Game Design Document

Assignment 2

Annas Isa

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#  GAME OVERVIEW

## GAME TITLE:

Zambisa Warrior.

## GAME CONCEPT:

Zambisa Warrior is a platformer, role-playing game. The objective of this game is to help Anthonia (the main character) prove to her people that she can become the heir to the throne by defending the Zambisa forest from different bandits and other creatures.

## GENRE:

Action & Adventure.

## GAME SUMMARY:

Zambisa Warrior is a game where the main character "Anthonia" will defeat all her enemies using the great Ida sword. There are various types of enemies in this game. There are the infamous Egungun bandits, who patrol the forest and have a boss called Damuwa. There are also other creatures. We have the One-eyed monsters called Karishika that would be seen round the forest. We have the Akagum Goblins who protect the forest's treasures and Kaza Mushroom monsters who protect magical orbs in the forest. The main character will pick up power-ups while on missions. The interface will be navigated using some designated keys on the keyboard for actions and the arrow keys for movement.

## LOOK AND FEEL SUMMARY:

The game will have three main scenes, the home scene, the level scene, and the Endgame Scene. Players will start the game on the home scene, which would serve as a landing page. It will contain various buttons that the player would give the player access to a new game, continue a previous game, read instructions, access the game options page, or quit the game. When a player completes a level by entering a portal set at the end of each level, they are taken to the end game scene, where they can move to the next level or play the level again if they are not satisfied with their level score. If the player runs out of life, they will be taken to the end game scene to choose to play the level again or go back to the home page.

#  MECHANICS

In Zambisa Warrior, we will be using a mechanic where the world's camera follows the character but is within the bounds of map height and width. All the levels have equal heights and varying lengths. Level one is 6720px long, level two is 13120px long and level three is 17824px long. The player would use the arrow keys for movement. There would also be other designated keys for actions. The player would be able to move on immovable static objects. This movement is made possible by making the player collide with these objects. A combination of upward, forward, and backward actions will be essential in getting to specific locations on the map or clearing obstacles. Losing all the character's life would result in ending the game.

## RULES:

1. The player is allowed to move forward, backward, and to jump to help with maneuvers.
2. The player’s health and shield are set to hundred at the beginning of every level.
3. The player loses an amount of their health (i.e., when their shield amount is zero) based on the damage power of the enemy.
4. The player’s shield reduces by half the amount of the enemy’s damage power.
5. The enemy starts to follow the player when they’re both within a particular fighting range. This range varies for different enemies.
6. The player must complete a level to gain rewards for that level. Therefore, the player is not rewarded if they die during the level.
7. The difficulty of the enemies is based on the combination of their attack power which is unique for every enemy, and their attack speed which is calculated on every level using this formula: attackSpeed / gameLevel.

### VICTORY CONDITIONS:

* The player must reach the end of the map and go through the portal.

### DEFEAT CONDITIONS:

* The player dies during the level.

## CHARACTER MOVEMENT:

Character movement would be constrained by the screen width and height. There will be no verticality to the levels.

### PLAYER MOVEMENT

The player would use the arrow keys for movement. If the right or left arrow key is pressed, it will set the player’s x velocity to a designated speed. When The up-arrow key is pressed, it will set the player’s y velocity to the desired speed. There would also be other defined keys for actions.

### ENEMY MOVEMENT

The enemies are always on patrol when they are not in contact with the player. The enemies use a simple AI logic to make them patrol within the strict area. Even if they have contacted the player, they stop to follow the player and resume patrol once the player is outside their patrol area.

## OTHER OBJECTS:

### HEALTH ORBS

Health orbs would be placed at different locations on the map. Once picked up, if the player’s health is less than fifty percent, it adds fifty precent life to the player’s current state. If the player’s health is more than fifty percent, it changes the player health to hundred percent.

### SHIELD ORBS

Shield orbs would be placed at different locations on the map. Once picked up, if the player’s shield is less than fifty percent, it adds fifty precent shield to the player’s current state. If the player’s shield is more than fifty percent, it changes the player shield to hundred percent.

### POWER UP ORBS

Power up orbs would be placed at different locations on the map. Once picked up, if the player’s rage is less than fifty percent, it adds fifty precent rage to the player’s current state. If the player’s rage is more than fifty percent, it changes the player rage to hundred percent.

