Mobile Application Development for Android
Retake session to be defended on June 4, 2024
2023-2024

Instructions :

- **This catch-up project can be done alone or in a team of up to 2 people.**
- The quality of the report provided will be taken into account in the rating.
- **There will be physical defense.**
- **The defense will take place on June 4, 2024 in person.**
- **Deliverables to be made on moodle no later than 03/06/2024.**

1. Project Statement

In order to improve its APP module, Isep wishes to develop a mobile application. The main objective of this application is to facilitate the consultation of notes by each student in A1. Indeed, currently, the grades are entered on a sheet called a skills sheet. Teachers post comments and grades for each student in each group. Here are some management rules to better understand the sheet. A competences sheet is also attached to this subject to allow you to consult it in case you have not had the opportunity to discover this sheet in A1 (APP) or A2 (APP IEMDP).

1.1. The team
- o There are approximately 10 groups of approximately 30 students each school year. Each group is divided into 5 teams composed of 6 to 7 students.
- o Each group has a name, a tutor for each component.
- o There are several components in which each group takes courses: Computer Science, Telecom, Electronics and Signal.
- o Each student has a first and last name, a student number and a photo.

1.2. Synthesis
Provides an overview of each student's performance for each skill. Note that if a score is missing in a skill then the component concerned will not have a score. The component score is calculated using those obtained in the relevant skills. (See the configuration sheet for details). Do not hesitate to manipulate a local version of the skills sheet to better understand the calculation formulas.

1.3. Overview
Provides an overview of each student's scores for each skill. (See the configuration sheet for details). Do not hesitate to manipulate a local version of the skills sheet to better understand the calculation formulas.

1.4. Components
Several components are evaluated (General Electronics – Signal, Electronics , Signal, General Computer Science – Telecommunications, Computer Science, Telecommunication, Integration). Aside from the Integration component, each group has a tutor for each component. Each component has a list of skills to assess. For each skill has a title, a description and a link to view the details. For each skill, the tutors concerned will be able to complete observations on the entire team, individual observations on each student in the team. They will also be able to give each student a score for each skill. Note that the notes are evolving (we would like to keep the history). Ratings vary between Far and Beyond (See configuration sheet for details).

1.5. Attendance
Each session, each tutor must make the attendance list and provide student attendance (Present, Absent without proof, Absent with proof, Late).

2. Functional Specifications

Isep would like to have two mobile applications that communicate with the same database.

*For this project, you will not have to develop all the features. **You can go further than what has been asked if you have enough time.***

A. The first application intended for the administration (tutors, clients, module manager, component manager) will play the role of backoffice and will feed all the tables. **Mandatory features in this application are in yellow** . Here are the main features requested:

1. Register, Login and Logout.
2. Have access to features based on your profile.
3. The module manager can do everything the other profiles can do
   a. Tutors
      i. Can consult/complete his notes, comments, remarks in his component for his group
      ii. Can provide the attendance of each student in each team in their group (Present, Absent without proof, Absent with proof, Late) for each session.
      iii. Publish your updates. This feature will allow tutors to send a notification to all students in their group that an update has been made to their grades and that they can go and view it.
   b. Component manager
      i. View scores for all groups in the component
      ii. Do everything the component tutors can do.
      iii. Send announcements
   c. The manager must be able to deactivate and reactivate a student.
   d. View the grades of all students in all components.
   e. Send announcements to all students.
   f. Add/Modify/Delete components
   g. Add/Modify/Delete skills for each component
   h. Assign/Dismiss a Tutor to each group for each component
   i. Assign/Remove a customer to each group
   j. Validate the registration of Tutors and students.
   k. Assign/Remove/change groups or teams to each student.

B. The second application is used by students. Here are the expected features. **All student features are mandatory.** Each student must be able to:
   a. Register, Login and Logout.
   b. View the scores obtained for each component.
   c. View the scores obtained for each skill based on the component.
   d. View the Overview
   e. View the summary
   f. Request reassessment of a skill by sending a message through the application with supporting documents.
   g. Open the usual email management application (gmail, outlook, etc.) by clicking on the email address of the tutor, client or managers.
   h. View announcements received
   i. Receive a notification when an update is released.
   j. View the notes of other team members

3. Technical specifications

For this catch-up project, here are the technical instructions

1- You should use git, even if the work is done alone, and do regular pushes to the project directory. We will take your pushes into account to monitor your progress.
2- Add the account maurras.togbe@isep.fr to git as a collaborator to have access to all features.
3- The design, the classes to create, the libraries to use, the DBMS to use are left to your free choice as a future engineer. You will nevertheless have to justify your technical choices in the report.
4- The programming language to use is Java or Kotlin.

4. Expected deliverables

For this catch-up project, we expect:

1- Two mobile applications, i.e. two installable ones, to be uploaded to Moodle.
2- A report detailing what was done. It must contain:
   a. A link to the project git
   b. A link to the project presentation video
   c. Explanations of your technical choices: languages, libraries, Framework, etc.
   d. The list of functionalities developed according to each profile
   e. Screenshots showing some features;
   f. The report should not exceed 15 pages.
3- **Deliverables to be made on moodle on 03/06/2024 at the latest. The defense will take place on 04/06/2024 in person.**