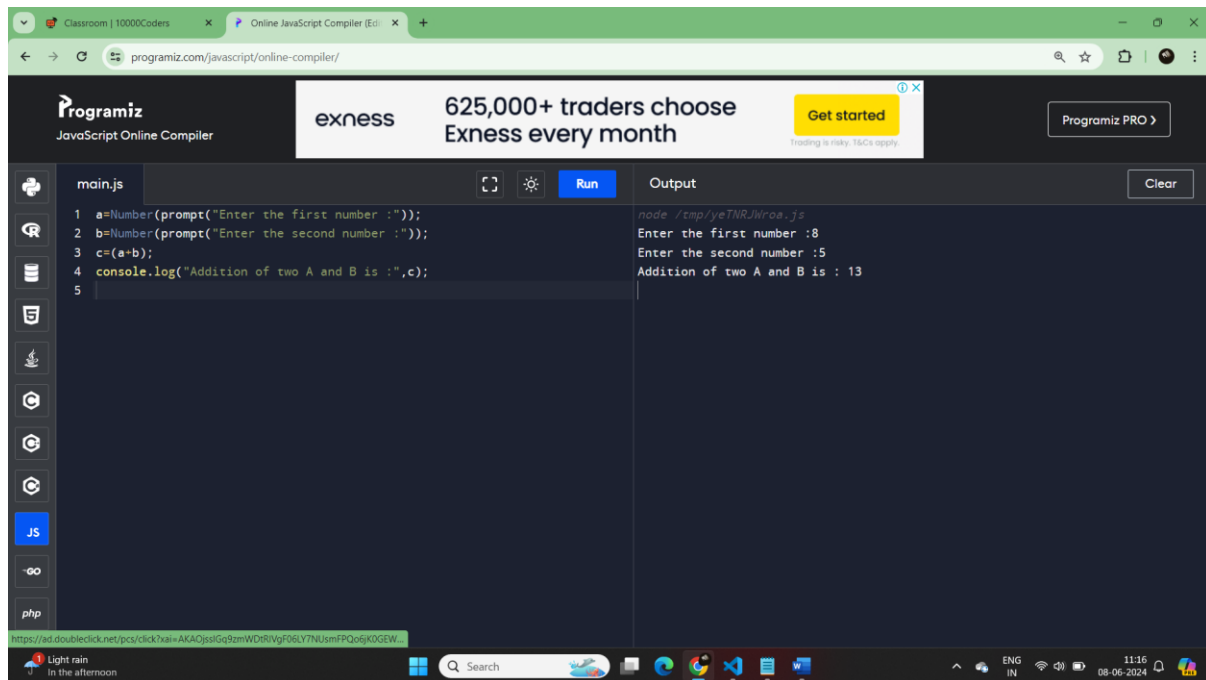


Topic : **Operators& conditional statements**
Date: 07/06/2024

1.Addition of Two Numbers

Write a program that takes two numbers as input and prints their sum.



The screenshot shows the Programiz JavaScript Online Compiler interface. The code editor on the left contains the following JavaScript code in `main.js`:

```
1 a=Number(prompt("Enter the first number :"));
2 b=Number(prompt("Enter the second number :"));
3 c=(a+b);
4 console.log("Addition of two A and B is :",c);
5
```

