

Teacher API & Web Tests

APIs

1. API to List All Teachers:

curl-X GET <http://localhost:5288/api/TeacherAPI>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X GET http://localhost:5288/api/TeacherAPI
{
  "$id": "1",
  "$values": [
    {
      "$id": "2",
      "teacherId": 7,
      "name": "Mark Smith",
      "hireDate": "2024-01-05T00:00:00",
      "subject": "Physics",
      "employeeNumber": "T9999",
      "teacherWorkPhone": "111-222-3333",
      "courses": {
        "$id": "3",
        "$values": [
        ]
      }
    }
  ],
  "$id": "4",
  "teacherId": 8,
  "name": "Surfiyaan",
  "hireDate": "2024-01-01T00:00:00",
  "subject": "English",
  "employeeNumber": "T99",
  "teacherWorkPhone": "789785",
  "courses": {
    "$id": "5",
    "$values": [
    ]
  }
},
{
  "$id": "6",
  "teacherId": 9,
  "name": "Surfiyaan Sayed",
  "hireDate": "2024-01-04T00:00:00",
  "subject": "English",
  "employeeNumber": "T100",
  "teacherWorkPhone": "789785",
  "courses": {
    "$id": "7",
    "$values": [
    ]
  }
},
{
  "$id": "8",
  "teacherId": 10,
  "name": "Mark Smith",
  "hireDate": "2024-01-05T00:00:00",
  "subject": "Physics",
  "employeeNumber": "T9199",
  "teacherWorkPhone": "111-222-3333",
  "courses": {
    "$id": "9",
    "$values": [
    ]
  }
}
]
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

2. API to Find Teacher by ID:

curl-X GET <http://localhost:5288/api/TeacherAPI/1>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X GET http://localhost:5288/api/TeacherAPI/7
{
  "$id": "1",
  "teacherId": 7,
  "name": "Mark Smith",
  "hireDate": "2024-01-05T00:00:00",
  "subject": "Physics",
  "employeeNumber": "T9999",
  "teacherWorkPhone": "111-222-3333",
  "courses": {
    "$id": "2",
    "$values": [
      {
        "$id": "3",
        "courseId": 5,
        "courseName": "Introduction to AI",
        "teacherId": 7,
        "teacher": {
          "$ref": "1"
        }
      }
    ]
  }
}
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

3. API to Add a teacher:

curl-X POST <http://localhost:5288/api/TeacherAPI> -H "Content-Type: application/json" -d '{"name":"","Mark Smith","hireDate":"","2024-01-05T00:00:00","subject":"","Physics","employeeNumber":"","T9199","teacherWorkPhone":"","111-222-3333"}'

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X POST http://localhost:5288/api/TeacherAPI -H "Content-type: application/json" -d '{"name":"","Mark Smith","hireDate":"","2024-01-05T00:00:00","subject":"","Physics","employeeNumber":"","T9199","teacherWorkPhone":"","111-222-3333"}'
{
  "$id": "1",
  "teacherId": 10,
  "name": "Mark Smith",
  "hireDate": "2024-01-05T00:00:00",
  "subject": "Physics",
  "employeeNumber": "T9199",
  "teacherWorkPhone": "111-222-3333",
  "courses": {
    "$id": "2",
    "$values": [
    ]
  }
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

4. API to Delete a teacher:

curl-X DELETE <http://localhost:5288/api/TeacherAPI/3>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X DELETE http://localhost:5288/api/TeacherAPI/10
{
  "$id": "1",
  "message": "Teacher successfully deleted.",
  "teacherId": 10
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

5. API for Error while Add a Teacher with Missing Name:

curl-X POST http://localhost:5288/api/TeacherAPI-H "Content-Type: application/json"-d
{"name":"","hireDate":"","2024-01-
05T00:00:00","subject":"","Physics","employeeNumber":"","T9001","teacherWorkPhone":"","111-222-
3333"}"

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X POST http://localhost:5288/api/TeacherAPI -H "Content-Type: application/json" -d '{"name":"","hireDate":"","2024-01-05T00:00:00","subject":"","Physics","employeeNumber":"","T9001","teacherWorkPhone":"","111-222-3333"}'
{
  "$id": "1",
  "type": "https://tools.ietf.org/html/rfc9110#section-15.5.1",
  "title": "One or more validation errors occurred.",
  "status": 400,
  "errors": {
    "$id": "2",
    "Name": [
      "The Name field is required."
    ]
  },
  "traceId": "00-72dba93d5e7f4c91d3982db9c9ded8934-927ea51562bd798d-00"
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

