



BIRZEIT UNIVERSITY

Advanced Computer Systems Engineering Laboratory – ENCS5150

(Summer 2024) - TODO 1: Rock-Paper-Scissors Game

Objective:

You will create a simple Rock-Paper-Scissors Game using Android Studio.

User Interface:

1. Main Activity:

- TextView containing the game's title "Rock-Paper-Scissors" (**horizontally centered, bold font**).
- Three buttons for the player to select rock, paper, or scissors, each featuring both text and an image that represents the button (rock image, paper image, scissors image).
- TextView to show the cumulative score (**green colored, large font size**).
- Image: an image that will show the choice of the adversary (**initially hidden**).
- TextView that contains your name and ID.

2. Result Activity:

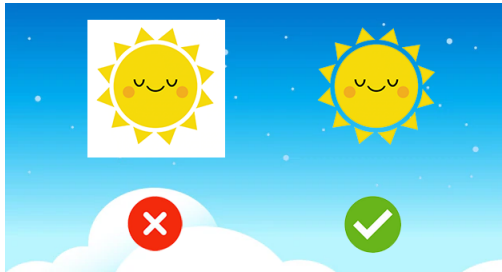
- Feedback TextView (that displays the text "You Won!" or "You Lost!").
- Score TextView (displays the cumulative score).
- Reset button (**red background color and white text color**).

Game Logic:

1. Initially, the app will show the main activity.
2. The adversary should decide its choice (rock, paper, or scissors) randomly.
3. The cumulative score TextView should be "0" initially and change by:
 - 3 for every win.
 - 1 for every draw.
 - -4 for every loss.
4. If the user clicks any of the three buttons, the following will happen in order:
 - The hidden image will become visible, and it will represent the choice of the adversary (if the adversary chose a rock then the image will be that of a rock).
 - 5 seconds after showing the hidden image, the app will use an intent object to move to the Result Activity.
5. Depending on the result of the last match, the feedback TextView should display "You Won!" or "You Lost!".
6. The score TextView should show the user's cumulative score.
7. If the reset button is clicked then it should switch back to "Main Activity". The adversary choice image should be hidden, but the cumulative score should not reset.

Notes:

- You can create any design as long as it is clear, easy to understand, and follows any mentioned specifics in the “**User Interface**” section above (such as specific color or hint requirements).
- Each button of the 3 game choices should contain both text and image, the text should be a real text in the button and not a part of the image.
- Utilize PNG images to achieve a transparent background.



- You should have exactly two activities, no more or less.
- The name of the application must be “ID_FirstName_LastName”.
- Use Pixel 3a XL device with API Level 26 (Graphic=Software).
- The minimum SDK should be API 26.
- ToDo is individual work and cheating/using LLM Models such as ChatGPT will result in a **0 mark**.
- Marks distribution is 8 for functionality and error-handling and 2 for design.
- No late submissions whatsoever, if the deadline is about to arrive, submit your work as it is.
- What to submit:
 1. **Project.zip** file (Size in KB)
From Android Studio: File → Export → Export to Zip File
 2. **app-debug.apk** file (Size in MB)
From Android Studio: Build → Build Bundle(s) / APK(s) → Build APK(s)
You will find the APK file under “app\build\outputs\apk\debug\app-debug.apk”

Send both the APK file and the ZIP file as a reply to my message.

- Test your APK before submission, either by installing it to the emulator by dragging and dropping the app-debug.apk file into the emulated phone, or by installing it to your personal Android phone. At least one mark will be deducted for submitting a faulty APK file.
- Deadline: **28/07/2024 Midnight (Send it before 29/07/2024)**