

Assignment 2-2

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Q-1 What are the scope of a variable in JavaScript?
Ans The scope of a variable is the region of your program in which it is defined.

- JavaScript have three scopes.

① global variables

② local variables

③ block variables

Q-2 What is callback?

Ans callback is a function which is to be executed after another function has finished execution.

Q-3 What is closure? Give an example.

Ans closure can capture variables in block scopes and module scopes as well.

Ex

```
const x = 5;  
if (Math.random() > 0.5)  
  const add = (function () {  
    let counter = 0;  
    return function () {  
      counter += 1;  
      return counter;  
    }  
  })  
  add();
```

Q-4 What is the difference between call & apply?

- Ans
- The call() method takes arguments separately.
 - The apply() method takes arguments as an array.
 - The apply() method is very handy if you want to use an array instead of an argument list.

Module - 2

Q-1

What is Node.js? Where can you use it?

- Ans Node.js is a popular programming environment that can be used for building high-scale applications that need to support multiple concurrent requests.
- Node.js is commonly used to develop real-time applications.

Q-2

Explain callback in Node.js.

- Ans Callbacks are a special type of function passed as an argument to another function.
- They're called when the function that contains the callback as an argument completes its execution, and allows the code in the callback to run in the meantime.

Q-3

What are the advantages of using Promises instead of callbacks?

- Ans They are composable, unlike callbacks, therefore we can avoid callback hell.
- You can easily execute code with Promise.
 - You can wait for only one result from concurrent pending Promises with the help of Promise.
 - You can write asynchronous code in a synchronous manner if you use it in conjunction with.

Q-4

What are the modules in Node.js? Explain.

- Ans In Node.js modules are the block of encapsulated code that communicate with an external

application on the basis of their related functionality.

- Modules can be a single file or a collection of multiple files / folders.