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# **Software Requirements Specification**

**for**

## **Doodle-Jump**

**Version 1.0 approved**

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# **1. Introduction**

## **1.1 Purpose**

Our purpose is to create the remake of an old android game called Doodle Jump. This game will be an entertaining way of spending time and beating high scores to be at the top of the scoreboard.

The user can play in single player or can register and log in to play against others and beat each

## **1.2 Intended Audience and Reading Suggestions**

This document is created for developers and project managers that are interested in the way this project was created or their intention is to develop this software.

This documentation includes the purpose of the project, the software features, in which environment was it created and designed, guide for using all the UI interfaces and mentions if any external software or database is used.

Our suggestion of reading this document is sequential, from the beginning to the end because each point is building on other, already mentioned points.

## **1.3 Product Scope**

Our scope is user entertainment, relaxation and to remind users of the good old days when this game was famous in google play store. Not least, our first priority is to gain experience in this unknown area.

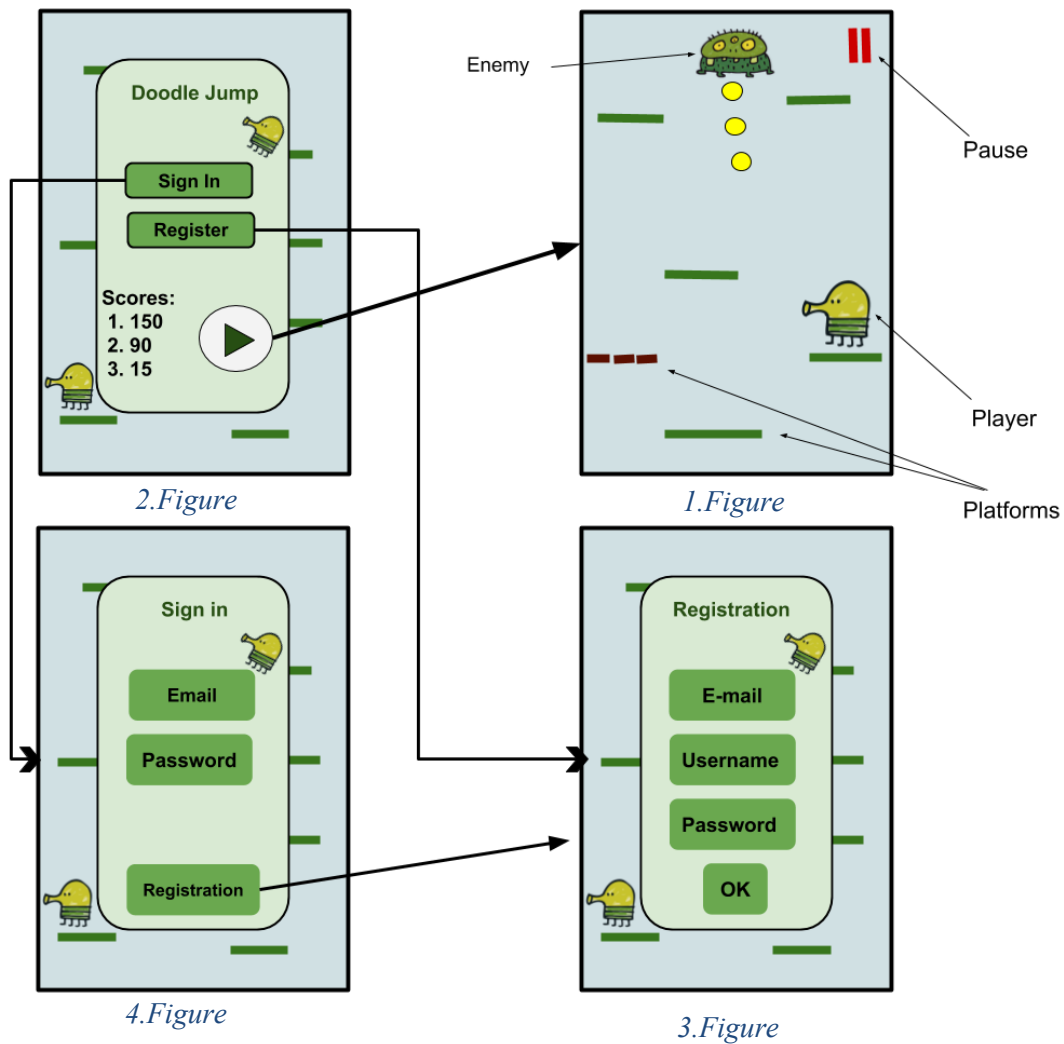
This is a game application, based on an android mobile operating system using some interesting libraries like: libGDX..

