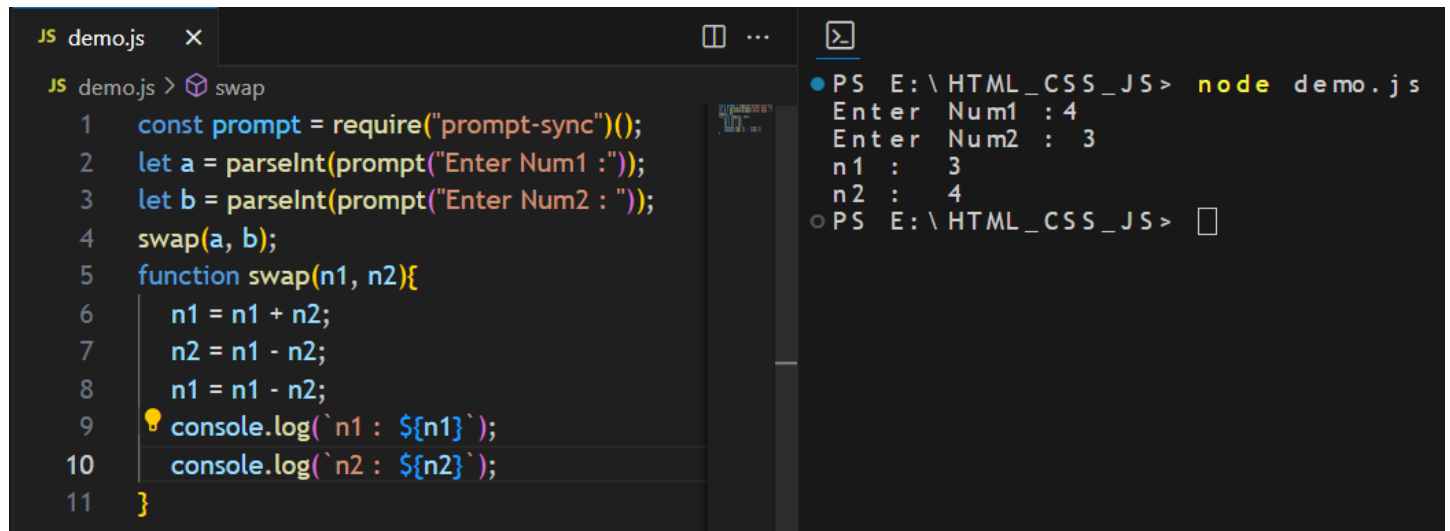


S-Problem01:

Write a program to Swap two Variables a and b (Swapping basically means interchanging)

Input a=3 , b=4 Output a=4, b=3



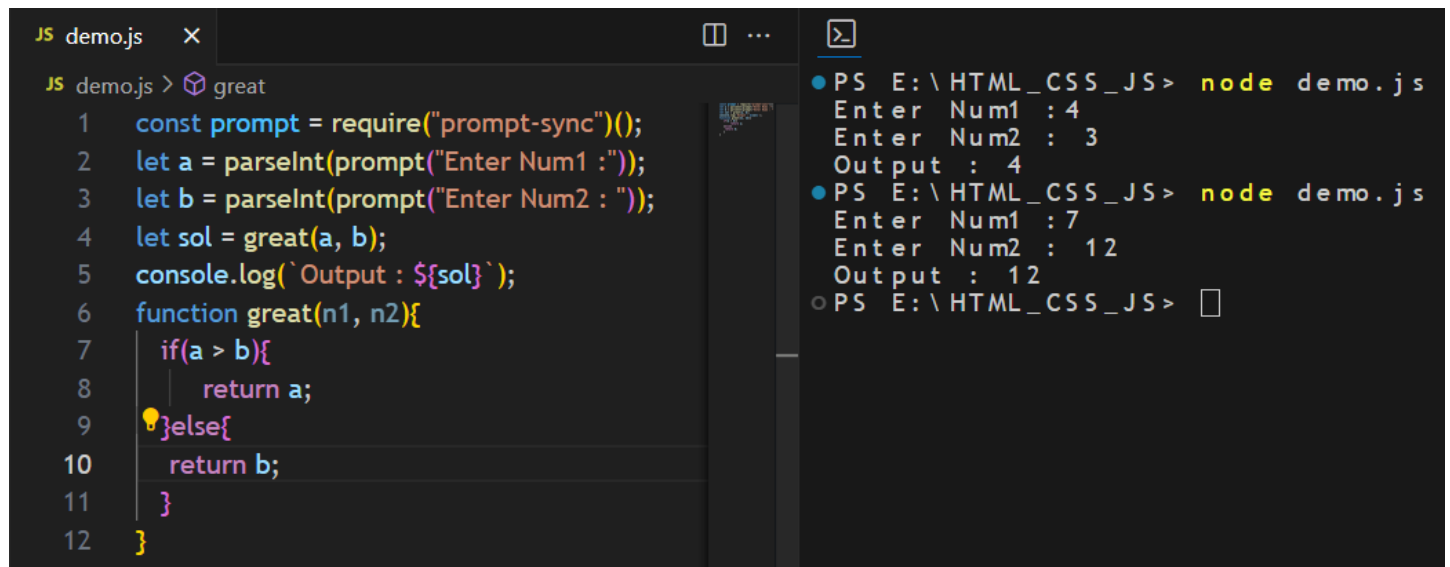
```
JS demo.js x
JS demo.js > swap
1  const prompt = require("prompt-sync")();
2  let a = parseInt(prompt("Enter Num1 :"));
3  let b = parseInt(prompt("Enter Num2 :"));
4  swap(a, b);
5  function swap(n1, n2){
6      n1 = n1 + n2;
7      n2 = n1 - n2;
8      n1 = n1 - n2;
9      console.log(`n1 : ${n1}`);
10     console.log(`n2 : ${n2}`);
11 }

PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 4
Enter Num2 : 3
n1 : 3
n2 : 4
PS E:\HTML_CSS_JS>
```

