

MAWLANA BHASHANI SCIENCE AND TECHNOLOGY UNIVERSITY

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Course Title : Telecommunication Engineering

Assignment : Controller REST API Name

Assignment No. : 03

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Theory: CRUD:

The name representational State Transfer implies exchanging data. The server acts as a data store, and the client retrieves and stores data. The server transfers object states to the client. The client can update these states too.

Most REST APIs implement CRUD: Create, Retrieve, Update, and Delete.

Go back to the Swagger page and click on the blue GET box so it collapses. Here's a quick tip: at the top of the page, there is the List Operations option. Clicking there will collapse the operations into a list again. We can map these operations into CRUD.

- POST—Create
- GET—Retrieve
- PUT / PATCH—Update
- DELETE—Delete

Question 5.1: Explain the advantages of REST API of the Controller.

Answer: The advantages are given below:

- **Due to its scalability.** This protocol stands out due to its scalability. Thanks to the separation between client and server, the product may be scaled by a development team without much difficulty.
- **Due to its flexibility and portability.** With the indispensable requirement for data from one of the requests to be properly sent, it is possible to perform a migration from one server to another or carry out changes on the database at any time. Front and back can therefore be hosted on different servers, which is a significant management advantage.
- **Due to its independence.** Due to the separation between client and server, the protocol makes it easy for developments across the various areas of a project to take place independently. In addition, the REST API adapts at all times to the working syntax and platform. This offers the opportunity to try several environments while developing.

Question 5.5: what is the difference between SDN and OpenFlow?

Answer: SDN and OpenFlow are prone to be confused and misunderstood. Take a look at SDN vs. OpenFlow, the two are indeed interconnected. First of all, as an open protocol, OpenFlow underpins the various SDN controller solutions. The complete SDN solution is taking SDN controller as the core, backed by OpenFlow switches and NFV to offer bountiful SDN app for a new smart, dynamic, open, custom network.

Conclusion

Even though representational State Transfer, also known as REST, is often referred to as a protocol, it's an architectural style. It defines how applications communicate over the Hypertext Transfer Protocol (HTTP). Applications that use REST are loosely-coupled and transfer information quickly and efficiently. While REST doesn't define data formats, it's usually associated with exchanging JSON or XML documents between a client and a server. This interface overcomes the disadvantages SOAP exhibited, such as the need for clients to know the operation semantics as a pre-requisite for its use, or the need for ports for different types of notifications.

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