



II SEMESTER M.TECH. (SOFTWARE ENGINEERING)

IN-SEMESTER II EXAMINATION, MAY 2023

SUBJECT: Elective III: FULL STACK WEB DEVELOPMENT [ICT 5021]

REVISED CREDIT SYSTEM

Time: 1 HOUR

MAX. MARKS: 15

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

1. Explain advantages of using single page application over multi-page application **3M**
2. For the webpage shown in Figure 1, identify the following:
 - Various react components.
 - Different states and properties
 - Identify where each state should reside

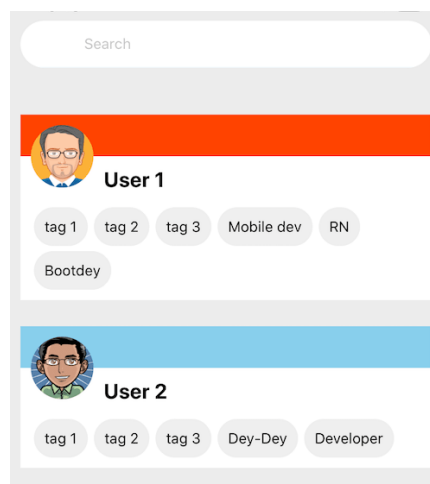


Figure 1

3. Create a simple react component named “user” which will return one row of a table with two columns, name and role. **3M**
4. With an appropriate example, differentiate between linking and embedding in MongoDB. **2M**
5. Implement the following using MongoDB query language. The student documents inside students collection of ‘mydb’ database is shown in Fig 2.

Name	Marks	Section
XX	100	A
YY	200	A
PP	300	B

Figure 1

- Insert a new student document (ZZ, 200, B)
- Find the students who have scored less than 150 marks

Q3. Sample React Component

```
import React from 'react';
```

```
const HelloWorldComponent = () => {  
  return ( <h1>Hello World</h1> );  
}
```

```
export default HelloWorldComponent;
```

Q5.

```
db.<collection>.insertOne({<field>:<value>})  
db.<collection>.find({<field> : {$lt : <value>}})
```