

School Management System

Name: Shivakumar Gandrakota

Overview

This school management system is a simple MATLAB application designed to manage students, teachers, and courses efficiently. It provides functionalities for adding, displaying, and deleting records.

Functionalities

1. Add Student

Allows the user to input student details (ID, Name, Age, Class) and stores them in a structured format.

2. Display Students

Displays all student records currently stored in the system.

3. Delete Student

Removes a student record from the system based on the provided Student ID.

4. Add Teacher

Allows the user to input teacher details (ID, Name, Age, Subject) and stores them in a structured format.

5. Display Teachers

Displays all teacher records currently stored in the system.

6. Delete Teacher

Removes a teacher record from the system based on the provided Teacher ID.

7. Add Course

Allows the user to input course details (Code, Name, Teacher ID) and stores them in a structured format.

8. Display Courses

Displays all course records currently stored in the system.

9. Delete Course

Removes a course record from the system based on the provided Course Code.

10. Exit

Terminates the program.

Implementation

The system uses structures to hold information about students, teachers, and courses. Each functionality is handled within a switch-case statement to ensure smooth user interaction.

Code

```
% School Management System in MATLAB
clc;
clear;

% Define structures for students, teachers, and courses
students = struct('ID', {}, 'Name', {}, 'Age', {}, 'Class', {});
teachers = struct('ID', {}, 'Name', {}, 'Age', {}, 'Subject', {});
courses = struct('Code', {}, 'Name', {}, 'TeacherID', {});

while true
    disp('School Management System');
    disp('1. Add Student');
    disp('2. Display Students');
    disp('3. Delete Student');
    disp('4. Add Teacher');
    disp('5. Display Teachers');
    disp('6. Delete Teacher');
    disp('7. Add Course');
    disp('8. Display Courses');
    disp('9. Delete Course');
    disp('10. Exit');

    choice = input('Enter your choice: ');

    switch choice
        case 1
            % Add Student
            studentInfo.ID = input('Enter Student ID: ', 's');
            studentInfo.Name = input('Enter Student Name: ', 's');
            studentInfo.Age = input('Enter Student Age: ');
            studentInfo.Class = input('Enter Student Class: ', 's');
            students(end+1) = studentInfo;
            disp('Student data added successfully.');
```

```

    % Display Students
    disp('Students:');
    for i = 1:length(students)
        disp(students(i));
    end

case 3
    % Delete Student
    delID = input('Enter Student ID to delete: ', 's');
    students = students(~strcmp({students.ID}, delID));
    disp('Student data deleted successfully.');
```

```

case 4
    % Add Teacher
    teacherInfo.ID = input('Enter Teacher ID: ', 's');
    teacherInfo.Name = input('Enter Teacher Name: ', 's');
    teacherInfo.Age = input('Enter Teacher Age: ');
    teacherInfo.Subject = input('Enter Teacher Subject: ', 's');
    teachers(end+1) = teacherInfo;
    disp('Teacher data added successfully.');
```

```

case 5
    % Display Teachers
    disp('Teachers:');
    for i = 1:length(teachers)
        disp(teachers(i));
    end

case 6
    % Delete Teacher
    delID = input('Enter Teacher ID to delete: ', 's');
    teachers = teachers(~strcmp({teachers.ID}, delID));
    disp('Teacher data deleted successfully.');
```

```

case 7
    % Add Course
    courseInfo.Code = input('Enter Course Code: ', 's');
    courseInfo.Name = input('Enter Course Name: ', 's');
    courseInfo.TeacherID = input('Enter Teacher ID for the Course: ',
's');

    courses(end+1) = courseInfo;
    disp('Course data added successfully.');
```

```

case 8
    % Display Courses
    disp('Courses:');
    for i = 1:length(courses)
        disp(courses(i));
    end

case 9
    % Delete Course
    delCode = input('Enter Course Code to delete: ', 's');
    courses = courses(~strcmp({courses.Code}, delCode));
    disp('Course data deleted successfully.');
```

```

case 10
    % Exit
    break;
```

```
        otherwise
            disp('Invalid choice. Please try again.');
```

end

```
    disp(' ');
end

disp('Thank you for using the School Management System.');
```

OUTPUT

School Management System

1. Add Student
2. Display Students
3. Delete Student
4. Add Teacher
5. Display Teachers
6. Delete Teacher
7. Add Course
8. Display Courses
9. Delete Course
10. Exit

Enter your choice: 1

Enter Student ID: 101

Enter Student Name: Rahul

Enter Student Age: 14

Enter Student Class: 8A

Student data added successfully.

School Management System

1. Add Student
2. Display Students
3. Delete Student
4. Add Teacher

5. Display Teachers

6. Delete Teacher

7. Add Course

8. Display Courses

9. Delete Course

10. Exit

Enter your choice: 2

Students:

ID: 101

Name: Rahul

Age: 14

Class: 8A

School Management System

1. Add Student

2. Display Students

3. Delete Student

4. Add Teacher

5. Display Teachers

6. Delete Teacher

7. Add Course

8. Display Courses

9. Delete Course

10. Exit

Enter your choice: 1

Enter Student ID: 102

Enter Student Name: Raheem

Enter Student Age: 15

Enter Student Class: 9B

Student data added successfully.

School Management System

1. Add Student
2. Display Students
3. Delete Student
4. Add Teacher
5. Display Teachers
6. Delete Teacher
7. Add Course
8. Display Courses
9. Delete Course
10. Exit

Enter your choice: 2

Students:

ID: 101

Name: Rahul

Age: 14

Class: 8A

ID: 102

Name: Raheem

Age: 15

Class: 9B

School Management System

1. Add Student
2. Display Students
3. Delete Student
4. Add Teacher
5. Display Teachers
6. Delete Teacher

7. Add Course
8. Display Courses
9. Delete Course
10. Exit

Enter your choice: 3

Enter Student ID to delete: 101

Student data deleted successfully.

School Management System

1. Add Student
2. Display Students
3. Delete Student
4. Add Teacher
5. Display Teachers
6. Delete Teacher
7. Add Course
8. Display Courses
9. Delete Course
10. Exit

Enter your choice: 2

Students:

ID: 102

Name: Raheem

Age: 15

Class: 9B