

## 8.Objects

### Q1. What is an object in JavaScript? How are objects different from arrays?

In JavaScript, an **object** is a collection of key-value pairs. Each key is called a **property**, and the value can be a string, number, array, or even another object. Objects are used to store structured data, just like real-world things (e.g., car, student, book).

#### Example of an object:

```
let student = {  
  name: "Riya",  
  age: 20,  
  course: "BCA"  
};
```

#### Difference between Objects and Arrays:

- **Array** stores multiple values but in **index form** (0,1,2...).
- **Object** stores values in **key-value form** (name, age, model...).
- Arrays are best for lists, while objects are best for structured data.

### Q2. Explain how to access and update object properties using dot notation and bracket notation.

There are two ways to access or change values in an object:

#### 1. Dot Notation

##### Example:

```
student.name = "Karan"; // Access or update
```

## 2. Bracket Notation

### Example:

```
student["age"] = 22; // Access or update
```

Dot notation is easier to use, but bracket notation is useful

when the key is dynamic (from variable or user input). Both help to read, update, and add properties inside an object.