

Date :- 14-June-2023

JAVASCRIPT ASSIGNMENT – 3

(Math Methods Question)

Q 1:- To find the Square root of a Given Number.

```
index.js > ...
1 // ***** MATH OBJECT METHOD *****
2
3 //1:- To find the square root of a given number.
4
5 let number = 2;
6 let squareRoot = Math.sqrt(number)
7 console.log(`Square Root of ${number} is :-`,squareRoot)
8
```

```
Square Root of 2 is :- 1.4142135623730951
Hint: hit control+c anytime to enter REPL.
>
```

Q 2:- To find the value of PI.

```
index.js v [icon] x +
index.js > ...
3
4 //2:- To find the value of PI.
5 let num = 23
6 let PI = Math.PI*num
7 console.log(`PI of ${num} is :-`, PI)
8
```

```
PI of 23 is :- 72.25663103256524
Hint: hit control+c anytime to enter REPL.
>
```

Q 3:- to generate a random number between 1 and 10.

```
index.js v [icon] x +
index.js > ...
13
14 // //3:- to generate a random number between 1 and 10.
15 // Dynamic random Number Genetor
16 let min = 1
17 let max = 10
18 let randomNumber = Math.floor((Math.random()*(max - min+1))+
min)
19 console.log("Random Numbers between 1 to 10 Appear :- ",
randomNumber)
20
```

```
Random Numbers between 1 to 10 Appear :- 5
Hint: hit control+c anytime to enter REPL.
>
```

Q 4:- to round a given decimal number to the nearest integer.

```
index.js > Round_Num2
25 // //4:- to round a given decimal number to the nearest
    integer.
26
27 let Num = 4.4
28 let Num2 = 4.5
29 let Round_Num = Math.round(Num)
30 let Round_Num2 = Math.round(Num2)
31 console.log(`Round of ${Num} is :- `, Round_Num)
32 console.log(`Round of ${Num2} is :- `, Round_Num2)
33
```

```
Round of 4.4 is :- 4
Round of 4.5 is :- 5
Hint: hit control+c anyti
```

Q 5:- to find the absolute value of a given number.

```
index.js > N
34 // //5:- to find the absolute value of a given number.
35 let N = parseInt(prompt("Enter Negative value :- "))
36 // let N = -90
37 let Absolute_Number = Math.abs(N)
38 console.log(`Absolute Number of ${N} is :- `,
    Absolute_Number)
39
```

```
Enter Negative value :- > -8
Absolute Number of -8 is :- 8
Hint: hit control+c anytime to ente
```

Q 6 :- To Calculate the Power of a Given base to a given exponent.

```
index.js > ...
39
40 // // 6:- to calculate the power of a given base to a given
    exponent.
41 let base = 2
42 let exponent = 4
43 let Power = Math.pow(base,exponent)
44 console.log("Power:- ", Power)
45
46
```

```
Power:- 16
Hint: hit contro
```

(Date Object Methods Question)