6. API for Error while Add a Teacher with Future Hire Date:

curl-X POST http://localhost:5288/api/TeacherAPI-H "Content-Type: application/json"-d {"name":"","Future
Teacher","hireDate":"","2026-05-
10T00:00:00","subject":"","Biology","employeeNumber":"","T12345","teacherWorkPhone":"","555-555-
5555"}"

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X POST http://localhost:5288/api/TeacherAPI -H "Content-Type: application/json" -d '{"name":"","Future Teacher","hireDate":"","2026-05-10T00:00:00","subject":"","Biology","employeeNumber":"","T12345","teacherWorkPhone":"","555-555-5555"}'
{
  "$id": "1",
  "message": "Error: Hire date cannot be in the future."
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

7. API for Error while Add a Teacher with Invalid Employee Number:

curl-X POST http://localhost:5288/api/TeacherAPI-H "Content-Type: application/json"-d {"name":"","Invalid
Employee","hireDate":"","2023-06-
15T00:00:00","subject":"","History","employeeNumber":"","ABC123","teacherWorkPhone":"","555-666-
7777"}"

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X POST http://localhost:5288/api/TeacherAPI -H "Content-Type: application/json" -d '{"name":"","Invalid Employee","hireDate":"","2023-06-15T00:00:00","subject":"","History","employeeNumber":"","ABC123","teacherWorkPhone":"","555-666-7777"}'
{
  "$id": "1",
  "message": "Error: Employee Number must start with 'T' followed by digits."
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

8. API for Delete Teacher that do not exists:

curl-X DELETE <http://localhost:5288/api/TeacherAPI/9999>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X DELETE http://localhost:5288/api/TeacherAPI/9999
{
  "$id": "1",
  "message": "Error: Teacher not found.",
  "teacherId": 9999
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

9. API which Updates a Teacher

```
curl -X PUT http://localhost:5288/api/TeacherAPI/2 -H "Content-Type: application/json" -d '{"TeacherId': 2, 'Name': \"Jane Smith Updated\", 'HireDate': \"2015-05-01T00:00:00\", 'Subject': \"Mathematics\", 'EmployeeNumber': \"T12345\", 'TeacherWorkPhone': \"123-456-7890\", 'Salary': 50000.00}'"
```

11

12 `select * from teachers;`

TeacherId	Name	HireDate	Subject	EmployeeNumber	TeacherWorkPhone	Salary
2	XYZ	1111-01-01 00:00:00.000000	English	T11	111111	78.00

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X PUT http://localhost:5288/api/TeacherAPI/2 -H "Content-Type: application/json" -d '{"TeacherId': 2, 'Name': \"Jane Smith Updated\", 'HireDate': \"2015-05-01T00:00:00\", 'Subject': \"Mathematics\", 'EmployeeNumber': \"T12345\", 'TeacherWorkPhone': \"123-456-7890\", 'Salary': 50000.00}'
{
  "$id": "1",
  "message": "Teacher updated successfully",
  "teacherId": 2
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

12 `select * from teachers;`

TeacherId	Name	HireDate	Subject	EmployeeNumber	TeacherWorkPhone	Salary
2	Jane Smith Updated	2015-05-01 00:00:00.000000	Mathematics	T12345	123-456-7890	50000.00

10. Update when the Teacher Hire Date is in the future

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X PUT http://localhost:5288/api/TeacherAPI/2 -H "Content-Type: application/json" -d '{"TeacherId': 2, 'Name': \"Jane Smith Updated\", 'HireDate': \"2025-05-01T00:00:00\", 'Subject': \"Mathematics\", 'EmployeeNumber': \"T12345\", 'TeacherWorkPhone': \"123-456-7890\", 'Salary': 50000.00}'
{
  "$id": "1",
  "message": "Error: Hire date cannot be in the future."
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

