TASK 2 DESCRIPTION

COP290: Design Practices

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Section 1: Introduction

In this Assignment, we built a gaming application similar to Pacman. We have used flutter as the main development tool kit and various other libraries for the creation.

Section 2: Game Rules

Following are the various game rules:

1. Pacman is on a mission to collect a maximum amount of gold coins.

2. Each player has to maximize their amount of gold coins collected in the game.

3. Pacman is allowed to move in four directions i.e left, right, up and down.

4. Ghosts are also constrained to move in four directions i.e. left, right, up and down.

5. Neither Pacman nor Ghosts can move through barriers i.e. they cannot occupy barrier space.

6. The game can be paused/stopped in between and it can continue in the same place where the player was paused/stopped his game.

7. After the end of the game, total score on that game and total time taken to play that game will be displayed on the screen.

8. At the end of the game, when all players have played the game, The player with the maximum score will be declared as the winner.

Apart from these normal features, we have the following additional features:

1. We can make a map in a custom fashion and play on that map.

2. We can use our face or any image for that matter and replace that image in place of pacman for playing the game :)

Section 3: Game Stages

1. Upon opening the app, the homescreen of the app will be visible.

2. It has 5 options:

    a. Pacman

    b. Maze Game

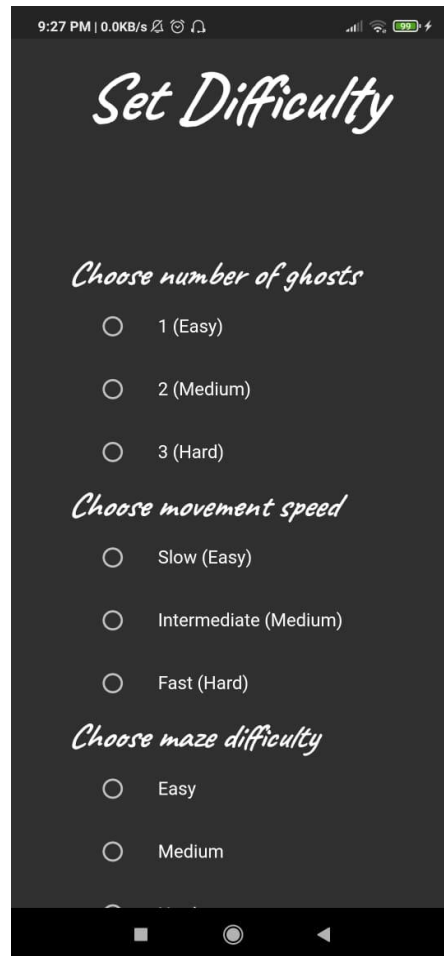   c. Add Maze

    d. Add Images

    e. About the Developers

Following is the detailed description of each of the following.

3. After tapping on "Pacman" a new screen "Set Difficulty" will be open for the Pacman game.

Following are the difficulty parameters/variables:

1. Number of ghosts

2. Movement speed of ghosts

3. Maze Difficulty
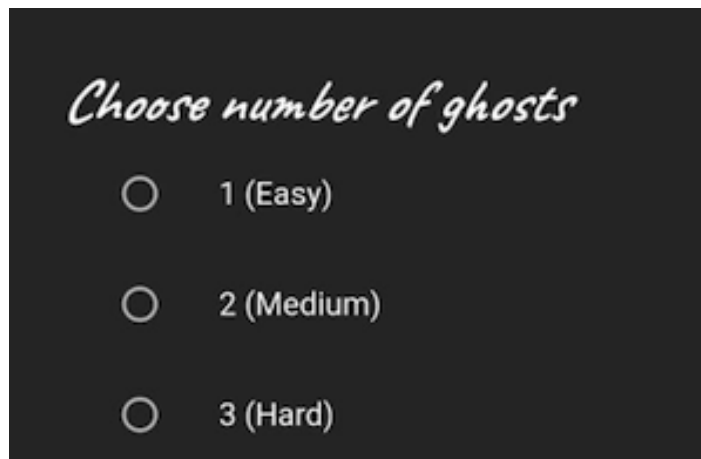
Other options are:

1. Choosing number of players.

2. Choosing the option to add custom image.

a) Choose the number of Ghosts to be present in the game .

   i) **1(Easy)**: It will provide you with only one ghost in the

game.

   ii) **2(Medium):** It provides 2 ghosts in the game.

   iii) **3(Hard)** : It provides 3 ghosts in the game.

Choose number of ghosts

○ 1 (Easy)

○ 2 (Medium)

○ 3 (Hard)

b) Choose movement speed: It provides you three speed options for the ghost.

i)**Slow(Easy):** Slow speed to the ghosts.

ii)**Intermediate(Medium):N**ormal speed to the ghosts.

iii) **Fast(Hard):** Fast speed of ghosts.