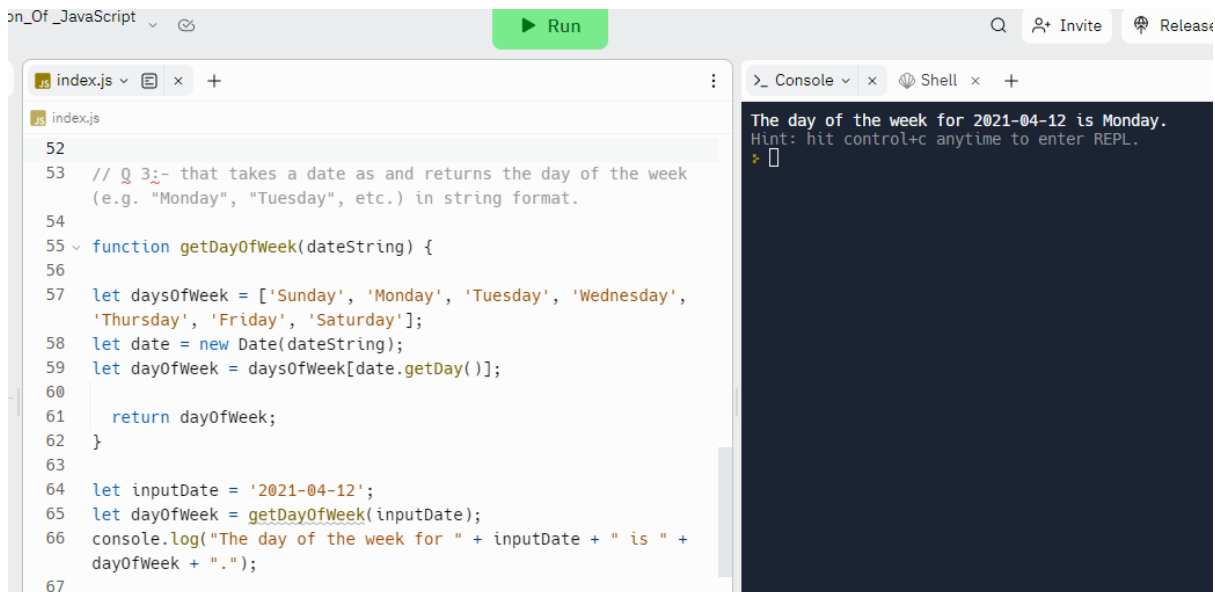
Q 1:- to display the current date and time in ISO format (YYYY-MM-DDTHH:MM:SSZ).



```
index.js > ...
45
46 // ***** DATE AND TIME OBJECT METHOD *****
47 // Q 1:-to display the current date and time in ISO format
  (YYYY-MM-DDTHH:MM:SSZ).
48
49 let now = new Date();
50 let isoDateTime = now.toISOString();
51 console.log(isoDateTime)
52
```

The console output shows the current date and time in ISO format: 2023-06-14T07:49:53.219Z. A hint suggests hitting control+c anytime to enter the REPL.

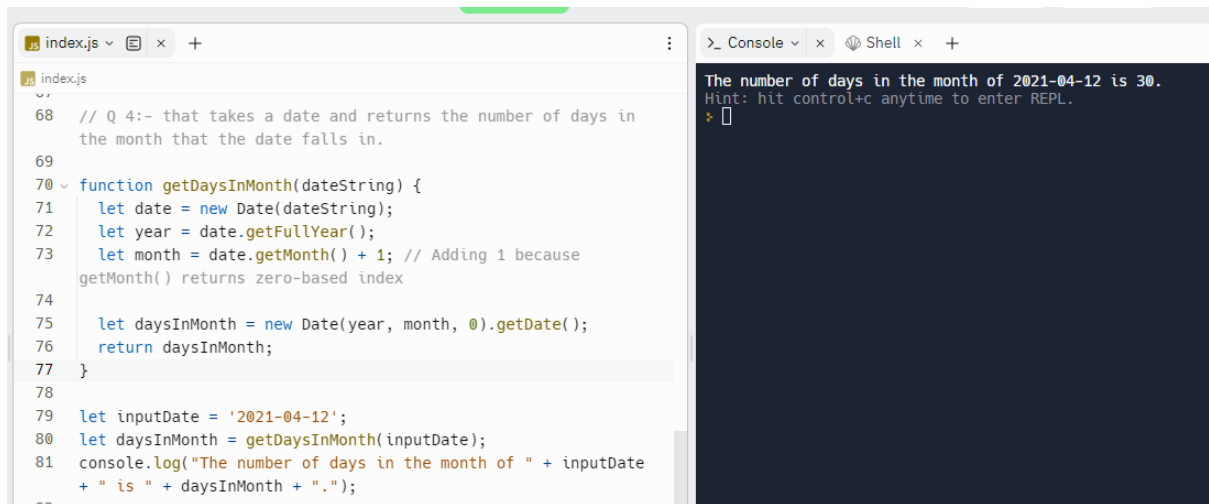
Q 3:- that takes a date as and returns the day of the week (e.g. "Monday", "Tuesday", etc.) in string format.



```
on_Of_JavaScript > Run
index.js
52
53 // Q 3:- that takes a date as and returns the day of the week
  (e.g. "Monday", "Tuesday", etc.) in string format.
54
55 function getDayOfWeek(dateString) {
56
57   let daysOfWeek = ['Sunday', 'Monday', 'Tuesday', 'Wednesday',
    'Thursday', 'Friday', 'Saturday'];
58   let date = new Date(dateString);
59   let dayOfWeek = daysOfWeek[date.getDay()];
60
61   return dayOfWeek;
62 }
63
64 let inputDate = '2021-04-12';
65 let dayOfWeek = getDayOfWeek(inputDate);
66 console.log("The day of the week for " + inputDate + " is " +
  dayOfWeek + ".");
67
```