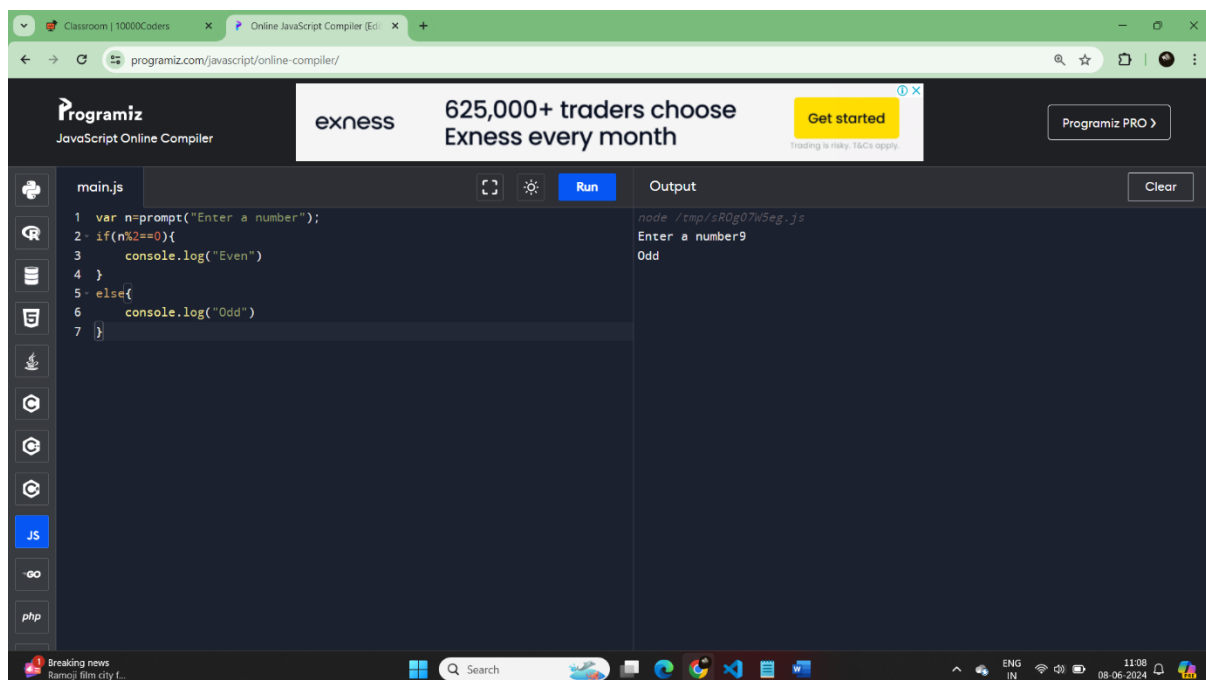
The 'Run' button is highlighted in blue. The output panel on the right shows the execution results:

```
node /tmp/yeTNRJWroa.js
Enter the first number :8
Enter the second number :5
Addition of two A and B is : 13
```

The browser's address bar shows the URL `programiz.com/javascript/online-compiler/`. The top navigation bar includes the Programiz logo, an Exness advertisement, and a 'Get started' button. The bottom status bar shows the system clock as 11:16 on 08-06-2024.

2.Checking Even or Odd

Write a program that takes a number as input and checks whether it is even or odd.



The screenshot shows the Programiz JavaScript Online Compiler interface. The code editor on the left contains the following JavaScript code in `main.js`:

```
1 var n=prompt("Enter a number");
2 if(n%2==0){
3     console.log("Even")
4 }
5 else{
6     console.log("Odd")
7 }
```

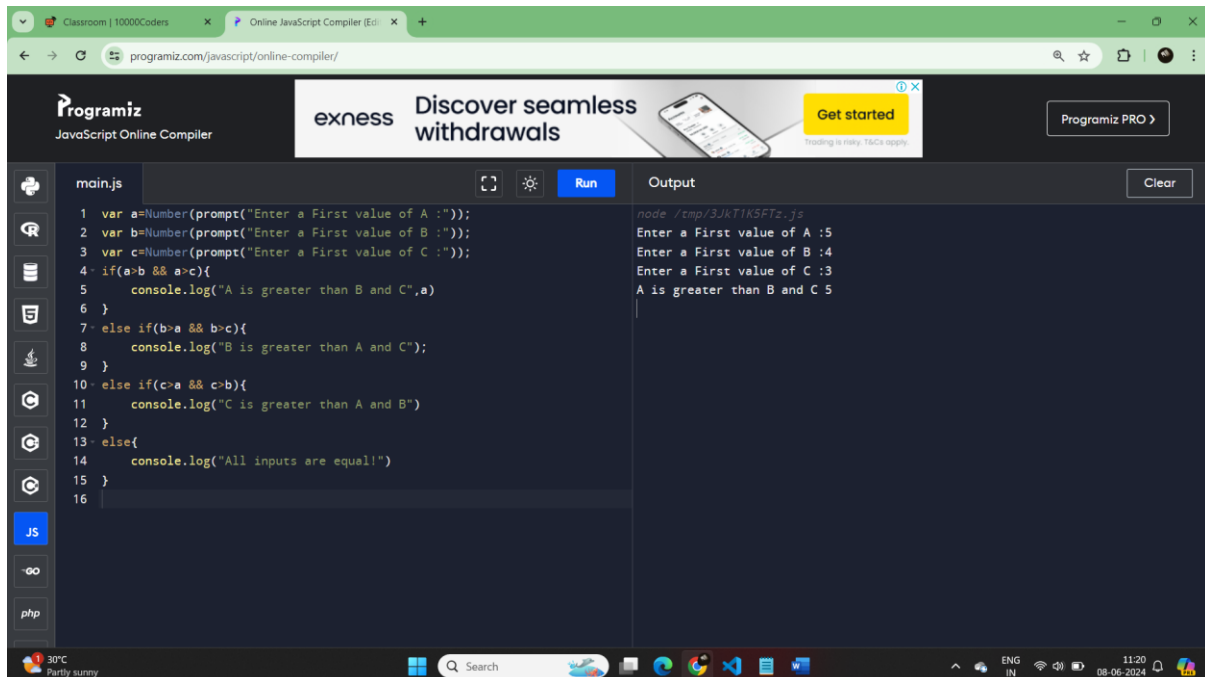
The 'Run' button is highlighted in blue. The output panel on the right shows the execution results:

```
node /tmp/sR0g07w5eg.js
Enter a number9
Odd
```

