Introduction

This document provides the API test cases for the student and enrolment management module, based on the updated student_route.py. The endpoints are designed to handle the full lifecycle of student records and their official enrolment in courses, with functionality segregated by user roles.

The test cases are divided into three main sections:

1. **General Features**: Read-only access for 'Learning Advisors' and 'Managers'.

2. **Learning Advisor Features**: Full CRUD (Create, Read, Update, Delete) access for managing student and enrolment records.

3. **Teacher Features**: Read-only access to view students within a specific class.

Testing Environment

- **Tool**: Postman

- **Base URL**: http://127.0.0.1:5000

- **Prerequisites**:

    o The application is running, and the database is seeded.

    o A valid JWT for a **Learning Advisor** is stored as {{laToken}}.

    o A valid JWT for a **Manager** is stored as {{managerToken}}.

    o A valid JWT for a **Teacher** is stored as {{teacherToken}}.

General Features (Learning Advisor & Manager)

Feature: Get and Search Students

- **Feature ID**: STU-01

- **Endpoints**: GET /student/, GET /student/search

Test Case ID	Description	Test Steps	Expected Result
STU-001-TC-001	Get All Students (LA)	1. Set method to GET. 2. Set URL to {{baseURL}}/student/. 3. Set Authorization header to Bearer {{laToken}}. 4. Send request.	**ER**: Status code is **200 OK**. The response body is a JSON array of all student objects.
STU-001-TC-002	Search for Student (Manager)	1. Set method to GET. 2. Set URL to {{baseURL}}/student/search?id=STU001. 3. Set Authorization header to Bearer {{managerToken}}. 4. Send request.	**ER**: Status code is **200 OK**. The response body contains the profile for student ST001.
STU-001-TC-003	Unauthorised Access (Attempt by Teacher)	1. Set method to GET. 2. Set URL to {{baseURL}}/student/. 3. Set Authorization header to Bearer {{teacherToken}}. 4. Send request.	**ER**: Status code is **403 Forbidden**. The response body contains an access denied message.

- **Results**

Test Case ID	Result	Status	Notes
STU-001-TC-001	Similar to ER	PASSED	N/A
STU-001-TC-002	Similar to ER	PASSED	N/A
STU-001-TC-003	Similar to ER	PASSED	N/A

Feature: Get and Search Enrolments

- **Feature ID**: STU-002
- **Endpoints**: GET /student/enrolment/, GET /student/enrolment/search

Test Case ID	Description	Test Steps	Expected Result
STU-002-TC-001	Get All Enrolments (Manager)	1. Set method to GET. 2. Set URL to {{baseURL}}/student/enrolment/. 3. Set Authorization header to Bearer {{managerToken}}. 4. Send request.	**ER**: Status code is **200 OK**. The response body is a JSON array of all enrolment objects.
STU-002-TC-002	Search for Enrolment (LA)	1. Set method to GET. 2. Set URL to {{baseURL}}/student/enrolment/search?id=ER001.	**ER:** Status code is **200 OK**. The response body contains the

		3. Set Authorization header to Bearer {{laToken}}. 4. Send request.	JSON object for the enrolment with the ID ER001.

- **Result**

Test Case ID	Result	Status	Notes
STU-002-TC-001	Similar to ER	PASSED	N/A
STU-002-TC-002	Similar to ER	PASSED	N/A

Learning Advisor Features

Feature: Manage Student Records (CRUD)

- **Feature ID**: STU-003
- **Endpoints**: /student/learningadvisor/add, /update, /delete

Test Case ID	Description	Test Steps	Expected Result
STU-003-TC-001	Successful Student Creation	1. Set method to POST. 2. Set URL to {{baseURL}}/student/learningadvisor/add.3. Set Authorization header to Bearer {{laToken}}. 4. Set Body to raw JSON with valid, unique data for a new student.	**ER**: Status code is **201 Created**. The response body contains

