Software Requirement Specification
Functional Requirements
CS 345-346

Problem 2 : Classnote Taking Application
Group 18

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1 Introduction

1.1 Purpose

The purpose of the document is to capture the description and the **functional requirements** of a **Classnote Taking Application**, focusing mainly on the needs of college-going students.The document lists each and every feature characterising the platform, and provides description for every functionality needed to build it.

1.2 Document Conventions

The format specified by **IEEE** was followed while creating this document.
Font Family used was **Computer Modern** and the font size was 12pt. The headings of each topic are in bold. Bullet points are used wherever required. All the titles, inputs and outputs of the **functional requirements** are written in Camel Case.

1.3 Intended Audience and Reading Suggestions

This SRS document is a part of a project under the **CS345** and **CS346** courses - Software Engineering. The intended audience is our course instructor, **Dr. Samit Bhattacharya**, and teaching assistants tasked with evaluating this project. The document acts as a guide to check the project progress at various stages and inspect if the objectives of the project are being met or not. The document also provides a summary of the project features to the evaluators.
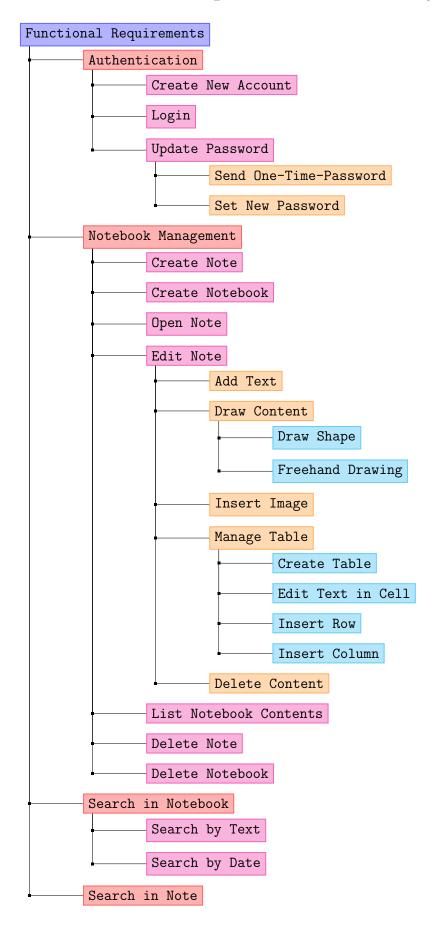
1.4 Product Scope

Sincerely taking notes during lectures helps a student center and better comprehend the principle ideas being taught by the professor. Note-making is a core value diligently followed by an ideal student, and helps him/her recollect the learnings and reproduce and apply them when needed to.
This application aims to provide a one-stop destination to a student that satisfies his/her needs to take notes digitally. This system eases the process of not only making notes, but also efficiently organising them in a manner best suited to being used by the student as and when needed. When used effectively, the application acts as an extension of the student's mind, recording his/her thought processes and saving them in the form of electronic notes for future use. The student can make notes in various forms provided by the application.

1.5 References

1. IEEE SRS Template
2. CS345 and CS356 course slides by Dr. Samit Bhattacharya. (Winter Semester 2021)

2 Functional Requirements Hierarchy

Functional Requirements
- Authentication
  - Create New Account
  - Login
  - Update Password
    - Send One-Time-Password
    - Set New Password
- Notebook Management
  - Create Note
  - Create Notebook
  - Open Note
  - Edit Note
    - Add Text
    - Draw Content
      - Draw Shape
      - Freehand Drawing
    - Insert Image
    - Manage Table
      - Create Table
      - Edit Text in Cell
      - Insert Row
      - Insert Column
    - Delete Content
  - List Notebook Contents
  - Delete Note
  - Delete Notebook
- Search in Notebook
  - Search by Text
  - Search by Date
- Search in Note

3 Functional Requirements

3.1 Authentication

3.1.1 Create New Account

- **Input :** User Information
- **Output :** Validation Prompt Message
- **Description :** Create a new account using user details and display account creation message.

