Department of Computer Science

Summative Coursework Set Front Page

Module Title	Programming in Java
Module Code	CS2PJ20
Lecturer responsible	Dr Neha Dogra
Type of Assignment (e.g., technical report, set exercise, in-class test)	Technical Report
Individual or Group Assignment	Individual Assignment
Weighting of the Assignment	50%
Word count/page limit	Technical report (10 pages max., including figures and code screenshots)
Expected hrs spent for the assignment (set by lecturer)	16-20 hrs.
Items to be submitted	Report (in PDF) and a Zip file of (source code, .apk and README file)
Work to be submitted on-line via Blackboard Learn by	20th March 2024
Work will be marked and returned by	15 working days

Note

By submitting this work, you are certifying that you have read the assessment guidelines, which are displayed in the folder of Assessment on the Blackboard course for this module, and that you have conformed to and understand the associated policies and practices, including those on:

- Submitting your own work, not that of other people or systems, and the associated penalties for Academic Misconduct
- Submitting by the specified deadline, and the penalties associated with late submission (if allowed)
- The exceptional circumstances system
- For students with relevant needs, attaching with a green sticker

1. ASSIGNMENT DESCRIPTION

In this coursework, you will construct an android application and will document the development process in a written report (pdf format). The assignment focuses on evaluating both your technical skills in app development and your ability to effectively communicate your work.

You can choose either of the following two scenarios:

Scenario 1:
You are tasked with developing a mobile application inspired by the University of Reading (**UoR Student app**), focusing on providing essential university services to students. Your app should incorporate: **basic functionalities, such as user authentication and personalized timetable** and at least **two additional features** (e.g., but not limited to, campus news and personal profile) that demonstrate your creativity and understanding of the students' needs.

Scenario 2:
Develop any app of your own choice (e.g., but not limited to, **games**) that demonstrate the **basic functionalities, such as user authentication and levels of the game**, and at least **two additional features** (e.g., but not limited to, sound effects and game rules) that highlight your creativity.

You will demonstrate successful completion of the coursework by the submission of:

Report Requirements:
1. Overview
    a. Brief overview of your intended application, which serves its purpose and target audience in the chosen scenario;
    b. Outline the objectives of the application development.

2. Application Specifications
    a. Describe the technical specifications for your application, such as functional components, algorithms for the basic functions and advance functions,
    b. user interface of the application

3. Application Implementation
    a. Examination of the basic functionalities implemented in the application, such as user authentication and personalized elements (timetable for the UoR Student app or levels for a game). Full-screen screenshots should be provided to demonstrate the technical implementation of these features, facilitating review by displaying the code and its outcomes as shown in Figure 1.
    b. Provide screenshots of users registered in Firebase to illustrate User Authentication as shown in Figure 2.

c. Discussion of two additional features included in the application, showcasing creativity and understanding of the users' needs or enhancing the gameplay experience. Full-screen screenshots should be provided to demonstrate the technical implementation of these additional features, facilitating review by displaying both the code and its outcomes (e.g., Figure 1).