S-Problem02:

Write a program to print the largest number of the two numbers given.

Input:- a=3, b=4 Output: 4



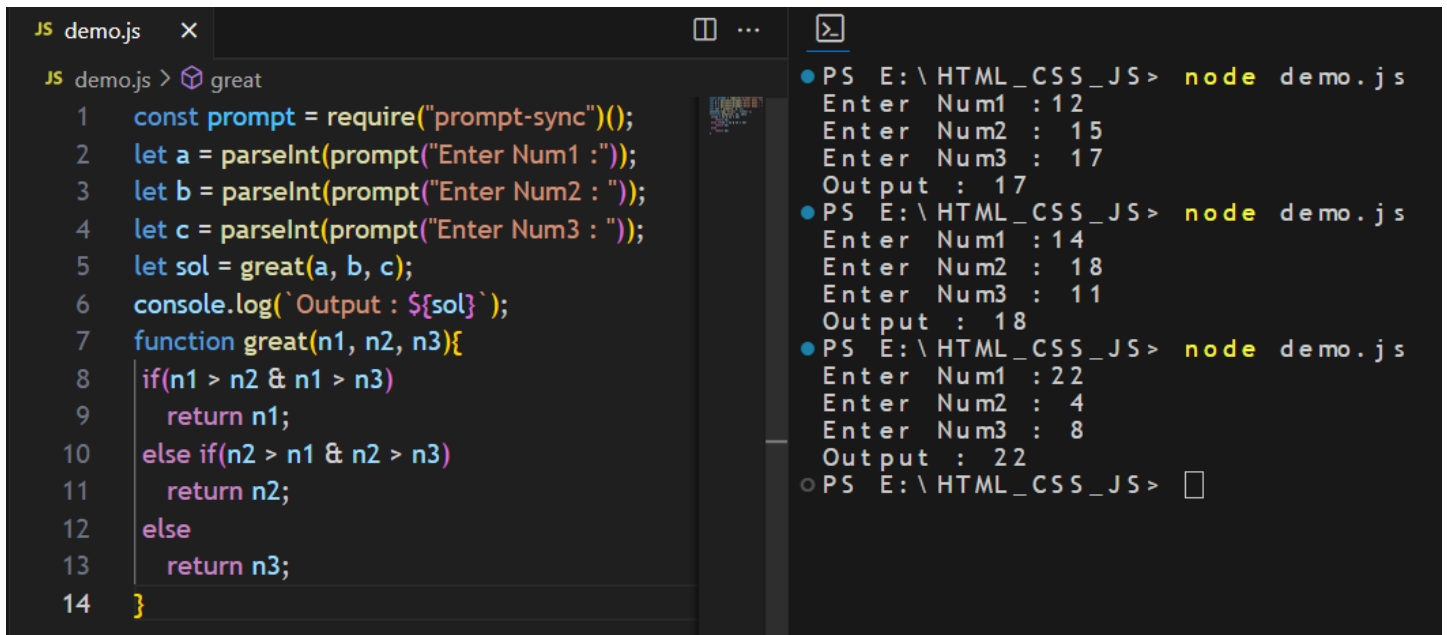
```
JS demo.js x
JS demo.js > great
1  const prompt = require("prompt-sync")();
2  let a = parseInt(prompt("Enter Num1 :"));
3  let b = parseInt(prompt("Enter Num2 :"));
4  let sol = great(a, b);
5  console.log(`Output : ${sol}`);
6  function great(n1, n2){
7      if(a > b){
8          return a;
9      }else{
10         return b;
11     }
12 }

PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 4
Enter Num2 : 3
Output : 4
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 7
Enter Num2 : 12
Output : 12
PS E:\HTML_CSS_JS>
```

S-Problem03:

Write a program to print the largest of the three numbers.

