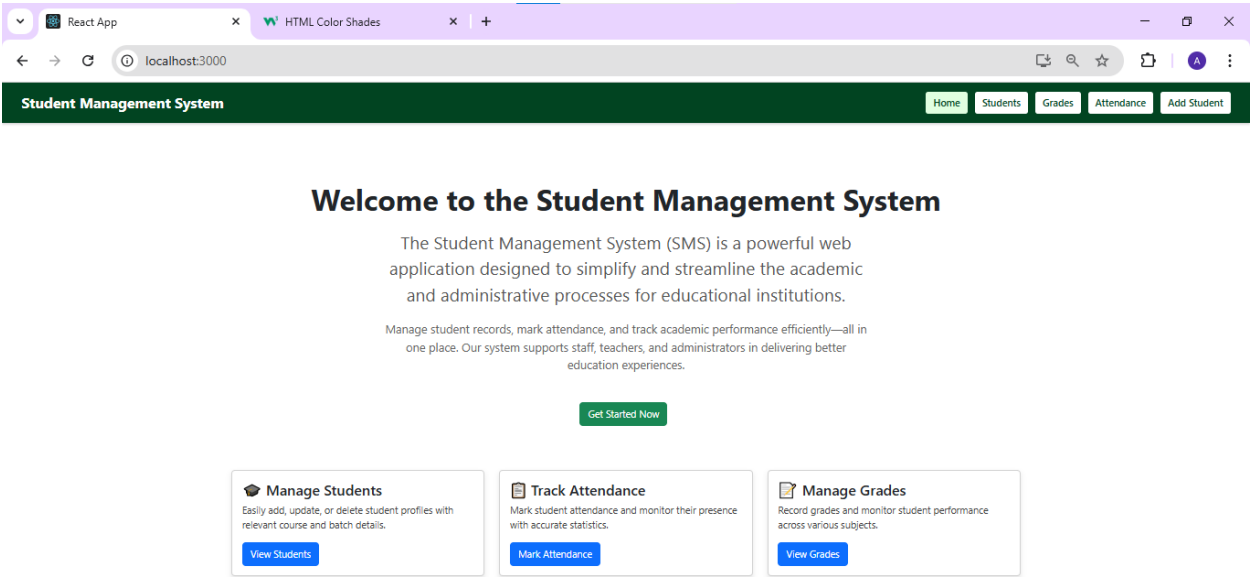


**Name:** Muhammad Abdul Qadir

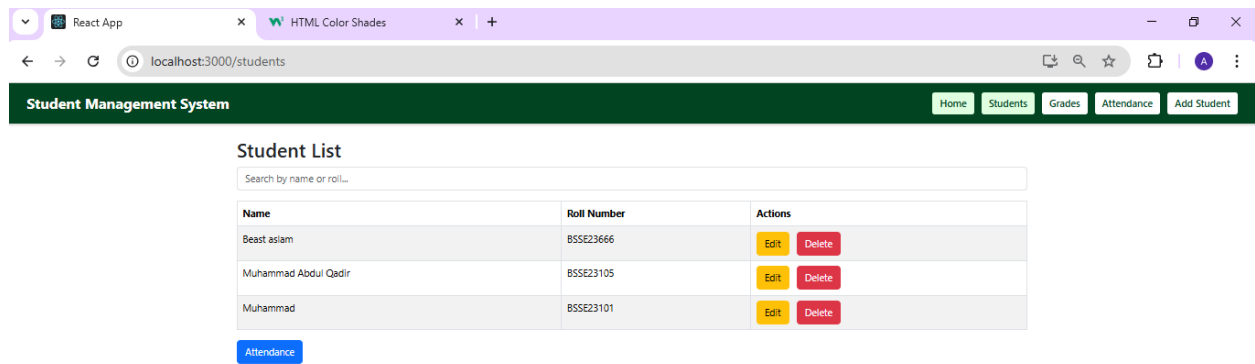
**Project:**

# Student Management System Using React

**Home Page**

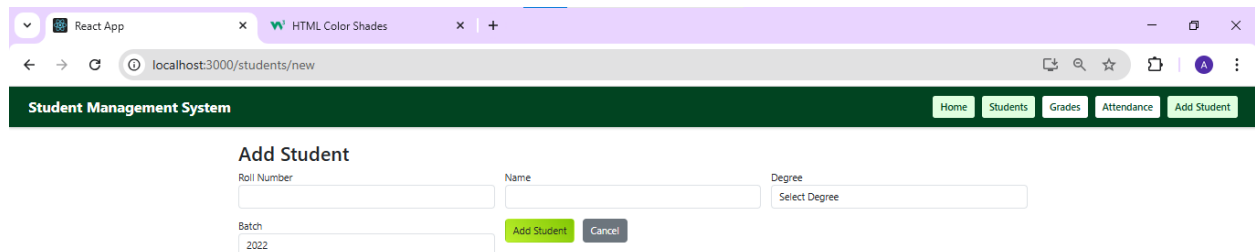


## 1. Student List Page



- ✓ **What it does:** Shows all students in a table with their name and roll number. You can search by typing a name or roll number. Each row has “Edit” and “Delete” buttons. There’s also a button to go to the Attendance page.
- ✓ **How it’s built:**
  - Uses reusable pieces (Table, Button, SearchBar).
  - Loads student data from your browser’s LocalStorage when the page opens.
  - Saves any change back to LocalStorage right away.
  - “Edit” sends you to a URL like /students/edit/BSSE23105; “Delete” removes the student from the list.