11. Update when the Salary is less than 0

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X PUT http://localhost:5288/api/TeacherAPI/2 -H "Content-Type: application/json" -d '{"TeacherId': 2, 'Name': \"Jane Smith Updated\", 'HireDate': \"2015-05-01T00:00:00\", 'Subject': \"Mathematics\", 'EmployeeNumber': \"T12345\", 'TeacherWorkPhone': \"123-456-7890\", 'Salary': -90.00}'
{
  "$id": "1",
  "type": "https://tools.ietf.org/html/rfc9110#section-15.5.1",
  "title": "One or more validation errors occurred.",
  "status": 400,
  "errors": {
    "Salary": {
      "$id": "2",
      "message": "The field Salary must be between 0 and 1.7976931348623157E+308."
    }
  }
}
```

12. Update when the Teacher Name is empty

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X PUT http://localhost:5288/api/TeacherAPI/2 -H "Content-Type: application/json" -d '{"TeacherId': 2, 'Name': \"\", 'HireDate': \"2015-05-01T00:00:00\", 'Subject': \"Mathematics\", 'EmployeeNumber': \"T12345\", 'TeacherWorkPhone': \"123-456-7890\", 'Salary': 90.00}'
{
  "$id": "1",
  "type": "https://tools.ietf.org/html/rfc9110#section-15.5.1",
  "title": "One or more validation errors occurred.",
  "status": 400,
  "errors": {
    "Name": {
      "$id": "2",
      "message": "The Name field is required."
    }
  }
},
{
  "TraceId": "80-6a404efa0aa378215975430e99885714-c0cfafe7aa6f4d-00"
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

Web Page

1. Display All Teachers:

localhost:5288/teacher/list

Teachers List

Search by hire date (YYYY-MM-DD)

ID	Name	Hire Date	Subject	Employee Number	Work Phone	Actions
7	Mark Smith	2024-01-05	Physics	T9999	111-222-3333	View Delete
8	Sufiyaan	0003-01-01	English	T99	789785	View Delete
9	Sufiyaan Sayed	2025-03-04	English	T100	789785	View Delete

[Add New Teacher](#)

2. Display Single Teacher:

Teacher Details

ID:	9
Name:	Sufiyaan Sayed
Hire Date:	2025-03-04
Subject:	English
Employee Number:	T100
Work Phone:	789785

Courses Taught

No courses assigned.

[Back to List](#) [Delete Teacher](#)

3. Add New Teacher:

Add New Teacher

Name:

Saahil Sayed

Hire Date:

01-01-2013

Subject:

MATHS

Employee Number:

T999999

Work Phone:

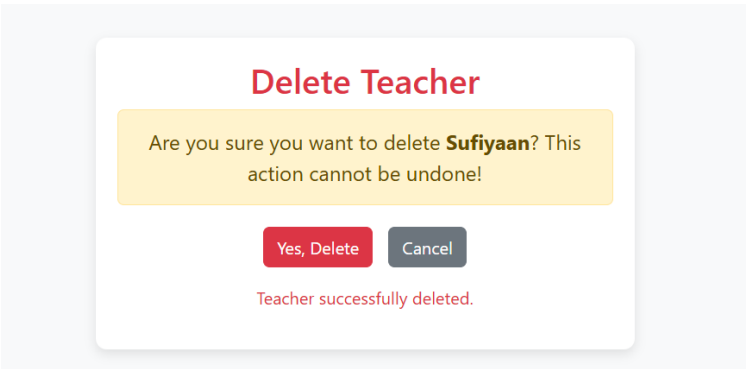
789785

[Add Teacher](#)

Teacher added successfully!

[← Back to Teacher List](#)

4. Delete Teacher:



5. Try to Add Teacher with Missing Fields

A form titled "Add New Teacher" with a blue header. It contains fields for "Name:" (with "aaa" entered), "Hire Date:" (with a date picker showing "dd-mm-yyyy"), "Subject:" (with a validation error message "Please fill out this field."), "Employee Number:", and "Work Phone:". A green "Add Teacher" button is at the bottom, along with a link "[← Back to Teacher List](#)".

6. Update Teacher

A table titled "Teachers List" with a search bar "Search by hire date (YYYY-MM-DD)". The table has 8 columns: ID, Name, Hire Date, Subject, Employee Number, Work Phone, Salary, and Actions. It contains 2 rows of data. Below the table is a green "Add New Teacher" button.

ID	Name	Hire Date	Subject	Employee Number	Work Phone	Salary	Actions
