**Test case:** Student attendance API for Northwest

**Objective:** To verify that the student attendance API functions as expected and provides accurate attendance data for a given student.

**Preconditions:**

The API is deployed on AWS and available for use.

The student data is available and accessible by the API.

The tutor data is available and accessible by the API.

The Modules data is available and accessible by the API.

**Test Steps:**

**Test case 1.1**

* Verify that the API can retrieve check-in data for a given student by making a GET request with the student ID as a parameter.

**Expected Result:** The API should return a response with the student's attendance data, including attendance status and dates.

Test case 2.1

* Verify that the API can update attendance data for a given student by making a POST request with the student ID and attendance data as parameters.

**Expected Result:** The API should update the attendance data for the student and return a success message.

Test case 2.2

Verify that the API can handle invalid student IDs and return appropriate error messages.

Test Case 3.1: Send a GET request with an invalid student ID as a parameter.

Expected Result: The API should return a 404 error message indicating that the student ID was not found.

Test Case 3.2: Send a POST request with an invalid student ID as a parameter.

Expected Result: The API should return a 404 error message indicating that the student ID was not found.

Test Case 3.3: Send a DELETE request with an invalid student ID as a parameter.

Expected Result: The API should return a 404 error message indicating that the student ID was not found.

Verify that the API can handle authentication and authorization requirements.

Test Case 4.1: Attempt to access the API without proper authentication credentials.

Expected Result: The API should return a 401 error message indicating that the authentication failed.

Test Case 4.2: Attempt to access the API with improper or invalid authentication credentials.

Expected Result: The API should return a 403 error message indicating that the authorization failed.

Verify that the API can handle unexpected errors or exceptions and return appropriate error messages.

Test Case 5.1: Send a request with missing or invalid parameters.

Expected Result: The API should return a 400 error message indicating that the request was invalid or incomplete.

Test Case 6.2: Send a request with unsupported or incompatible data formats.

Expected Result: The API should return a 415 error message indicating that the data format was unsupported or incompatible.

Test Case 6.3: Send a request with a server error or exception.

Expected Result: The API should return a 500 error message indicating that an unexpected error or exception occurred on the server.

**Post-Conditions:**

The API functions as expected and provides accurate attendance data for a given student.

All test cases have been executed and passed without any critical errors.