**Android Project 1 Report**

**(Cat-Mouse-Elephant)**

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**Rules:** This game is called Cat-Mouse-Elephant. The objective of the game is to score 5 points before the computer scores 5 points. To score a point, you must win a round. During each round, you must select 1 animal: cat, mouse or elephant. The computer will also select an animal. After you select your animal for the round, there will be a face-off. In the face-off, cat beats mouse, elephant beats cat, and mouse beats the elephant. If your animal wins, you score a point in that round. If your animal loses, computer gets a point for that round. If you both choose the same animal, no one gets points. Then you keep moving to the next round until either you or the computer gets to 5 points. The first to score 5 points wins the game, and the game ends.

**Use of Template:** The template provided has been used minimally like to write the logic of generating random animal from computer and using button\_selector.xml.

**Basic Structure:**

* The app consists of 2 activites:

1. The first is the MainActivity that is started when the app starts. This displays the menu options like play, quit and about along with animations.
2. The second activity is the GameCenterActivity that is started when user clicks on Play button. This activity contains the main game that the user plays, and also the winner of the game.

* Accordingly, the app has 2 layout files in the layout folder and 2 corresponding java files in the java folder.
* In the res/drawable folder, there are all images required by the app and 2 xml files for customized buttons.
* The res/raw directory contains the 4 media files required by the app.

**Flow of the App:**

The ideal flow of the app by an average user should be as follows:

1. Start the app.
2. On seeing the menu, click on About to know the rules.
3. Click return to go back to the menu.
4. Click Play to start the game or Quit if he wants to exit.
5. Click on buttons to select animals to play the game till he loses or wins.
6. Select either Restart if he wants to play again or click Quit if he wishes to exit the app.

**Features:** As proposed in the project proposal, the project has a few additional features and some UI enhancements as compared to the demo project. Below are the highlights of the project features.

1. Animations: The home screen of the game has 2 animations: one for the question mark image that rotates for a few seconds and one for the play button that gets bigger to attract user’s attention. These animations make the home screen visually appealing and give a feeling of enhanced interaction capabilities.
2. Circular Button: The play button is different from all the other buttons in the app. The play button is specially designed in the round\_button.xml file to be displayed as a circle, instead of the rectangular shape. This feature differentiated the button from all others in the app.
3. Hidden Layouts: The app has 2 hidden layouts in each of the two activities. One hidden layout is reserved to display the rules of the game when the player clicks the about button. The second hidden layout is reserved for displaying the winner of the game, when the game finishes.
4. Media: The app also has 4 media resources stored in the raw folder. The 4 media resources are as follows:
5. **Game\_sound.mp3**: This audio is played when the game starts or the player returns to the MainActivity. Whenever the mainActivity is called, this music is played in a continuous loop.
6. **Round\_sound.mp3:** This audio file is played each time the user plays a round. This sound gives a very authentic feel to the game.
7. **Winner\_sound.mp3**: This sound is played if the user wins a game.
8. **Loser\_sound.mp3**: This sound is played if the user loses a game.
9. Score Boards: The gameCenterActivity displays clear score boards for both the player and computer scores in contrasting colours with the score labels.
10. Chosen Animals: The app also displays what animal both the player and computer have selected. This display is done synchronously with the round\_sound.mp3 audio file which give the game a very good effect.
11. Quit and Restart: The app also provides the user options to quit the application and also provides the option to restart the game after one game is finished.
12. App Icon: The app Icon is changed from the default android icon to a custom icon that is suitable to a gaming app.