

Qualification details			
<b>Training Package Code and Title:</b>	<b>ICT - Information and Communications Technology (Release 7.0)</b>		
<b>Qualification National Code and Title:</b>	ICT40120 Certificate IV in Information Technology (Gaming Development)	<b>State code:</b>	BFF9
<b>Training Package Code and Title:</b>	<b>CUA - Creative Arts and Culture Training Package (Release 5.1)</b>		
<b>Qualification National Code and Title:</b>	CUA41220 Certificate IV in Screen and Media (Animation, Gaming, and Visual Effects)	<b>State code:</b>	BGS2

<b>Assessment Title</b>	<b>AT03 Gamification Project</b>		
<b>Unit National Code &amp; Title</b>	ICTGAM420 Produce interactive games (Release 1) ICTGAM421 Identify and apply games design and game play principles (Release 1)		
<b>Date Due</b>	<b>Session 17</b>	<b>Date Received</b>	

<b>Student Name</b>		<b>Student ID</b>	
<b>Student Declaration</b>	I declare that the evidence submitted is my own work: .....		

<b>Assessor Name</b>			
<b>Assessment Decision</b>	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Not Yet Satisfactory	
<b>Assessor Signature</b>		<b>Date</b>	
<b>Is student eligible for reassessment (Re-sit)?</b>	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<b>Reassessment Date:</b>

Feedback to student			
Via Blackboard (LMS) – Please check [Grade] section.			
Feedback from student			
Via Blackboard (LMS) – Please use [Comment] section during submission.			
<b>Student signature</b>		<b>Date</b>	

### Assessment Instructions

#### TO THE ASSESSOR

Type of Assessment	<i>Project</i>
Duration of Assessment	<i>9 sessions (session 9 – session 17)</i>
Location of Assessment	<i>In classroom (computer lab), at home</i>
Conditions	<p><i>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.</i></p> <p><i>This includes access to:</i></p> <ul style="list-style-type: none"><li>• <i>project briefs</i></li><li>• <i>applicable organisational documentation</i></li><li>• <i>game-production assets</i></li><li>• <i>technical specifications</i></li><li>• <i>game production testing and trialling tools</i></li><li>• <i>industry standard game-engine software and development tools</i></li><li>• <i>required industry-standard hardware, software and peripheral devices</i></li><li>• <i>the internet</i></li><li>• <i>required hardware and software required in researching games and the games industry</i></li></ul> <p><i>Learners are required to complete the required tasks and submit the required evidence electronically via Blackboard.</i></p>
Elements and Criteria	<p>As detailed in the assessment plan.</p> <p>You are required to make sure that all students meet the elements, performance criteria and foundation skill items as outlined in the provided checklist.</p>

### TO THE STUDENT

#### Purpose of Assessment

You are required to show you can:

##### *ICTGAM420 Produce interactive games*

- Identify game requirements and component assets
- Identify, evaluate and select game-engine software and tools
- Create a game-play sequence and prototype using game-engine software
- Evaluate and reiterate game prototype
- Transform prototype into a final proof-of-concept prototype

##### *ICTGAM421 Identify and apply games design and game play principles*

- Analyse and document characteristics of various game genres
- Interpret consumer demographics in various games products
- Identify industry game-design principles
- Outline development of games

You are required to meet the elements, performance criteria and foundation skill items as outlined.

#### Allowable Materials

Blackboard (Topic by topic) will include the following: Weekly Readings, Class notes, and Weekly Activities.

Internet resources must be recorded as references for the assessment.

#### Required Resources

##### *Computer with:*

- *Internet Access*
- *Word processing software*
- *Access to Learning Management System (LMS)*
- *Version control software (Git and SourceTree)*
- *Game-engine software (Unity)*

#### Reasonable Adjustment

In some circumstances, adjustments to assessments may be made for you. If you require support for literacy and numeracy issues; support for hearing, sight or mobility issues; change to assessment times/venues; use of special or adaptive technology; considerations relating to age, gender and cultural beliefs; format of assessment materials; or presence of a scribe you need to inform your lecturer.

