Consensus Academy- Node JS Question

Swarnandhra Institutions-Advanced Java Batch (27-07-2023)

I. Code for all the following questions: 5 X 10=50

Instructions:

Create a folder named Node-yourname and store all five JavaScript files in that folder.

Question 1: Create a basic HTTP server

Write code to create a simple HTTP server that listens on a specific port and returns "Hello, World!" as the response for all incoming requests.

Instructions:

- Save the code in a file named task1.js.
- Open your terminal or command prompt and navigate to the directory where task1.js is saved.
- Run the server using the following command:

  node task1.js

Question-2

Set up the MySQL Connection: Create a new file named **Task2-1.js**. In this file, import the 'mysql' module and create a connection to your MySQL database using the following parameters:

Host: localhost
User: your MySQL username
Password: your MySQL password (if any)
Database: the name of the database you want to create

Create the Database: In the same **Task2-1.js** file, write a function named createDatabase that uses SQL to create the specified database. The function should take the database name as a parameter and execute the SQL query to create the database.

Create the Table: Now, write a function named createTable in the **Task2-1.js** file. This function should use SQL to create a table named 'employees' with the following columns:

id (Primary Key, Auto-increment)
name (VARCHAR, 255 characters)
department (VARCHAR, 100 characters)
salary (DECIMAL, 10, 2)

Execute the Functions: Create a new file named **Task2-2.js**. In this file, import the db_connection.js module and call the createDatabase and createTable functions to execute the queries and create the database and table.

Run the Code: Open your terminal or command prompt, navigate to the directory where app.js is located, and run the following command to execute the Node.js script:

node task2-2.js

Question-3

Send an Email

Use the username and password from your selected email provider to send an email to pravin.consensus@gmail.com

Instructions:

- Save the code in a file named task3.js.
- Open your terminal or command prompt and navigate to the directory where task3.js is saved.
- Run the server using the following command:

  node task3.js

Question-4

Create a Node.js module that exports a single function, following a specific contract, to list and filter files in a given directory.
Create a new folder inside Node-yourname→ Node-lists and create three text files and add annanymous content. Let those files shall be saved as

text_file1.txt
text_file2.txt
text_file3.txt

The function should take three arguments: the directory name, the file extension string to filter by, and a callback function. The callback function should adhere to the idiomatic Node.js convention, passing an error as the first argument (if any), and the data (filtered list of files) as the second argument.

Your module must strictly adhere to the following contract:

Export a single function with the specified arguments.
Call the callback function exactly once with an error or the filtered list of files.
Do not print directly to the console from your module file; print only from the original program.
Handle and pass any errors that may occur to the callback function.

Instructions:

- Save the code in a file named task4.js.

- Open your terminal or command prompt and navigate to the directory where task4.js is saved.
- Run the server using the following command:

node task4.js /path/to/directory/ extension

Question-5

Create a Node.js module that exports a function to perform a specific task and demonstrate how to use that function in another file.

Instructions:

- Save the code for the **square** function in a file named **task5-1.js**.
- Save the code that uses the module in another file named **task5-2.js**.
- Open your terminal or command prompt and navigate to the directory where both **task5-1.js** and **task5-2.js** are saved.
- Run the code using the following command:

  node task5-2.js
- The program will calculate the square of the number 5 using the square function from the **task5-1.js** module and print the result: "The square of 5 is: 25".

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Note:
Push the folder which contains all 7 files,

task1.js
task2-1.js
task2-3.js
task3.js
task4.js
task5-1.js
task5-2.js

in GitHub and make it a separate repository. Name the repository as follows

yourname_reg.no-Node_Assessment

Share the link of your repository in the Google sheet that has been shared.