Choose movement speed

○ Slow (Easy)

○ Intermediate (Medium)

○ Fast (Hard)
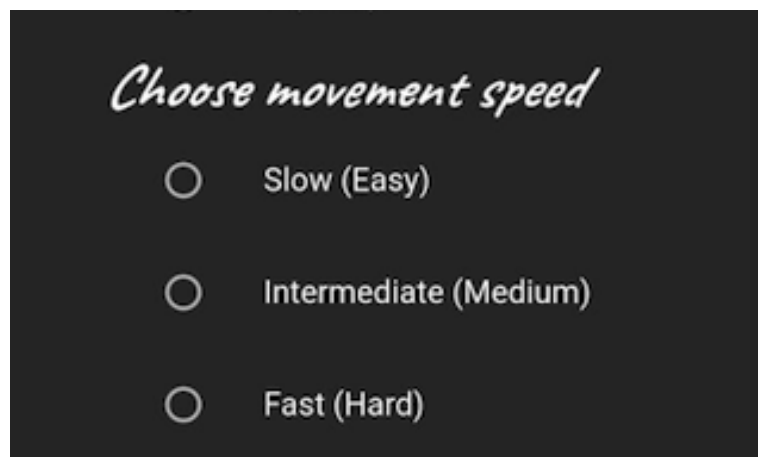
c) Choose Maze Difficulty: This provides different types of Maze.
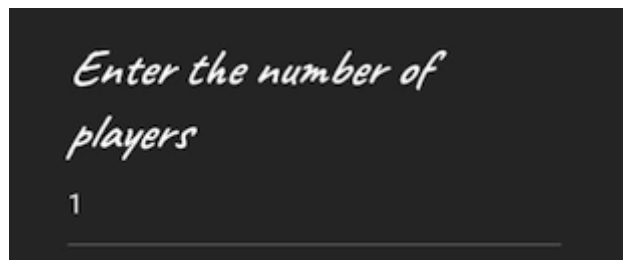
i) **Easy:** Very simple with little or no traps.

ii) **Medium:** Moderate level involving some traps.

iii) **Hard:** It requires a very quick decision response as it has many traps.
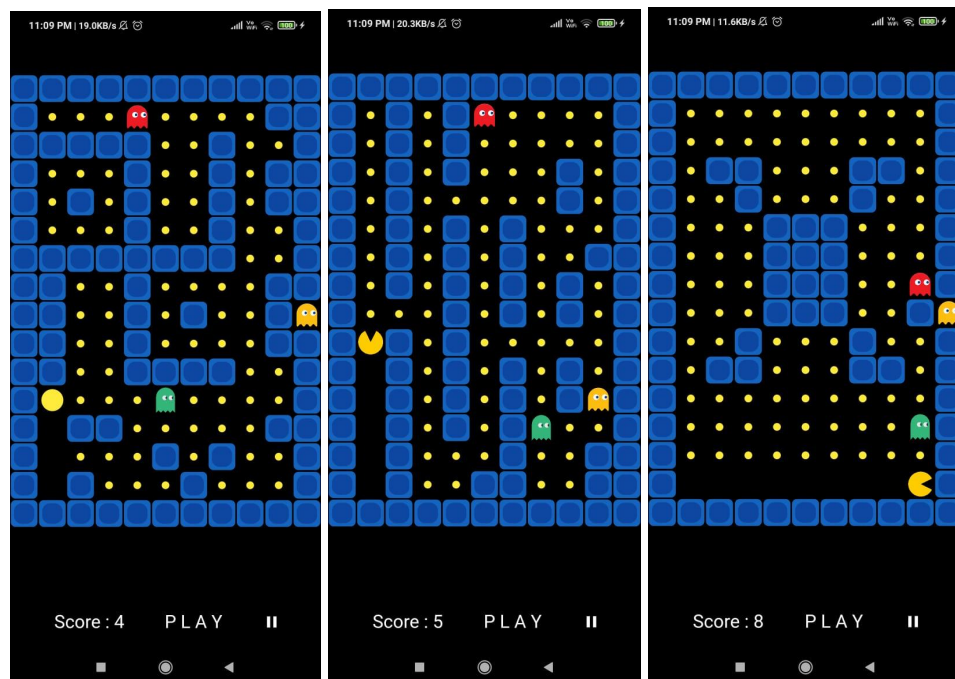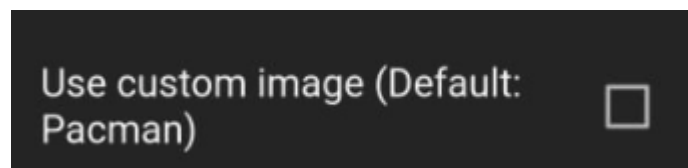
d) Enter the number of players : Write number in this Text Box.
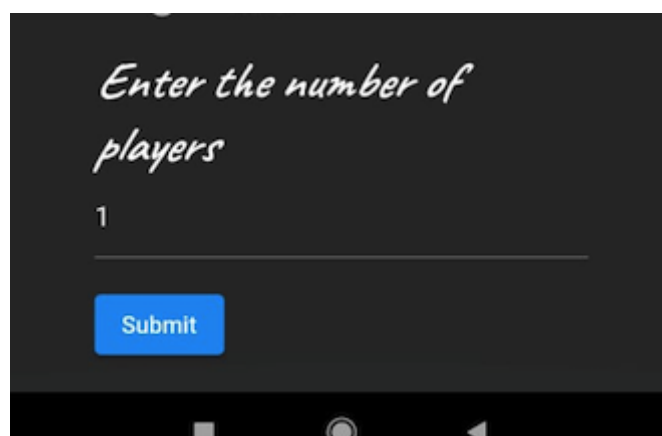Number corresponds to the number of players who want to participate in
this game.