The console output shows the result: The day of the week for 2021-04-12 is Monday. A hint suggests hitting control+c anytime to enter the REPL.

Q 4:- That takes a date and returns the number of days in the month that the date falls in.



```
index.js
68 // Q 4:- that takes a date and returns the number of days in
    the month that the date falls in.
69
70 function getDaysInMonth(dateString) {
71   let date = new Date(dateString);
72   let year = date.getFullYear();
73   let month = date.getMonth() + 1; // Adding 1 because
    getMonth() returns zero-based index
74
75   let daysInMonth = new Date(year, month, 0).getDate();
76   return daysInMonth;
77 }
78
79 let inputDate = '2021-04-12';
80 let daysInMonth = getDaysInMonth(inputDate);
81 console.log("The number of days in the month of " + inputDate
    + " is " + daysInMonth + ".");
82
```

```
_ Console x Shell x +
The number of days in the month of 2021-04-12 is 30.
Hint: hit control+c anytime to enter REPL.
>
```

(String Question in JavaScript)

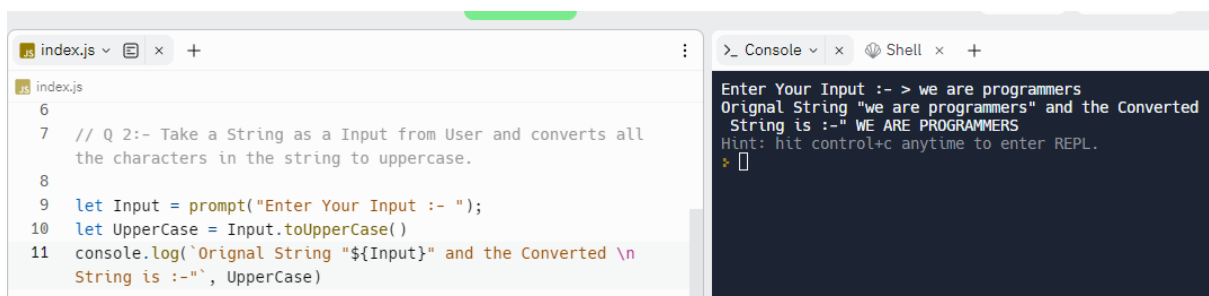
Q 1:- Takes a string as a input from the user and print out the length of the string.



```
index.js
1 // Q 1:- Takes a string as a input from the user and print out
    the length of the string.
2
3 let Input = prompt("Enter Your Input :- ");
4 let lenghtOfString = Input.length;
5 console.log(`Length of the ${Input} is :-`, lenghtOfString )
```

```
_ Console x Shell x +
Enter Your Input :- > Javascript
Length of the Javascript is :- 10
Hint: hit control+c anytime to ente
>
```

