```
const person = {
  name: "Alice",
  age: 25,
  isStudent: true
};
console.log(person.name);      // Dot notation
console.log(person["age"]);    // Bracket notation
for (let key in person) {
  console.log(key + ": " + person[key]);
}
const users = [
  { id: 1, name: "John", age: 20 },
  { id: 2, name: "Jane", age: 22 },
  { id: 3, name: "Jack", age: 18 }
];
const names = users.map(user => user.name);
console.log(names); // ["John", "Jane", "Jack"]
const adults = users.filter(user => user.age > 20);
console.log(adults);
const totalAge = users.reduce((sum, user) => sum +
user.age, 0);
```

```
console.log(totalAge); // 60
```

```
function greet(name, callback) {
  console.log("Hi " + name);
  callback();
}

function sayBye() {
  console.log("Goodbye!");
}

greet("Alice", sayBye);
```

Assignments

Create an array of products with name and price.

Use .map() to extract names.

Use .filter() to find products under $20.

Use .reduce() to find total price.

Use a callback function for a basic task (e.g., greeting).

```
// Array of student objects
const students = [
```

```
  { rollNo: 1, name: "Alice", age: 18, gender: "Female", marks: 85 },
  { rollNo: 2, name: "Bob", age: 19, gender: "Male", marks: 45 },
  { rollNo: 3, name: "Charlie", age: 18, gender: "Male", marks: 72 },
  { rollNo: 4, name: "Diana", age: 20, gender: "Female", marks: 60 },
  { rollNo: 5, name: "Eva", age: 17, gender: "Female", marks: 38 }
];
```

1. **Get all student names (using .map)**
2. Filter students who passed (marks > 50)
3. Calculate total marks (using .reduce)
4. Display student info (using .forEach)
5. Use a Callback Function

```
function displayResult(student, callback) {
  console.log(`Checking result for ${student.name}...`);
  callback(student.marks);
}

function checkPass(marks) {
  if (marks >= 50) {
    console.log("Status: Pass");
  } else {
    console.log("Status: Fail");
  }
}

// Test with one student
displayResult(students[1], checkPass); // Bob
```