The browser's address bar shows the URL `programiz.com/javascript/online-compiler/`. The top navigation bar includes the Programiz logo, an Exness advertisement, and a 'Get started' button. The bottom status bar shows the system clock as 11:08 on 08-06-2024.

3. Maximum of Three Numbers

Write a program that takes three numbers as input and prints the maximum of the three.



The screenshot shows the Programiz JavaScript Online Compiler interface. The code in the editor is as follows:

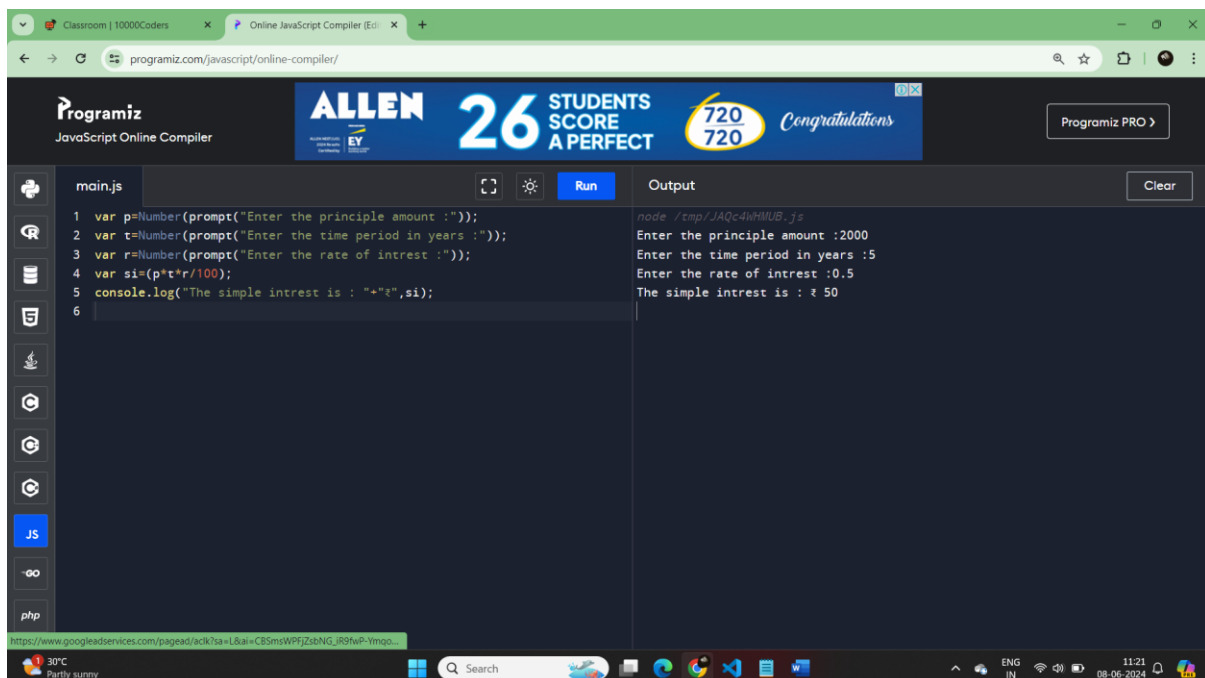
```
1 var a=Number(prompt("Enter a First value of A :"));
2 var b=Number(prompt("Enter a First value of B :"));
3 var c=Number(prompt("Enter a First value of C :"));
4 if(a>b && a>c){
5     console.log("A is greater than B and C",a)
6 }
7 else if(b>a && b>c){
8     console.log("B is greater than A and C");
9 }
10 else if(c>a && c>b){
11     console.log("C is greater than A and B")
12 }
13 else{
14     console.log("All inputs are equal!")
15 }
16
```

