



JAVASCRIPT MASTERY

4.Functions in JavaScript

1.Regular Function

- Example:

```
function greet(name) {  
  return `Hello, ${name}`;  
}  
console.log(greet("Alice"));
```

2.Arrow Function

- Shorter syntax for defining functions.
- Example:

```
const add = (a, b) => a + b;  
console.log(add(2, 3)); // Output: 5
```

3.Immediatly Invoked Function Expression(IIFE)

- A function that runs immediately after being defined.
- Example:

```
(function() {  
  console.log("This runs immediately!");  
})();
```



JAVASCRIPT MASTERY

4.Functions in JavaScript

4.Higher-Order Function

- A function that takes another function as an argument.
- Example:

```
function operate(fn, a, b) {  
  return fn(a, b);  
}  
console.log(operate((x, y) => x + y, 10, 20));  
// Output: 30
```



JAVASCRIPT MASTERY

5.Scoping & Closures in JavaScript

1.Global Scope

- Variables declared outside any function are accessible anywhere.
- Example:

```
let globalVar = "Hello";  
function show() {  
  console.log(globalVar);  
}
```

2.Function Scope

- Variables declared inside a function are not accessible outside.
- Example:

```
function example() {  
  let localVar = 10;  
}  
console.log(localVar); // Error
```

3.closures

- A function that remember variables from its outer functions.
- Example:

```
function outer(x) {  
  return function inner(y) {  
    return x + y;  
  };  
}  
const addFive = outer(5);  
console.log(addFive(10)); // Output: 15
```