#### Assessment Submission

*All activities must be attempted.*

*Use of research tools and peers in formulating answers are acceptable – but work submitted must be your own work and must not be plagiarised.*

*Final files and documentation are to be uploaded to the appropriate area in the Blackboard course created for this unit.*

*If you are marked as NYS (Not Yet Satisfactory) on your first attempt, you will be provided with another opportunity to re-attempt the assessment.*

#### Project contents

This project consists of the following tasks:

- Conduct pre-production processes
- Create a prototype of a gamified application
- Peer review prototype
- Conduct user trials
- Produce a gold-master of a gamified application

### Production Diary Documentation Guidance\Requirements:

Throughout the assessment task you are required to research, gather ideas, document examples, evaluate techniques, gather inspiration, up-skill, experiment with game development techniques, plan production strategies, reflect on your performance, and undertake professional conversations.

Production documentation should include (but is not limited to) a game design document, project management software specifically created for monitoring game production projects (such as Hack n Plan), and a version control repository (such as GitHub). Your production documentation should feature research findings, design and development notes, textual explanations and reviews, written records of conversations, production tasks and timelines, visual references (such as images and videos), links, and other types of media.

There is an expectation that all visual content is supplemented by supporting written documentation to provide a clear overview of intent.

Your final production documentation must clearly show that you have evidence to support the outlined requirements for each part included in this assessment. All production documentation needs to contain evidence for all assessment requirements to be considered complete.

### Scenario:

For about two months you have been working as a game designer for Immersive Studios, a local digital media studio. You have demonstrated your expertise and workplace competency by producing a small internal video game project, and the studio manager is now ready to assign you to the production of a small client project. For the most part, the client projects currently active within the studio are all interactive 'gamified' applications – where the design principles of video games are applied to other interactive applications that have not been created primarily for the purpose of entertainment. As you are still an entry level game developer and there are several active client projects being worked on within the studio, your manager has again given you the choice of selecting an active client project that best suits your skills and knowledge.

### Criteria:

You will need to select one of the active client projects as detailed in the 'AT03 Client Projects' folder on BlackBoard (Introduction to game design > Assessment > AT03 Client Projects). Each project provides a game brief detailing all of the creative and technical requirements and specifications for the gamified application being created.

At the steps that require you to verbally consult and gain verbal feedback, your lecturer will play the role of the **studio manager** who is supervising your work for Immersive Studios. You will need to provide the studio manager with remote access to your project repository.

### Part 1 – Conduct pre-production processes

1. As specified in the criteria section of this assessment, you will need to select one of the active client projects outlined within the 'AT03 Active Projects' directory on BlackBoard. Once you have selected a client project to produce, download the associated client brief and any other provided production documentation. The client brief will need to be included in your assessment submission as a supplement to your production diary, so that the project you have selected can be identified.

2. To ensure you have a clear understanding of the gamified application you are producing for the client, you will need to research the gameplay elements and objectives for different genres of video games and gamified applications. Identify, analyse, and review at least one (1) genre of video games relevant to the gamified application you will be producing. In your review of the genre explain the core mechanics and other gameplay elements it is typically associated with, and describe the player objectives typically presented in the genre. Document the findings of your analysis and review in your production diary.
3. In order to produce an application that efficiently fulfils its intended purpose, it is critical to build a clear understanding of the primary audience(s) it will be built for. In your production diary identify the primary target market that the gamified application is being produced for, and clearly describe the relationship between the intended purpose of the application and the needs of the market.
  - a) After you have identified and described the primary demographic for the application, you need to understand the motivations of the market. Research the consumer choices and patterns for the target demographic(s) of the application, and in your production diary describe your interpretation of these choices and patterns and how they may impact the marketing of the product.
4. With an understanding of the genre and target demographics relevant to your selected gamified application, you need to determine how your selected project can be 'gamified'. Research and identify at least two (2) game design principles and two (2) gameplay strategies, and in your production diary outline how they can be applied to your selected project.
5. In order to efficiently maintain and monitor the production cycle, you must consider the industry standards and organisational guidelines that need to be followed throughout production. In your production diary outline the guidelines for version control and project management that will be followed throughout the production of the project.
  - a) Describe how version control (such as Git) and other relevant software (such as GitHub or SourceTree) will be used to maintain the integrity of the project files during production. Here you must include a link to a software repository you have created for storing the project files throughout production.
  - b) Describe how agile project management software (such as Hack 'n' Plan) will be used to monitor and maintain the progress of production for the project.
6. It is important to create a production and testing schedule for the development of the project so that you can track production progress and prioritise your work accordingly. Use relevant project management software (such as Hack 'n' Plan) to organise and maintain a schedule for production and testing throughout the development cycle of the project.
  - a) To build an effective schedule you will need to ensure that you have identified all of the required technical specifications for the gamified application, as well as the assets that need to be sourced and/or produced. For each of the tasks and tests being generated and managed through project management software, ensure you include all of the required details as according to the creative and production requirements of the project.
  - b) Your schedule will need to outline the development sequence for the construction of a beta prototype of your selected project. Use relevant features and tools provided by your project management software in order to create and plan iterative phases of production (sprints) for the entire production cycle.
7. With the different types of assets required for the application identified and a list of required assets defined, you will need to consider the standards and procedures for implementing the asset files within a game engine. Meet with the studio manager to