The output console shows the following results:

```
node /tmp/3JkT1K5FTz.js
Enter a First value of A :5
Enter a First value of B :4
Enter a First value of C :3
A is greater than B and C 5
```

4.Simple Interest Calculation

Write a program to calculate simple interest given the principal amount, rate of interest, and time period.



The screenshot shows the Programiz JavaScript Online Compiler interface. The code in the editor is as follows:

```
1 var p=Number(prompt("Enter the principle amount :"));
2 var t=Number(prompt("Enter the time period in years :"));
3 var r=Number(prompt("Enter the rate of instrest :"));
4 var si=(p*t*r/100);
5 console.log("The simple intrtest is : "+t",si);
6
```

The output console shows the following results:

```
node /tmp/JAQc4wHMUB.js
Enter the principle amount :2000
Enter the time period in years :5
Enter the rate of instrest :0.5
The simple intrtest is : 50
```

5.Swapping Two Variables

Write a program that swaps the values of two variables without using a temporary variable.

The screenshot shows the Programiz JavaScript Online Compiler interface. The top banner features the Allen logo and a congratulatory message for a student who scored 26, with a score of 720/720. The main editor area displays a JavaScript file named 'main.js' with the following code:

```
1 console.log('Dynamically typed')
2 var a = parseInt(prompt("Enter the First number :"));
3 var b = parseInt(prompt("Enter the Second number :"));
4 a = a + b;
5 b = a - b;
6 a = a - b;
7 console.log("After swapping, a =", a);
8 console.log("After swapping, b =", b);
9
10 //Statically Typed
11 console.log('Statically Typed')
12 a=11;
13 b=22;
14 a=a+b;
15 b=a-b;
16 a=a-b;
17 console.log(a);
18 console.log(b);
19
```

The 'Run' button is highlighted. The output area on the right shows the results of the execution:

```
node /tmp/WeUMrLaj1.js
Dynamically typed
Enter the First number :11
Enter the Second number :22
After swapping, a = 22
After swapping, b = 11
Statically Typed
22
11
```

The bottom status bar indicates a temperature of 27°C and 'Mostly sunny' weather.

6. Temperature Conversion

Write a program to convert a temperature given in Celsius to Fahrenheit.

The screenshot shows the Programiz JavaScript Online Compiler interface. The top banner features the Exness logo and a message 'Think Next Level Trading Think Exness'. The main editor area displays a JavaScript file named 'main.js' with the following code:

```
1 var c=Number(prompt("Enter Temperature in Celsius :"));
2 var f=(9/5*c+32);
3 console.log("Temperature in Fahrenheit :",f);
```

The 'Run' button is highlighted. The output area on the right shows the results of the execution:

```
node /tmp/Q4NodUfSS.js
Enter emperature in Celsius :29
Temperature in Fahrenheit : 84.2
```

The bottom status bar indicates a temperature of 30°C and 'Partly sunny' weather.

7. Positive, Negative, or Zero

Write a program that takes a number as input and prints whether it is positive, negative, or zero.