		5. Send request.	the new student object.
STU-003-TC-002	Successful Student Update	1. Set method to PUT. 2. Set URL to {{baseURL}}/student/learningadvisor/update?id=STU001. 3. Set Authorization header to Bearer {{laToken}}. 4. Set Body to raw JSON: { "contact_info": "0900112233 - Uncle" }. 5. Send request.	**ER**: Status code is **200 OK**. The response contains the message: Student updated successfully.
STU-003-TC-003	Successful Student Deletion	1. Set method to DELETE. 2. Set URL to {{baseURL}}/student/learningadvisor/delete?id=STU002. 3. Set Authorization header to Bearer {{laToken}}. 4. Send request.	**ER**: Status code is **200 OK**. The response contains the message: Student deleted successfully.
STU-003-TC-004	Attempt to Add Student with Duplicate ID	1. Set method to POST. 2. Set URL to {{baseURL}}/student/learningadvisor/add.	**ER**: Status code is **400 Bad Request**. The

| | | 3. Set Authorization header to Bearer {{laToken}}. 4. Set Body to raw JSON with an id that already exists (e.g., STU001). 5. Send request. | response body contains an error message about a database constraint violation. |

- **Results**

Test Case ID	Result	Status	Notes
STU-003-TC-001	Similar to ER	PASSED	N/A
STU-003-TC-002	Similar to ER	PASSED	N/A
STU-003-TC-003	Similar to ER	PASSED	N/A
STU-003-TC-004	Similar to ER	PASSED	N/A

Feature: Manage Enrolment Records (CRUD)
- **Feature ID**: STU-004
- **Endpoints**: /student/enrolment/learningadvisor/add, /update, /delete

Test Case ID	Description	Test Steps	Expected Result
STU-004-	Successful Enrolment Creation	1. Set method to POST.	**ER**: Status code is **201 Created**.

TC-001		2. Set URL to {{baseURL}}/student/enrolment/learningadvisor/add. 3. Set Authorization header to Bearer {{laToken}}. 4. Set Body to raw JSON with valid data linking an existing student, contract, and course. 5. Send request.	The response body contains the new enrolment object.
STU-004-TC-002	Successful Enrolment Update	1. Set method to PUT. 2. Set URL to {{baseURL}}/student/enrolment/learningadvisor/update?id=ER001. 3. Set Authorization header to Bearer {{laToken}}. 4. Set Body to raw JSON with a valid new enrolment_date. 5. Send request.	**ER**: Status code is **200 OK**. The response contains the message: Enrolment updated successfully.
STU-004-TC-003	Successful Enrolment Deletion	1. Set method to DELETE. 2. Set URL to {{baseURL}}/student/enrolment/learningadvisor/delete?id=ER002. 3. Set Authorization header to Bearer {{laToken}}. 4. Send request.	**ER**: Status code is **200 OK**. The response contains the message: Enrolment deleted

			successfully.
STU-004-TC-004	Attempt to Create Enrolment with Non-existent Contract	1. Set method to POST. 2. Set URL to {{baseURL}}/student/enrolment/learningadvisor/add. 3. Set Authorization header to Bearer {{laToken}}. 4. Set Body to raw JSON with a contract_id that does not exist. 5. Send request.	**ER**: Status code is **404 Not Found**. The response body contains the message: Contract not found.

- **Results:**

Test Case ID	Result	Status	Notes
STU-004-TC-001	N/A	N/A	N/A
STU-004-TC-002	N/A	N/A	N/A
STU-004-TC-003	N/A	N/A	N/A
STU-004-TC-004	N/A	N/A	N/A

Teacher Features

Feature: Get Students by Class

- **Feature ID**: STU-005

- **Endpoint**: GET /student/teacher/

Test Case ID	Description	Test Steps	Expected Result
STU-005-TC-001	Successful Retrieval	1. Set method to GET. 2. Set URL to {{baseURL}}/student/teacher/?id=<class_id>. (Use a valid class ID from the seed data). 3. Set Authorization header to Bearer {{teacherToken}}. 4. Send request.	**ER**: Status code is **200 OK**. The response body is a JSON array of student profiles for all students enrolled in the specified class
STU-005-TC-002	Missing Class ID Parameter	1. Set method to GET. 2. Set URL to {{baseURL}}/student/teacher/. 3. Set Authorization header to Bearer {{teacherToken}}. 4. Send request.	**ER**: Status code is **404 Not Found**. The response body contains the message: Missing

			class ID in query params
STU-005-TC-003	Unauthorised Access (Attempt by Manager)	1. Set method to GET. 2. Set URL to {{baseURL}}/student/teacher/?id=<class_id>. 3. Set Authorization header to Bearer {{managerToken}}. 4. Send request.	**ER**: Status code is **403 Forbidden**. The response body contains an access denied message.

- **Results**

Test Case ID	Result	Status	Notes
STU-005-TC-001	N/A	N/A	N/A
STU-005-TC-002	N/A	N/A	N/A
STU-005-TC-003	N/A	N/A	N/A