

# MOBILE APPS DEVELOPMENT - 503074

## SEMESTER 1 – ACADEMIC YEAR 2023 - 2024

Version 1.0, Last updated on Sep 13, 2023

### I. REQUIREMENT DESCRIPTION

Comprehensive Study of Google **Firestore** for Developing a Realtime App for Student Information Management

#### Objective

This project aims to acquire a thorough understanding of Firestore in order to develop app that provides various functionalities related to student information management.

#### Key Software Functions:

**User Account Management** (using firebase authentication is not required but can be a good choice)

- User Login (for all users)
- Change Profile Picture (for all users)
- View the List of System Users
- Add a New User: Name, Age, Phone Number, Status (Normal/Locked)
- Delete a User
- Modify User Information
- View Login History of a User

#### Student Management

- View List of Students

- Add a New Student
- Delete a Student
- Update Student Information
- Sort the List of Students based on various criteria
- Search for Students using multiple criteria
- Access Student Details Page
  - o View complete student information on the details screen
  - o Manage a list of certificates for students:
    - View the list of certificates
    - Add a new certificate
    - Delete a certificate
    - Update certificate information

#### **Data Import/Export**

- Import a list of students from a file
- Export the list of students to Excel/CSV
- Import a list of certificates for a student from a file
- Export the list of certificates to Excel/CSV

The app needs to provide three user roles: admin, manager and employee. The admin account is integrated with the system without needing to be created. The remaining accounts can be created by admins, normal users cannot create

accounts themselves. In the functions mentioned above, admin can perform everything, manager can perform all functions related to students, and employee accounts can only view content. Employees are not allowed to edit any content other than updating their profile picture.

### III. REQUIREMENTS FOR OUTPUT

- **Report (pdf):** Present the report in general form of the Faculty in English. The basic content of the report is to introduce everything you have learned about Firebase Firestore, helping readers understand what you have learned and how they work. In addition, the report also needs to present details about how you created the student management application.
- **Video demo:** create a video (with audio) represented by a member of your group about content your team has learned about. Videos have a maximum duration of 20 minutes, if the content is longer, some unimportant segments can be fast forwarded to ensure the duration is still 20 minutes. You should choose members who speak loudly, present well, video only needs 720p standard. This demo video does not have to use a powerpoint slide, it just needs to clarify the problem, show the audience the results of your team's research, provide useful information on the topic that the group has learn to the viewer. The grading instructor (practice instructor) can change the demo video recording request to the live report score if needed.
- **Source code:** source code of the work / illustrated work (if any). It is necessary to provide the full source code, library, database and instructions necessary for the examiner to be able to run this source code on their computer.

#### IV. DETAILED SCORING

| CONTENT                              |       | 1              | 2   | 3  | 4   |
|--------------------------------------|-------|----------------|---|--|---|
|                                      | POINT | 0              | 1/4   | 1/2 - 3/4  | Full score  |
| REPORT                               | 4.0   |                |   |  |   |
| Content                              | 1.0   | No report file | The content is very sketchy, not highlighting important issues in the topic that the group is assigned to explore.  | The content of the study is relatively complete but has not fully exploited the aspects of the topic or has not had a specific analysis / comparison / evaluation.   | The content is very complete and detailed, clarifying aspects of the topic that the group is assigned to learn. There is analysis / evaluation / comparison ...   |
| Correctness                          | 0.75  | No report file | Only copy content directly from blog pages and aggregate it into reports or keep bloggers' writing style without sifting, not rewriting according to group's understanding and writing style. | The content is relatively complete and there are also quotes, but the group does not focus on rewriting according to the group's understanding and writing style or there are references on the blog that are ambiguous, confusing, but the group has not acted. reached back in a way that is easier to understand. | Present information selectively, with clear origin. The content in the report is rewritten by the team based on the information that the team has learned and written in the group's writing style, not copying the content directly from the blog pages. |
| Presentation style and writing style | 0.75  | No report file | Bad, sloppy report presentation, no investment. No line spacing, font alignment, font and color synchronization, many typos.  | The presentation style and the way of writing are fine, but there are still some errors of presentation that make the report not eye-catching or misspellings or the writing style   | The report is clean, has a clean layout, uses proper alignment, font color, text size, image size, and tables accordingly. Professional writing style,  |