Input:- a=3, b=5, c=1 Output:- 5

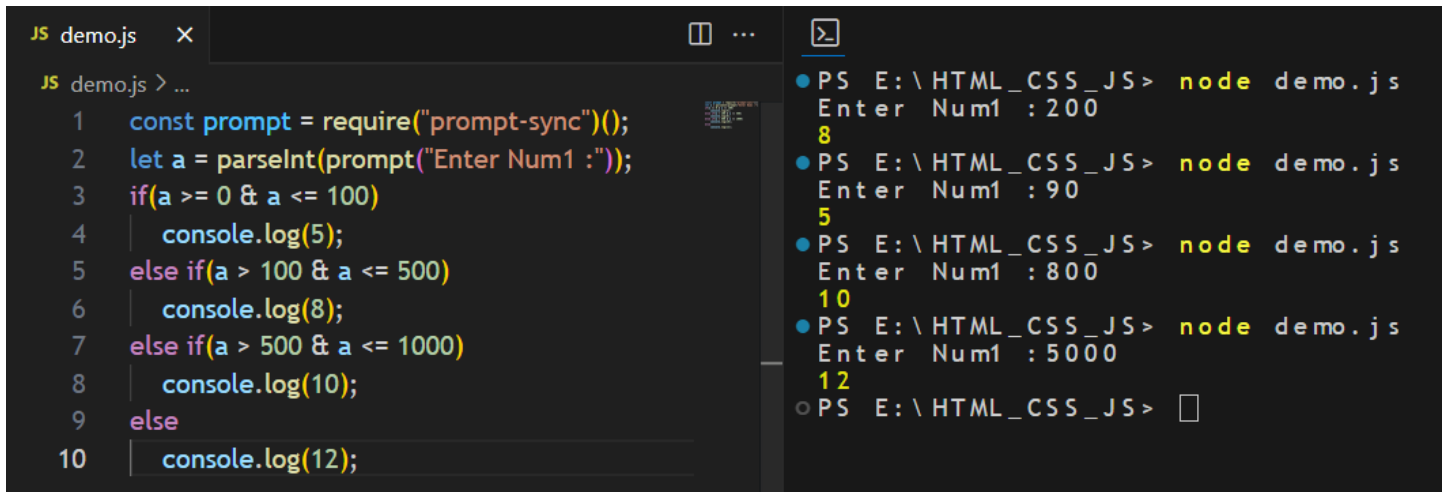


```
JS demo.js  X  ...  >
JS demo.js > great
1  const prompt = require("prompt-sync")();
2  let a = parseInt(prompt("Enter Num1 :"));
3  let b = parseInt(prompt("Enter Num2 :"));
4  let c = parseInt(prompt("Enter Num3 :"));
5  let sol = great(a, b, c);
6  console.log(`Output : ${sol}`);
7  function great(n1, n2, n3){
8    if(n1 > n2 & n1 > n3)
9      return n1;
10   else if(n2 > n1 & n2 > n3)
11     return n2;
12   else
13     return n3;
14 }
```

```
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 12
Enter Num2 : 15
Enter Num3 : 17
Output : 17
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 14
Enter Num2 : 18
Enter Num3 : 11
Output : 18
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 22
Enter Num2 : 4
Enter Num3 : 8
Output : 22
PS E:\HTML_CSS_JS>
```

S-Problem04:

Given a variable D (distance) write a program to print the cost associated with it as shown in the image:- Input:- D = 700 Output:- 10



```
JS demo.js  X  ...  >
JS demo.js > ...
1  const prompt = require("prompt-sync")();
2  let a = parseInt(prompt("Enter Num1 :"));
3  if(a >= 0 & a <= 100)
4    console.log(5);
5  else if(a > 100 & a <= 500)
6    console.log(8);
7  else if(a > 500 & a <= 1000)
8    console.log(10);
9  else
10   console.log(12);
```

```
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 200
8
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 90
5
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 800
10
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 5000
12
PS E:\HTML_CSS_JS>
```

S-Problem05:

Write a program to assume a value of marks and print whether a person has failed or passed using ternary Operator. If Marks ≥ 40 --> pass ELSE ---> fail

Input:- Marks =52 Output:- pass

```
JS demo.js x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2 let a = parseInt(prompt("Enter Num1 :"));
3 let str = (a >= 40)? "pass" : "fail";
4 console.log(str);

• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 55
pass
• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 32
fail
○ PS E:\HTML_CSS_JS>
```

S-Problem06:

Write a program to print the maximum of two numbers using Ternary operator.

