CERT 4 GAMES PRG/ST LEONARDS

Learner Number	Learner Number	**Learner Name**	Learner name
Unit code	ICTPRG301 ICTPRG417	**Unit name and release number**	Apply introductory programming techniques Apply mathematical techniques for software development

Please note that TAFE NSW is required to retain copies of all completed assessments, where practical, for a *minimum* period of three (3) years (or in accordance with regulatory/licencing requirements) after the completion of a learner's studies. *Refer to procedure to determine the retention period required.*

Assessment Instructions	
Assessment overview	Students are to create a small solo prototype of a cookie clicker style game. This game will be assessing keys skills such as your programming techniques, problem solving and understanding for math problems and formulae.
Learner must provide	Portable USB for version control and storage of project.
Assessor must provide	A simulated work environment
What do I need to do to achieve a satisfactory result?	All criteria for each task must be addressed to successfully complete this assessment event. Refer to assessment criteria on the following page.
Time allowed	4 weeks
Assessment feedback, review or appeals	Feedback must be provided to you no later than 10 days after all assessment activities have been conducted. If you want a review of your results or if you have any concerns about your results, you can contact the teacher/assessor or your Head Teacher. You have three weeks from the date you receive your results in which to make an appeal and/or request a review. You should receive a response within ten days of the receipt of the request. Teachers and their Head Teacher will address any appeal in accordance with Assessment Guidelines for TAFE NSW.

SPECIFIC TASK INSTRUCTIONS

Game Brief

You are to create an Incremental or clicker game where the players only action is clicking on UI buttons that reward the player with in-game currency. The player can then spend currency to purchase in-game items or abilities that allow them to earn currency faster or automatically click/earn currency over time.

Task 1: **Write a short document covering the following**

Create a simple document where you must plan out the basic design of your prototype.

- Describe the development process of small sized games/applications
- Identify common game engines and programming languages in the industry
    - Compare the languages
    - What is different in how their syntax is written
    - How are scripts structured
- Explain the data types you will be using and why
- Explain what mathematical operations you can use to calculate your equations
    - Explain any mathematical terms you may use in the document

Task 2: Create a Cookie Clicker style game based on the brief below

This Prototype must include the following:

- Ability to click and earn currency from UI buttons
- Upgrades/items that increase currency by spending currency
- Upgrades/items become incrementally more expensive
- Upgrades/items unlock as the player earns more currency
- Multiple UI elements
- Clean and commented code
- No code errors
- Simple maths and formulae to calculate the cost of each upgrade

Task 3: Submit functioning project files, project build and all documentation

Students must submit the following things to the student Moodle and make sure their project ticks off the following checklist according to industry standards.

Submit the following to Moodle

- Link to Project files (hosted on GitHub repository)
- Zipped Build of project
- Completed Documentation

Make sure you have written your name on each page of any document/template you have filled in as part of this assessment, before submitting to your teacher/assessor for marking