**KingsWay Year 11 Game Design Project**

**Internal Assessment Resource**

**Achievement standard:** KingsWay Internal programming and project management

**Standard title:**  Develop a computer program (4 credits)

Use basic iterative processes to develop a digital outcome (4 credits)

**Credits:** 8

**Resource title:** Game On!

**Resource reference:** Digital Technologies & Hangarau Matihiko 2.1

**Akonga/Student Cover Page**

**Student Name**: Jaden Meharry

**Student Declaration\***:

* I declare that the work I have submitted for this assignment is my own original work. I have not copied, plagiarized, or used any unauthorized sources or materials such as. I have properly cited and referenced any sources that I have consulted or quoted in my work. I have followed the academic integrity policies and guidelines of KingsWay School and course, including its policy on AI use. I understand that any breach of academic integrity may result in disciplinary action and penalties.
* I have not used AI code completion or a tutorial to create the program/game for me. It is my own original game.
* I give permission for my work to be independently moderated.

**Signature**: Jaden Meharry **Date**: 17/07/ 2025

**Due Date**: 9 September 2025 @ 12:00

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Students must write their report in their own words and reference any quotes accordingly.

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# Brief

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| **OVERVIEW** |
|  |
| This assessment activity requires you to develop a small interactive Māori-themed computer game that appeals to a broad target audience (eg, year 11 students), which will assist them to learn about a Māori myth, legend or story or any other idea in consultation with your teacher.  You have already created a proposal for your game, so it is now time to develop your game program, using the appropriate programming language you have selected. |
| You MUST provide evidence showing how the problem has been decomposed, how the components have been developed and trialled, and of how they have been assembled and tested to create a final, working outcome. |
| **HOW WILL YOU BE ASSESSED?** |
| You are going to be assessed on how you develop your game, including testing and trialling your prototype.  You will be assessed on how effectively you plan your development, decompose the problem into smaller components, trial these components, and test and refine your program so that it is a high-quality response to the task (eg, well-structured, logical, flexible, robust and comprehensively tested).  When planning and developing your program, you must ensure that it uses:  • variables storing at least two types of data (e.g. numeric, text, Boolean)  • sequence, selection and iteration control structures  • input from a user, sensors or another external source and one or more of:  • data stored in collections (e.g. lists, arrays, dictionaries)  • user-defined methods, functions or procedures.  You must use conventions for the programming language and code commenting that describes code function and behaviour. Your program should be comprehensively tested and debugged in an organised manner.  This is an individual assessment task, so if you are working as a collaborative group, you must provide evidence of your own work for all aspects of the standards. |
| **TASK** |
| You need to:   1. Create an overall plan to develop the code by breaking the task down into smaller sub-tasks that can be coded, tested and debugged, prioritising the sub-tasks for development, and creating a timeline to help you track your development process. 2. Plan how the code for each sub-task will work, research techniques that could improve this sub-task and create a test plan to confirm that your program works for expected, boundary and relevant boundary cases. 3. Develop and test the code using your test cases, being sure to comment your code meaningfully. |
| **HAND IN** |
| Your plan for program development  Your program testing evidence  All the versions of your program.  Link to GitHub Repository: https://github.com/TrumpetMonkeyy/11DGT-GameRepo  Link to your Kanban board: <https://trello.com/b/rBUdxaPm/game-t3-y11-dgt> (this is my Trello bord)  <https://trello.com/b/MXBHEMjW/weekly-steps> (this is Caleb’s Trello bord that we use for management)  **Note:** You are doing one project, so there is no need to separate out the evidence by standard. Please use headings and subheadings so that your teacher can find all the relevant evidence required for the two assessments.  IT IS REALLY IMPORTANT TO SHOW THAT YOU HAD A PLAN AND THAT YOU FOLLOWED YOUR PLAN! Do this through creating sub tasks and then following them. |

# My Plan

*Write down your plan here. How are you planning to develop your game. Break the game up into smaller tasks (sub tasks) that can be coded, tested and debugged. To do this, create a timeline to help you track your development. You could either make a traditional timeline or one with bullet points or even utilise a project management tool like* [*Trello boards*](https://trello.com/) *(remember to share your board with me).*

