University of Vavuniya

Second Examination in Information Technology

Second Semester

IT 2234 Practical for Web Service and Server Technologies

Answer All Questions

Time Allowed: Three hours

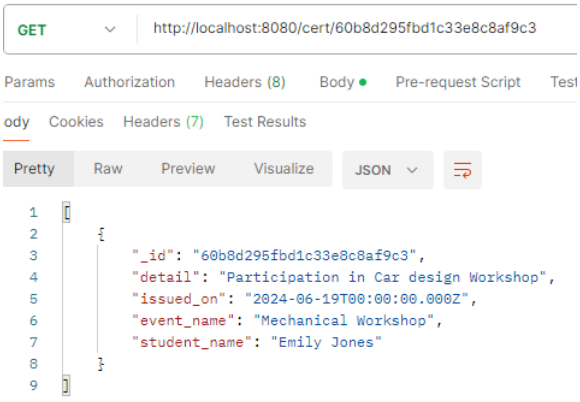
You have planned to design a certificate verification system to authenticate certificates digitally, by replacing manual processes with digital ones. Nodejs and MongoDB were selected as the primary development tools. Initially, you have decided to build a REST web service as backed and later develop UI for web and mobile apps. The basic entities involved in the project are described in the below paragraph.

A Student has attributes like registration number, degree, faculty, first name, and last name. Each student, identified by their registration number, can participate in multiple events and receive certificates for their participation. An Event is defined by attributes such as id, date, description, name, and organizer. Each event can have many students participating and can issue multiple certificates to these students. A Certificate records the participation or achievements of students in events. It has attributes like id, detail, and issued date. Each certificate links a specific student to a specific event.

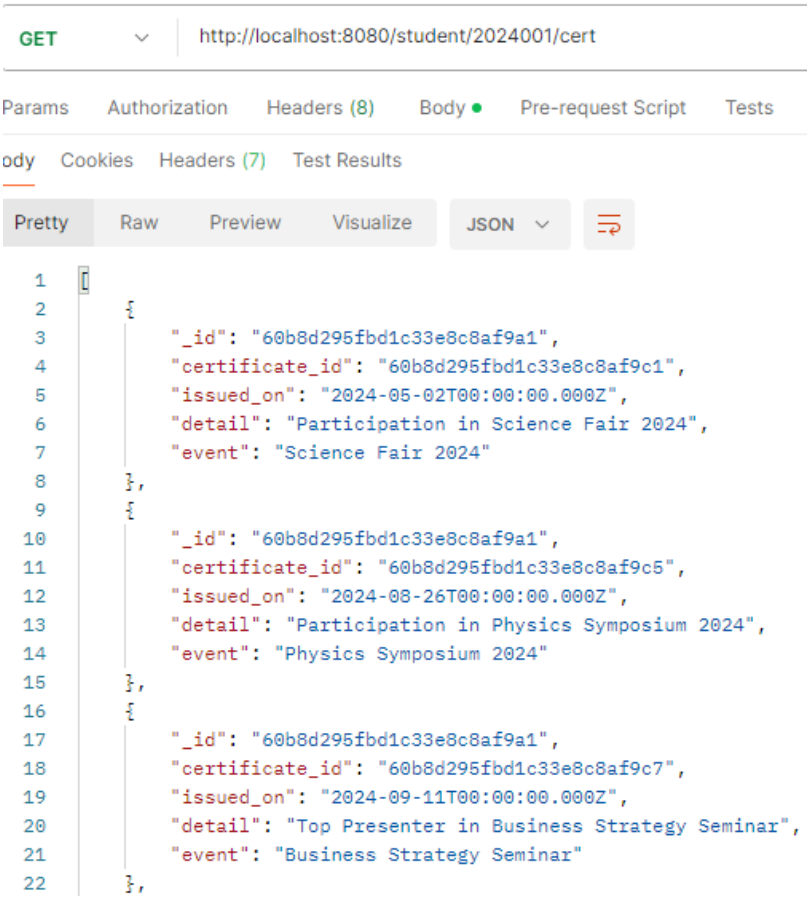
Note:
A sample data files are available in the data folder. Use the given project directory to answer the questions, and capture a screenshot of each question's output.

The system requirements are divided and assigned to the team to speed up the development. The following tasks are given to you. Complete the task with efficient coding practices, and return proper JSON responses.