1 (b):- Take a String as a Input from user and Converts all the characters in the String to Upper Case.



```
index.js
6
7 // Q 2:- Take a String as a Input from User and converts all
    the characters in the string to uppercase.
8
9 let Input = prompt("Enter Your Input :- ");
10 let UpperCase = Input.toUpperCase()
11 console.log(`Original String "${Input}" and the Converted \n
    String is :-`, UpperCase)
```

```
_ Console x Shell x +
Enter Your Input :- > we are programmers
Original String "we are programmers" and the Converted
String is :-" WE ARE PROGRAMMERS
Hint: hit control+c anytime to enter REPL.
>
```

1 (c) :- Take two String as Input from user and concatenate them into a Single String .

```
index.js
12
13 // Q 3:- Take two String as Input from user and concatenate
    them into a Single String .
14
15 let a = prompt("Enter Your Input :- ");
16 let b = prompt("Enter Your Input :- ");
17
18 let newString = a.concat(" ",b)
19 console.log("Concatenated String :-",newString)
```

```
>_ Console x Shell x +
Enter Your Input :- > Jasmeen
Enter Your Input :- > Siddiqui
Concatenated String :- Jasmeen Siddiqui
Hint: hit control+c anytime to enter REPL.
>
```

1 (d) :- takes a string and prints out the first and last characters of the string.

```
in JavaScript
Run
index.js
21 // Q 4:- takes a string and prints out the first and last
    characters of the string.
22
23 let str = "JavaScript"
24
25 console.log("First Charcter of String is :-", str[0])
26 console.log("First Charcter of String is :- ", str.slice(0,1))
27 console.log("First Charcter of String is:- ", str.charAt(0))
28 console.log(" ")
29
30 let len = str.length
31 console.log("last Charcter of String is :-", str[len-1])
32 console.log("last Charcter of String is :- ", str.slice(-1))
33 console.log("last Charcter of String is:- ", str.charAt(len-1))
34
35
```

```
>_ Console x Shell x +
First Charcter of String is :- J
First Charcter of String is :- J
First Charcter of String is:- J

last Charcter of String is :- t
last Charcter of String is :- t
last Charcter of String is:- t
Hint: hit control+c anytime to enter REPL.
>
```

1(e) :- Replaces all occurrences of the letter "a" with the letter "b".

```
index.js
dex.js

// Q 5:- Replaces all occurrences of the letter "a" with the
letter "b".

let str = "Package"
let replace = str.replaceAll("a", "b")

console.log(replace)
```

```
>_ Console x Shell x +
Pbckbge
Hint: hit control+c anytime to e
>
```

1 (f) :- Removes all the whitespace characters from the string.

```
index.js
41
42 // Q 6:- removes all the whitespace characters from the string.
43
44 let str = "      Javascript is a Beautiful      Language  "
45 let newstr = str.replaceAll(" ", "");
46 console.log(newstr)
47
48
```

```
>_ Console x Shell x +
JavascriptisaBeautifullLanguage
Hint: hit control+c anytime to
```

1(g):- Prints out the number of vowels (a, e, i, o, u) in the string.

```
index.js > ...
47
48 // Q 7:- Prints out the number of vowels (a, e, i, o, u) in the
    string.
49
50 let str = "Aeroplane"
51 const vowels = ['a', 'e', 'i', 'o', 'u'];
52 let count = 0;
53 |
54 for (let i = 0; i < str.length; i++) {
55   if (vowels.includes(str[i].toLowerCase())) {
56     count++;
57   }
58 }
59
60 console.log(`Number of vowels: ${count}`);
61
```