### EGUNGUN BANDITS

Egungun bandits are humanlike enemies who would initially be placed at different locations on the map. They attack using their swords. They start with forty health and have damage of twenty-five. They have a fighting range of seventy-five and move at a speed of one-hundred and fifty. They use a simple AI logic that makes them patrol within the strict area. Even if they have contacted the player, they stop to follow the player and resume patrol once the player is outside their patrol area. While patrolling, Egungun bandits can only move left and right on the x-axis. Once. They work for a dark lord called Damuwa.

### DARK LORD (DAMUWA)

 Dark lord Damuwa would be placed at the end of the map of the final level. He starts with two hundred health and has damage of forty. They have a fighting range of seventy-five and move at a speed of one-hundred and fifty. He would use a simple AI logic that makes him attack the player once they encounter each other. While attacking the player, the Dark Lord can only move left and right on the x-axis.

### KARISHIKA (ONE EYED MONSTER)

 Karishikas are one-eyed monsters that will be placed at different locations on the map. They start with twenty health and have damage of fifteen. They have a fighting range of hundred and move at a speed of thirty. They use a simple AI logic that makes them patrol within the strict area. Even if they have contacted the player, they stop to follow the player and resume patrol once the player is outside their patrol area. While patrolling, Karishikas can only move left and right on the x-axis.

### KAZA (MUSHROOM MONSTER)

 Kaza's are mushroom monsters that would be placed at different locations on the map. They start with forty health and have damage of twenty. They have a fighting range of eighty and move at a speed of sixty. They use a simple AI logic that makes them patrol within the strict area. Even if they have contacted the player, they stop to follow the player and resume patrol once the player is outside their patrol area. While patrolling, Kaza's can only move left and right on the x-axis.

### AKAGUM GOBLINS

Akagums are goblin monsters that would be placed at different locations on the map. They start with thirty health and have damage of twenty. They have a fighting range of hundred and move at a speed of one hundred. They use a simple AI logic that makes them patrol within the strict area. Even if they have contacted the player, once the player is outside their patrol area, they stop to follow the player and resume patrol. While patrolling, Akagums can only move left and right on the x-axis.

#  BACK STORY

Far away in the west of Africa lies a remote kingdom somewhere north of Nigeria called Zambisa. Zambisa kingdom is well known for its vast lands, wildlife, treasures, and treacherous forest. King Alhaji Musa Mai Gemu, son of King Alhaji Abdul Mai Gemu, son of Alhaji Zakari Mai Gemu, is the current ruler of the Zambisa kingdom. Usually, the crown passes down to the first son of the king. There has been chaos in the kingdom lately because king Alhaji Musa Mai Gemu has been very ill, and none of the healers have been able to heal him. That is just one of the problems. The king has no heir to the throne as he only has two daughters, princess Anthonia Zara Mai Gemu, the elder one, and princess Saratu Zoey Mai Gemu. Although princess Anthonia has trained all her life to become a warrior, the land people don't still think she is fit to be the heir to the throne. Princess Anthonia faces all this rejection because of her caucasian maternal lineage and the fact that she is a woman. Amidst all this drama, A dark lord called Damuwa has been taking advantage of the king's illness to cause havoc in the forest areas. He is gradually moving towards the main town area. He plans to overthrow King Musa. Now Anthonia must set out to defend her land from this evil creeping into their land. To gain her people's blessing, she must do this alone.

#  GAME WORLD

The game uses a parallax forest theme background, which uses multiple images, one behind the other, and setting different scroll values for them, which creates an illusion of depth for the player. The map is created using an application called Tiled. The objects on the map are made into layers using tilesets. These map objects are then set to either collide or overlap with the player, depending on what they are. For example, the tiles that make up the ground collide with the player so that the player doesn't fall through the screen, and the objects that make up the water overlap with the playing to create a drowning effect. Tiled is also used to create collectibles for the game and to set the starting locations for all the game objects, including the player. The world bounds are assigned to the height and width of the map. The camera bounds are set to the map's width, and the height starts from the difference between the window inner height and the height of the map from the tiled.

#  FUTURE IMPROVEMENTS

* Adding a leader board table to encourage competitiveness while playing the game.
* Create a shop where players can speed their money gold on upgrading their player.
* Add different backgrounds for all the level.
* Change from Local Storage to Database system.