Ql.Write a program that grades students based on their marks.

- **If greater than 90 then A Grade**
- **If between 70 and 90 then a B grade**
- **If between 50 and 70 then a C grade**
- **Below 50 then an F grade**

Answer:

```
const marks = 71;
let grade;

if (marks >= 90) {
  grade = 'A grade';
}else if (marks >= 70 && marks <+ 90
  ){ grade = 'B grade';
}else if (marks >= 50 && marks <70)
  { grade = 'C grade';
}else {
  grade = 'F grade';
}

console.log(`Your grade is :${grade}`)
```

Q2. Generate numbers between any 2 given numbers. Ex.

Const numl = 10; Const num2 = 25;
Output: 11,12,13,...,25

Answer:

```
const numl = 10;
const num2 = 25;

for (let i = num + 1; i <= num2; i++){
console.log(i);
}
```

Q3. Use a nested ternary operator to check that a number is positive, negative or zero. You have to print "positive" i the number is positive and similarly for negative and zero also.

Answer:

```
const number = 0;
number > 0
   console.log("Positive")
   number < 0
   console.log("Negative")
  console.log("Zero");
```

Q4. Describe the usage of the comma operator in JavaScript and provide an example.

Answer:
Comma operator allows us to evaluate multiple expressions in a single statement like declaring multiple variables in a single statement separating them with the comma operator.

```
const a = 10, b = 20, c = 30;
console.log(a, b, c);
```

Q5. You're creating a basic login system. Make a login function with two things: a username and a password. Check if the username is "admin" and the password is "12345". If they're both correct, show "Login successful"; if not, show "Invalid credentials."

Answer:

```
let username = "admin";
let password = "12345";

if (username === "admin" && password === "12345") {
 console.log("Login Successful");
} else {
 console.log("Invalid credentials");
}
```

Q6. You are working on an e-commerce platform. Write a JavaScript program that takes the payment method ("credit", "debit", or "paypal") as input and uses a switch statement to determine and print the processing fee associated with each payment method. For example, "credit" may have a processing fee of 2%, "debit" 1.5%, and "paypal" 3%.

Answer:

```
let paymentMethod = "credit";

switch (payrnentMethod) {
 case "credit":
  console.log("Processing fee for credit payment: 2%");
  break;
 case "debit":
  console.log("Processing fee for debit payment: 1.5%");
  break;
 case "paypal":
  console.log("Processing fee for PayPal payment: 3%");
  break;
 default:
  console.log("Invalid payment method");
}
```

Q7. You are building a weather application. Write a JavaScript program that takes the current temperature as input and uses the conditional (ternary) operator to determine and print the weather condition. If the temperature is above 30°C, the condition is "Hot"; otherwise, it is "Moderate".

Answer:

```
let currentTemperature = 28; let weatherCondition = currentTemperatu

re > 30 ? "Hot" : "Moderate";

console.log('Current weather condition: S{weatherCondition}');
```

QB. You are creating a program to calculate the sum of numbers. Write a JavaScript program that takes a positive integer as input and uses a do-while loop to calculate and print the sum of all numbers from 1 to the given integer.

Answer:

JavaScript

```
let targetNumber = 8;

let sum = 0;
let currentNumber = 1;

do {
 sum += currentNumber;
 currentNumber++;
} while (currentNumber <= targetNumber);

console.log('Sum of numbers from 1 to ${targetNumber}: ${sum}');
```