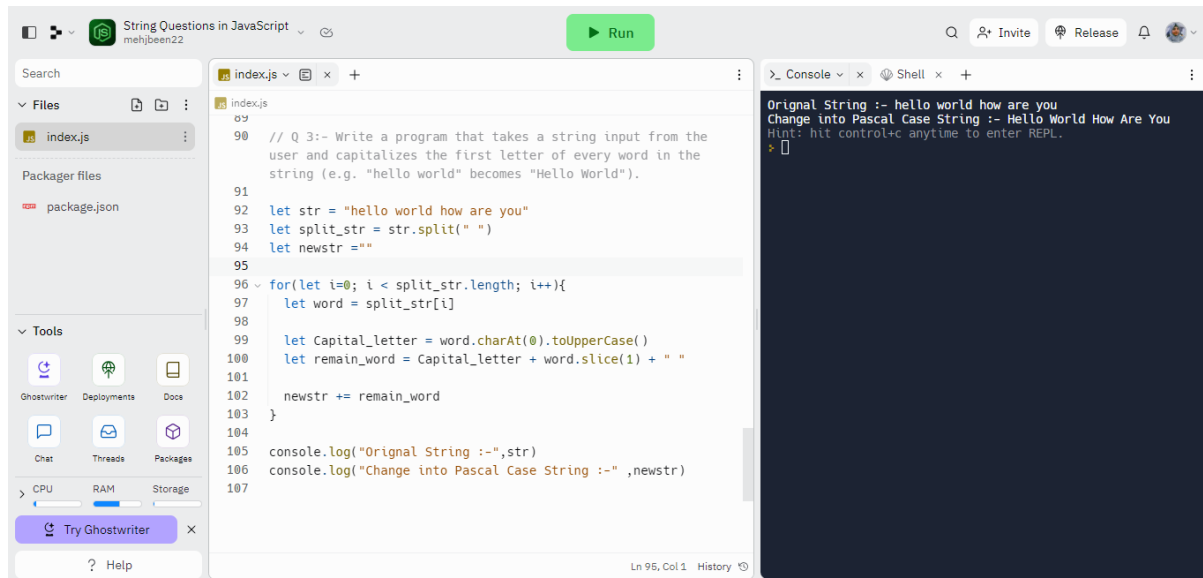
```
>_ Console x Shell
Number of vowels: 5
Hint: hit control+c anyt
```

Q 2:- Write a program that takes a string input from the user and checks if the string is a palindrome (reads the same backwards as forwards).

```
index.js
71 // .....
72
73 // Q 8:- Write a program that takes a string input from the
    user and checks if the string is a palindrome (reads the same
    backwards as forwards).
74
75 let str = prompt("Enter Your Input :- ")
76 let len = str.length
77 let pstr = ""
78
79 while (len>0){
80   pstr += str.charAt(len-1)
81   len-=1
82 }
83 if(str === pstr){
84   console.log(`${str} is a Palindrome String`)
85 }
86 else{
87   console.log(`${str} is not a Palindrome String`)
88 }
```

```
>_ Console x Shell x +
Enter Your Input :- > MOM
"MOM" is a Palindrome String
Hint: hit control+c anytime to
```

Q 3:- Write a program that takes a string input from the user and capitalizes the first letter of every word in the string (e.g. "hello world" becomes "Hello World").



