1. Welcome Program

- Ask user name using prompt().

- Show alert: Hi , Welcome to JavaScript Training.

- Print the same message in console.

```
// Ask the user for their name
let userName = prompt("Please enter your name:");

// Create the greeting message
let message = "Hi " + userName + ", Welcome to JavaScript Training!";

// Show the message in an alert
alert(message);

// Print the same message in the console
console.log(message);
```

2. Console Methods Practice

- Print 500 using console.log(), console.warn(), console.error().

- Use console.clear().

```
// Print 500 using different console methods
console.log(" 500");
console.warn(" 500");
console.error("500");
//  Use Clear the console
console.clear( );
```

3. Data Type Identification

- Create string, number, boolean, undefined, and null variables.

- Print value and type using typeof.

```
// 1. Create variables of different data types
let myString = "Hello, JavaScript";   // String
let myNumber = 500;                   // Number
let myBoolean = true;                 // Boolean
let myUndefined;                      // Undefined
let myNull = null;                    // Null

// 2. Print value and type using typeof
console.log("Value:", myString, "| Type:", typeof  myString);
console.log("Value:", myNumber, "| Type:", typeof  myNumber);
console.log("Value:", myBoolean, "| Type:", typeof  myBoolean);
console.log("Value:", myUndefined, "| Type:", typeof  myUndefined);
console.log("Value:", myNull, "| Type:", typeof  myNull);
```

4. Arithmetic Operations

- Use let a = 20 and let b = 5.
- Perform +, -, *, /, %, ** and print results.

```
// Declare variables
let a = 20;
let b = 5;

// Perform operations and print results
console.log(a + " + " + b + " = " + (a + b));   // Addition
console.log(a + " - " + b + " = " + (a - b));   // Subtraction
console.log(a + " * " + b + " = " + (a * b));   // Multiplication
console.log(a + " / " + b + " = " + (a / b));   // Division
console.log(a + " % " + b + " = " + (a % b));   // Modulus (remainder)
console.log(a + " ** " + b + " = " + (a ** b)); // Exponentiation (a to the power b)
```

5. Increment & Decrement

- Demonstrate pre-increment, post-increment, pre-decrement, post-decrement.
- Print variables clearly.

```
// Declare a variable
let num = 10;

console.log("Initial value of num:", num);



console.log("Pre-increment (++num):", ++num); // num becomes 11, then prints 1
console.log("Post-increment (num++):", num++); // prints 11, then num becomes 12
console.log("Value after post-increment:", num); // prints 12

console.log("Pre-decrement (--num):", --num); // num becomes 11, then prints 11
console.log("Post-decrement (num--):", num--); // prints 11, then num b
```

6. Assignment Operators
- Use let num = 10.
- Perform +=, -=, *=, /=, %= and print results.

```
// Declare variable
let num = 10;
console.log("Initial value of num:", num);

num += 5; // equivalent to num = num + 5
console.log("After num += 5:", num);

num -= 3; // equivalent to num = num - 3
console.log("After num -= 3:", num);

num *= 2; // equivalent to num = num * 2
```

```
console.log("After num *= 2:", num);



num /= 4; // equivalent to num = num / 4
console.log("After num /= 4:", num);



num %= 3; // equivalent to num = num % 3
console.log("After num %= 3:", num);
```

7. Array Access

- Create array ['HTML','CSS','JavaScript','React'].
- Print first element, second element, last element (using length), and total elements.

```
// Create the array
let techArray = ['HTML', 'CSS', 'JavaScript', 'React'];

// Print the first element
console.log("First element:", techArray[0]);

// Print the second element
console.log("Second element:", techArray[1]);

// Print the last element using length
console.log("Last element:", techArray[techArray.length - 1]);

// Print total number of elements
console.log("Total elements:", techArray.length);
```

8. Modify Array

- Add one element at end.

- Remove last element.
- Print updated array.

```
// Create the array
let techArray = ['HTML', 'CSS', 'JavaScript', 'React'];

// Add one element at the end
techArray.push('Node.js');
console.log("After adding an element:", techArray);

// Remove the last element
techArray.pop();
console.log("After removing the last element:", techArray);
```

9. Student Object
- Create object with name, age, course, city.
- Print values using dot notation.

```
// Create an object
let student = {
   name: "Ramya",
   age: 25,
   course: "JavaScript",
   city: "Hyderabad"
};

// Print values using dot notation
console.log("Name:", student.name);
console.log("Age:", student.age);
console.log("Course:", student.course);
console.log("City:", student.city);
```

10. Nested Object Practice

- Create company object with nested trainer object.

- Print company name, trainer name, trainer subject.

```
// Create company object with nested trainer object
let company = {
   companyName: "Stackly",
   location: "Hyderabad",
   trainer: {
      name: "Ramya",
      subject: "Developer"
   }
};

// Print required values
console.log("Company Name:", company.companyName);
console.log("Trainer Name:", company.trainer.name);
console.log("Trainer Subject:", company.trainer.subject);
```

```
      </script>
</body>
</html>
```