# **2. Overall Description**

## **2.1 Product Perspective**

This software is going to be a remake of an old game called Doodle Jump.

It will have a main menu with our highest score, a sign in, registration and a button to start our new game.



## 2.2 Product Functions

Using this software we can perform certain functions like:

- Log in
- Log out
- Register
- Play
- View our highscore

## 2.3 User Classes and Characteristics

Users without logging in can't see all of their and others highscores they have reached, can only see their score when they die in the game.

Logged in users can see the leaderboard with the top players and their scores, logged in users scores will be saved in a database.

## 2.4 Operating Environment

This software will run on any android mobile device which has at least 16 of SDK version, for certain parts a gyroscope is required, the game will only have portrait mode. For login and saving scores in the cloud database also required internet connection.

## 2.5 User Documentation

The user can access an information state in the game when touches the pause button, where all the elements of the game and functions he can perform are listed.

## 2.6 Assumptions and Dependencies

The software uses only one third party software, Firebase cloud database, to store highscores and login information about the users so if it is changing in the near future it might affect the functionalities in the software.

# 3. External Interface Requirements

## 3.1 User Interfaces

### 3.1.1. Menu state

The user when opens the application will see this interface ( **Error! Reference source not found.** ), where he can perform some functions such as signing in, registering and starting a new game with the circular play button.

The user also can see the highscores if he is already logged in with the name of the player attached to that score.

At the top of the screen there is the name of the game.

### 3.1.2. Sign in state ( 4.Figure )

If the user touches the sign in button then he will be redirected to this screen where the user has to type in his e-mail or username and a password, by clicking on the registration button all of the fields will be verified if they are correct or not and if not, then a popup bubble will appear with the instructions.

If the user doesn't want to register, the basic phone back function will take him back to the previous screen.

### 3.1.3. Registration state ( 4.Figure )

At the registration screen the user has to fill the fields with valid email, username and password and by clicking on the OK button the fields will be validated and if everything is good a new account will be created.

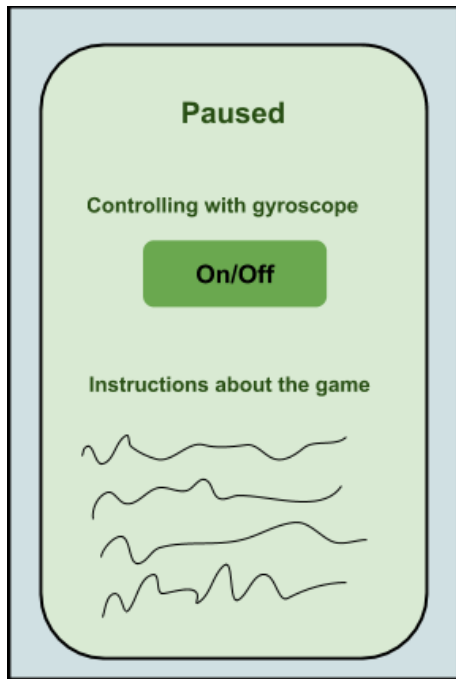
### 3.1.4. Play state ( 4.Figure )

In the play screen there is only one button, the pause button that will take us to a new screen where all the important features are listed about the game and also a help guide, how the user can play the game.

Our character can be controlled by touching the bottom side of the screen, by touching the bottom right side the character will move right, touching the bottom left side the character will go left.

We also can shoot in the game by touching the top side of the screen, because in the map there are monsters also and we want to eliminate them because if we touch them the game is over.