The screenshot shows the Programiz JavaScript Online Compiler interface. The top banner features the Allen logo and a congratulatory message for a student who scored 26 in the NEET (UG) 2024 exam with a score of 720. The main editor area displays a JavaScript program in a file named 'main.js'. The program prompts the user to enter a number and then checks if it is positive, negative, or zero using conditional statements. The output window shows the result of the program execution, which is 'zero entered'.

```
main.js
1 var n=prompt("Enter a number :");
2 if(n>0){
3     console.log("The "+n+" is positive number");
4 }
5 else if(n<0){
6     console.log("The "+n+" is negative number");
7 }
8 else{
9     console.log("zero entered");
10 }
```

Output

```
node /tmp/jHbJkGbHb5.js
Enter a number :0
zero entered
```

8.Absolute Value

Write a program that takes a number as input and prints its absolute value.

The screenshot shows the Programiz JavaScript Online Compiler interface. The top banner features the Allen logo and a congratulatory message for a student who scored 26 in the NEET (UG) 2024 exam with a score of 720. The main editor area displays a JavaScript program in a file named 'main.js'. The program prompts the user to enter a number and then calculates its absolute value using a conditional statement. The output window shows the result of the program execution, which is 'The absolute value of given number is : 10'.

```
main.js
1 var a=prompt("enter a number :");
2 if(a<=0){
3     console.log("The absolute value of given number is :",-a)
4 }
5 else{
6     console.log("The absolute value of given number is :",a)
7 }
8
```

Output

```
node /tmp/kEwYsKQgg.js
enter a number :-10
The absolute value of given number is : 10
```

9Area of a Circle

Write a program that calculates the area of a circle given its radius.

The screenshot shows the Programiz JavaScript Online Compiler interface. The editor contains the following JavaScript code in `main.js`:

```
1 var r=prompt("Enter the radius of circle is in square centimeters:");
2 a=3.14159*r*r**2
3 console.log("The area of circle is :","a+" square centimeters" );
```

The `Run` button is highlighted. The output window on the right shows the result of running the code:

```
node /tmp/2TwTk3JrHI.js
Enter the radius of circle is in square centimeters:5
The area of circle is : 78.53975 square centimeters
```

The interface also features a banner for Allen 26 Students Score a Perfect 720/720 and a `Programiz PRO` button. The bottom status bar shows the system time as 11:27 on 08-06-2024.

10. Leap Year Check

Write a program that checks if a given year is a leap year.

The screenshot shows the Programiz JavaScript Online Compiler interface. The editor contains the following JavaScript code in `main.js`:

```
1 var n=prompt("Enter a Year");
2 if((n%4==0) && (n%100!=0) || (n%400==0)){
3   console.log("Leap Year")
4 }
5 else{
6   console.log("Not a leap year")
7 }
```

The `Run` button is highlighted. The output window on the right shows the result of running the code:

```
node /tmp/Pu7kvAmuRr.js
Enter a Year1700
Not a leap year
```

The interface also features a banner asking "LOOKING TO LEARN PROGRAMMING?" and a `Programiz PRO` button. The bottom status bar shows the system time as 11:10 on 08-06-2024.

11. Age Check

Write a program that takes a person's age as input and prints whether they are a child (0-12), a teenager (13-19), an adult (20-59), or a senior (60+).

The screenshot shows the Programiz JavaScript Online Compiler interface. The editor contains a JavaScript program that prompts the user to enter their age and then categorizes them based on the following ranges: child (0-12), Teenager (13-19), Adult (20-59), and Senior (60+). The output window shows the result of running the program with the input '9', which is 'child'.

```
main.js
1 var a=Number(prompt("Enter the age :"));
2 if(a>=0 && a<=12){
3     console.log("child")
4 }
5 else if(a>=13 && a<=19){
6     console.log("Teenager");
7 }
8 else if(a>=20 && a<=59){
9     console.log("Adult");
10 }
11 else if(a>=60){
12     console.log("Senior")
13 }
14 else{
15     console.log("Age not be negative")
16 }
17
```

Output

```
node /tmp/0mZMeJc2jk.js
Enter the age :9
child
```

12. Grade Calculation

Write a program that takes a student's marks as input and prints their grade based on the following scale:

90-100: A

80-89: B

70-79: C

60-69: D

0-59: F

The screenshot shows the Programiz JavaScript Online Compiler interface. The editor contains a JavaScript program that prompts the user to enter their marks and then prints their grade based on the following scale: A (90-100), B (80-89), C (70-79), D (60-69), and F (0-59). The output window shows the result of running the program with the input '95', which is 'The student got A grade'.

