

**Design Document for:**

# Dalinda

**The Next Level Racing Game**

“Be Green with envy of your friend’s racing!”™

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Version # 1.00

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# **Design History**

We tried to make 2D Platformer Game with Unity. To make it come true, We have to work step by step.

## **Version 1.10**

Version 1.10 includes some tuning and reinforcing that I did after making my initial pass at the design. Here is what I changed.

1. I rewrote the section about what systems the game runs on.
2. I incorporated feedback from the team into all parts of the design however no major changes were made.
3. Just keep listing your changes like this.

# **Game Overview**

## **Common Questions**

### **What is the game?**

‘Dalinda’ is the game for two players in which players run on the same but seperated world using their own characteristic skill which disturb another character.

### **Why create this game?**

I found out there is a large variety of countries which has distinguished and interesting culture and costume. I wanted to express this own feature for the different country via the 2D platformer game.

### **Where does the game take place?**

There are three maps for the game consists of forest, desert and volcano for the runner.

### **What do I control?**

Each player has three direction keys, one jump key, one attack key and one skill key. Players can jump twice before he/she land back on the map. Player is able to attack the monster on the map and also able to use skill depending on the gift they have.

### **What is the main focus?**

Players try to finish the race first using their skill disturbing another player. There is trap on the players so they have to be careful when they control the character. Also there is a monsters give players a gift with which players can use their own skill.

### **What’s different?**

There is a lot of 2D platformer game and running game. But we run with disturbing each other. I strongly believe people would feel extra fun while running on our world!

# **Feature Set**

## **General Features**

5 characters

3 maps

2D tile map

2 Player game

## **Gameplay**

User can select 5 character representing each continent.

1 skill per character.

There is gift on the map.

When player touches the gift, player gets it.

Player can use skill when player has more than one gift. In that case, player will spend a gift.

Skill will disturb another player, each character has different skill.

Player who passes the finish-line on the 3rd level first win the game.

There is monster disturbing players.

Player can kill the monster with ‘Attack’.

When the monster die, it leaves a gift with certain probability.

# **The Game World**

## **Overview**

Our whole game world is consists of two maps with a character, three level(forest, desert, volcano) including trap, monsters

## Two maps

There is two maps. Two map is physically separated and each one is only for one player. but they can interact between each other using skill. Maps are consists of tiles.

## Three levels

One map has three level which is made up of forest, desert, volcano. Background music will be changed when winning player enter next level.

## The Physical World

### **Key Locations**

There is few fork in the world. It’s hard to go up to the upper way but it will provide user the easier way. However, it’s easy to go down to the down way but it has a lot of trap and sometimes it will just kill the player.

### **Travel**

Player will travel only right side to the screen. Sometimes player will face forks.

### **Scale**

Our map is (1.2 km X 26m) scale in Unity Coordinate plane. The game normally takes 5 mins per one game.

### **Objects**

Gift: there is a gifs in the map. If the player touch the gift, player got it and spens for the skill. Each skill spends one gift.

### **Time**

There is no time limit. Player pass the finish line first will win. Which occurs the end of the game.

## **Camera**

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### Overview

Two cameras are used to divide the screen. Each camera follows the player who is in the same object. Camera blocks player going back. Monster object will destroy when it touches the left end of camera.

## **Game Engine**

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### **Overview**

Our game use Unity 2D Engine.

### **Game Engine Detail**

The game engine will keep track of characters and enemies.

### **Collision Detection**

The game takes advantage of three kinds of collider. Each Objects have different types of collider declared trigger or non-trigger attributes for each purpose. These colliders detect a collision with other colliders. The action of each collision is distinguished by the tag of game objects. Detection method is defined in the c# script using OnTrigger2D and OnCollision2D which is inherited Monobehavior class.

# **The World Layout**

## **Overview**

The world is made up of background and tile maps.

## Background

It is literally a background picture.

## Tile map - collider

With this, character can detect a ground and walk.

## Tile map - decoration

Decoration doesn’t have any collider. There is trees, flowers, grass etc.

## Tile map - trap

Trap has collider. When player touch this collider, player dies.

## Tile map - step

Step is the same with collider but with which, player can down jump.

# **Game Characters**

## **Overview**

In order to pass the bounds of the commonplace, we chose 5 nations/union that are not quite famous EU (Europe), Korean (Asia), Egyptian (Africa), Cuban (North America) and Peruvian (South America). Each character represents one continent of the world and it has its own skill. We decided their skills referencing their cultures or legends.

European makes other player jumps even though the player does not want.

Korean makes other player’s speed slow and then makes himself fast.

Egyptian changes other player’s moving keyboards.

Cuban makes the blocks and the background black, so other player is not able to see their platform well.

Peruvian can disturb the view of other player. The camera will flip 270 degrees.

## **Creating a Character**

Our character saved into prefab file. Characters are consisted as model and sensors.

Model part contains head, body, weapon and leg. The main purpose of model is depicting sprite renderer. There are three sensors in one character and each sensor is using collider. Ground sensor is used to detect whether the character is jumping or not. Weapon sensor works by trigger related with enemy object.

After each player has selected the character, the selected characters are created into an object going to the next scene. When the character is made, character creating script load prefab file from the Resources folder.

## **Monsters**

There is one monster in the world namely Neoguri, the monster can bark, run and attack. The first actions of the monster is looking at the player when the player is in specific the distance. After then, if the player is coming closer, their other actions will be started in every specific distance. When the player hit the monster, it destroys with a gift box. The gift box will be created randomly and the probability of creation is 2/3. This gift box makes the player is able to use the skill.

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# **User Interface**

## **Overview**

Player 1 and 2 must use one keyboard because this game does not offer networking through internet. The screen also must be splitted because they are watching one monitor. All keys are followed by US keyboard set.

## Player 1 Interface

Player 1 uses F (left), G (sit), H (right) as three direction keys, Q as a jump key, W as an attack key and E as a skill key.

## Player 2 Interface

Player 2 uses Left arrow (left), Down arrow (sit), Right arrow (right) as three direction keys, L as a jump key, Semicolon key as an attack key and Quote key as a skill key.

## Information Canvas

Each screen of player has information canvas. The canvas presents hearts and skill point.

When one player reaches the goal, a message will be revealed which shows who won.

**Weapons**

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## Overview

Each character has different weapon. European is holding a hammer Mjolnir which is Thor used according to the myth. Korean has a traditional fan painted taegeuk symbol because this symbol is an emblem of Korea. Egyptian has a staff which is one of Egypt god Horus used. Cuban and Peruvian have their traditional instrument.

# **Musical Scores and Sound Effects**

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## **Overview**

We used our own sound which is from what we used before.

## **Sound Design**

We used simple music tool name of ‘Music Studio(android application)’ to make a background music.