3.1.2 Login

- **Input :** User Credentials
- **Output :** Login Status
- **Description :** Verify user credentials and provide access to user data.

3.1.3 Update Password

3.1.3.1 Send One-Time-Password

- **Input :** User Email
- **Output :** One-Time-Password
- **Description :** A one-time-password is sent to the user's email.

3.1.3.2 Set New Password

- **Input :** One-Time-Password, New Password
- **Output :** Password Change Verdict
- **Description :** One-Time-Password is verified, new password entered and the password is updated.

3.2 Notebook Management

3.2.1 Create Note

- **Input :** Note Location and Note Name
- **Output :** New Empty Note
- **Description :** Create a new empty Note in the given location.

3.2.2 Create Notebook

- **Input :** Notebook Location and Notebook Name
- **Output :** New Notebook
- **Description :** Create a new empty Notebook in the given location.

3.2.3   Open Note

- **Input :** Note Location
- **Output :** Note Content
- **Description :** Display contents of the given Note.

3.2.4   Edit Note

3.2.4.1   Add Text

- **Input :** Write Position, Text
- **Output :** Note Content
- **Description :** Display edited content after adding the new text at the given position in the Note.

3.2.4.2   Draw Content

3.2.4.2.1   Draw Shape

- **Input :** Shape, Set of Coordinates
- **Output :** Note Content
- **Description :** Display the shape described by the set of coordinates acting as its vertices.

3.2.4.2.2   Freehand Drawing

- **Input :** Dynamic Set of Coordinates
- **Output :** Note Content
- **Description :** Display the scribbling drawn by connecting the dynamic set of coordinates.

3.2.4.3   Insert Image

- **Input :** Position, Image
- **Output :** Note Content
- **Description :** Display the inserted image in the given Note.

3.2.4.4   Manage Table

3.2.4.4.1   Create Table

- **Input :** Table Position, Number of Rows and Columns
- **Output :** Note Content
- **Description :** Create an empty table in note with the specified number of rows and columns and display the updated note content.

3.2.4.4.2 Edit Text in Cell

- **Input :** Table ID, Row Number, Column Number, Text
- **Output :** Note Content
- **Description :** Set the text in selected cell(identified by row number and column number) to the new text.

3.2.4.4.3 Insert Row

- **Input :** Table ID, Row Position
- **Output :** Note Content
- **Description :** Insert an empty row at the given position in the Table.

3.2.4.4.4 Insert Column

- **Input :** Table ID, Column Position
- **Output :** Note Content
- **Description :** Insert an empty column at the given position in the Table.

3.2.4.5 Delete Content

- **Input :** Element ID
- **Output :** Note Content
- **Description :** Remove the element from the note and display the updated note content.

3.2.5 List Notebook Contents

- **Input :** Notebook Location
- **Output :** List of Notes and Notebooks
- **Description :** Return the list of Notes and Notebooks inside the current Notebook.

3.2.6 Delete Note

- **Input :** Note Location
- **Output :** Deletion Message
- **Description :** Delete the Note present at the location.

3.2.7 Delete Notebook

- **Input :** Notebook Location
- **Output :** Deletion Message
- **Description :** Delete the Notebook present at the location.

3.3   Search in Notebook

3.3.1   Search by Text

- **Input :** Text Phrase
- **Output :** List of Notes
- **Description :** Return the list of Notes present in the given notebook containing the given text phrase.

3.3.2   Search by Date

- **Input :** Date
- **Output :** List of Notes
- **Description :** Return the list of Notes created on the given date present in the given notebook.

3.4   Search in Note

- **Input :** Text Phrase, Note
- **Output :** List of Positions
- **Description :** Parse the whole document to search the given text phrase and return the positions at which the phrase found.