JavaScript Data Types Explained

1. Number

JavaScript uses a single Number type for integers and floating-point numbers.

```javascript
let num = 42;          // Integer
let price = 99.99;      // Float
let inf = Infinity;
let notANum = NaN;
```

2. String

Strings represent sequences of characters and can be defined using single, double, or backticks.

```javascript
let single = 'Hello';
let double = "World";
let template = `Hello ${single} ${double}`;
```

3. Boolean

Booleans represent logical values: true or false.

```javascript
let isLoggedIn = true;
let hasPermission = false;
```

4. Null

Null is an intentional absence of any object value.

```javascript
let student = null;
```

5. Undefined

A variable declared but not assigned any value is undefined.

```javascript
let score;
console.log(score);  // undefined
```

6. BigInt

BigInt is used for representing integers larger than the Number limit.

```javascript
let big = 12345678901234567890123456789012345678 90n;
```

7. Symbol

Symbols are unique and immutable data types often used as object property identifiers.

```javascript
let sym1 = Symbol("id");
let sym2 = Symbol("id");
console.log(sym1 === sym2); // false
```