Me and caleb are planning to work together on a game using GitHub to transfer code but

***Link to GitHub Repository****: https://github.com/TrumpetMonkeyy/11DGT-GameRepo*

## Timeline

***Link to KanBan Board****:* [*https://trello.com/b/MXBHEMjW/weekly-steps*](https://trello.com/b/MXBHEMjW/weekly-steps)

## Sub tasks (Components)

*This is where each component of your game development goes For example: Start Screen – What needs to be done to create it (wireframes, artwork etc), how is going to be done? (code, design etc) How am I going to test that it works as expected? (buttons are clickable, screen shows up etc.)*

### map (Component 1)

#### what? use tiled to create the map and apply it in python

#### how? using the program called tiled me and Caleb will collaborate to make a map in tiled while I make the script that applies it in the game. I seam to be the only one with this problem and I couldn’t figure it out so as a last-ditch effort to get it to work I relied on ai to show me the math and how the code will work I have takin time to learn how the code works and have linked a screenshot of the prompt below

A screenshot of a computer program

AI-generated content may be incorrect.

A screenshot of a computer program

AI-generated content may be incorrect.

Updated one

A screenshot of a computer program

AI-generated content may be incorrect.

#### Tests? Look at game\_testing.docx

### Subtask 2 (Component 2)

#### What? Menus

#### How? I will add a start menu with options to play the game, get instructions on how to play, and if I have time a settings menu

#### Tests? Look at game\_testing.docx

### Subtask 3 (Component 3)

#### What? Items(tombs), tombs are items placed around the map that give you abilities that you are able to use to fight enemies

#### How? By placing a tomb sprite around the map I can check if the player has picked it up, then it stops placing it

#### Tests? Look at game\_testing.docx

Etc…

# Test Cases

*Create a table of your main test cases.*

Look at the Game\_testing.docx

Show how your tests have improved your game!

# Version Control Evidence

*Your version control evidence should go here. This could be in the form of annotated screenshots which show you you managed this process or you could make a brief screencast explaining how you implemented version control.*

[*https://github.com/TrumpetMonkeyy/11DGT-GameRepo/commits/main/*](https://github.com/TrumpetMonkeyy/11DGT-GameRepo/commits/main/) *look at the commits I’ve made*

# Implications

*Provide evidence to show how you have described and addressed the relevant implications for your program, for example:*

* How your game will be suitable for your chosen audience
* How you will honour copyright, my sprite pack allows me to use for free with no copyright if I don’t sell my game online
* How you will make sure that your game has taken into account relevant HCI (Human-Computer Interaction) principles. I will look over it again when me and Caleb finish the final version

# Bibliography

Any evidence, notes, research or documents should be recorded and kept as part of this development.

cupnooble, The asset pack I used, used 16/07/2025: <https://cupnooble.itch.io/sprout-lands-asset-pack>

Menu screen, watched 17/07/2025: <https://www.youtube.com/watch?v=GMBqjxcKogA>

Baraltech, The tile map video I didn’t use in the end, 16/07/2025: <https://www.youtube.com/watch?v=37phHwLtaFg>

bitcraft, Pytmx documentation, 16/07/2025: <https://pytmx.readthedocs.io/en/latest/>

Hiross\_xD, This is where I found pytmx, 16/07/2025:<https://www.reddit.com/r/pygame/comments/rkkb9f/create_tile_map_with_pygame/>

user623990, Scraped later on, 16/07/2025: <https://stackoverflow.com/questions/9383014/cant-import-my-own-modules-in-python>

used for text, 17/07/2025: <https://www.geeksforgeeks.org/python/python-display-text-to-pygame-window/>

You must use correct referencing of sources of research.

You should use the [Harvard style of referencing](https://www.canterbury.ac.nz/library/support/citations-and-referencing/harvard-citation-style/). (page not found)

You need to include a **bibliography**listing all of your reference materials.

For referencing websites it is important that you record the date that you accessed the material as it can change.

The format is:

Author (or organisation responsible for the site) Year, *Title*, viewed Date (day month year), <URL>.

Andrew Thawley 2021, *Stage 1 – Research*, viewed 27 January 2021, <https://learnictnow.com/lesson/stage-1-research/>.