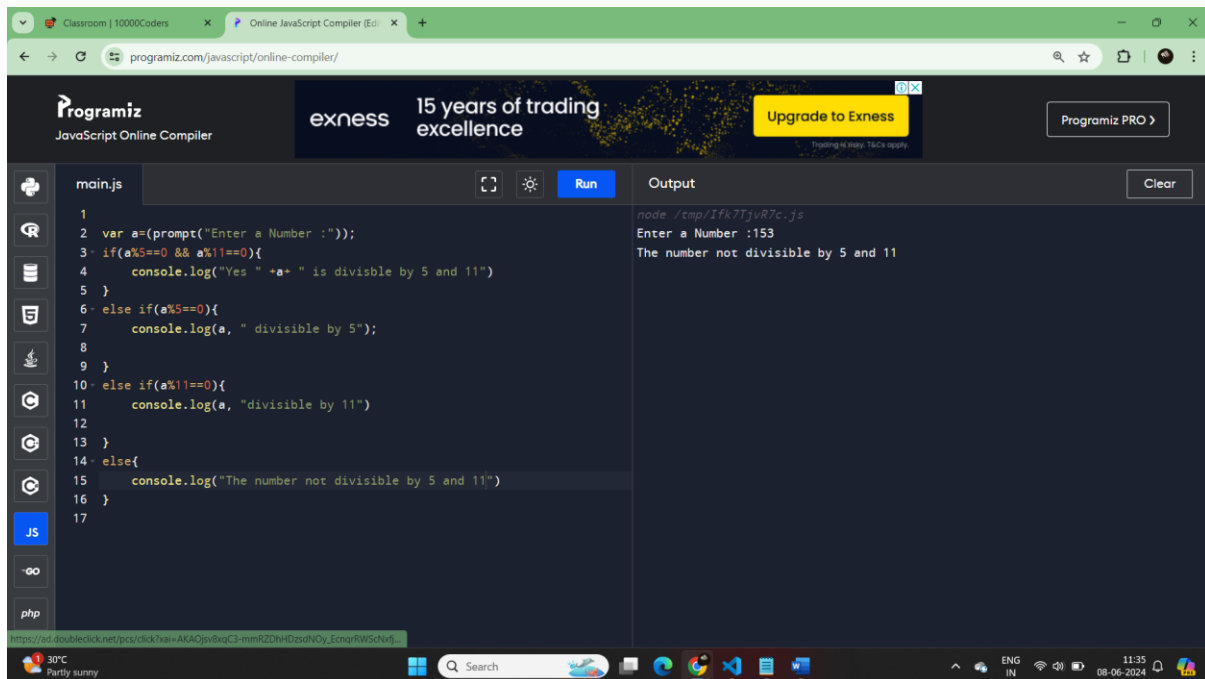
```
main.js
1 var a=prompt("Enter the Student marks :");
2 if(a>=90 && a<=100){
3     console.log("The student got A grade ");
4 }
5 else if(a>=80 && a<=89){
6     console.log("The student got B grade")
7 }
8 else if(a>=70 && a<=79){
9     console.log("The student got C grade")
10 }
11 else if(a>=60 && a<=69){
12     console.log("The Student got D grade")
13 }
14 else if(a>=0 && a<=59){
15     console.log("FAIL! Better luck next time")
16 }
17 else{
18     console.log("Invalid Selection Enter Marks correctly!!")
19 }
20
```

Output

```
node /tmp/A6F87Fn5Ng.js
Enter the Student marks :95
The student got A grade
```

13. Divisibility Check

Write a program that takes a number as input and checks if it is divisible by 5 and 11.