### 3.1.5. Paused state



5.Figure

By clicking on the pause button, the pause screen will appear ( 5.Figure ), here the user can switch between to control the character with touching the screen or using the gyroscope of the phone. Also there will be useful information about the game and about all the elements in the game.

## 4. System Features

### 4.1 Login

#### 4.1.1 Description and Priority

By clicking on the Login button appear two text fields for username and password. If these are correct then it is possible for the user to login. This function is only medium

priority, it's possible for the user to play without login. But it's necessary for score saves and score ranking view.

#### 4.1.2 Stimulus/Response Sequences

- Click on the login button: - if username and password are correct then we are jumping to the user screen
  - Negative: different error messages
  - Positive: bottom message: "Login success!"
- Click on the back button: - we are going back to the main screen where we can choose between registration and login

#### 4.1.3 Functional Requirements

##### **Login Button Press**

REQ-1: Username exist in database

- ★ Negative response: - error message: "Username not exists!"

REQ-2: Incorrect password for actual username

- ★ Negative response: - error message: "Wrong password!"

REQ-3: Not empty fields

- ★ Negative response: - error message: "Fill out please!"

REQ-4: Have internet connection

- ★ Negative response: - toast message: "No Internet connection"

##### **Back Button Press**

No requirements!

## 4.2 Register

#### 4.2.1 Description and Priority

By clicking on the Register button we are jumping to the RegisterScreen where there are three text fields for username, password and confirm password. If these are correct then it is possible for the user to register a new account. This function is only medium priority, it's possible for the user to play without registration. But it's necessary for score saves and score ranking views to have an account.

#### 4.2.2 Stimulus/Response Sequences

- Click on the Register button: - if the filled fields are correct then we are jumping to the user screen with a new account
  - Negative: different error messages
  - Positive: bottom message: "Registration success!"
- Click on the back button: - we are going back to the main screen where we can choose between registration and login

### 4.2.3 Functional Requirements

#### **Register Button Press**

REQ-1: Username consists 5-10 characters

- ★ Negative response: - error message: “Minimum 5, maximum 10 character!”

REQ-2: Username not exist in database, username is't occupied

- ★ Negative response: - error message: “This username is already exist”

REQ-3: Correct password, minimum 8 character, 1 digit

- ★ Negative response: - error message: “Minimum 8 character, at least 1 digit”

REQ-4: Confirm password is the same as password

- ★ Negative response: - error message: “Not the same password”

REQ-: Have internet connection

- ★ Negative response: - toast message: “No Internet connection”

#### **Back Button Press**

No requirements!

## 4.3 Play/End game

### 4.3.1 Description and Priority

By clicking on the Play button the user starts to play, Login or Registration is't necessary for this. After falling down with the player (doodle), it appears on the screen, your score, a restart button and back button.

### 4.3.2 Stimulus/Response Sequences

- Click on the Play button: - start game
- Click on the Restart button: - restart game
- Click on the back button: - we are going back to the User or Main screen, depends on the user is logged or not, here happens the score save

### 4.3.3 Functional Requirements

#### **Play Button Press**

- ★ always working

#### **End Button Press (after game)**

- ★ always jumping back to main/user screen



- ★ saving score only if the user is logged, or login after game exit

## 4.4 In game

### 4.4.1 Description and Priority

By touching one of the sides of the screen, we can control our player. The goal is to go as high as you can by jumping to the platforms one by one. Be alert because there are fake platforms and monsters who can kill you. There is a pause button right-top on the screen, by clicking that the game will be paused and you can see the pause screen.

### 4.4.2 Stimulus/Response Sequences

- Click on the Pause button:
  - switch to gyroscope
  - see controls
  - informations
- Controls:
  - Standard :
    - touch one of the side of the screen: - moving right/left
    - touch top of screen (above center): - shooting
  - Gyroscope :
    - rotate screen a bit right/left: - moving right/left
    - touch the screen anywhere: - shooting
- Player fall down / game over
  - Check your score
  - Restart button click: - restart game
  - Back/exit button click: - back to menu