Example:- Input:- a=3, b=5 Output:- 5

```
JS demo.js x
JS demo.js > [?] str
1 const prompt = require("prompt-sync")();
2 let a = parseInt(prompt("Enter Num1 :"));
3 let b = parseInt(prompt("Enter Num2 :"));
4 let str = (a > b)? `${a}` : `${b}`;
5 console.log(str);

• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 58
Enter Num2 : 99
99
• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 101
Enter Num2 : 5
101
○ PS E:\HTML_CSS_JS>
```

S-Problem07:

Given the Day number, print the Day name in lower case corresponding to it by using the help of switch statement. Note: Day 1 - is Monday. If the day is not valid example 1> day >7 then print invalid
Input :- Day – 3 Output :- Wednesday

```
JS demo.js x
JS demo.js > ...
1  const prompt = require("prompt-sync")();
2  let a = parseInt(prompt("Enter Num1 :"));
3  switch(a){
4      case 1:
5          console.log("Monday");
6          break;
7      case 2:
8          console.log("Tuesday");
9          break;
10     case 3:
11         console.log("Wednesday");
12         break;
13     case 4:
14         console.log("Thursday");
15         break;
16     case 5:
17         console.log("Friday");
18         break;
19     case 6:
20         console.log("Saturday");
21         break;
22     case 7:
23         console.log("Sunday");
24         break;
25     default:
26         console.log("Invalid!");
27         break;
28 }
```

```
● PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 2
Tuesday
● PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 5
Friday
● PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 1
Monday
● PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 9
Invalid!
○ PS E:\HTML_CSS_JS> 
```

Q. What will be the output of the following algorithm.

```
switch (x) {  
case 1:    print( "Choice is 1");    break;  
case 2:    print( "Choice is 2");  
case 3:    print("Choice is 3");  
case 4:    print("Choice is 4");    break;  
default:   print("Choice other than 1, 2, 3 and 4")    break;    }  

```

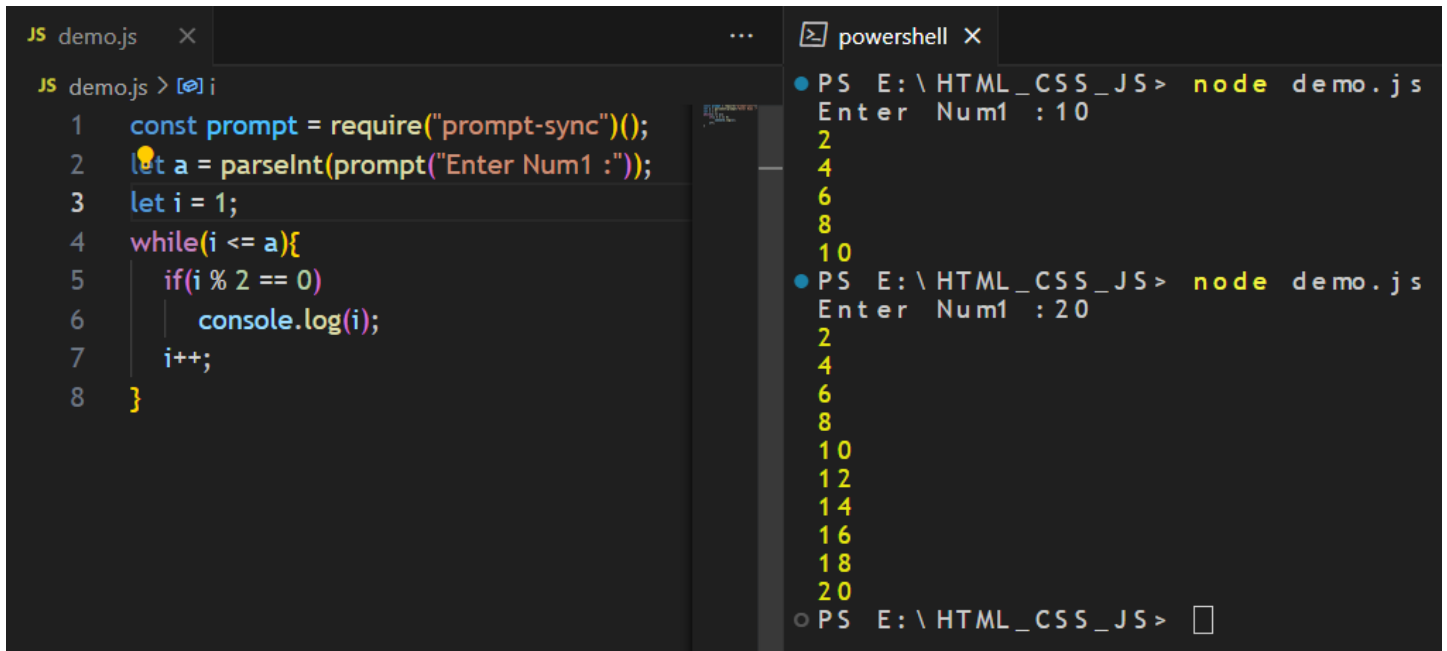
Which of the following Option is correct if (x=2) :-

- A) Choice is 1
- B) Choice is 1 Choice is 2
- C) Choice is 2 Choice is 3 Choice is 4 -> Correct Answer
- D) Choice is 2 Choice is 3

S-Problem08:

Write a program using only while loops to print all the even numbers from 1 to n.

