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**State** Finished

**Completed on** Wednesday, 11 December 2024, 10:08 PM

**Time taken** 8 mins 6 secs

**Marks** 16.00/20.00

**Grade** 80.00 out of 100.00

## Question

### 1

Complete

Mark 0.00 out of 1.00

In a React app, how can you ensure a user is redirected to the login page if they are not authenticated?

Select one:

- ☐ a. Use ``sessionStorage`` to check for a token and conditionally render components.
- ☐ b. All of the above.
- ☒ c. Redirect users in the ``useEffect`` hook of the protected component.
- ☐ d. Use the ``useState`` hook to monitor authentication status.

## Question

### 2

Complete

Mark 1.00 out of 1.00

Which part of this Express code prevents Cross-Origin Resource Sharing (CORS) issues?

```
const cors = require("cors");
```

```
app.use(cors());
```

Select one:

- ☐ a. It does not prevent CORS issues.
- ☐ b. ``require("cors")``
- ☒ c. ``app.use(cors())``
- ☐ d. Defining routes with ``app.get`` or ``app.post``.

## Question

### 3

Complete

Mark 1.00 out of 1.00

What will happen if the JWT token used for accessing a protected route is expired?

Select one:

- ☐ a. The route will execute normally.
- ☒ b. The server will return a 403 (Forbidden) response.
- ☐ c. The client will automatically request a new token.
- ☐ d. The server will return a 500 (Internal Server Error) response.

## Question

# 4

Complete

Mark 1.00 out of 1.00

What is the purpose of the following line in the `server.js` file?

```
````javascript
app.use(cors());
````
```

Select one:

- ☐ a. Enable parsing of JSON requests.
- ☒ b. Allow cross-origin requests from different domains.
- ☐ c. Handle authentication using JWT.
- ☐ d. Log incoming requests for debugging.

## Question

# 5

Complete

Mark 1.00 out of 1.00

In a React app, how can you pass user data from a parent component (`App.js`) to the `Dashboard` component?

Select one:

- ☒ a. Using `props`.
- ☐ b. Using `sessionStorage`.
- ☐ c. Using `useEffect`.
- ☐ d. Using `useNavigate`.

## Question

# 6

Complete

Mark 1.00 out of 1.00

In React, why is `useEffect` used in the `StudentsTable` component?

Select one:

- ☐ a. To handle form submissions.
- ☐ b. To reset the component state.
- ☐ c. To manage routing logic.
- ☒ d. To fetch student data only once when the component mounts.

## Question

# 7

Complete

Mark 1.00 out of 1.00

What will happen if `express.json()` middleware is not used in an Express server handling a `POST` request?

Select one:

- ☐ a. The request will be automatically rejected with a 400 error.
- ☐ b. The `next()` middleware will not execute.
- ☒ c. The request body will not be parsed, and `undefined` will be returned.
- ☐ d. The server will crash.

## Question

# 8

Complete

Mark 1.00 out of 1.00

Which middleware is used to parse incoming JSON requests in an Express server?

Select one:

- ☒ a. `express.json()`
- ☐ b. `bodyParser`
- ☐ c. `cors`
- ☐ d. `morgan`

## Question

# 9

Complete

Mark 1.00 out of 1.00

Given the following backend login route, what is missing to ensure user security?

```
router.post("/login", async (req, res) => {  
  const user = await User.findOne({ email: req.body.email });  
  if (!user) return res.status(404).json({ message: "User not found" });  
  
  const isPasswordValid = req.body.password === user.password;  
  if (!isPasswordValid) return res.status(401).json({ message: "Invalid password" });  
  
  const token = jwt.sign({ id: user._id }, SECRET_KEY);  
  res.status(200).json({ token });  
});
```

Select one:

- ☐ a. A return statement after generating the token.
- ☒ b. Password hashing and comparison.
- ☐ c. Nothing is missing.
- ☐ d. Setting a cookie for the token.

## Question

# 10

Complete

Mark 1.00 out of 1.00

What is the purpose of the `Authorization` header in a JWT-based authentication system?

