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# INTRODUCTION

This is an original iOS game: "Roll for Dime" which is a game where you roll and reroll 2 dice to satisfy a condition randomly imposed by the game and win some coins based on the result while managing your lives to not drop to 0. The game is a simple RNG game with an element of gambling to test your luck and your decision-making, to choose between accepting this turn result to get more coins or to try again to get a better result.

# PROJECT DESCRIPTION

## How to play the game:

When you start the game, you are greeted with the "Menu" where you can choose to go to "Game" to start the game, "How to Play" scene to understand the game rule, "Leaderboard" scene to display past save files with their respective name, high score and achievements. The "Setting" scene, as required by the assignment, is through the "Game" option and is for choosing your player name and the game difficulties from 'Easy" : "Childsplay" to "Default: "Dime&Dozen" to ""Hard": "Gambler" which give us different setting in the game view. The goal is to get as many coins as possible while you are alive (or your life is above 0) by rolling 2 dice and get a value that satisfies the condition stated above the dice (like bigger than 5 or smaller than 7) and you will be rewarded with coins based on your remaining rerolls (get 1 when have smaller than 7 challenge will get you more coins than get 5 from the same condition). You lose when your life is 0 and you get the option to return to the menu or play again with a new name.

* 1. **Tip / Tricks:**

- Start with the easy difficulty: The game has yet to be through a lot of tests so there is not much balancing in the game mechanic nor the richness in their gameplay but simple click and roll dice game. The game is very RNG-based so start with "Childsplay" then "Dime&Dozen" then "Gambler". The game mode modifies the stat of the player and the difficulty of the challenge so go easy and get used to the mechanic and devise the most suitable strategy for yourselves.

- Consider your available option carefully: Should you play as safe as possible by rerolling every chance until you get the safest result or you risk your lives and get as many coins as possible is up to your choice. Juggling between playing it safe or risky to maximizing the total coins in the end for the best score possible.

# MAIN FEATURE & ADVANCED FEATURE

## Implemented Feature:

* MENU VIEW
  + Initial view when you open the app and is greeted with the title card and the buttons - from top to bottom - named: "Game" - the main game view, "How to play" - guide and instruction on how to play the game, "Leaderboard" - where to look at other player achievement and score and stat.
* GAME VIEW + SETTING VIEW
  + Upon pushing the "Game" button you are greeted with a setting view or a difficulties setting view where you can pick one of 3 main difficulties, each modify your lives count, your rerolls count and the challenge difficulty. Click either of 3 will transport you to the main view where you play the game of dice, beat the challenge by making your dice value smaller or larger than the stated value in the challenge. You will see the challenge, the live count, coin count, 2 dice and 2 buttons for (re)rolling and checking the dice. You win coins - (score) the better your dice value at fulfilling the challenge and how many rerolls you have left and it is calculated by this formula: coins = rerolls \* difference between result & challenge (if fulfilled). Until the live count goes 0, you will be transported to a death view where you see your coin count and 2 buttons, one for play again and one for return to the menu.
* HOW TO PLAY VIEW
  + This View will have a view explaining how to play a game in simplest details and tips/ tricks and a button at the bottom to return to the menu. The view will have visual aid to help better understanding
* LEADERBOARD VIEW
  + This Navigation View showcases a list of high scores achieved by players and many achievements badge with its respective name and badge and player's game statistics.
* MUSIC & SOUNDTRACK
  + There will be soundtracks played on all views on repeat and sound effects when you interact with buttons(in all of view) or dice (when it is in rolling animation), gain coins (win game),lose health (lose a lives) and finally die (lost all lives and lose game). All sound effects are made by myself.
* SAVE & RESUME
  + Using App Storage I can save player data in game view when they exit the game and reopen it at a later time. It is also used to store the app for leaderboard view.
* LANGUAGE SUPPORT & TOGGLE THEME SETTING
  + There will be buttons for both language support and button view to change language, for English and German and Italy and toggle light/dark themes.

## Demonstration:

* MENU VIEW
* GAME VIEW + SETTING VIEW
* HOW TO PLAY VIEW
* LEADERBOARD VIEW
* MUSIC & SOUNDTRACK
* SAVE & RESUME
* LANGUAGE SUPPORT & TOGGLE THEME SETTING

1. **EXTERNAL LIBRARIES & API**

External library is only an iOS Sound Cloud System through AVFoundation to AVAudioPlayer for playing sound effects and soundtracks during the running of the app. I also use UserDefault for App Storage for storing local app data in case the app is not in use. External resources include button image extract from itch.io through free, independent producer and music was created by myself in site like pixabay.com for free dice sound effect, jsfxr.com for 8 bit sound effect for button, win coins, lose health and game over and Nsynth for soundtracks in background (2 distinct sound: in menu and in game).

1. **VIDEO VISUALIZATION**

GIFs for live visualization of the app in action in OneDrive Folder:

1. **APPENDIX**