2	ABC	1111-01-01	English	T11	111111	\$78.00	View Edit Delete
3	Saahil	1111-01-01	Js	T100	788888	\$7868.00	View Edit Delete

Edit Teacher

Name:

Hire Date:

Subject:

Employee Number:

Work Phone:

Salary:

Update Teacher

Teacher updated successfully!

Teachers List

Search by hire date (YYYY-MM-DD)

ID	Name	Hire Date	Subject	Employee Number	Work Phone	Salary	Actions
2	XYZ	1111-01-01	English	T11	111111	\$78.00	View Edit Delete
3	Saahil	1111-01-01	Js	T100	788888	\$7868.00	View Edit Delete

Add New Teacher

7. Update when the Teacher Name is empty

Edit Teacher

Name:

Hire Date:

Subject:

Employee Number:

Work Phone:

Salary:

Update Teacher

Please fill all required field : Name.

8. Update when the Teacher Hire Date is in the future

Edit Teacher

Name:

Saahil

Hire Date:

01-01-8887

Subject:

English

Employee Number:

T11

Work Phone:

111111

Salary:

78.00

Update Teacher

Error updating teacher: Error: Hire date cannot be in the future.

9. Update when the Salary is less than 0

Edit Teacher

Name:

Saahil

Hire Date:

01-01-1111

Subject:

English

Employee Number:

T11

Work Phone:

111111

Salary:

-78

Update Teacher

Salary cannot be less than 0

Student API

1. API to List All Students:

curl-X GET <http://localhost:5288/api/StudentAPI>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X GET http://localhost:5288/api/StudentAPI
{
  "$id": "1",
  "$values": [
    {
      "$id": "2",
      "studentId": 1,
      "name": "Emily Johnson",
      "enrollmentDate": "2023-09-01T00:00:00"
    },
    {
      "$id": "3",
      "studentId": 2,
      "name": "Mili",
      "enrollmentDate": "2023-09-01T00:00:00"
    }
  ]
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

2. API to Find Student by ID:

curl-X GET <http://localhost:5288/api/StudentAPI/2>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X GET http://localhost:5288/api/StudentAPI/2
{
  "$id": "1",
  "studentId": 2,
  "name": "Mili",
  "enrollmentDate": "2023-09-01T00:00:00"
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

3. API to Add a Student

curl-X POST http://localhost:5288/api/StudentAPI-H "Content-Type: application/json"-d
{"name":"Mili","enrollmentDate":"2023-09-01T00:00:00"}

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X POST http://localhost:5288/api/StudentAPI -H "Content-Type: application/json" -d {"name":"Mili","enrollmentDate":"2023-09-01T00:00:00"}
{
  "$id": "1",
  "studentId": 2,
  "name": "Mili",
  "enrollmentDate": "2023-09-01T00:00:00"
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

4. API to Delete a student:

curl-X DELETE <http://localhost:5288/api/StudentAPI/1>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X DELETE http://localhost:5288/api/StudentAPI/1
{
  "$id": "1",
  "message": "Student successfully deleted.",
  "studentId": 1
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

5. API Error while Add a Student with Missing Name

curl-X POST http://localhost:5288/api/StudentAPI-H "Content-Type: application/json"-d
{"name":"","enrollmentDate":"2023-09-01T00:00:00"}


