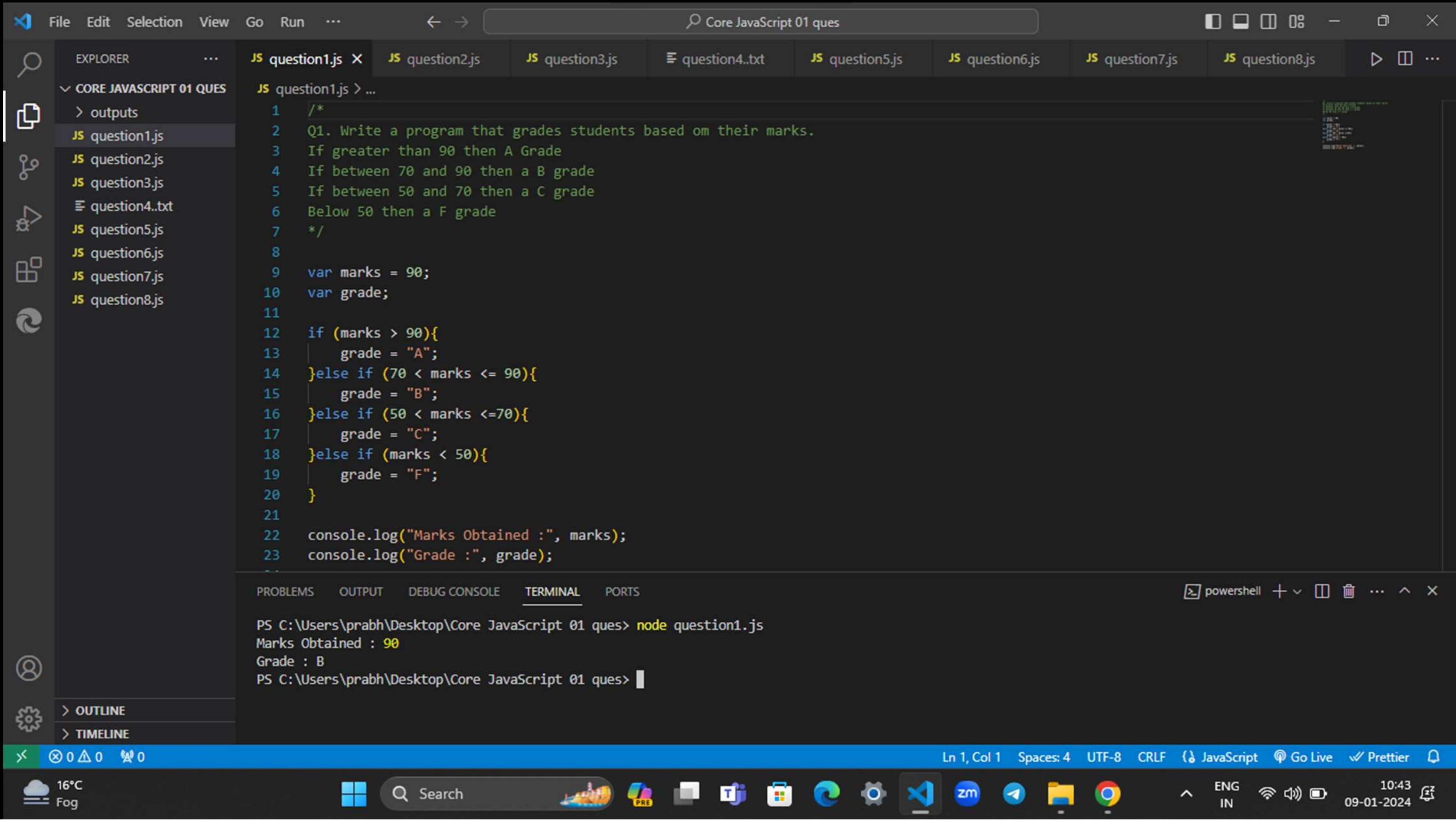
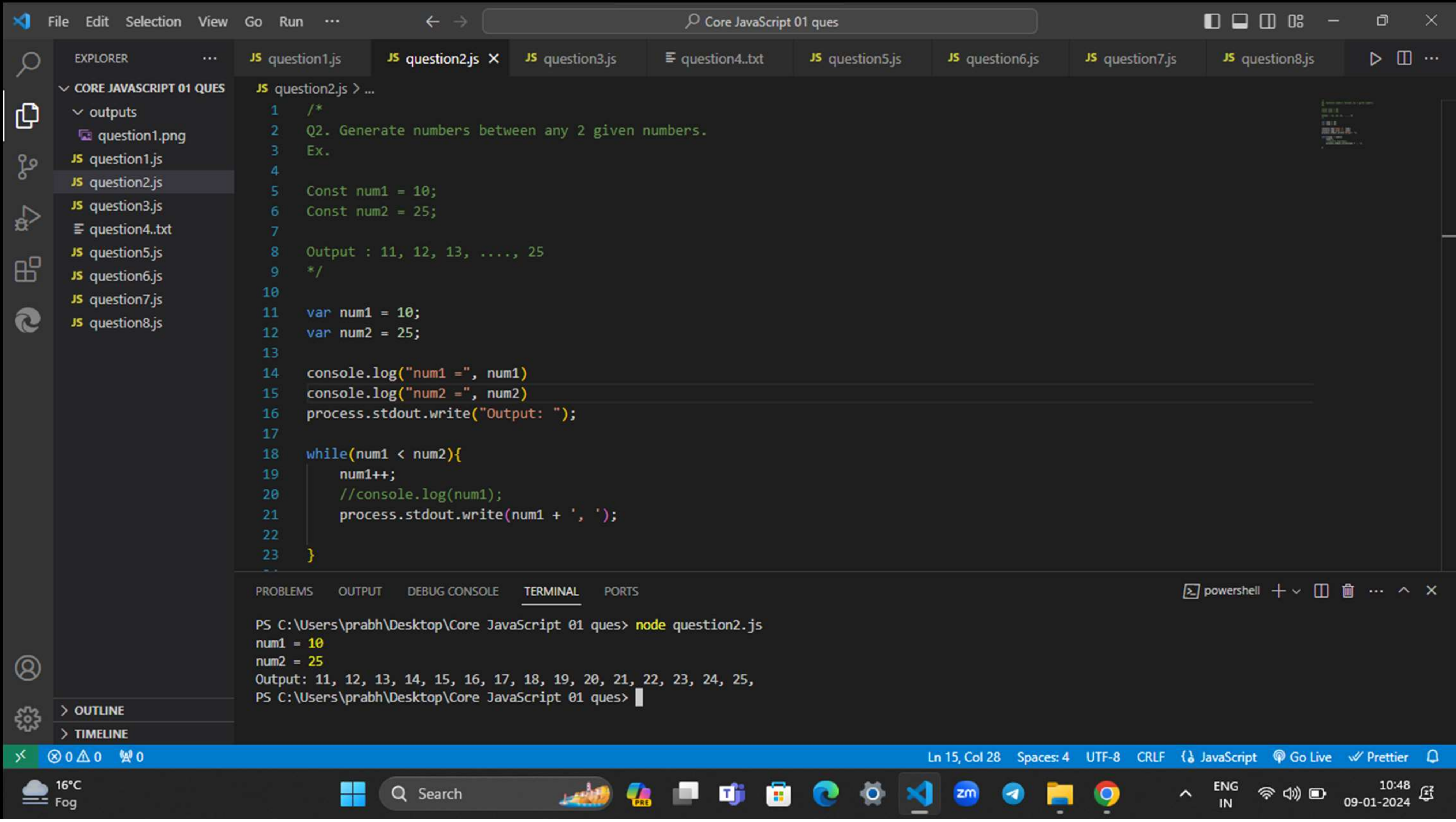
Question 1: Output



```javascript
/*
Q1. Write a program that grades students based om 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 a F grade
*/

var marks = 90;
var grade;

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

console.log("Marks Obtained :", marks);
console.log("Grade :", grade);
```

```
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques> node question1.js
Marks Obtained : 90
Grade : B
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques>
```

