Mehran University of Engineering and Technology Jamshoro

Project Proposal

Student Attendance Management System

SUBJECT

PROGRAMMING FUNDAMENTALS

SUBMITTED BY

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SUBMITTED TO

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Introduction

This project aims to create a system that efficiently records student attendance. Using C++ as the programming language, the system captures attendance for the class *24BSAI*, stores data in a text file, and provides a summary of students present and absent. This simple yet effective tool can improve attendance tracking and minimize errors.

Objectives

- Develop an automated attendance system for recording student attendance.
- Store attendance data in a text file for future reference.
- Provide an easy-to-use interface for teachers to mark attendance.

Scope

The system will:

- Allow teachers to input attendance as "Present (P)" or "Absent (A)" for each student.
- Store attendance data in a file named **"attendence.txt"** for easy retrieval.
- Display summaries of present and absent students.
- Be limited to a single subject and class (24BSAI).

```
int main()
    string subject;
    cout << "Enter the name of subject ";
    getline(cin, subject);
    cout<<"Subject : "<<subject<<endl;
    ofstream out("attendence.txt", ios::app);
    string date;
    cout << "Enter date " << endl;
    getline(cin, date);
    out << endl << endl << "Attendence of 24BSAI" << endl;
    out<<"Subject : "<<subject<<endl;
    out << "DATE : " << date;
    cout << " ATTENDANCE PORTAL 24BSAI " << endl;
    cout << "Date :" << date << endl;
    const int totalStudents = 56;
    int roll, presentCount = 0, absentCount = 0;
    int present[totalStudents], absent[totalStudents];
    char c;

    for (roll = 1; roll <= totalStudents; roll++)
    {
        cout << "24BSAI0" << roll << " (p/a): ";
        c = getch();
        cout << c << endl;

        if (c == 'p' || c == 'P')
        {
            present[presentCount++] = roll;
            cout << "24BSAI0" << roll << " is Present" << endl;
        }
        else if (c == 'a' || c == 'A')
        {
            absent[absentCount++] = roll;
            cout << "24BSAI0" << roll << " is Absent" << endl;
        }
        else
        {
            cout << "Invalid key! Please choose (p/a)." << endl;
            roll--;
        }
```

Required Tools and Technologies

- **Programming Language:** C++
- **Libraries:** `<iostream>`, `<fstream>`, `<conio.h>`
- **Compiler:** C++ compiler GCC
- **IDE:** Visual studio code

Team Members and Responsibilities

- **Syed Muhammad Qasim (24BSAI29):**
  Responsible for core programming, system design, and testing the program functionality.
- **Muhammad Safeer (24BSAI22):**
  Handles file handling operations, ensuring proper storage of attendance records in the text file.
- **Syed Muhammad Shaheer (24BSAI52):**
  Focuses on debugging the program, identifying, and fixing logical and runtime errors to ensure smooth performance.
- **Muhammad Sadiq Qazi (24BSAI33):**
  Responsible for creating and presenting the PowerPoint presentation for the project.

Expected Outcomes

- A functional attendance system for class *24BSAI*.
- Attendance data stored securely in a text file.
- Accurate reports of students present and absent for any session.

Conclusion

The **Student Attendance Management System** is a highly efficient and user-friendly solution designed to streamline the process of attendance tracking. By utilizing simple yet powerful programming techniques, this system ensures accurate attendance records and minimizes human error. Through its intuitive interface and seamless functionality, it provides a practical tool for educators to easily manage attendance data in real time.

The system not only simplifies attendance recording but also offers valuable insights by generating reports of present and absent students, making it easier for teachers to track student participation. With data stored securely in a text file, this solution guarantees both reliability and ease of access for future reference.

Overall, this project aligns with our goal of developing a functional and user-centric system that contributes to the modern educational experience, making administrative tasks more efficient and less time-consuming.