```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X POST http://localhost:5288/api/StudentAPI -H "Content-Type: application/json" -d '{"name":"","enrollmentDate":"2023-09-01T00:00:00"}'
{
  "$id": "1",
  "type": "https://tools.ietf.org/html/rfc9110#section-15.5.1",
  "title": "One or more validation errors occurred.",
  "status": 400,
  "errors": {
    "Name": [
      "The Name field is required."
    ]
  },
  "traceId": "00-e1f656bb5702ab90e8fcfd57491d5f-e23708edd1ac5025-00"
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

6. API-to Delete Student that do not exists:

curl-X DELETE <http://localhost:5288/api/StudentAPI/9999>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X DELETE http://localhost:5288/api/StudentAPI/9999
{
  "$id": "1",
  "message": "Error: Student not found.",
  "studentId": 9999
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

7. Update Functionality Students

curl -X PUT http://localhost:5288/api/StudentAPI/1 -H "Content-Type: application/json" -d '{"StudentId": 1, "Name": "Mili Updated", "EnrollmentDate": "2025-01-01T00:00:00"}'

12 `select * from students;`

StudentId	Name	EnrollmentDate
1	Mili	2023-09-01 00:00:00.000000

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X PUT http://localhost:5288/api/StudentAPI/1 -H "Content-Type: application/json" -d '{"StudentId": 1, "Name": "Mili Updated", "EnrollmentDate": "2025-01-01T00:00:00"}'
{
  "$id": "1",
  "message": "Student successfully updated.",
  "studentId": 1
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>
```

12 `select * from students;`

StudentId	Name	EnrollmentDate
1	Mili Updated	2025-01-01 00:00:00.000000

Course API

1. API to List All Courses:

curl-X GET <http://localhost:5288/api/CourseAPI>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X GET http://localhost:5288/api/CourseAPI
{
  "$id": "1",
  "$values": [
    {
      "$id": "2",
      "courseId": 5,
      "courseName": "Introduction to AI",
      "teacherId": 7,
      "teacher": null
    }
  ]
}
```

2. API to Find Course by ID:

curl-X GET <http://localhost:5288/api/CourseAPI/5>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X GET http://localhost:5288/api/CourseAPI/5
{
  "$id": "1",
  "courseId": 5,
  "courseName": "Introduction to AI",
  "teacherId": 7,
  "teacher": null
}
```

3. API to Add a Course

curl-X POST http://localhost:5288/api/CourseAPI-H "Content-Type: application/json"-d
{"courseName":"","teacherId":7}

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X POST http://localhost:5288/api/CourseAPI -H "Content-Type: application/json" -d '{"courseName":"","teacherId":7}'
{
  "$id": "1",
  "courseId": 5,
  "courseName": "Introduction to AI",
  "teacherId": 7,
  "teacher": null
}
```

4. API to Delete a Course:

curl-X DELETE <http://localhost:5288/api/CourseAPI/5>

```
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X DELETE http://localhost:5288/api/CourseAPI/5
{
  "$id": "1",
  "message": "Course successfully deleted.",
  "courseId": 5
}
```

5. API to add a Course with Missing Name

curl-X POST http://localhost:5288/api/CourseAPI-H "Content-Type: application/json"-d
{"courseName":"","teacherId":"1"}

```

"courseId": 5
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X POST http://localhost:5288/api/CourseAPI -H "Content-Type: application/json" -d '{"courseName":"","teacherId":"1"}'
{
  "$id": "1",
  "type": "https://tools.ietf.org/html/rfc9110#section-15.5.1",
  "title": "One or more validation errors occurred.",
  "status": 400,
  "errors": {
    "$id": "2",
    "CourseName": [
      "The CourseName field is required."
    ]
  },
  "traceId": "00-4bf62a382816f9077eff1fb4ad6f5223-0745b112bf15d60a-00"
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>

```

6. API to Delete Non-Existent Course

curl-X DELETE <http://localhost:5288/api/CourseAPI/9999>

```

C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X DELETE http://localhost:5288/api/CourseAPI/9999
{
  "$id": "1",
  "message": "Error: Course not found.",
  "courseId": 9999
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>

```

7. Update Functionality Courses

curl -X PUT http://localhost:5288/api/CourseAPI/1 -H "Content-Type: application/json" -d '{"CourseId": 1, "CourseName": "Physics 102 - Updated", "TeacherId": 1}'

12 `select * from courses;`

CourseId	CourseName	TeacherId
1	Physics 101	2

```

C:\Saahil\Assignment_4_Saahil\SchoolAPI>curl -X PUT http://localhost:5288/api/CourseAPI/1 -H "Content-Type: application/json" -d '{"CourseId": 1, "CourseName": "Physics 102 - Updated", "TeacherId": 2}'
{
  "$id": "1",
  "message": "Course updated successfully",
  "courseId": 1
}
C:\Saahil\Assignment_4_Saahil\SchoolAPI>

```

12 `select * from courses;`

CourseId	CourseName	TeacherId
1	Physics 102 - Updated	2