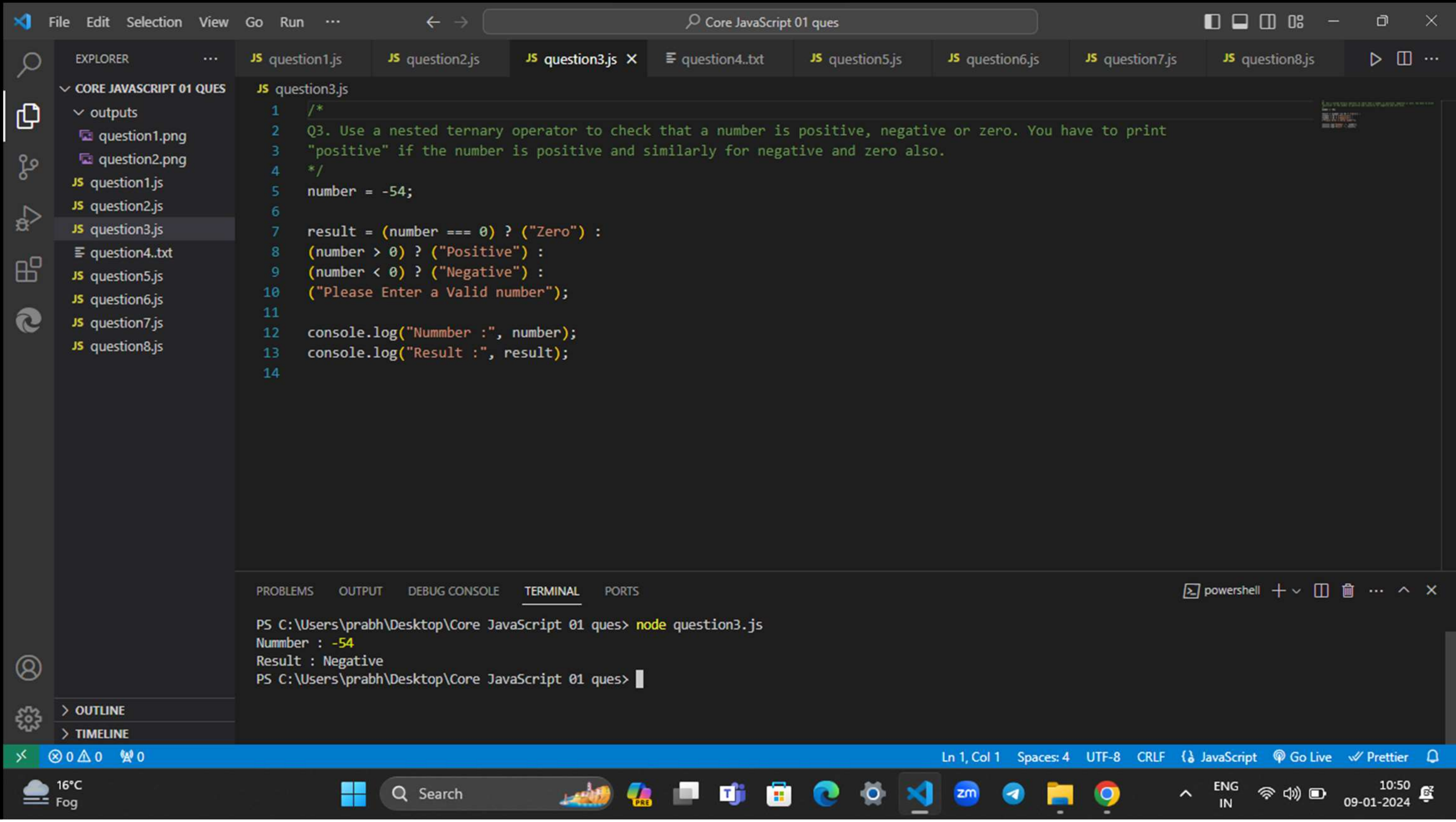
Question 2: Output



```
/*
Q2. Generate numbers between any 2 given numbers.
Ex.

Const num1 = 10;
Const num2 = 25;

Output : 11, 12, 13, ...., 25
*/

var num1 = 10;
var num2 = 25;

console.log("num1 =", num1)
console.log("num2 =", num2)
process.stdout.write("Output: ");

while(num1 < num2){
    num1++;
    //console.log(num1);
    process.stdout.write(num1 + ', ');

}
```

```
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques> node question2.js
num1 = 10
num2 = 25
Output: 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25,
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques>
```

