# Interview Questions on Functions

JS





## What is a First Class Functions?

- In JavaScript, functions are first-class objects.
- First class functions means when functions in that language are treated like any other variable
- For example: a function can be passed as an argument to other function, can be returned by another function and can be assigned as a value to a variable.

```
const run = () => {
   // logic
}
run(); // invoke it using a variable
```



## What is **Higher Order Function?**

A function that returns another function as an argument or returns a function as a return value or both is called **Higher Order Function** 

```
const data = [1,2,4];

data.map(function(d){
    console.log(d); //1,2,4
});
```

here, map is a Higher Order function because its accepting other func as argument



#### What is Callback Function?

 A callback function is a function that is passed as an argument into another function and then invoked inside the outer function to complete some kind of routine or action.

```
const data = [1,2,4];

data.map(function(d){
    console.l(d); //1,2,4
});
```

here, **inner function is a callback func** because its passed as argument to other function



## What is the Currying Function?

- It is a process of taking a function with multiple arguments and turning it into a sequence of functions each with only a single argument.
- Currying is named after Mathematician
   Haskell Curry
- Curry functions are great to improve code reusability and functional composition

```
function calculateVolume(length){
    return function(breadth){
        return function(height){
            return length*breadth*height;
        }
    }
}
console.log(calculateVolume(2)(4)(2)); //16
```



#### What is a Pure Function?

- A Pure function is a function where the return value is only determined by its arguments without any side effects.
- If you call a function with same arguments it will always return the same result.

```
const add = (x, y) => x + y;
add(2, 4); // 6
```



## What is a Arrow Function?

- Arrow function(=>) is one of the features introduced in the ES6 version of JavaScript.
- It allows you to create functions in a cleaner way compared to regular functions
- Arrow functions don't have their own bindings to this, arguments, or super

```
const add = (x, y) => x + y;
add(2, 4); // 6
```



# What is a **Anonymous Function?**

- Anonymous is a function that does not have any name associated with it.
- Normally we use the function keyword before the function name to define a function in JavaScript, however, in anonymous functions in JavaScript, we use only the function keyword without the function name

```
var greet = function () {
   console.log("Join @nishasingla05");
};
greet();
```



## What is a IIFE Function?

- An IIFE (Immediately Invoked Function Expression)
- IIFE is a JavaScript function that runs as soon as it is defined.
- You can use IIFEs to prevent global variables' definition issues, alias variables, protect private data, and avoid conflicts of using many libraries that export the same object name

```
(function(){
   console.log('This is a IIFE function');
})();
```





Jayesh Deshmukh

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