

Short Answer Questions

Answer the following questions with complete sentences in your own words. You are encouraged to conduct your own research online or through other methods before answering the questions. If you research online, please consult multiple sources before you write down your answers. You are expected to be able to explain your answers in detail

1. What is a web service?
2. What are the differences between REST and SOAP?
3. What is RESTful web service? List some of its advantages?
4. Describe the RESTful principles.
5. What is the usage of @RestController?
6. What is RestTemplate?

Coding Questions

Write code in Java to solve the following problems. Please write your own answers. You are highly encouraged to present more than one way to answer the questions. Please follow best practice when you write the code so that it would be easily readable, maintainable, and efficient. Clearly state your assumptions if you have any. You may discuss the questions with others, but please write your own code.

In your personal project, create a RestController to do the following:

- Add a new user
 - POST /user
 - Request Body (specific content should be based on your table design):

```
{
    "username": "SampleUsername",
    "firstname": "SampleFirstName",
    "lastname": "SampleLastName",
    "password": "SamplePassword",
    ...
}
```

- Delete an existing user
 - DELETE /user
 - Request Parameter: userId : int
 - Sample Request URL: http://localhost:8080/user?userId=1

- Activate or suspend an existing user
 - PATCH /user/{userId}/status
 - Path Variable: userId : int
 - Request Parameter: activate : boolean
 - Sample Request URL: http://localhost:8080/user/1/status?activate=false

- Get all users
 - GET /user
 - Sample Request URL: http://localhost:8080/user

- Get an user by userId
 - GET /user
 - Request Parameter: userId : int
 - Sample Request URL: http://localhost:8080/user?userId=1

- Get all quizzes done by a user given their userId
 - GET /quiz
 - Request Parameter: userId : int
 - Sample Request URL: http://localhost:8080/quiz?userId=1

Frontend UI is not required, instead, please test your endpoints through Postman and submit screenshots of the Postman requests and responses. Include these Postman screenshots in a PDF.

In addition, please export your Postman collection containing your requests and include it in your submission.

Your submission should be ONE .zip file which contains the following:

- Short answers PDF
- Project code as either a ZIP file or Google Drive link
- Postman request & response screenshots in a PDF
- Postman collection