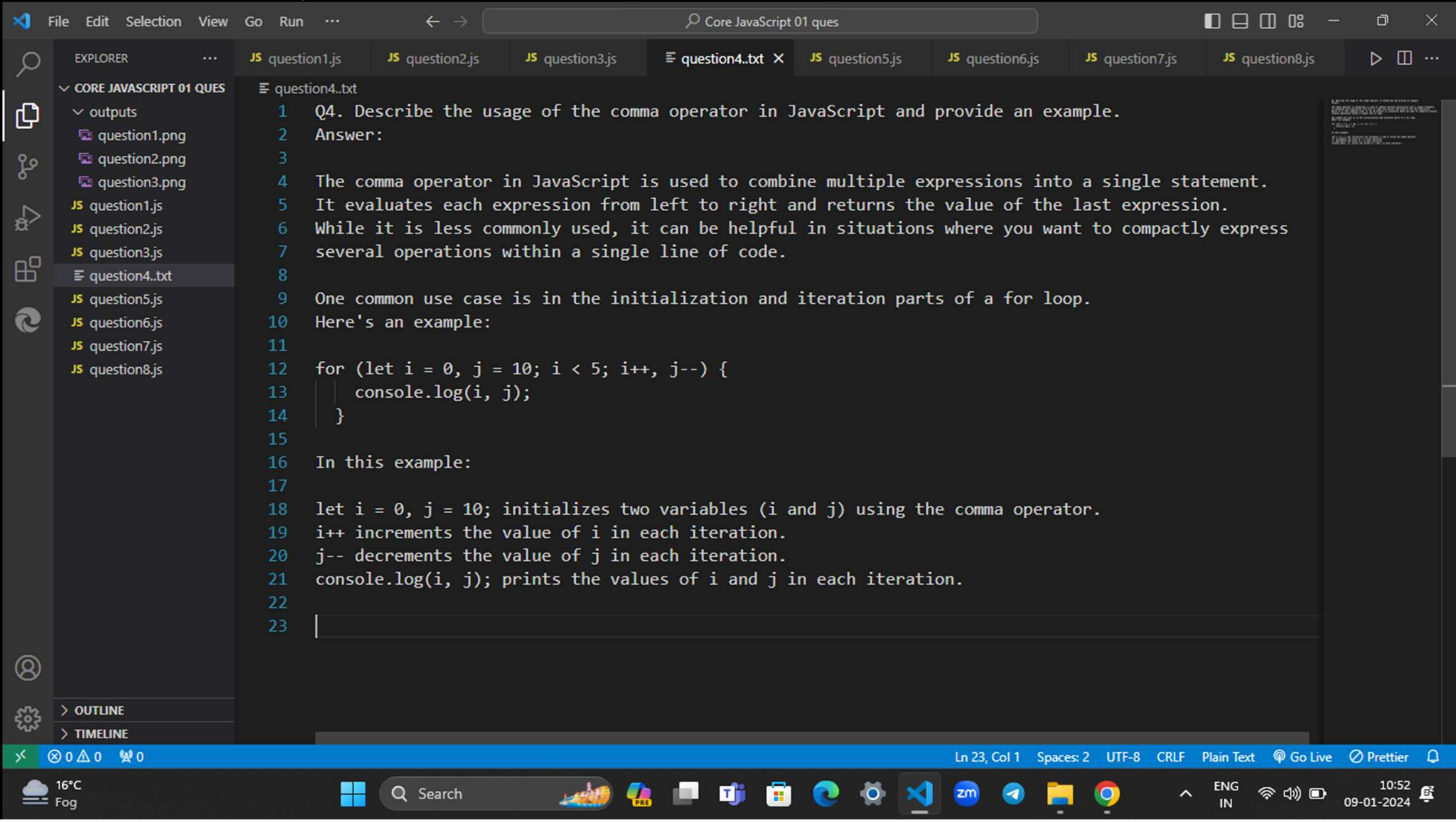
Question 3: Output



```
/*
Q3. Use a nested ternary operator to check that a number is positive, negative or zero. You have to print
"positive" if the number is positive and similarly for negative and zero also.
*/
number = -54;

result = (number === 0) ? ("Zero") :
(number > 0) ? ("Positive") :
(number < 0) ? ("Negative") :
("Please Enter a Valid number");

console.log("Nummber :", number);
console.log("Result :", result);