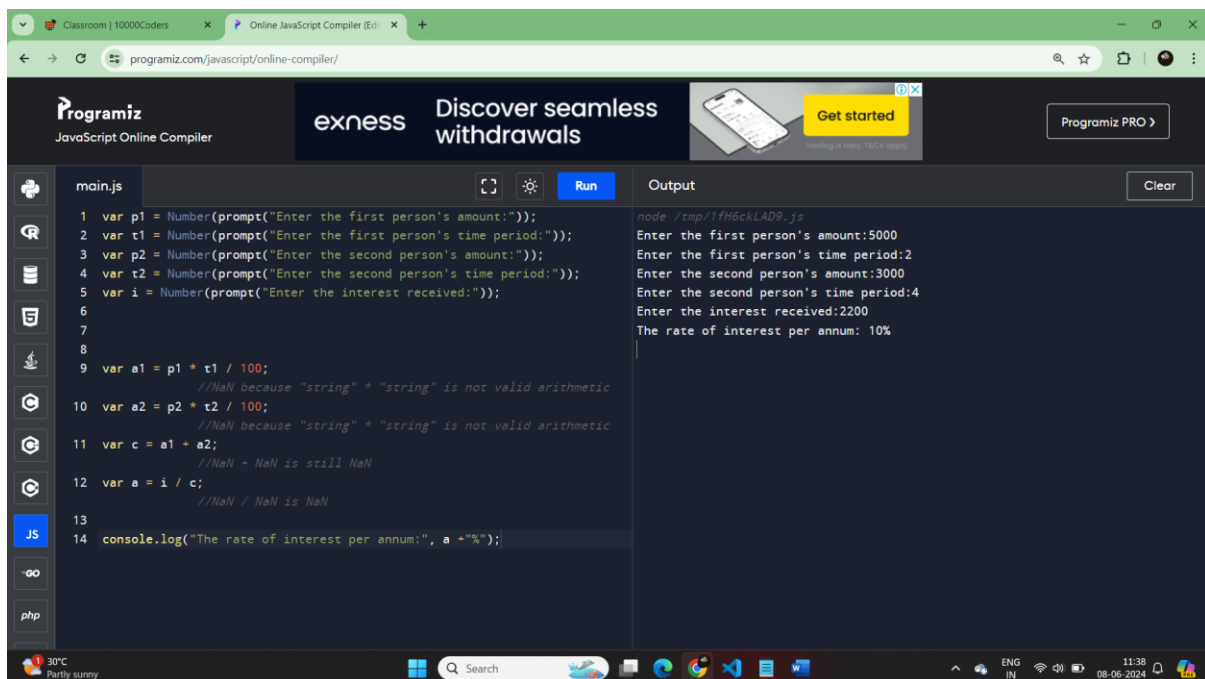
The screenshot shows a web browser with the Programiz JavaScript Online Compiler. The code in the editor is as follows:

```
1 var a=(prompt("Enter a Number :"));
2 if(a%5==0 && a%11==0){
3   console.log("Yes " +a+ " is divisible by 5 and 11")
4 }
5 else if(a%5==0){
6   console.log(a, " divisible by 5");
7 }
8 else if(a%11==0){
9   console.log(a, "divisible by 11")
10 }
11 else{
12   console.log("The number not divisible by 5 and 11")
13 }
14 }
```

The output on the right shows the result of running the code with the input 153:

```
node /tmp/Ifk7TjvR7c.js
Enter a Number :153
The number not divisible by 5 and 11
```

14.A lent Rs. 5000 to B for 2 years and Rs. 3000 to C for 4 years on simple interest at the same rate of interest and received Rs. 2200 in all from both of them as interest. The rate of interest per annum is:??



The screenshot shows the same online JavaScript compiler with a new program for calculating the rate of interest. The code in the editor is as follows:

```
1 var p1 = Number(prompt("Enter the first person's amount:"));
2 var t1 = Number(prompt("Enter the first person's time period:"));
3 var p2 = Number(prompt("Enter the second person's amount:"));
4 var t2 = Number(prompt("Enter the second person's time period:"));
5 var i = Number(prompt("Enter the interest received:"));
6
7
8 var a1 = p1 * t1 / 100;
9 //NaN because "string" * "string" is not valid arithmetic
10 var a2 = p2 * t2 / 100;
11 //NaN because "string" * "string" is not valid arithmetic
12 var c = a1 + a2;
13 //NaN + NaN is still NaN
14 var a = i / c;
15 //NaN / NaN is NaN
16 console.log("The rate of interest per annum:", a + "%");
```

The output on the right shows the result of running the code with the following inputs:

```
node /tmp/Ifh6ckLAD9.js
Enter the first person's amount:5000
Enter the first person's time period:2
Enter the second person's amount:3000
Enter the second person's time period:4
Enter the interest received:2200
The rate of interest per annum: 10%
```