Input if n = 10 Output 2 4 6 8 10



The screenshot shows a code editor on the left and a terminal on the right. The code editor displays a JavaScript file named 'demo.js' with the following code:

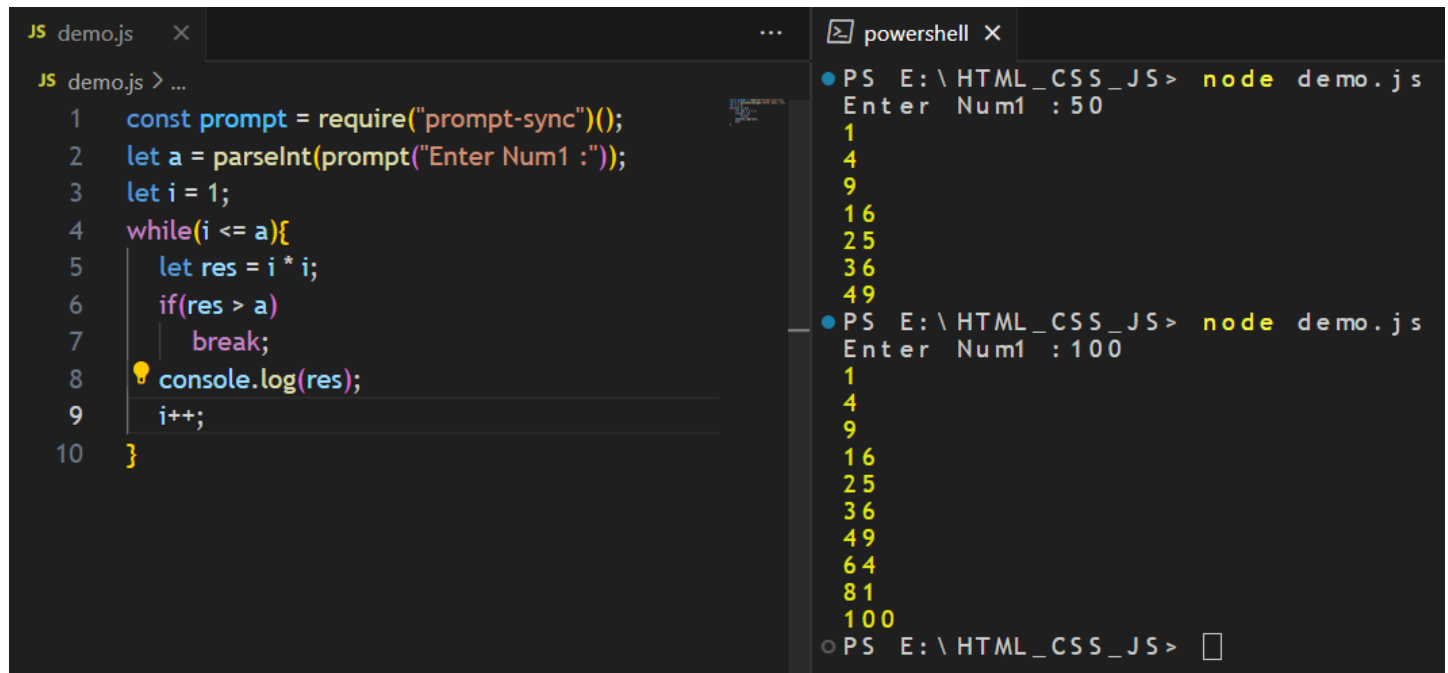
```
1 const prompt = require("prompt-sync")();  
2 let a = parseInt(prompt("Enter Num1 :"));  
3 let i = 1;  
4 while(i <= a){  
5     if(i % 2 == 0)  
6         console.log(i);  
7     i++;  
8 }
```

The terminal on the right shows the execution of the program. It starts with a PowerShell prompt, followed by the command 'node demo.js'. The program prompts 'Enter Num1 : 10' and outputs the even numbers 2, 4, 6, 8, and 10. The second execution shows 'Enter Num1 : 20' and outputs even numbers from 2 to 20.

