

ឈ្មោះ សោ វិសាលស៊ីង SO VISALSING

ថ្នាក់ M1 Y4

Lab Exercise API-1

Subject: Web Development

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1. What are restful and rest API ?

- ⇒ REST API is an architectural style for an API that uses HTTP requests to access and use data, and exchange it securely over the internet. REST API is a way for two computer systems to communicate.
- ⇒ RESTful API is an interface that allows two different systems to exchange information over the internet with tight security. RESTful APIs offer a scalable and simple method to construct APIs that are applicable to various programming languages and platforms.

2. What are XML and json ? Why should we use them ? Which one is better why ?

- ⇒ JSON is an open data interchange format that is readable by both people and machines. JSON is independent of any programming language and is a common API output in a wide variety of applications.
- ⇒ XML is a markup language that provides rules to define any data. It uses tags to differentiate between data attributes and the actual data.
- ⇒ We should use them because both JSON and XML are used for data interchange between systems, and the choice between them offer depends on the specific requirements of the application or system.
- ⇒ One is better depended on the situation or circumstances: JSON is generally a better choice for APIs, mobile apps, and data storage, while XML is better suited for complex document structures that require data exchange.

3. Write simple API in PHP with MySQL ? ( Coding )

4. <?php

5.

```
6. // Database configuration
7. $host = 'localhost';
8. $dbUsername = 'root';
9. $dbPassword = '';
10. $dbName = 'my-sms';
11.
12. // Create a connection to the database
13. $mysqli = new mysqli($host, $dbUsername, $dbPassword, $dbName);
14.
15. // Check the connection
16. if ($mysqli->connect_error) {
17.     die('Connection failed: ' . $mysqli->connect_error);
18. }
19.
20. // API endpoint to fetch data from a table
21. if ($_SERVER['REQUEST_METHOD'] === 'GET') {
22.     $query = "SELECT * FROM accounts";
23.     $result = $mysqli->query($query);
24.
25.     if ($result->num_rows > 0) {
26.         $data = array();
27.         while ($row = $result->fetch_assoc()) {
28.             $data[] = $row;
29.         }
30.         // Set the response header to JSON
31.         header('Content-Type: application/json');
32.         // Convert the data array to JSON and output it
33.         echo json_encode($data);
34.     } else {
35.         echo 'No data found.';
36.     }
37. }
38.
39. // Close the database connection
40. $mysqli->close();
41.
42. ?>
```