## 2. Add Student Page



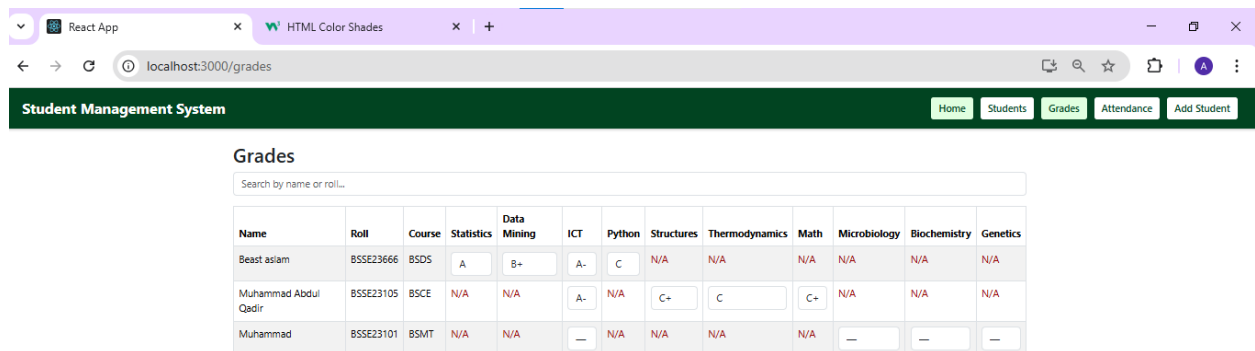
✓ **What it does:**

- **Add mode:** Shows an empty form to add a new student (attendance starts at zero).

✓ **How it's built:**

- Uses a common Form wrapper and Bootstrap styling.
- Checks that roll number, name, and course are not blank before letting you submit.
- Shows helpful error messages right under each field if something is missing.
- After you save, it writes the new or updated student list to LocalStorage and sends you back to the list.

### 3. Grades Page



Name	Roll	Course	Statistics	Data Mining	ICT	Python	Structures	Thermodynamics	Math	Microbiology	Biochemistry	Genetics
Beast aslam	BSSE23666	BSDS	A	B+	A-	C	N/A	N/A	N/A	N/A	N/A	N/A
Muhammad Abdul Qadir	BSSE23105	BSCE	N/A	N/A	A-	N/A	C+	C	C+	N/A	N/A	N/A
Muhammad	BSSE23101	BSMT	N/A	N/A	—	N/A	N/A	N/A	N/A	—	—	—