|   |            |   |   |   |  |
|---|------------|---|---|---|--|
|   |            |   |   | in the direction of "speaking", not consistent with the style of the report.  | consistent with writing style. There are no spelling mistakes and presentation errors.   |
| <b>Pictures, tables, diagrams</b>                         | 0.75       | No report file<br>Or no image in the report content   | Has images / tables / diagrams but the same as nonexistent: unrelated images or copying images / tables as is from blog pages without sifting, watermarked or drawn / drawn lines Unrelated markers of blog author on photo / board.  | Have pictures / tables / diagrams but have not focused on investment and still have basic errors such as: no photo captions / tables / diagrams, using very basic images from blog while being able to draw / take a screenshot of these pictures, the picture is too big / too small or contains unnecessary information in the image. | Use accurate, consistent images / tables / diagrams. Take a screenshot by yourself or design a reasonable drawing image. Tables and diagrams (if any) show clear and accessible information. Each image / chart / diagram has a clear caption. |
| <b>Cover page, table of contents, appendix, reference</b> | 0.75       | Entering the wrong name of the school; wrong names and codes of group members; not delete the tutorial comments in the sample report file; Copy the thanks from the internet. | Do not have one of the following pages: cover page, table of contents, acknowledgments, references or incorrect information of instructor in charge, or keep one of the annexes containing sample information intact (unrelated to the assignment) as shown in the sample report file provided by the instructor. | There are full cover pages, indexes, appendices and references, but there are still some other minor errors such as the sloppy presentation of content on these pages   | Presenting clean and beautiful with correct model provided by lecturers / Faculties, accurate and complete information. No fundamental errors.   |
| <b>PRODUCT</b>  | <b>6.0</b> |   |   |   |  |

|                                    |     |                 |   |  |  |
|------------------------------------|-----|-----------------|---|--|--|
| <b>Account Management Features</b> | 1.5 | Not Implemented | There is no preparation or presentation of content through speakers, sketchy. Difficult sound, noise or content problems or interruptions make it difficult for viewers to grasp the content. | The preparation and presentation style are average, not engaging enough.   | Very well-prepared, animated and engaging demo presentation. The presenter has a loud voice that is easy to hear and the style of presentation is confident. Make the listener feel easy to understand, quickly grasp the problem. |
| <b>User Management Features</b>    | 2.0 | Not Implemented | The requirements as described in the description have not been completed, but the core functions have been completed, reaching an overall score of over 60% of the requirements.              | The requirements as described in the description have not been completed, but the core functions have been completed, reaching an overall score of over 60% of the requirements. | Complete all functions as described or even pay attention to every small detail for user improvement.  |
| <b>Data Import/Export Features</b> | 1.0 | Not Implemented | The requirements as described in the description have not been completed, but the core functions have been completed, reaching an overall score of over 60% of the requirements.              | The requirements as described in the description have not been completed, but the core functions have been completed, reaching an overall score of over 60% of the requirements. | Complete all functions as described or even pay attention to every small detail for user improvement.  |
| <b>User Interface</b>              | 1.0 | Not Implemented | The interface is not beautiful  | The interface is okay, enough to use the features but not eye-catching or the interface is complicated and difficult to use.   | The interface of the website has a good investment, looks beautiful and eye-catching, the layout is clear, responsive and easy to use.   |

|           |     |                 |   |   |  |
|-----------|-----|-----------------|---|---|--|
| Stability | 0.5 | Not Implemented | The software is unstable, has errors, or is very difficult to use | The software works well but there are occasional errors that need to be looked into | The software operates stably, with no errors or only very small errors |
|-----------|-----|-----------------|---|---|--|

A minus point may be applied (depending on the teacher) in such cases:

- No demonstration video provided (up to 2.0 point)
- Division of work unevenly among team members.
- Late submission, submit via personal email.
- Filed in the wrong format as required:
  - o Missing or missing member information
  - o No necessary descriptive information: for example, there is no instruction for running source code or running source code but not providing an admin account to access the application.