4. Conclusions and Future Work
   a. Concluding remarks (Summary of the project outcomes).
   b. Reflection on overall learning experience and achievements.
   c. Future Work (Proposals on any potential future improvements or expansion for the application including potential updates, new features, and other enhancements).
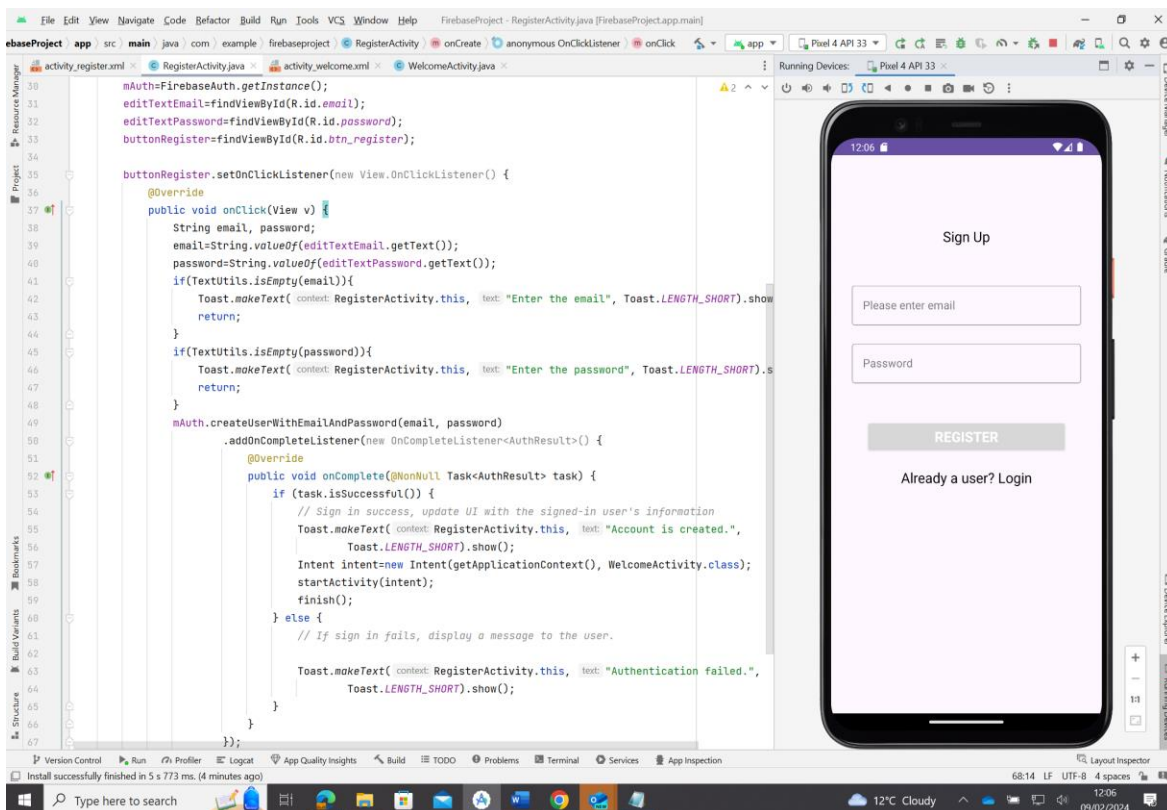

