

## **TECHNICAL DESIGN DOCUMENT**

### **1. Features List**

The game will have the following features :

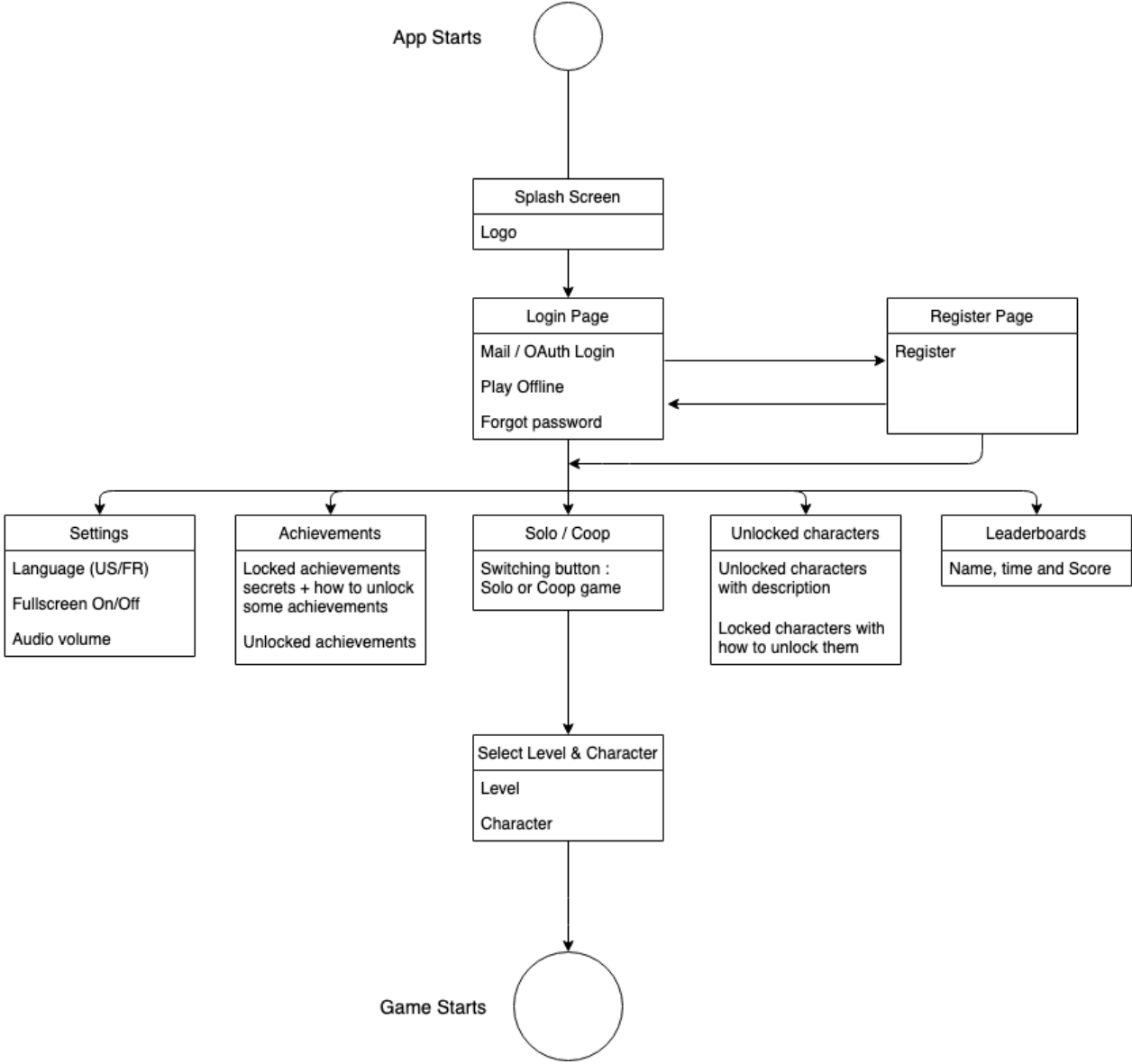
- a. Register & Login
- b. Multiplayer
- c. Personalize character
- d. Run game (endless)
- e. Unlocked weapons screen

