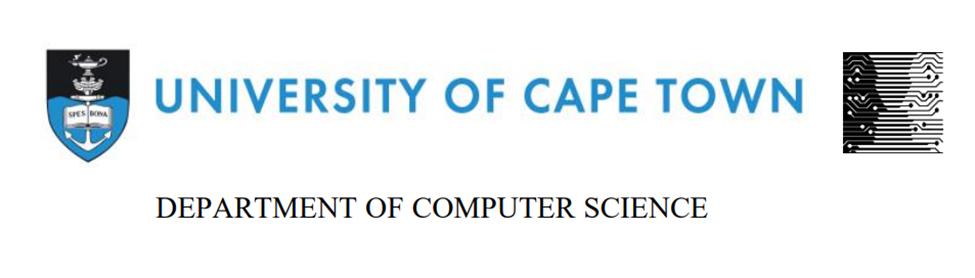
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**COMPUTER GAME DESIGN**

**CSC4027Z**

**Jam Slam Technical Design Document**

**Zenan Shang (SHNZEN001)**

**Erin Heath (HTHERI001)**

**Morten Unstad (UNSMOR001)**



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1. **Art Asset**

These are the art assets required for the game. These will all be personally designed.

| 2D art asset | Dimension |
| --- | --- |
| Strawberry | 128 x 128 |
| Blueberry | 128 x 128 |
| Red Sugar Cubes | 128 x 128 |
| Blue Sugar Cubes | 128 x 128 |
| Gate - Closed | 128 x 128 |
| Gate - Open | 128 x 128 |
| Cauldron | 128 x 128 |
| Water - Left | 128 x 128 |
| Water - Right | 128 x 128 |
| Water - Middle | 128 x 128 |
| Ground - Grass | 128 x 128 |
| Ground - Soil | 128 x 128 |
| Scale | 128 x 128 |
| Fly | 128 x 128 |
| Insect | 128 x 128 |

1. **Audio Asset**

These are the audio assets required for the game. These assets will be found from online sources to be used.

| Resource Type | Duration |
| --- | --- |
| Berries walking | 1s |
| Berries Jumping | 0.2s |
| Berries land | 0.2s |
| Sugarcubes collected | 0.2s |
| Sugarcubes dropped | 0.2s |
| Berries touch insect/fly | 1s |
| Gate open | 0.5s |
| Berries on scale | 0.5s |
| Berries in cauldron | 0.5s |
| Berries walking on water | 0.5s |
| Water sound | 0.5s |

1. **Achievement**

These are some of the achievements that the user can reach through playing the game. More achievements will be added as the game expands.

| Name | Description | Level |
| --- | --- | --- |
| Just getting started | Complete the tutorial | Easy |
| On the right track | Complete a level without dying | Easy |
| Berry master | Kill 10 Ants | Medium |
| Wall Breaker | Break 5 walls | Easy |
| Sugar rush | Collect all sugarcubes on a level | Medium |
| Epic fall | Both berries die at the same time | Hidden |
| Candy king | Collect all sugar cubes on all levels | Hard |
| Berry Jumper | Jump a total of 100 times in a game | Hidden |
| I am a designer | Design their own levels | Hard |

1. **System Design**

* Game Engine: Unity
* Language: C#
* File Format: Load PNG or Sprite Sheets for characters, environments, and interactive elements. WAV or MP3 formats for audio effects and background music.

The game will be designed in Unity, scripts will be written using C#, the art assets will come from either Unity Asset Store or drawing it ourselves.

1. **Interface**

The game's interface is designed to be minimalistic and intuitive, emphasising the on-screen action without cluttering the player's view. The only visible element interface-wise in-game will be the Sugar cube counter, where you will see how many cubes you need to open the gate in the end.

In the main menu, you will choose the level you want to play by pressing the play button..Once players have cleared levels, they can revisit previous levels for replayability. However, they can't jump levels.

1. **Iterative development:**

The game will be developed in three iterations, one for each week we have until the project presentation the 20th of October.

* *Week 1: 02/10 - 08/10*
* Terrence: Finish up design of all in-game objects.
* Erin: Set up the basic game engine and configure player movement, interaction with the environment like picking up sugar cubes, and ant movement.
* Morten: Provide three possible map layouts for the game. One easy, one of medium difficulty and one hard.
* *Week 2: 09/10 - 15/10*
* Terrence: Finalise any remaining designs, and design animations for special abilities. Finish the in-game audio effects.
* Erin: Integrate the maps Morten provides and ensure they work smoothly with game mechanics, and implement the audios as Terrence finishes them.
* Morten: Help Erin integrate the maps, and tweak them by playing the game and getting a feel of the mechanics.
* *Week 3: 16/10 - 19/10*
* Terrence: Ensure all design elements are finalised and delivered. Help with testing.
* Erin: Polish the game mechanics and ensure fluidity in character movements and interactions. Test the game and final debugging.
* Morten: Make sure the levels are of adequate difficulty, final tweaking and testing.