## **01 JavaScript Part 01**

## **🔁 1. Loops – Repeating Tasks**

### **What is it?**

A **loop** allows you to repeat a block of code multiple times.

### **Example:**

for (let i = 1; i <= 5; i++) {

console.log("Hello, number " + i);

}

### **What it does:**

* Starts from 1 and runs until 5

Prints:  
  
 Hello, number 1

Hello, number 2

...

Hello, number 5

## **🧠 2. Conditionals – Making Decisions**

### **What is it?**

**Conditionals** let you run different code depending on a condition.

### **Example:**

let age = 18;

if (age >= 18) {

console.log("You are an adult.");

} else {

console.log("You are a minor.");

}

### **What it does:**

* Checks if age is 18 or more
* If true → prints: You are an adult.
* If false → prints: You are a minor.

## **📦 3. Arrays – Storing Lists**

### **What is it?**

An **array** stores multiple values in one variable.

### **Example:**

let fruits = ["apple", "banana", "mango"];

console.log(fruits[0]); // Access first item: apple

console.log(fruits.length); // Get total number of items: 3

## **🧊 4. Array Methods: push() and unshift()**

### **push() – Adds an item to the end of the array**

let colors = ["red", "blue"];

colors.push("green");

console.log(colors); // ["red", "blue", "green"]

### **unshift() – Adds an item to the start of the array**

colors.unshift("yellow");

console.log(colors); // ["yellow", "red", "blue", "green"]

## **🧩 5. Functions – Reusable Code Blocks**

### **What is it?**

A **function** is a block of code you can run again and again.

### **Example:**

function greet(name) {

console.log("Hello, " + name + "!");

}

greet("Alice"); // Hello, Alice!

greet("Bob"); // Hello, Bob!

### **What it does:**

* You pass a name into the function
* It prints a custom message

## **🔤 6. String Methods: repeat()**

### **What is it?**

String methods let you manipulate text.

### **Example:**

let word = "Hi";

let repeatWord = word.repeat(3);

console.log(repeatWord); // HiHiHi

### **What it does:**

* "Hi" is repeated 3 times to create "HiHiHi"

## **✅ Summary Table**

| **Concept** | **What It Does** | **Example** |
| --- | --- | --- |
| for loop | Repeats code | for (let i = 1; i <= 5; i++) |
| if / else | Makes decisions | if (age >= 18) |
| Arrays | Store lists of values | let fruits = ["apple", "banana"] |
| push() | Add to end of array | colors.push("green") |
| unshift() | Add to beginning of array | colors.unshift("yellow") |
| Functions | Reuse code with inputs | function greet(name) { ... } |
| repeat() | Repeat strings | "Hi".repeat(3) |