- evaluate various types of file formats for different types of assets, and discuss potential issues that may be encountered when integrating the assets into a game engine.
8. After determining the required assets and the specifications for their file formats, you may now begin to generate original assets or source and select existing ones as necessary. Download the Unity package file provided for your selected client project (e.g. 'RealEstateWalkthrough.unitypackage') from the 'AT03 Client Projects' directory on BlackBoard, which contains the scripts required to define the core functionality of the project. Visual and audio assets may be sourced and downloaded from a third party, provided that the assets have been released under the CC0 or CC-BY copyright licensing terms. All third party assets must have their original sources documented in your production diary. All assets must be stored in an appropriate version control repository so they are ready for production.
  9. To ensure that production runs smoothly it is important to ensure you have considered how you will maintain the progress of production against the planned progress outlined in the schedule. In your production diary describe at least two (2) strategies that you will use throughout production to actively monitor the actual production progress against the planned production progress.
  10. The final element of pre-production that needs to be defined is the game-engine software that will be used to construct the application. There are many commercial game-engines available to choose from, with each having different strengths and weaknesses. As such it is important to research and consider the tools and features provided by different game-engines in relation to the concepts of your selected project, to determine which engine is most suitable for producing the gamified application you will be developing. In your production diary evaluate at least two (2) different game-engines available for commercial use, describing their strengths and weaknesses as well as some of the unique tools and features they provide.
  11. Once you have assessed the strengths and weaknesses of at least two different game-engines, it is important to consider how suitable they will be in the implementation of your selected project. Meet with the studio manager to evaluate your research findings, and assess which game-engine will be most suitable to produce the project and its corresponding gameplay requirements. Select the most suitable game-engine software for production based on the outcomes of the discussion.

## Part 2 – Create a prototype

1. Now you will need to use your selected game-engine software to create a prototype for your selected client project. Load the game-engine software using the appropriate processes, create a project with a suitable configuration for development of the application, and then use the tools and features provided by the game-engine software to implement the required gameplay and sound for the project.
2. Although you have been provided with most of the scripts required to generate the functionality for your selected client project, you will need to write a small amount of custom code in order to integrate at least one (1) of the unique gameplay functions/mechanics outlined in the client brief of your selected project.
  - a) The custom script files you write will need to be named appropriately according to the nature of the unique gameplay functionality being implemented (e.g. a C# script for a UI mini-map would be called something like 'MiniMap.cs').
  - b) Each custom script you write will need to include a code comment at the top of the script detailing your name and the date that the script was last updated.
3. As you import and assemble the assets and gameplay for the application, it is important to ensure you are completing production tasks efficiently by following a logical sequence. Import and assemble the required assets and gameplay for the application in a logical



sequence as according to creative and technical requirements of the project, to ensure that issues encountered in production are minimized.

