Arithmetic, Assignment, Comparison, Logical (5)

1. Write a program to add, subtract, multiply, and divide two numbers entered by the user.
2. Demonstrate the difference between == and === using two examples.
3. Use the modulus operator % to check if a number is even or odd.
4. Write a program using logical operators to check if a number lies between 10 and 50.
5. Show how the += assignment operator can be used to calculate the sum of numbers from 1 to 5.

if-else, switch-case, loops (5)

6. Write a program that checks whether a given year is a leap year using `if-else`.
7. Use a `switch` statement to print the day of the week when given a number (1–7).
8. Write a program to print the multiplication table of 7 using a `for` loop.
9. Use a `while` loop to calculate the factorial of a number.
10. Write a program using `if-else` that determines the largest of three numbers.

Object literals, arrays, array methods, map and set (10)

11. Create an object literal representing a student with properties: name, age, and grade. Access its values.
12. Write a program to iterate over an array of numbers and print only the even ones.
13. Use the `push` and `pop` methods to add and remove elements from an array.
14. Demonstrate the use of `map()` to square every element of an array.
15. Write a program using `filter()` to return numbers greater than 10 from an array.
16. Use `reduce()` to find the sum of all numbers in an array.
17. Create a `Set` with duplicate values and print how it removes duplicates automatically.
18. Write a program to check if a specific element exists in a `Set`.
19. Create a `Map` to store country-capital pairs and print them.
20. Demonstrate how to update a value in a `Map` and then iterate through all key-value pairs.