```

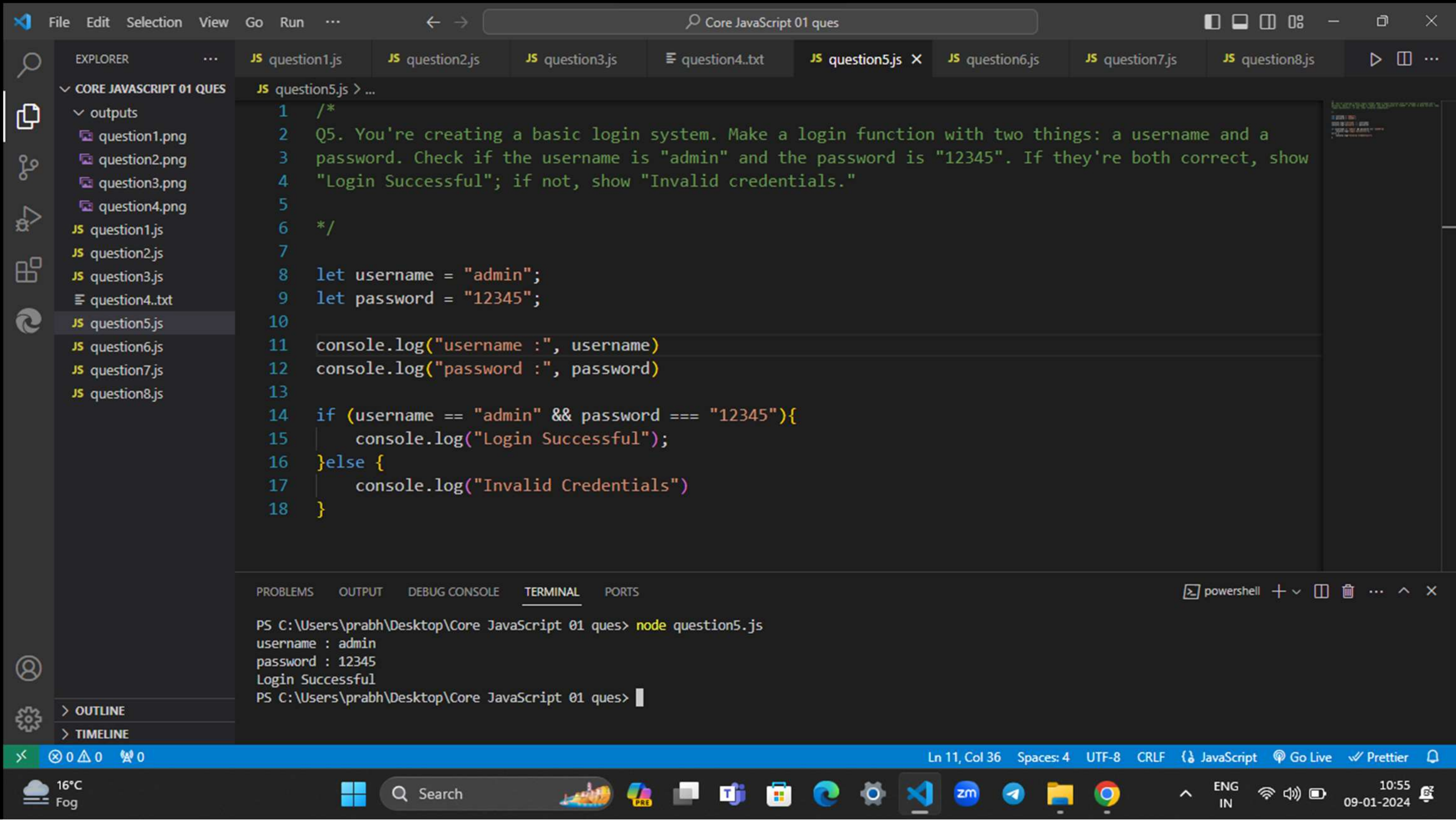
```
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques> node question3.js
Nummber : -54
Result : Negative
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques>
```

Question 4: Output



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

The comma operator in JavaScript is used to combine multiple expressions into a single statement.
It evaluates each expression from left to right and returns the value of the last expression.
While it is less commonly used, it can be helpful in situations where you want to compactly express
several operations within a single line of code.