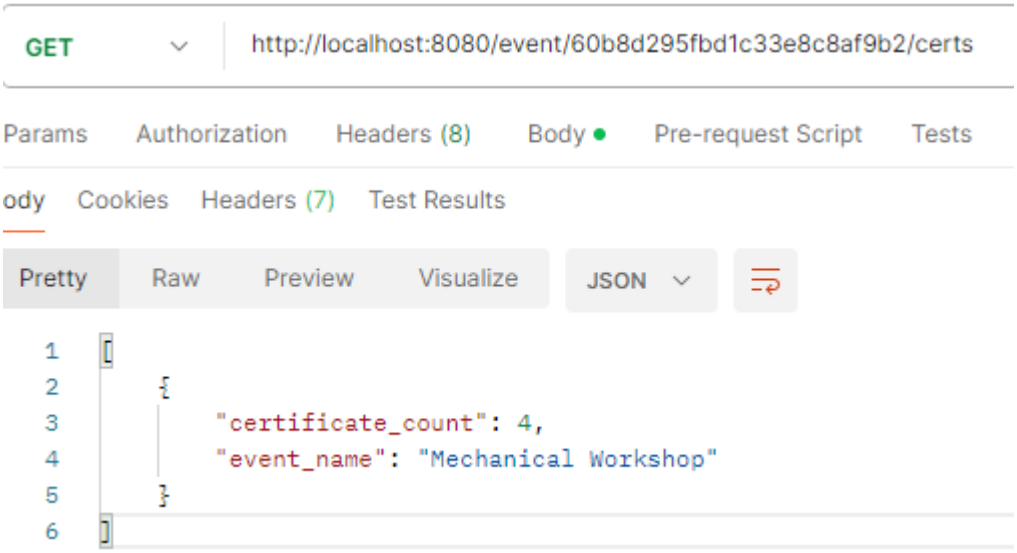
1. The initial task is "Model Building." Utilize the entity description to construct appropriate models and transfer them to a database [10 mark]
2. List all available students, events, and certificates. [10 mark]
3. Get the certificate for the specified ID, including the event name and the student's full name. [20 mark]



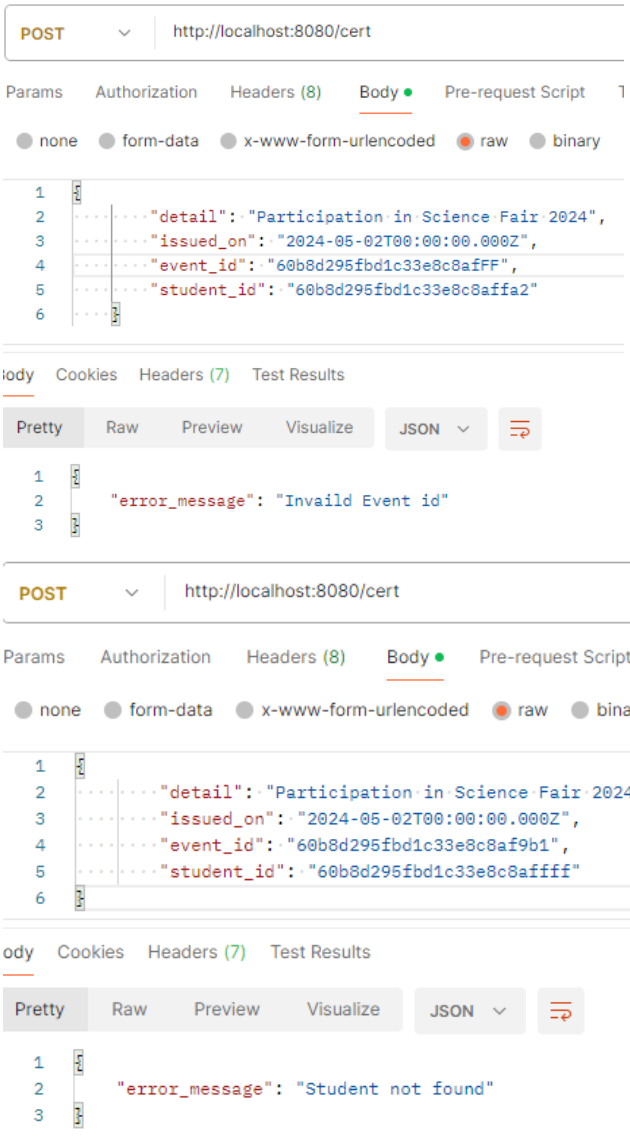
4. Show event name and certificate details for a student's certificates based on their registration number. [20 mark]



5. Count the number of certificates issued for the given event ID. [20 mark]



6. Ensure that both student ID and event ID are already present in the system before adding a certificate, and implement proper validations. Once the validation process confirms the existence of both the student ID and event ID in the system, proceed with adding the certificate. [20 mark]


POST
http://localhost:8080/cert
Params
Authorization
Headers (8)
Body
Pre-request Script
none
form-data
x-www-form-urlencoded
raw
binary
{
"detail": "Participation in Science Fair 2024",
"issued_on": "2024-05-02T00:00:00.000Z",
"event_id": "60b8d295fbd1c33e8c8afFF",
"student_id": "60b8d295fbd1c33e8c8affa2"
}
ody
Cookies
Headers (7)
Test Results
Pretty
Raw
Preview
Visualize
JSON
{
"error_message": "Invaild Event id"
}

POST
http://localhost:8080/cert
Params
Authorization
Headers (8)
Body
Pre-request Script
none
form-data
x-www-form-urlencoded
raw
binary
{
"detail": "Participation in Science Fair 2024",
"issued_on": "2024-05-02T00:00:00.000Z",
"event_id": "60b8d295fbd1c33e8c8af9b1",
"student_id": "60b8d295fbd1c33e8c8affff"
}
ody
Cookies
Headers (7)
Test Results
Pretty
Raw
Preview
Visualize
JSON
{
"error_message": "Student not found"
}