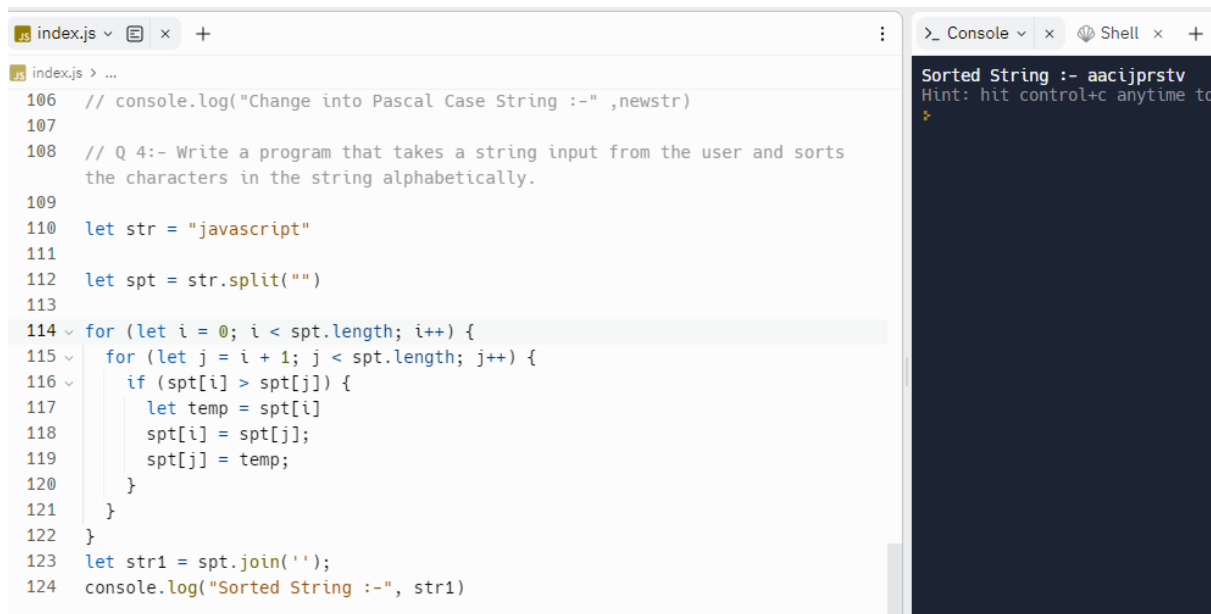
The screenshot shows a code editor with a file named `index.js`. The code is as follows:

```
90 // Q 3:- Write a program that takes a string input from the
    user and capitalizes the first letter of every word in the
    string (e.g. "hello world" becomes "Hello World").
91
92 let str = "hello world how are you"
93 let split_str = str.split(" ")
94 let newstr = ""
95
96 for(let i=0; i < split_str.length; i++){
97     let word = split_str[i]
98
99     let Capital_letter = word.charAt(0).toUpperCase()
100    let remain_word = Capital_letter + word.slice(1) + " "
101
102    newstr += remain_word
103 }
104
105 console.log("Original String :-",str)
106 console.log("Change into Pascal Case String :-" ,newstr)
107
```

The console output shows:

```
Original String :- hello world how are you
Change into Pascal Case String :- Hello World How Are You
Hint: hit control+c anytime to enter REPL.
```

Q 4:- Write a program that takes a string input from the user and sorts the characters in the string alphabetically.



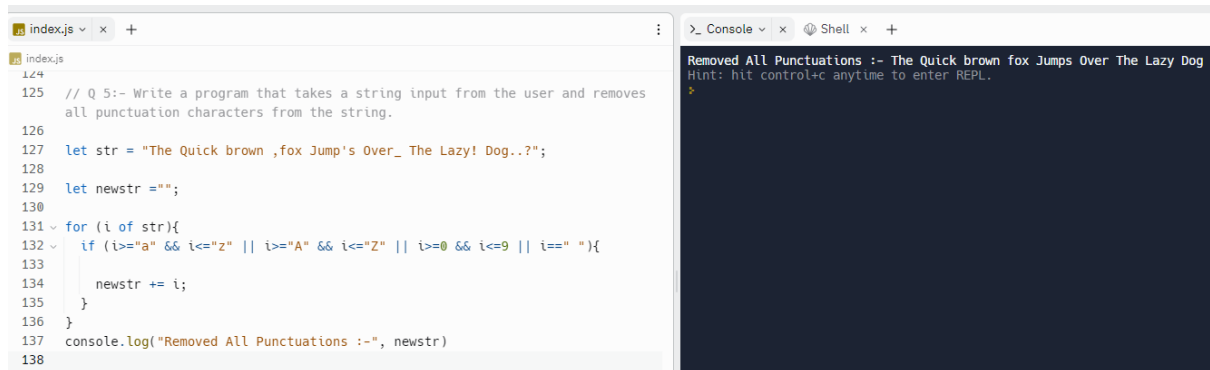
The screenshot shows a code editor with a file named `index.js`. The code is as follows:

```
106 // console.log("Change into Pascal Case String :-" ,newstr)
107
108 // Q 4:- Write a program that takes a string input from the user and sorts
    the characters in the string alphabetically.
109
110 let str = "javascript"
111
112 let spt = str.split("")
113
114 for (let i = 0; i < spt.length; i++) {
115     for (let j = i + 1; j < spt.length; j++) {
116         if (spt[i] > spt[j]) {
117             let temp = spt[i]
118             spt[i] = spt[j];
119             spt[j] = temp;
120         }
121     }
122 }
123 let str1 = spt.join('');
124 console.log("Sorted String :-", str1)
```