One common use case is in the initialization and iteration parts of a for loop.
Here's an example:

for (let i = 0, j = 10; i < 5; i++, j--) {
    console.log(i, j);
  }

In this example:

let i = 0, j = 10; initializes two variables (i and j) using the comma operator.
i++ increments the value of i in each iteration.
j-- decrements the value of j in each iteration.
console.log(i, j); prints the values of i and j in each iteration.

```

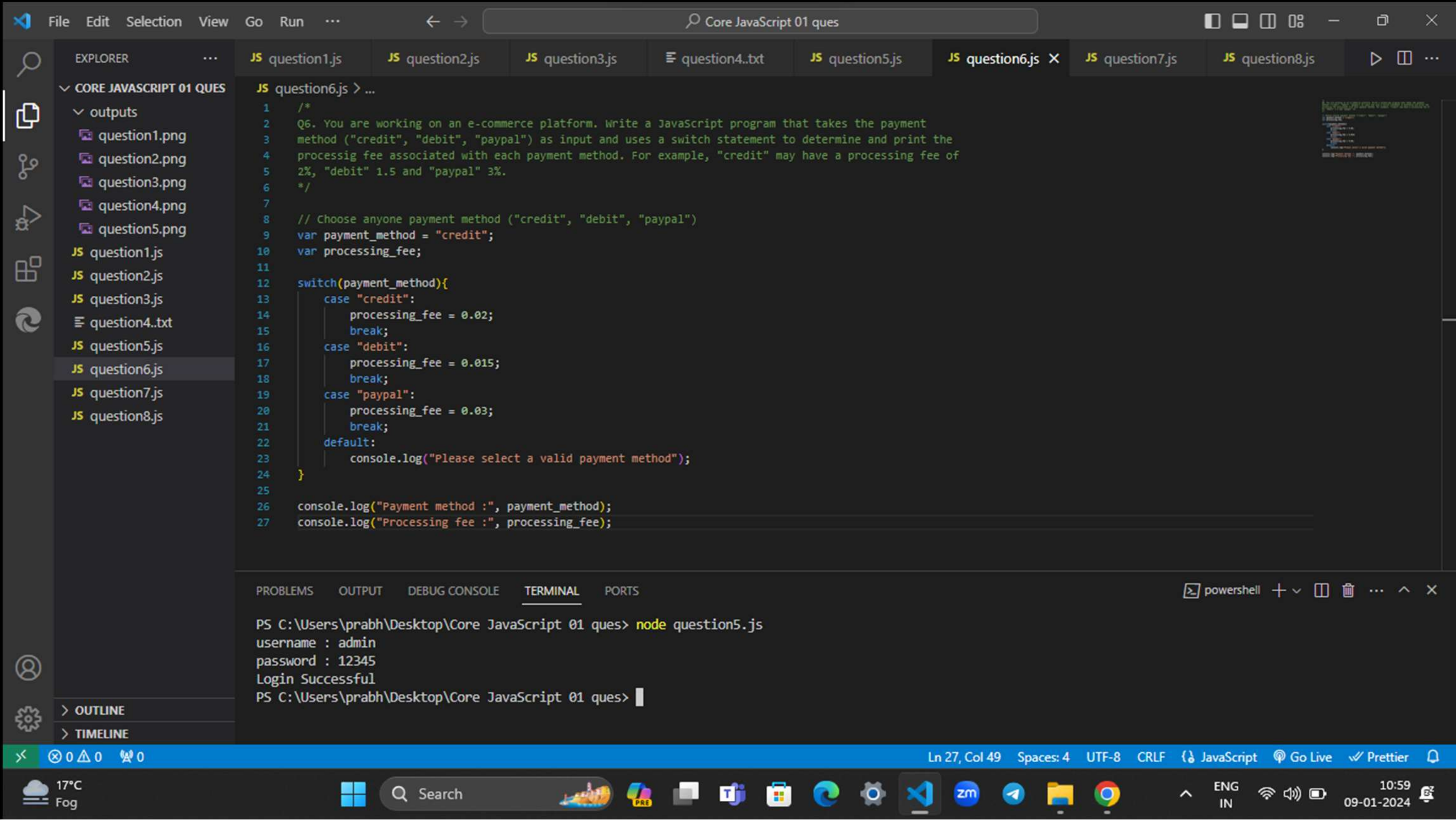
Question 5: Output



```javascript
/*
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."