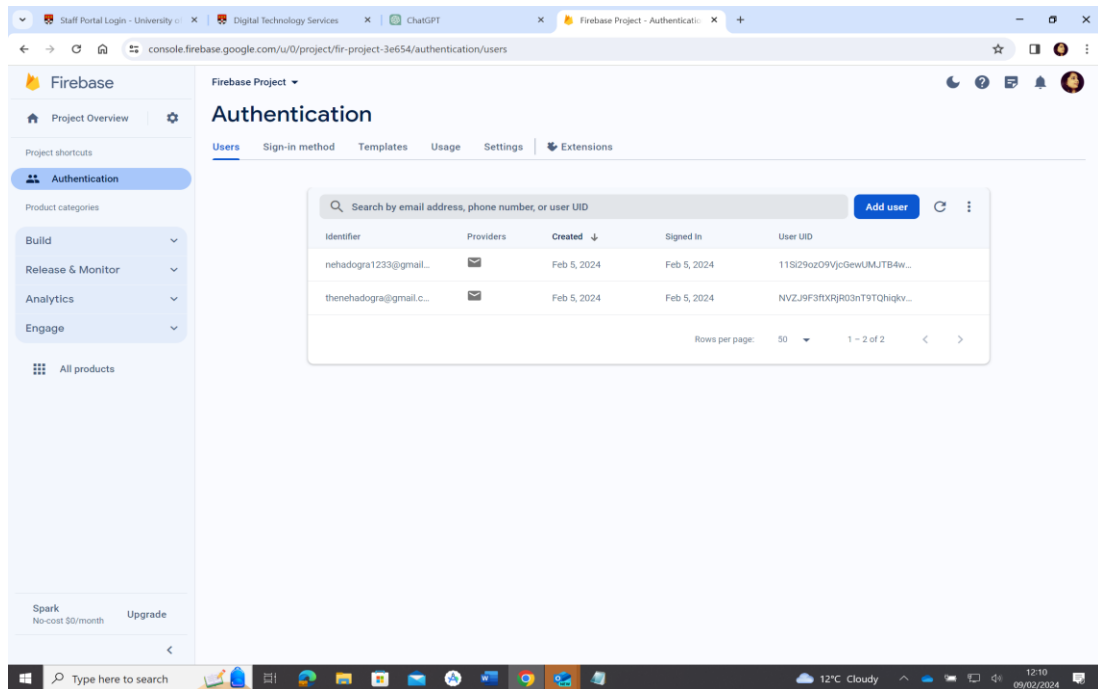
Figure 1: User Authentication Page

Figure 2: Registered users

2. ASSIGNMENT SUBMISSION REQUIREMENTS

You will demonstrate successful completion of the coursework by the submission of:

1. A technical report (10 pages maximum) in .PDF format

   Front page of the report submission
   (*the following are compulsory)*
   Module Code:

   Assignment report Title:

   Date (when the work completed):

   Actual hrs spent for the assignment:

2. Program codes in
   A Zip of (i) Source Code, (ii) installable APK and (iii) instructions to run code (README)

3. ASSESSMENT MARKING RUBRIC

Your assignment will be evaluated based on the criteria presented as follows:

Criteria	Excellent (70% and above)	Good (60 -69%)	Satisfactory (50-59%)	Adequate (40-49%)	Needs Improvement (30-39%)
Introduction and Context (10 Marks)	Provides a comprehensive and engaging introduction, clearly outlining the app's purpose, target audience, and key features	Offers a clear introduction and overview, adequately explaining the app's purpose and main features, with minor details lacking or not fully elaborated.	Gives a basic introduction and overview of the app but lacks depth or clarity in conveying the app's purpose or key features.	Provides an overview with minimal detail, lacking clarity in the app's purpose and main objectives.	Introduction and context are unclear, incomplete, or missing.
Basic Functionality 1 (20 Marks)	The functionality is fully implemented and exceeds basic requirements. Demonstrates innovative use of technology and seamless user experience.	The functionality is implemented well, meeting all basic requirements with minor issues or areas for improvement.	Meets the basic requirements with noticeable issues in implementation or user experience.	Partially meets the basic requirements with significant issues in functionality or user experience.	Functionality is poorly implemented, with critical flaws or many parts not working.
Basic Functionality 2 (20 Marks)	The functionality is fully implemented and exceeds basic requirements. Demonstrates innovative use of technology and seamless user experience.	The functionality is implemented well, meeting all basic requirements with minor issues or areas for improvement.	Meets the basic requirements with noticeable issues in implementation or user experience.	Partially meets the basic requirements with significant issues in functionality or user experience.	Functionality is poorly implemented, with critical flaws or many parts not working.
Additional Feature 1 (20 Marks)	Exceptionally creative and useful, significantly improving the overall app experience with flawless integration.	Well-implemented with clear benefits to the app's functionality or user experience, with slight room for enhancement.	Adds value but with limitations in creativity, implementation, or impact on the app's overall quality.	Minimal impact on enhancing the app, with issues in functionality or relevance.	Fails to add meaningful functionality or enhancement to the app, with poor execution.
Additional Feature 2 (20 Marks)	Exceptionally creative and useful, significantly improving the overall app experience with flawless integration.	Well-implemented with clear benefits to the app's functionality or user experience, with slight room for enhancement.	Adds value but with limitations in creativity, implementation, or impact on the app's overall quality.	Minimal impact on enhancing the app, with issues in functionality or relevance.	Fails to add meaningful functionality or enhancement to the app, with poor execution.
Conclusion and Future Work (10 Marks)	Provides insightful reflections on the project, a thorough analysis of achievements, and well-considered plans for future enhancements.	Offers a clear conclusion and future work with some insights and reasonable suggestions for improvements.	The user interface design is satisfactory but lacks in areas like intuitiveness, aesthetics, or user experience.	Provides a minimal conclusion with vague or limited thoughts on future work.	Conclusion and future work are either very poorly articulated or missing.