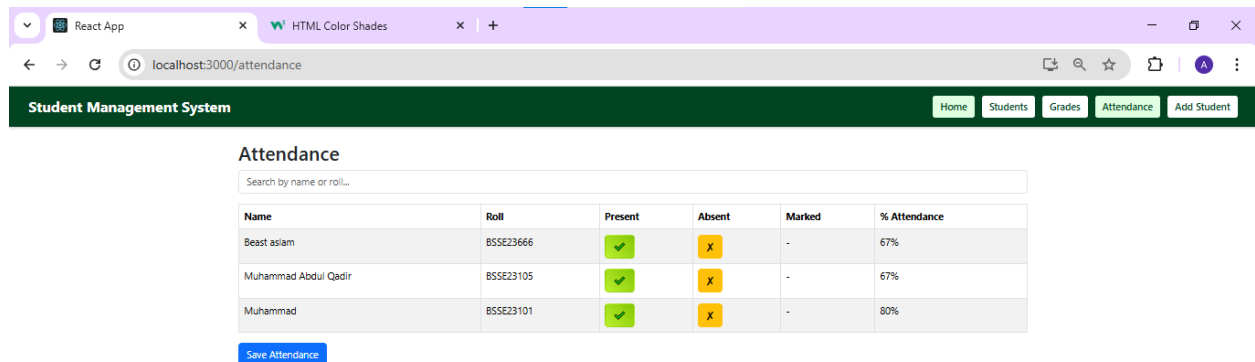
- ✓ **What it does:** Displays every student along with their course subjects in a table. For each subject, there's a dropdown to pick a grade (A+, A, B-, etc.). You can also search by name or roll.

✓ **How it's built:**

- Keeps a list of subjects for each course (BSCS, BSSE, etc.) and figures out all the columns needed.
- Stores each student's grades in their record, then saves back to LocalStorage whenever you change a grade.

- If a subject doesn't apply to a student, it shows "N/A" in red instead of a dropdown.

## 4. Attendance Page



- ✓ **What it does:** Lets you mark each student Present (✓) or Absent (X) once per session. It then updates their total classes, attended classes, and shows the attendance percentage. When you click "Save Attendance," it locks in the changes and clears the marks so you can start a new session.
- ✓ **How it's built:**
  - Tracks which students you've already marked so you can't mark the same student twice in one go.
  - Updates the student data in LocalStorage when you finish.
  - Shows a temporary "Attendance saved!" message for a few seconds after you hit save.

## **BRIEF EXPLANATION OF HOW MVC IS APPLIED ON EACH PAGE OF MY REACT APP**

### **1. Student List Page**

- **Model:**

Gets student info from LocalStorage with `loadData('students')`.

- **View:**

Displays a list (table) of student names and IDs, a search box, and buttons to edit or remove each student.

- **Controller:**

Functions like `handleDelete`, `handleEdit`, and search filtering let you remove a student, change their info, or find someone by name.

### **2. Add Student Page**

- **Model:**

Creates a new student record and saves it in LocalStorage.

- **View:**

Shows a simple form with boxes for the student's name, ID, and course, and tells you right away if a field is wrong.

- **Controller:**

`handleChange` watches your typing, `validate()` checks your entries, and `handleSubmit` saves the new student.

### **3. Grades Page**

- **Model:**

Stores each student's grades in a `grades` object in LocalStorage.

- **View:**

Builds a table where you pick grades from dropdown menus for each subject in a course.

- **Controller:**

`handleGradeChange()` updates the chosen grade in the model and writes it back to LocalStorage.

#### 4. Attendance Page

- Model:

Keeps totalClasses and attendedClasses for each student in LocalStorage.

- View:

Shows a table with “Present” and “Absent” buttons and automatically shows the attendance rate as you mark.

- Controller:

mark() logs whether a student is present or absent, and finishMarking() saves all attendance records.

#### Summary

- Model = All student data (grades, attendance) stored in LocalStorage
  - View = Simple UI parts (tables, forms, dropdowns) that show information
  - Controller = Functions that handle adding, changing, deleting, and checking data
- 

#### Overall App Structure

- **Folders:**

- components/ – shared pieces like Button, Form, SearchBar
- pages/ – each screen (StudentList, AddStudent, Grades, Attendance)
- utils/ – helpers for reading and writing LocalStorage
- App.js – sets up React Router (which URL goes to which page)
- index.js – app entry point

ABDULQADIR_ASSIGNMENT6		
my-app		
node_modules		
public		
src		
components		
JS Button.js	U	
JS Card.js	U	
JS Form.js	U	
JS List.js	U	
JS Navbar.js	U	
JS SearchBar.js	U	
pages		
JS AddStudent.js	U	
Attendance.js	U	
Grades.js	U	
Home.js	U	
NotFound.js	U	
JS StudentList.js	U	
utils		
storage.js	U	
# App.css	M	
JS App.js	1, M	
JS App.test.js		
# index.css	M	
JS index.js	M	
logo.svg		

OUTLINE