*/

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

console.log("username :", username)
console.log("password :", password)

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

```
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques> node question5.js
username : admin
password : 12345
Login Successful
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques>
```

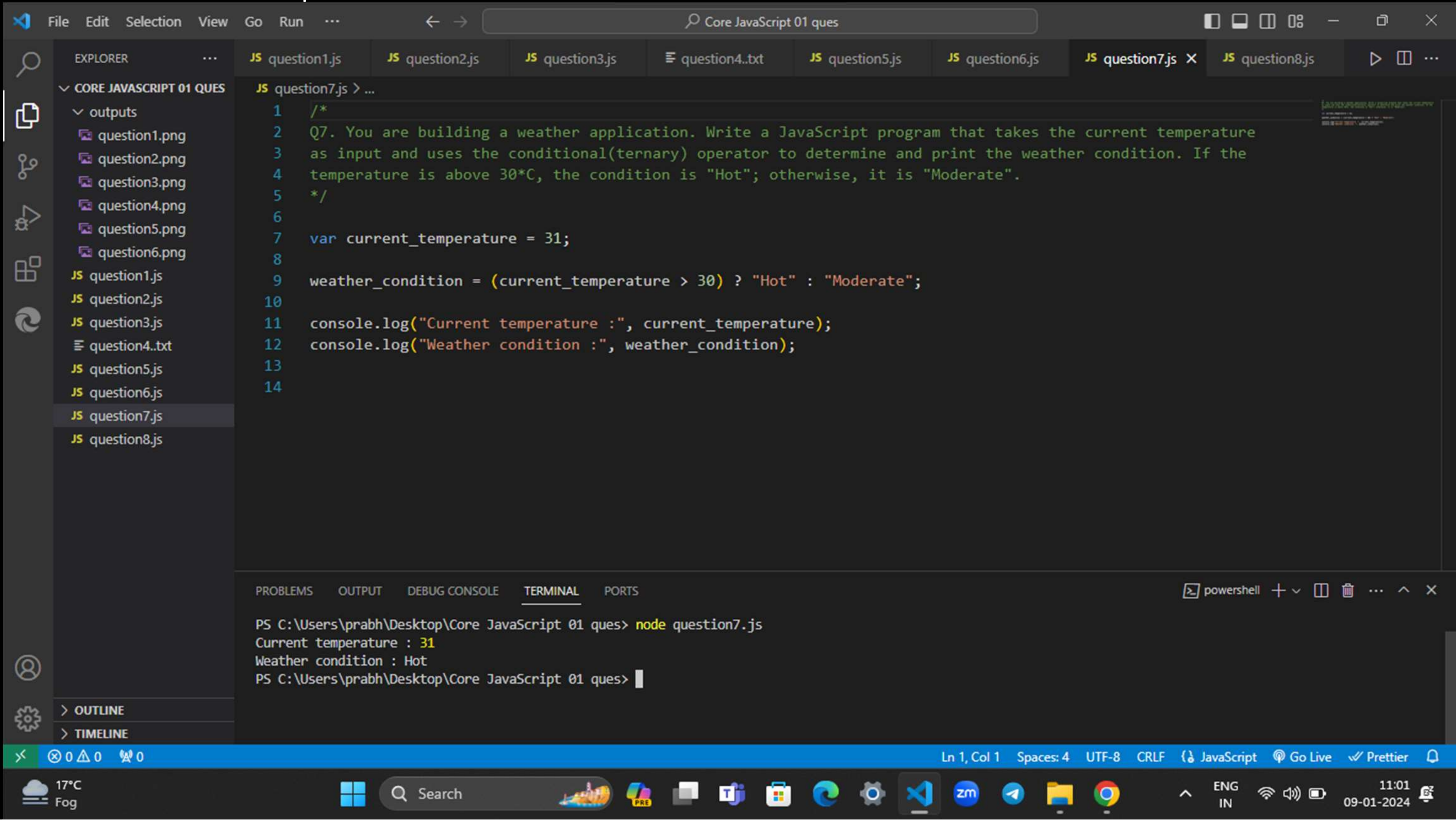
Question 6: Output



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

// Choose anyone payment method ("credit", "debit", "paypal")
var payment_method = "credit";
var processing_fee;

switch(payment_method){
    case "credit":
        processing_fee = 0.02;
        break;
    case "debit":
        processing_fee = 0.015;
        break;
    case "paypal":
        processing_fee = 0.03;
        break;
    default:
        console.log("Please select a valid payment method");
}

console.log("Payment method :", payment_method);
console.log("Processing fee :", processing_fee);
```