S-Problem09:

Print the following series using while loop 1 4 9 16 25 36 n

Input :- n = 49 Output :- 1 4 9 16 25 36 49



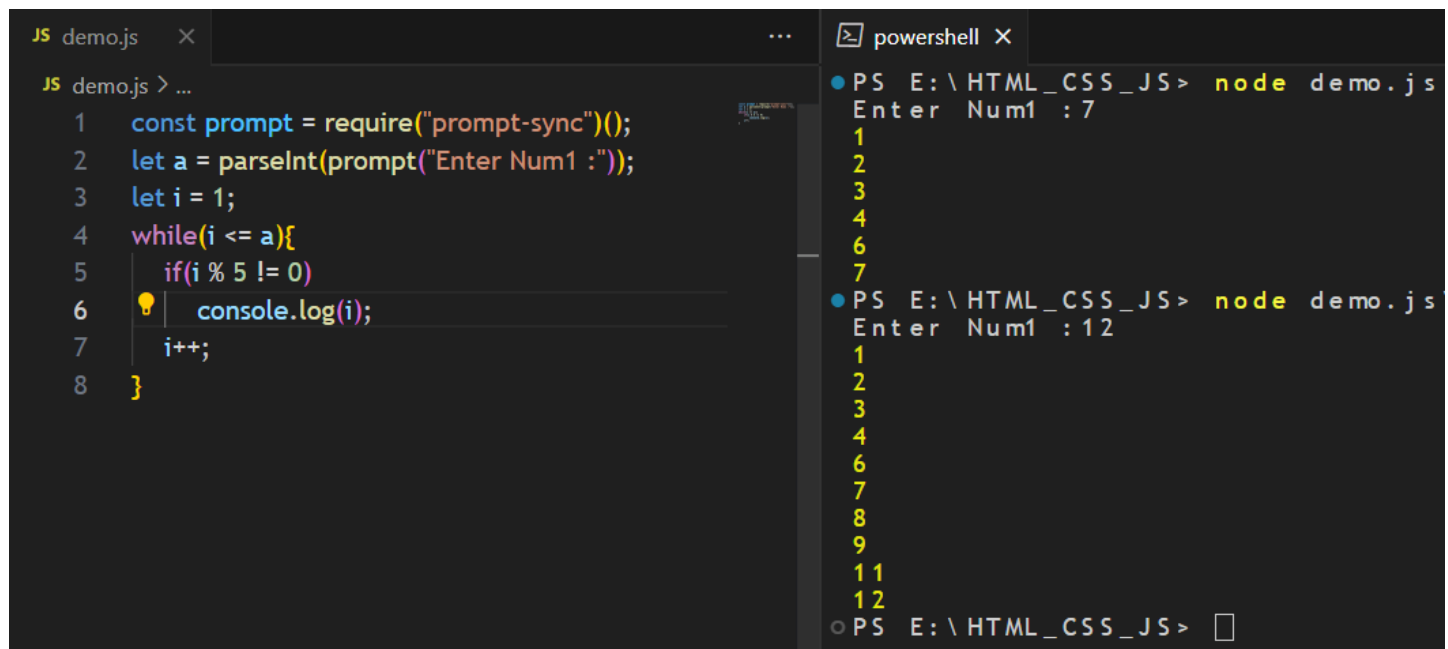
The screenshot shows a VS Code editor with a file named `demo.js` and a PowerShell terminal. The JavaScript code in `demo.js` uses a `while` loop to calculate the squares of numbers from 1 to `n`. The PowerShell terminal shows the command `node demo.js` being executed twice. In the first run, `Enter Num1 : 50` is entered, and the output is the series 1, 4, 9, 16, 25, 36, 49. In the second run, `Enter Num1 : 100` is entered, and the output is the series 1, 4, 9, 16, 25, 36, 49, 64, 81, 100.

```
JS demo.js x ... powershell x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2 let a = parseInt(prompt("Enter Num1 :"));
3 let i = 1;
4 while(i <= a){
5     let res = i * i;
6     if(res > a)
7         break;
8     console.log(res);
9     i++;
10 }

PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 50
1
4
9
16
25
36
49
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 100
1
4
9
16
25
36
49
64
81
100
PS E:\HTML_CSS_JS> 
```

S-Problem10:

By using while loop and continue statement Print all number from 1 to n but then it should not be divisible by 5 Example:- Input:- n=7 output:- 1 2 3 4 6 7



The screenshot shows a VS Code editor with a file named `demo.js` and a PowerShell terminal. The JavaScript code in `demo.js` uses a `while` loop to print numbers from 1 to `n`, skipping numbers divisible by 5 using the `continue` statement. The PowerShell terminal shows the command `node demo.js` being executed twice. In the first run, `Enter Num1 : 7` is entered, and the output is 1, 2, 3, 4, 6, 7. In the second run, `Enter Num1 : 12` is entered, and the output is 1, 2, 3, 4, 6, 7, 8, 9, 11, 12.

```
JS demo.js x ... powershell x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2 let a = parseInt(prompt("Enter Num1 :"));
3 let i = 1;
4 while(i <= a){
5     if(i % 5 != 0)
6         console.log(i);
7     i++;
8 }

PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 7
1
2
3
4
6
7
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 12
1
2
3
4
6
7
8
9
11
12
PS E:\HTML_CSS_JS> 
```

S-Problem11:

Write a program to print the digits of a number . Input:- N - 153 . output:- 3 5 1

```
JS demo.js x ... powershell x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2 let a = parseInt(prompt("Enter Num1 :"));
3 while(a != 0){
4     let rem = a % 10;
5     console.log(rem);
6     a = Math.floor(a/10);
7 }

PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 153
3
5
1
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 1234
4
3
2
1
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 148
8
4
1
PS E:\HTML_CSS_JS> 
```

S-Problem12:

Armstrong Number Input: 153 Output: True

Input: 123 Output = false;

```
JS demo.js x ... powershell x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2 let a = parseInt(prompt("Enter Num1 :"));
3 let A = a, res = a;
4 let rem = 0, count = 0, sum = 0;
5 while(a != 0){
6     rem = a % 10;
7     count++;
8     a = Math.floor(a/= 10);
9 }
10 while(A != 0){
11     let rem1 = A % 10;
12     sum += Math.pow(rem1,count);
13     A = Math.floor(A / 10);
14 }
15 if(sum == res)
16     console.log('true');
17 else
18     console.log('false');

PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 153
true
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 123
false
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 768
false
PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 770
false
PS E:\HTML_CSS_JS> 
```

S-Problem13:

Write a program to return the reverse of a number. Input -> n=123 output : 321

```
JS demo.js  X  [ ] ...  [ ]
JS demo.js > ...
1  const prompt = require("prompt-sync")();
2  let a = parseInt(prompt("Enter Num1 :"));
3  let rev = 0;
4  while(a != 0){
5      let rem = a % 10;
6      rev = (rev * 10) + rem;
7      a = Math.floor(a / 10);
8  }
9  console.log(rev);

• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 123
321
• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 1234
4321
○ PS E:\HTML_CSS_JS> [ ]
```

S-Problem14:

Write a program to print all odd numbers from 1 to n using for loops

Example:- Input :- n=7 Output :- 1 3 5 7

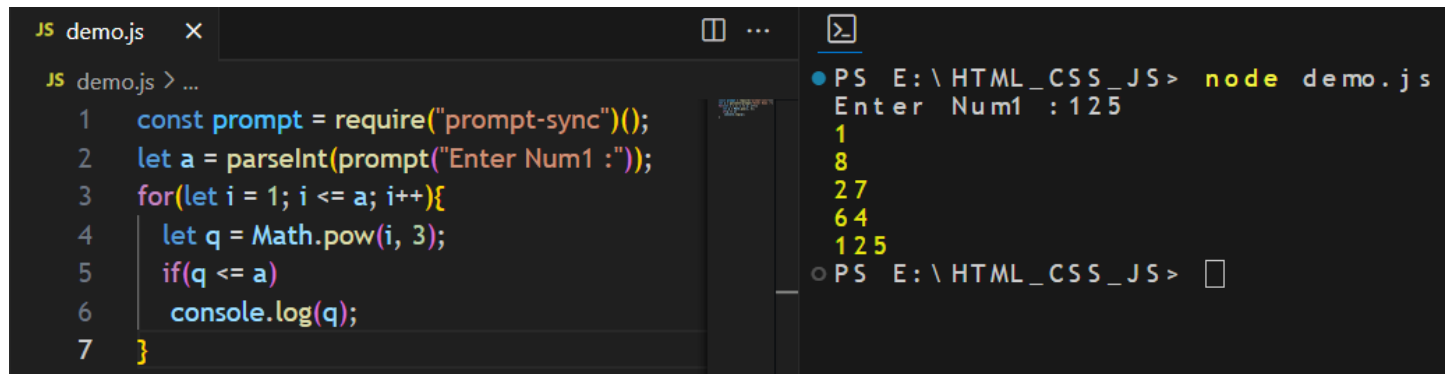
```
JS demo.js  X  [ ] ...  [ ]
JS demo.js > ...
1  const prompt = require("prompt-sync")();
2  let a = parseInt(prompt("Enter Num1 :"));
3  for(let i = 1; i <= a; i++){
4      if(i % 2 != 0){
5          console.log(i);
6      }
7  }

• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 7
1
3
5
7
• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 20
1
3
5
7
9
11
13
15
17
19
○ PS E:\HTML_CSS_JS> [ ]
```


S-Problem15:

Print the following series using for loop:- 1,8,27,64,125,216,.....n

Input: 125 Output :- 1 8 27 64 125



The screenshot shows a VS Code editor with a file named 'demo.js'. The code is as follows:

