

Basic Data Types JavaScript

1. Variables and Data Types

```
// Declare a variable
var greeting = "Hello, World!";

// Numbers
var num1 = 5;
var num2 = 10;

// Booleans
var isTrue = true;

// Arrays
var fruits = ["apple", "banana", "orange"];

// Objects
var person = {
  name: "John",
  age: 25,
  isStudent: false
};
```

2. Conditional Statements

```
var temperature = 25;

if (temperature > 30) {
  console.log("It's a hot day!");
} else if (temperature >= 20 && temperature <= 30) {
  console.log("The weather is pleasant.");
} else {
  console.log("It's cold outside.");
}
```

3. Loops

```
// For loop
for (var i = 0; i < 5; i++) {
    console.log("Iteration " + (i + 1));
}

// While loop
var count = 0;
while (count < 3) {
    console.log("Count: " + count);
    count++;
}
```

4. Functions

```
// Function declaration
function greet(name) {
    return "Hello, " + name + "!";
}

// Function call
var message = greet("Alice");
console.log(message);
```

5. DOM Manipulation (for web scripting)

```

// Get an HTML element by ID
var heading = document.getElementById("main-heading");

// Change the content of the element
heading.innerHTML = "New Heading Text";

// Add a click event listener
heading.addEventListener("click", function () {
    alert("Heading clicked!");
});

```

6. AJAX Request (Asynchronous Javascript and XML)

```

// Create a new XMLHttpRequest object
var xhr = new XMLHttpRequest();

// Configure it (GET request to a URL)
xhr.open("GET", "https://api.example.com/data", true);

// Set up a callback function for when the request is complete
xhr.onload = function () {
    if (xhr.status === 200) {
        console.log("Data received:", xhr.responseText);
    } else {
        console.error("Request failed. Status:", xhr.status);
    }
};

// Send the request
xhr.send();

```