Select one:

- ☒ a. To identify the user making the request.
- ☐ b. To store user passwords securely.
- ☐ c. To retrieve cookies from the browser.
- ☐ d. To refresh the user's session automatically.

## Question

# 11

Complete

Mark 1.00 out of 1.00

Which HTTP method should be used to retrieve user data from an Express server?

Select one:

- ☐ a. `DELETE`
- ☒ b. `GET`
- ☐ c. `POST`
- ☐ d. `PUT`

## Question 12

Complete

Mark 0.00 out of 1.00

Which of the following code snippets is a valid way to fetch students' data in React?

Select one:

- ☐ a. **Nothing is missing.**

```
useEffect(() => {  
  const response = axios.get("http://localhost:4000/allstudents");  
  setStudents(response.data);  
}, [students]);
```
- ☒ b. 

```
useEffect(async () => {  
  const response = await axios.get("http://localhost:4000/allstudents");  
  setStudents(response.data);  
}, []);
```
- ☐ c. 

```
useEffect(() => {  
  axios.get("http://localhost:4000/allstudents").then((response) => {  
    setStudents(response.data);  
  });  
}, []);
```
- ☐ d. 

```
useEffect(() => {  
  const fetchData = axios.get("http://localhost:4000/allstudents");  
  setStudents(fetchData.data);  
}, []);
```

## Question 13

Complete

Mark 0.00 out of 1.00

What is the correct way to handle an error in an async route handler in Express?

Select one:

- ☐ a. Using a `try-catch` block.
- ☒ b. Wrapping the handler in `Promise.resolve()`.
- ☐ c. Using a middleware function.
- ☐ d. Returning `res.status(500)` directly in the code.

## Question 14

Complete

Mark 1.00 out of 1.00

In React, which hook is used to redirect users after a successful login?

Select one:

- ☒ a. `useNavigate`
- ☐ b. `useState`
- ☐ c. `useContext`
- ☐ d. `useEffect`

## Question 15

Complete

Mark 0.00 out of 1.00

In a JWT-based authentication system, where should the token typically be stored on the client side?

Select one:

- ☒ a. In the browser's cookies.
- ☐ b. In localStorage or sessionStorage.
- ☐ c. In the component state.
- ☐ d. In a Redux store.

## Question 16

Complete

Mark 1.00 out of 1.00

What will be the output of the following React code?

```
const [count, setCount] = useState(0);
```

```
useEffect(() => {  
  setCount(count + 1);  
}, [count]);
```

Select one:

- ☐ a. The `count` will remain `0`.
- ☐ b. The component will increment `count` once.
- ☐ c. The `count` will increment only on user interaction.
- ☒ d. The component will crash due to infinite re-rendering.

## Question 17

Complete

Mark 1.00 out of 1.00

What will be the output of the following code snippet in an Express server?

```
app.get("/user/:id", (req, res) => {  
  res.send(req.params.id);  
});
```

Request: `GET /user/123`

Select one:

- ☐ a. `undefined`
- ☐ b. `{ id: 123 }`
- ☒ c. `123`
- ☐ d. `{ id: "123" }`

## Question 18

Complete

Mark 1.00 out of 1.00

Which of the following methods is used to hash passwords securely in the backend?

Select one:

- ☐ a. `express.json()`
- ☐ b. `jwt.sign()`
- ☐ c. `fs.writeFile()`
- ☒ d. `bcrypt.hash()`

## Question 19

Complete

Mark 1.00 out of 1.00

What is wrong with the following Express route handling user deletion?

```
app.delete("/user/:id", async (req, res) => {  
  const user = await User.findByIdAndDelete(req.body.id);  
  res.status(200).json({ message: "User deleted" });  
});
```

Select one:

- ☐ a. The wrong HTTP method is used.
- ☒ b. `req.body.id` should be replaced with `req.params.id`.
- ☐ c. `findByIdAndDelete` should be replaced with `deleteOne`.
- ☐ d. No error handling is implemented.

## Question 20

Complete

Mark 1.00 out of 1.00

Which HTTP status code is returned for a successful creation of a resource in an Express server?

Select one:

- ☒ a. `201`
- ☐ b. `404`
- ☐ c. `200`
- ☐ d. `400`