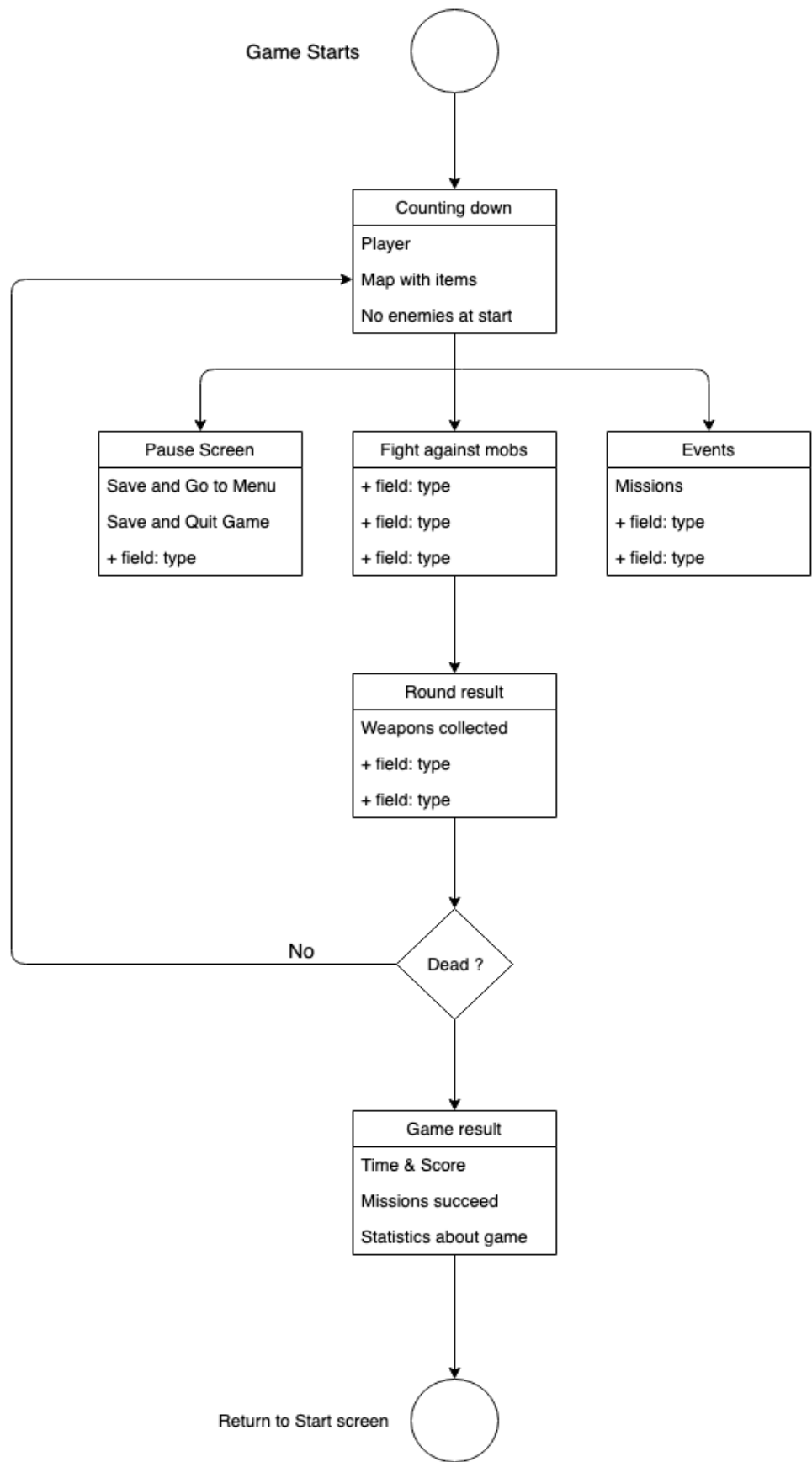
### **2. Technology**

The game will be developed with Unity C#. Targeted platforms are Windows, then Linux but it is not a priority. Server-side database with MySQL on Unity and client-side database for local game with MySQL too.

### 3. Diagrams

#### PAGE FLOW





#### 4. Database design

Table : Player	
Player ID	Integer
Player Name	Varchar 20
FB ID	Varchar 64
Google ID	Varchar 64
Current Gold	Integer
Mission Done	Integer
Highest Score	Integer

Table : Character	
Character Name	Varchar 20
Total HP	Integer
Max Level	Integer

Table : Weapons	
Weapon ID	Integer
Weapon Name	Varchar 20
Low Damage	Integer
High Damage	Integer

Table : Challenges	
Challenge ID	Integer
Challenge Name	Varchar 50
Challenge Brief	Text
Is Completed	Boolean
Is Repeatable	Boolean
Is Unlocked	Boolean

Table : Items	
Item ID	Integer
Item Name	Varchar 50
Destroyable	Boolean
Starting HP	Integer

Table : Enemy	
Enemy ID	Integer
Enemy Name	Varchar 50
Starting HP	Integer
Difficulty Class	Integer

Low Damage	Integer
High Damage	Integer

Table : Enemy Action	
Action ID	Integer
Action Name	Varchar 50
Enemy ID	Integer
Trigger Chance	Integer
Effect ID	Integer

## 5. Features breakdown & functions list

### a. Register & Login

When app starts, check if a user is already registered locally, else login with FB / Google / Mail (OAuth).

User can register via FB, Google, Mail or locally.

### b. Multiplayer

On the main screen, player can choose if he wants to play solo / coop. It appears as a switching button

### c. Personalize character (Main page)

Player can choose what gun is equipped

You can see best score (time and score)

### d. Run game (endless)

A button on the bottom-center to run the game. Player starts in the middle of the screen with his selected weapon. Ammunitions and new weapons frequently pop on the screen.

### e. Unlocked characters

Player can see unlocked characters and a little description about them.

He can also see how many characters he can still unlock.

Characters are only here to allow the player to modify the game's look.

Player can unlock some with virtual money won with achievements.

### f. Achievements screen

Secret locked achievements and normal achievements with an explanation on how to unlock them.

Unlocked achievements on to of the list.

They are related to the gameplay but also there are also "meta successes".

### g. Leaderboards

This screen shows the name, time and score as a list.

## 6. Convention

The team will use exclusively English and will use CamelCase as naming convention.