



## **SWE483 Project**

**(Fall 2023-2024)**

**Due Date: Sunday 03/12/2023 at 8:00am**

### **PROJECT OBJECTIVES:**

- Applying the concepts, you have learned in the class.
- Translating the business requirements into a running application.
- Scaling up your skills in developing a mobile application.

### **Introduction:**

One of the best ways to organize your academic and scientific experience in KSU and have quick and easy access to the semester's duties (quizzes, midterms, projects, assignments, exams, etc.) and events (scientific workshops and camping, hackathons, training sessions, etc.) is to use a calendar app on your smartphone.

It allows you to set up recurring deadlines and customize the type of notification you receive to alert you about any upcoming duty. This project aims to create an android mobile application to help KSU student organizing his academic tasks and deadlines. The user will be able to view a timeline of his closest commitments and events within specified period. These duties are extracted and added automatically from received SMSs (from KSU deanships, LMS, etc.). Students may also add manually a new duty or event. In both cases, this duty will be saved to the calendar (name, nature, date, time, priority, tasks and notes), after checking if there are conflicts. In that case, an alert should be generated; then the student can signal this conflict to the sender through a message. When a duty deadline is reached (the period should be specified by the student), the user should be notified/alerted and should receive a reminder.

### **Main Requirements:**

The following are the gathered business requirements to be implemented in the application:

- The system should contain at least 2 activities.
- Navigating from one activity to another should be easy and clear.
- The first activity (homepage) should include:
  - A timeline of the weekly closest duties when clicking on one, you can view details (name, nature, date, time, priority, tasks and notes). You can also edit, confirm or dismiss this duty.
  - An add button: when it is pressed, the system displays a second activity to add manually a duty with all its features: name, nature, date, time, priority, tasks and notes and the reminder period. This event should be added to the local database, and the calendar, and eventually to the timeline.

Mainly, the local database will be fed automatically based on received messages from KSU or LMS. The application should parse each received message, and then extract key duty details.

- The second activity (duty Information) which includes these fields: name, nature, date, time, priority level, tasks, notes.
  - A data validation mechanism where an error message should appear if the user enters invalid data.
  - A submit button: when it is pressed, it connects with the local database to check the validity of the entered duty. In case of success, it is added to the calendar with specific mark. In case of failure, the system should display an error message to the user.

#### **Additional requirements:**

- When two or more duties are conflictual, an alert should be displayed and a message can be sent to the duty responsible.
- When a duty approaches, a reminder and notification should be sent to the user. When this notification is clicked, a detailed description is provided. You can then confirm or ignore this duty.

#### **General Guidelines:**

- Students are expected to work in small groups of exactly five students.
- The business requirements are general; so, you have the freedom to choose the android programming style you like including activities layout, views, classes, methods, etc.
- Innovation and creativity are always welcome.
- The project shall be submitted on time. Late submissions will not be graded.
- The project is worth 20% of your grades.
- Do not wait until the last day to start the project. No extension will be given.
- Need help or got a question?! Never ever hesitate to reach out to your instructor.

#### **Project Deliverables:**

1. The project report (2-page limit) in .pdf format which should include:
  - a. Student's names, ids
  - b. Introduction
  - c. Challenges (encountered difficulties)
  - d. Lessons learned and issues solving tricks
  - e. Some screenshots of the GUI
  - f. The contribution of each student
2. The apk file of your application and source code files.
3. Both the project report and the source code should be in compression file such as Group#.zip (ONLY one submission per team)
4. Live demo session with your instructor (the schedule will be announced later)

**Have fun!**