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------------------------------PRACTICAL 03------------------------------

❖ Question (TASK) :

You are building a Node.js application for a scheduling platform. As part of the functionality, you need to display the current date and time whenever a user interacts with the platform.

To achieve this, create a custom dateTimeModule in Node.js that provides the current date and time in a formatted manner. Once you have created the module, demonstrate how you would use it in your main application file (app.js) to display the current date and time whenever a user performs a certain action.

❖ STEPS TO PERFORM THIS TASK :

➥ Step 1 :

» Create Project Files.

» Create a new project directory and set up the following files inside it :

- project_directory

- server.js

  -public_directory(in project_direcory)

   - dateTimeModule.js

- index.html

- style.css

- main.html

⇒ Step 2 :

» Install Dependencies.

» Open a terminal or command prompt, navigate to the project directory, and install the required dependencies. In this case, we need **'express'** to run the server.

» Run this following command to install the EXPRESS Module :
```
npm init -y
npm install express
```

⇒ Step 3 :

» Set up file contents.

✓ **Index.html :-**

```html
<html>

<head>
    <meta charset="utf-8">
    <title>Digital Clock</title>
    <link rel="stylesheet" href="/style.css">
    <script src="/script.js" async></script>
</head>

<body>
    <div class="wrapper">
        <div class="display">
            <div id="time"></div>
            <div id="date"></div>
        </div>
        <span></span>
        <span></span>
    </div>

    <script src="dateTimeModule.js"></script>

</body>

</html>
```

```
<script>
    setInterval(() => {
      const time = document.querySelector(".display #time");
      const dateDisplay = document.querySelector(".display #date");

      // Import the functions from dateTimeModule.js
      const { getCurrentTime, getCurrentDate } =
require('./dateTimeModule');

      // Update time and date using the new functions
      time.textContent = getCurrentTime();
      dateDisplay.textContent = getCurrentDate();
    }, 1000);
  </script>
```

✓ **dateTimeModule.js :-**

```
// Function to format the current time
function getCurrentTime() {
    const currentDate = new Date();
    let hours = currentDate.getHours();
    let minutes = currentDate.getMinutes();
    let seconds = currentDate.getSeconds();
    let day_night = "AM";

    if (hours > 12) {
        day_night = "PM";
        hours = hours - 12;
    }

    if (seconds < 10) {
        seconds = "0" + seconds;
    }

    if (minutes < 10) {
        minutes = "0" + minutes;
    }

    if (hours < 10) {
        hours = "0" + hours;
    }

    return `${hours}:${minutes}:${seconds} ${day_night}`;
}

// Function to format the current date
function getCurrentDate() {
    const currentDate = new Date();
    const day = currentDate.getDate();
    const month = currentDate.getMonth() + 1; //Months are zero-based
```

```
    const year = currentDate.getFullYear();

    let formattedDay = day < 10 ? "0" + day : day;
    let formattedMonth = month < 10 ? "0" + month : month;

    return `${formattedDay}/${formattedMonth}/${year}`;
}

module.exports = { getCurrentTime, getCurrentDate };
```

✓ **Server.js :-**

```
// server.js

const express = require('express');
const app = express();
const path = require('path');

app.use(express.static(path.join(__dirname, 'public')));

app.get('/jamesbond', (req, res) => {
    res.sendFile(path.join(__dirname, 'public', 'index.html'));
});

app.get('/tushar', (req, res) => {
    res.sendFile(path.join(__dirname, 'public', 'main.html'));
});

const port = process.env.PORT || 3000;
app.listen(port, () => {
    console.log(`Server is running on port ${port}`);
});
```

➡ **Step 4 :**

» Start the server.

» In the Terminal/CMD , run this following command to start the NodeJS Server:
`node server.js`

» The server will running on port 3000.

» **Step 5 :**

» Access the application

» Open web browser and enter the following address:
http://localhost:3000/jamesbond

» That's it! Now you have successfully created and run the Node.js application with the custom **'dateTimeModule'** , and you can view the digital clock on the main page.

✓ **<u>Output :-</u>**