e) Giving the option of adding a custom image replacing the pacman.

 f) Submit : After selecting each option given above, tap on the Submit
button to start the game.
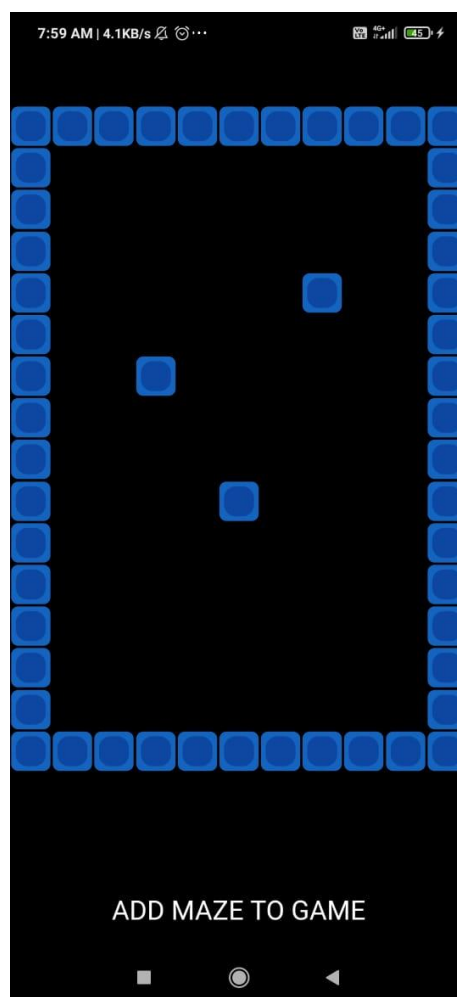
3. Custom maze addition

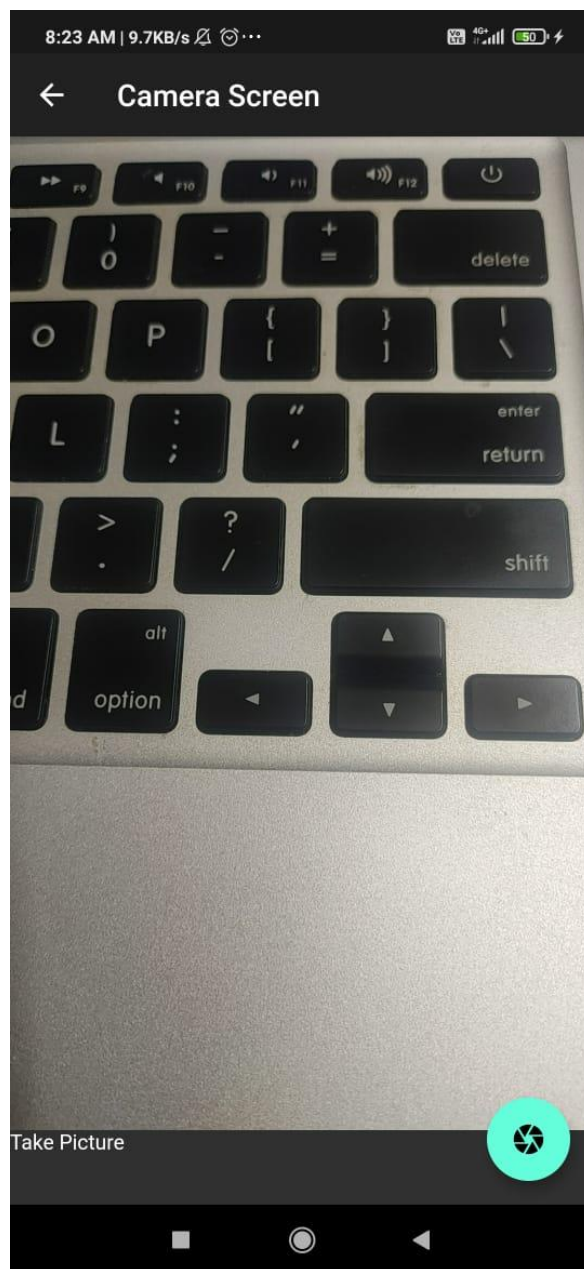   We have given an option to the user to make a custom maze.

   Thereafter, that maze will be added to the global list of mazes.

4. Custom pacman-icon.

   The user will be expected to click a picture and use that picture as
   a substitute for the conventional boring pacman icon.

5. About the developers

This repo is about the developer and the repo link.

6. Default icons

The default icons used are the standard pacman icons