- a)** As various gameplay elements are implemented, test and check them against the creative and technical requirements of the project to ensure all specifications have been met.
- 4.** Once you are satisfied with the state of gamified application prototype you will need to export it from the game-engine in order to create a build that can run on the desired platform(s). Using your selected game-engine, follow the appropriate processes for compiling an executable version of the gamified application. Save the build of the prototype in an independent directory ensuring that all required files have been included, before archiving the build directory to a zipped file and storing it via your version control repository.

### Part 3 – Peer review prototype

- 1.** Next you will need to have your prototype peer reviewed in order to ensure that the creative, technical, and production requirements of your selected project have been met. Demonstrate your prototype as a presentation for the studio manager by testing and running the gameplay sequences. In discussion with the studio manager confirm that your prototype fulfils the required creative, technical, and production specifications.
- 2.** It is also important to consider the user-experience that the prototype provides users. In discussion with the studio manager evaluate your prototype to determine how you have achieved a creative product that is user-friendly and provides an engaging experience for users.
- 3.** As a result of your peer review you may need to apply some amendments to your prototype. In discussion with the studio manager identify a range of potential changes to the prototype, and agree on the changes you need to integrate.
  - a)** You must integrate the required changes into the prototype as agreed on with the studio manager. You will need to create a new build for the amended prototype, which must be named clearly and stored separately from the original prototype build using your version control repository.

### Part 4 – Conduct user trials

- 1.** Assist in conducting the testing processes required for trialling the prototype with a group of target users. You will need to organise a small testing group of at least three (3) users who will test the prototype by running through it, with developer assistance only as required. You will need to use industry language and appropriate listening and questioning techniques to obtain feedback from each tester, and document or record the feedback appropriately so that it can be reviewed and evaluated to identify issues and improvements. It is important that you ensure that the location, date, time, and necessary resources required for the user trials have all been pre-arranged so that your testes can be appropriately prepared.
  - a)** You may decide to record user feedback using a feedback form or survey, or an audio or video recording. These records will need to supplement the production diary.
- 2.** The feedback received through user trials can be used to identify the strengths and weaknesses of your application as according to the interpretations of the target audience. Review the range of feedback that you recorded throughout the user trials of the prototype, and document an evaluation of the feedback in the production diary. In your evaluation consider the feedback from users against the design and implementation of the concept in order to identify issues and potential improvements. You should also consider how successfully the requirements of the concept have been fulfilled and how

engaging the user experience is. Identify at least two (2) potential improvements that could be integrated into the prototype in response to the feedback received from user trials, and describe them in your production diary.

3. After you have evaluated the outcomes of the user trials and identified the strengths and weaknesses of the prototype, you must define the final amendments that will be integrated into the gold-master version of the gamified application. Meet with the studio manager to discuss your evaluation of the user trials, agree on the final amendments that need to be integrated into the prototype, and confirm the endorsement of the studio manager to develop the prototype into a complete gold-master version of the application.

### Part 5 – Produce a gold-master

1. At this stage you should be ready to finalise the production of the project by completing the gold-master version of the gamified application. Integrate the final required amendments to the prototype as previously discussed with the studio manager, and ensure that all elements of the application have also been integrated as required by the creative and technical specifications of the project.
2. Before you create a final build for the complete gold-master version of the application, it is critical that you conduct a review and appropriate quality assurance processes. As you review the application ensure that the navigational sequences conform to the intended design by confirming all UI elements, menus, and scene transitions function as required.
3. Once you are satisfied with the final state of the complete gold-master version of your application, you are ready to generate the final build and prepare it for distribution. Using your selected game-engine export the required final executable builds by following the processes suitable for the required platforms, saving and storing the builds as according to relevant organisational procedures.
  - a) An independent directory should be created to store all of the files relevant to the final build of the application, with the name of the directory clearly indicating the gold-master state of the build.
  - b) A copy of each directory containing the final executable builds will need to be compressed (zipped) and stored in your version control repository.
  - c) The final versions of all game-engine project files also need to be appropriately stored in your version control repository.
4. After finalising the gold-master version of the gamified application and appropriately storing it according to organisational procedures, meet with the studio manager to obtain their final sign-off on the completion of production for the project.