# Assessment event 3 of 3: Project

## Criteria

### Unit code and name

ICTPRG434 | Automate processes

ICTGAM423 | Apply artificial intelligence in game development

### Qualification/Course code and name

ICT40120 CERT IV in Information Technology Game Development

## Student details

Student name

Student number

Version: 20240406

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This assessment can be found in the TAFE NSW [Learning Bank](https://share.tafensw.edu.au/share/logon.do?.page=searching.do?in%3DC1b145167-45e0-41ec-9f64-92af668e3e54%26q%3D%26type%3Dstandard%26sort%3Drank%26dr%3DAFTER%26page%3D1).

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment event overview** | The objective of this assessment is to assess your knowledge and performance in introductory programming tasks using an object-oriented programming language including tool usage, documentation, debugging, and testing techniques.  Write scripts to automate solutions by using basic scripting processes and application-specific scripting options.  Identify, evaluate and incorporate pre-existing (re-use) components from a library, or other source, as part of a software project.  Research, develop and implement artificial intelligence (AI) solutions in games.  This assessment is in 3 parts:   * Part 1: Instructions Manual * Part 2: Create a monster battler game * Part 3: Testing |
| **Unit assessment guide** | Refer to the unit assessment guide (UAG) before attempting this assessment event. The UAG contains information including assessment requirements and how to achieve a satisfactory result. |
| **Submission instructions** | When you complete this assessment:   * read the checklist at the end of the assessment to make sure you have completed everything * keep a copy of all the electronic and hardcopy assessments you submit to TAFE NSW * make sure you have completed the assessment declaration before you submit. |

## Task instructions

The assessor will use the criteria outlined in the following tasks to determine if you have satisfactorily completed this assessment event. Follow these instructions to ensure you demonstrate the required knowledge and skills.

## Part 1: Create an instructions manual

Create instructions on how to play your game. A short manual will be instructing the players on how to play your game. Include screen shots and written steps to follow.

## Part 2: Create a monster capture game

Create a monster battler game with the following features:

1. Monster Capture Mechanics: Develop a game where the player captures monsters that are walking around in a 3d world.
2. Player-Controller: Create a player controller that allows the player to traverse a 3D world. Player should be able to jump. There should be a camera that follows the player.
3. AI-Controlled Monsters: Create at least 2 AI-controlled monster that utilises a state machine for decision-making. The state machine should have at least three distinct states, each influencing the monster's behaviour. 1 AI should be aggressive, 1 AI should run away from the player. For example, There could be a state where the AI is wandering, A state where the AI is alert, and A state where the AI runs away.
4. Display AI State: Incorporates an interface that displays the current state of the AI-controlled monsters.

If there was any issues with your game after submission you will be given feedback. It will identify any areas not covered or covered incorrectly by your code. Please amend any omissions and errors and resubmit.

## Part 3: Testing

Ensure you have debugged your monster capture game code with no syntax and semantic errors in your code.

Run the following tests on your game, ensuring each test preforms correctly.

You may need to break down tests into multiple smaller tests. Write what is expected to happen in the Expected Results column and what actually occurs in the Actual results column.

|  |  |  |  |
| --- | --- | --- | --- |
| Test Case | Expected Results | Actual Results | Pass? |
| Player can perform all actions |  |  |  |
| AI can perform all abilities and states |  |  |  |
| States change according to situation |  |  |  |

## Submission

Ensure all requirements have been met in your project.

On submission your project will be reviewed, if any changed are required, you will be provided feedback.

Ensure you have submitted the following

1. Documentation as a .pdf
2. A build in a .zip (include all files in the build folder)
3. A copy of your code as a .zip
4. A copy of your code on github (make sure its public)