Games Development Design Document CMP1904M

**Game Design Document**

**Games Development Assessment Item 1 and 2**

Please thoroughly read the assessment briefs and corresponding CRGs in addition to this Game Design document. They will guide you through what work is expected to be completed for each assessment.

**Overview**

The game you are tasked to make **must** be based on the popular top-down arcade-style genre of games and must follow many exemplar mechanics and tropes.

The game's goal is to survive fast-paced combat for 60 seconds. Then the player will engage in a boss battle for another 60 seconds maximum. The focus of the game is to permit the player to engage with their player character in numerous meaningful ways.

* Interact with the enemies (e.g. weapons projectiles).
* Two unique abilities or a particular move.
* Interact with the environment (e.g. switches, floor panels).
* Collect Power-ups that alter the gameplay (e.g. speed boost).

While you have some freedom in designing some elements, several core game elements and features must be implemented into the game. These are:

* Player character
* Foes
* Levels
* Bonus Items
* Camera
* God Mode
* Visual Theme & Aesthetics
* Sound and Music

Over the following pages, each game element section features a table detailing the element and whether it can be expanded for your assessments.

**Player Character**

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| **Mechanic** | **Specifics** | **Expand Mechanic Example** |
| Player controls & Player Moving | The game must feature a character that is controllable by the player. | Four directions minimum, move at varying speeds. Verticality might be included. |
| **Two** unique abilities or Special Moves. | An ability is a unique action that is only available to the player. It significantly helps the player towards their aim.  Two unique and distinct abilities are required. | The player can dash forward through enemies. It needs some reload time before it can be used again.  **<<THIS MECHANIC MUST BE EXPANDED UPON>>** |
| Player Collision | The player must collide with  objects in the game world. | Power-ups may affect behaviour. |
| The player interacts with the enemies. | The player must be able to  fire at least one kind of  projectile that interacts with the enemies. | Shoot in multiple  projectiles, different  kinds of projectiles,  and melee attacks. |
| The player collects a power-up, | An item that the player collects that affects gameplay. | The power-ups affect the score. Consumable one-off item. |
| Player health. | The Player has health that depletes depending on game mechanics. The game ends when it reaches zero. | Players can drain  health upon  attacking. |
| The player interacts with the environment | Environment items that the player can interact with in a meaningful way. | The player stands on a given floor platform to heal themselves. |
| Player score | The player has a scoring system that increases/decreases depending on their actions. | The player can directly interact with their score through, e.g. disposing of foes in quick succession. |

**Foes**

The game, by default, has three types of enemies; two basic enemies and one boss enemy.

* The first enemy type is a melee attacker. They will follow the player around the game environment and deal damage upon colliding with the player's character. They cannot range attack.
* The second enemy type is a ranged attacker. They will attempt to disrupt the player from a distance.
* The boss enemy must have a significantly increased health pool and must feature a berserk phase where it deals increased damage when nearly defeated.

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| **Mechanic** | **Specifics** | **Expand Mechanic Example** |
| Melee Foe | Enemy moves toward the player and deals damage when colliding. | Multiple melee enemies, complex mechanics such as shields. |
| Ranged Foe | Either stationary or moving. Interacts with the player from a distance. | Shoots a deadly projectile towards the player to damage them. |
| Boss with Berserk Phase | The boss must be stronger than any other type of enemy. It can be stationary or move around.  It must feature a berserk phase which affects gameplay. | Add additional phases that change how the player  engages with the boss. |

**Levels**

The game must contain two levels: a survival level and a boss level.

* The survival level is a medium-sized room. The player can traverse from one end of the room to the other end within five seconds. The level will be survival-based, with enemies, foes, and power-ups spawning in increasing frequency until 60 seconds have passed. The level should increase in difficulty linearly, although you must keep your game balanced. After the player has survived for 60 seconds, they can go to the boss room (door/teleport).
* The boss level must be a small area that contains the boss that must be defeated. When starting the boss level, the game should introduce the boss through a short cutscene. Upon defeating the boss, the game will give the player a victory message, and the game ends.

Both levels must have some game mechanic which allows the player to interact with elements of the levels.

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| **Mechanic** | **Specifics** | **Expand Mechanic Example** |
| Survival Level | The level lasts sixty seconds. Game-specific elements spawn at an increasing frequency. | The environment can be expanded to include hazards and obstacles. |
| Boss Level | A smaller area that contains the boss. You must include a cutscene introducing the boss. A victory message is played upon defeating the boss and beating the game. | Can be enhanced similarly to the survival level. |
| Level Interaction | Both levels must feature a game mechanic for the player to interact with the level. | Buttons/Switches to modify the layout, destroyable walls, floor traps, etc. |

**Bonus Items**

The player must be able to pick up items that grant the player a temporary game-specific bonus. The game must include **two** different bonus items - not more, not less. They affect gameplay significantly.

* The bonus items have a 10% chance of appearing when the player destroys an enemy. The player can pick up these items by moving over them with no button press required.
* When the bonus item has been picked up, it will disappear from the ground.

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| **Mechanic** | **Specifics** |
| Bonus Item | Foes have a 10% chance to spawn a bonus item when removed from the map. |
| Bonus Item Effect | The player can collect these items by moving through the items. Once collected, the item has a temporary effect that significantly affects gameplay. |

**Camera**

The camera in the game should not be controllable by the player. If the play area is more significant than the camera view, the camera object should move with the player. You must ensure that the player stays in view at all times. The player can not rotate or pan the camera in any fashion. The camera should be either top-down or at an isometric angle.

**GOD MODE**

The game **must** feature a way to make the player immune to damage.

**Visual Theme & Asset Limitations**

You can pick any visual theme, as long as the aesthetics are consistent throughout the game. You can decide on the aesthetic of your game.

Be aware there are limitations on assets that you can use. **Everything** in the game **must be made** out of **basic primitives available in Unity** (no packages or extensions). User interface assets can be used but must be appropriately referenced. Please employ bright colours and animations to make the game objects readable.

**Sound and Music**

The game must have audio to instil a sense of atmosphere. There should be thematic and engaging background music; this can be the same for each level. The title screen should likewise have appropriate music playing.

Actions completed by the player and the enemies should make different sounds. This should trigger a sound effect if a foe or the player is eliminated. The pickup of bonus items and other game events should trigger appropriate sound effects.

Make sure to reference all 3rd party sounds used on the splash screen and only use ones which allow publishing.

**Final Notes**

For Assessment Item 2: You will be expected to implement **all** the mechanics and game elements described in this document. When working on your assessment, you should frequently review this document to ensure you implement the requested features and gameplay.