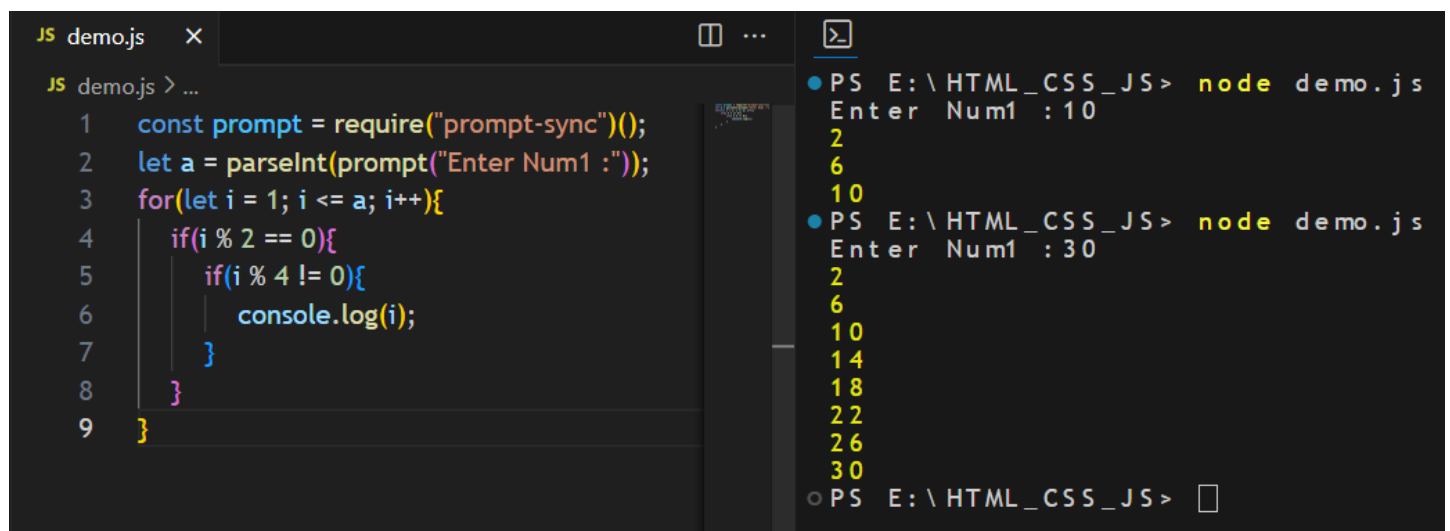
```
1 const prompt = require("prompt-sync")();
2 let a = parseInt(prompt("Enter Num1 :"));
3 for(let i = 1; i <= a; i++){
4     let q = Math.pow(i, 3);
5     if(q <= a)
6         console.log(q);
7 }
```

The terminal on the right shows the command 'node demo.js' being executed. It prompts 'Enter Num1 : 125' and then prints the series: 1, 8, 27, 64, 125.

S-Problem16:

Write a program to print even numbers from 1 to n except numbers which are divisible by 4. Use Continue statement to avoid printing.

Input 10 Output 2 6 10



The screenshot shows a VS Code editor with a file named 'demo.js'. The code is as follows:

```
1 const prompt = require("prompt-sync")();
2 let a = parseInt(prompt("Enter Num1 :"));
3 for(let i = 1; i <= a; i++){
4     if(i % 2 == 0){
5         if(i % 4 != 0){
6             console.log(i);
7         }
8     }
9 }
```

The terminal on the right shows the command 'node demo.js' being executed. It prompts 'Enter Num1 : 10' and prints the even numbers 2, 6, 10. Then, it prompts 'Enter Num1 : 30' and prints the even numbers 2, 6, 10, 14, 18, 22, 26, 30.

S-Problem17:

Write a program to print all the numbers from 1 to n .If m is present in between the sequence then stop printing any other number and break out of the loop.

Input :- n = 10 m = 4 Output :- 1 2 3

```
JS demo.js  X
JS demo.js > ...
1  const prompt = require("prompt-sync")();
2  let a = parseInt(prompt("Enter Num1 :"));
3  let b = parseInt(prompt("Enter Num2 :"));
4  for(let i = 1; i <= a; i++){
5      if(i < b)
6          console.log(i);
7  }

• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 10
Enter Num2 : 4
1
2
3
• PS E:\HTML_CSS_JS> node demo.js
Enter Num1 : 10
Enter Num2 : 8
1
2
3
4
5
6
7
• PS E:\HTML_CSS_JS> 
```

S-Problem18:

Assume temperature is in Celsius if conversion unit is Kelvin. Assume temperature is in Kelvin if conversion unit is Celsius. Input: 35, K Output: 308 Input: 308, C Output: 35

```
JS demo.js  X
JS demo.js > func
1  const prompt = require("prompt-sync")();
2
3  function func(temprature, unit){
4      let value1 = unit === 'C';
5      let value2 = value1 ? temprature - 273 : temprature + 273;
6      // let value3 = value1 ? 'C' : 'K';
7      // let value4 = value1 ? `${value1} - 273` : `${value1} + 273`;
8      return `${value2}`;
9  }
10 console.log(func(35, 'K'));
11 console.log(func(308, 'C'));
```

```
>
• PS E:\HTML_CSS_JS> node demo.js
308
35
• PS E:\HTML_CSS_JS> 
```