

Assignment 2, mobile programming

Put all deliverables into github repository in your profile. Share link to google form according to teams deadline. Defend by explaining deliverables and answering questions. There should be proof that you did yourself.

Deliverables: report in pdf

Google form:

https://docs.google.com/forms/d/e/1FAIpQLSe0GyNdOYlvM1tX_I_CtlPod5jBf-ACLGdHYZq1gVZbUeBzlg/viewform?usp=sf_link

Assignment: Create Basic Pages of Instagram in Android Studio

Objective

The goal of this assignment is to develop a simplified version of Instagram's core pages using Android Studio. Students will learn to implement layouts, navigation, and user interface elements similar to Instagram.

Deliverables

1. A fully functional Android application with the following pages:
 - Home Feed
 - Profile Page
 - Search Page
 - Add Post Page
 - Notifications Page
 2. A report documenting the development process, design choices, and lessons learned.
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Assignment Instructions

1. Project Setup

- Create a new Android Studio project using the "Empty Activity" template.
- Set up the project with the necessary dependencies (e.g., Material Components).

2. Layouts

- **Home Feed Page**
 - Use a **RecyclerView** to display a list of posts.
 - Each post should include an image, username, caption, and likes.
- **Profile Page**

- Display user information (profile picture, bio, and posts count).
- Include a grid layout to show the user's posts.
- **Search Page**
 - Create a search bar at the top.
 - Use a **RecyclerView** to display search results with user profiles.
- **Add Post Page**
 - Implement a simple form to add a post with an image and caption.
 - Include a button to upload the post.
- **Notifications Page**
 - Use a **RecyclerView** to show a list of notifications (e.g., likes, comments).

3. Navigation

- Implement bottom navigation to switch between the Home Feed, Search, Profile, Add Post, and Notifications pages.
- Use the Navigation Component to handle fragment transactions and back stack.

4. User Interaction

- Implement click listeners for:
 - Posting new content.
 - Navigating to profiles when clicking on usernames in posts.
 - Liking and commenting on posts.

5. Data Handling

- Use a local data model to simulate user data and posts.
- Implement mock data to populate the RecyclerViews.

Report Structure

Title Page

- Title of the assignment
- Student's name
- Date of submission

Table of Contents

- List of sections and their page numbers.

Introduction

- Brief overview of the assignment and its objectives.

Project Setup

- Describe the initial project setup process.
- Mention any libraries or frameworks used.

Page Design

- Explain the design of each page:
 - **Home Feed:** Discuss layout and data structure.
 - **Profile Page:** Describe how the user data is displayed.
 - **Search Page:** Explain the search functionality.
 - **Add Post Page:** Detail the input fields and submission process.
 - **Notifications Page:** Summarize how notifications are displayed.

Navigation

- Describe how navigation is implemented.
- Explain the use of the Navigation Component.

User Interaction

- Detail how user interactions are handled.
- Include examples of click listeners and their functionalities.

Challenges and Solutions

- Discuss any challenges faced during development.
- Explain how you resolved these challenges.

Conclusion

- Summarize the key learnings from the assignment.
- Reflect on the importance of UI/UX in mobile app development.

References

- Cite any resources or tutorials used in the development process.
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Submission Guidelines

- Submit the Android Studio project as a zip file.
- Include the report in PDF format.