```
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques> node question5.js
username : admin
password : 12345
Login Successful
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques>
```

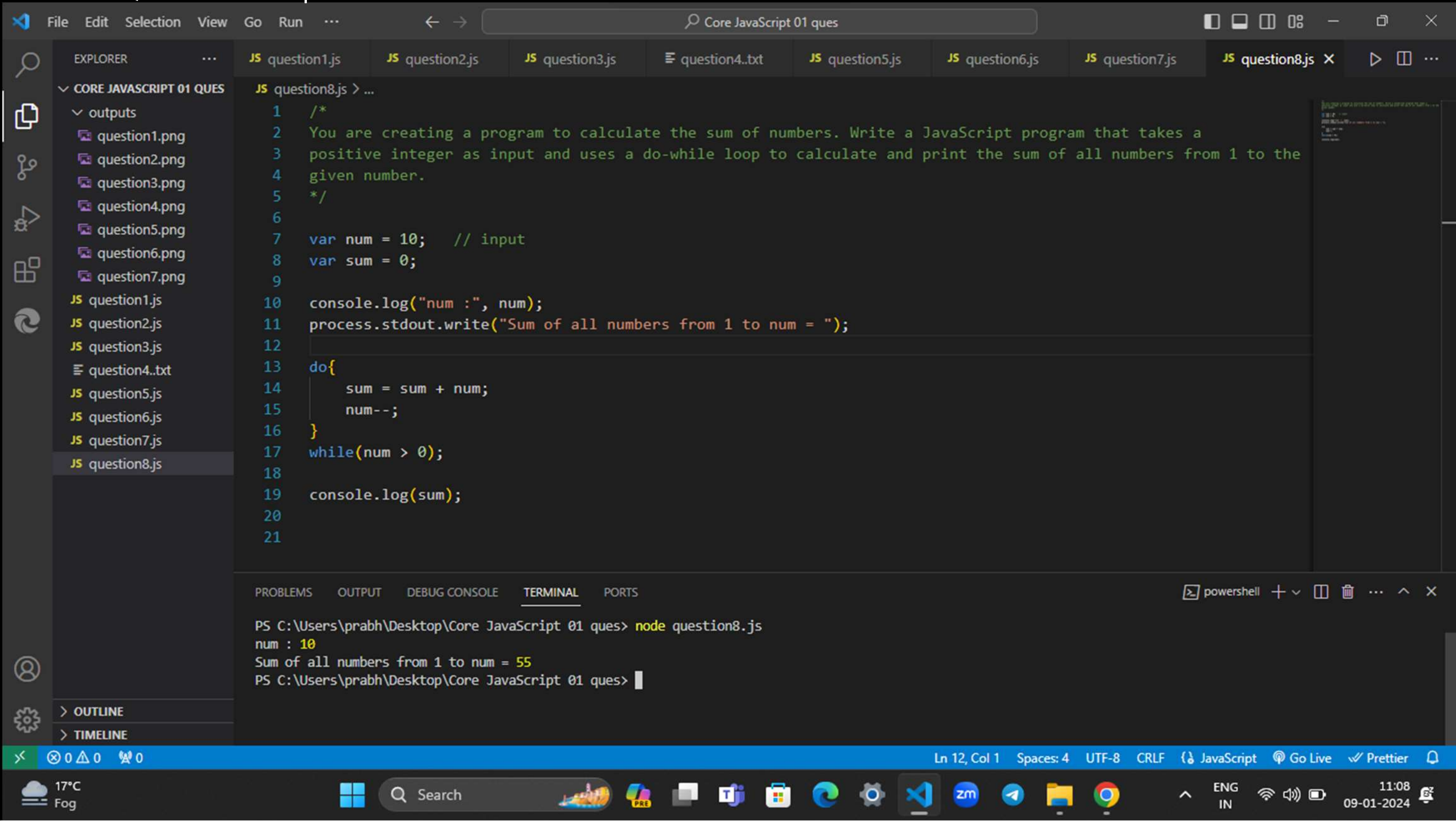
Question 7: Output



```
/*
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".
*/

var current_temperature = 31;

weather_condition = (current_temperature > 30) ? "Hot" : "Moderate";

console.log("Current temperature :", current_temperature);
console.log("Weather condition :", weather_condition);
```

```
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques> node question7.js
Current temperature : 31
Weather condition : Hot
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques>
```

Question 8: Output



```javascript
/*
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 number.
*/

var num = 10;   // input
var sum = 0;

console.log("num :", num);
process.stdout.write("Sum of all numbers from 1 to num = ");

do{
    sum = sum + num;
    num--;
}
while(num > 0);

console.log(sum);
```

```
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques> node question8.js
num : 10
Sum of all numbers from 1 to num = 55
PS C:\Users\prabh\Desktop\Core JavaScript 01 ques>
```