standard game-play hardware and software products
- technical constraints hardware and software impose on design and development
- risk and critical path management, applicable to interactive game development
- game production testing and trialling process
- the process of evaluating game prototypes from technical, design and game play perspectives
- industry standards and organisational guidelines applicable to game production
- game-production assets and issues with asset integration.

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:

- project briefs
- applicable organisational documentation
- game-production assets
- technical specifications
- game production testing and trialling tools
- industry standard game-engine software and development tools
- required industry-standard hardware, software and peripheral devices.

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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