

FA-19/BCS/018

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COMSATS UNIVERSITY, ISLAMABAD
DEPARTMENT OF COMPUTER SCIENCE
Final Examination, Spring 2022

Class/Section: - BSCS - 6 A/B
Subject: - Web Technologies and Programming
Instructor: - Muhammad Rashid Mukhtar

Marks: - 50
Time: - 3 hours
Dated: - July 04, 2022

1. Attempt all questions.
2. All examples should be using programming constructs.

Q# 01: - Answer the short Questions CLO [1,4] Total:24 Marks

- A. In Node, streams are better mechanism to handle files. Why?
- B. What is the difference in Props and States in React JS? Explain with code.
- C. How we can implement JW Tokens for security in Server application? Provide an example.
- D. While creating REST API, how we manage session while keeping server stateless?
- E. To connect MongoDB, what options are available in node, explain with code.
- F. In React, how we can handle Asynchronous nature of program while dealing with REST API?
- G. In Passport, what are authentication strategies? Explain any one.
- H. In React, how we can write unit tests? Give an example.

Q# 02: - Write the code for these

Total:26 Marks

`<api_url>/<resource-collection>/[<id>]`

The server where the API is hosted

The resource collection to be accessed

Optional parameter to identify the resource

`http://pizzaService/pizzas/1`

GET	/pizzas	List all pizzas
POST	/pizzas	Create a pizza
GET	/pizzas/1	Get pizza 1
PUT	/pizzas/1	Update pizza 1
DELETE	/pizzas/1	Delete pizza 1

A. You will design and write code for REST API where user can access above resources and URIs for getting information. Do highlight if you assume something in implementation [CLO-2]

Marks: 13 Marks

B. Write the components in React JS. There will be one component for each type of information from the REST API. [CLO-3]

Marks: 13 Marks

Best of Luck