The console output shows:

```
Sorted String :- aacijprstv
Hint: hit control+c anytime to
```

Q 5:- Write a program that takes a string input from the user and removes all punctuation characters from the string.



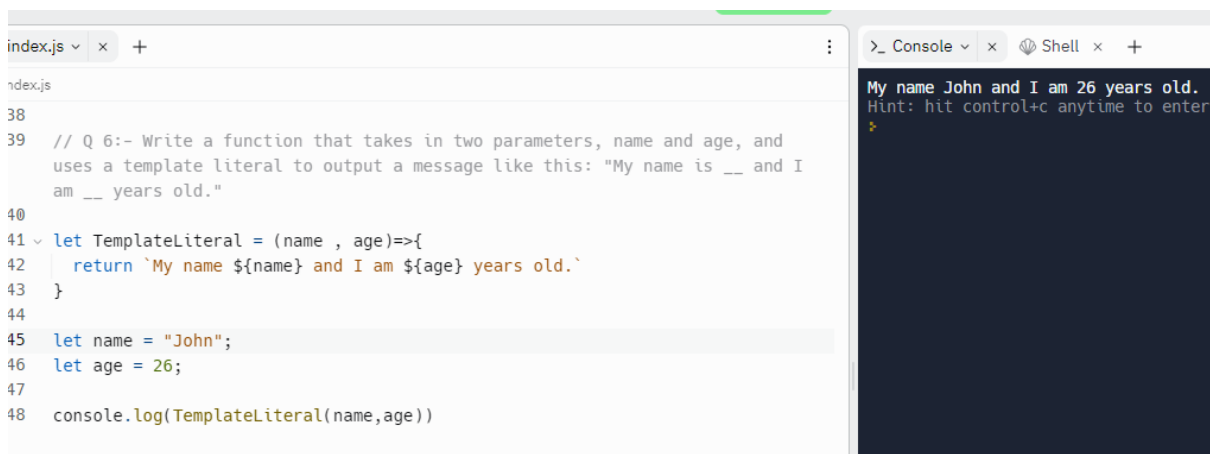
The screenshot shows a code editor with a file named `index.js`. The code is as follows:

```
124
125 // Q 5:- Write a program that takes a string input from the user and removes
    all punctuation characters from the string.
126
127 let str = "The Quick brown ,fox Jump's Over_ The Lazy! Dog..?";
128
129 let newstr = "";
130
131 for (i of str){
132   if (i>="a" && i<="z" || i>="A" && i<="Z" || i>="0" && i<="9" || i==" "){
133     newstr += i;
134   }
135 }
136 console.log("Removed All Punctuations :-", newstr)
137
138
```

The console output on the right shows:

```
>_ Console x Shell x +
Removed All Punctuations :- The Quick brown fox Jumps Over The Lazy Dog
Hint: hit control+c anytime to enter REPL.
```

Q 6:- Write a function that takes in two parameters, name and age, and uses a template literal to output a message like this: "My name is __ and I am __ years old."



The screenshot shows a code editor with a file named `index.js`. The code is as follows:

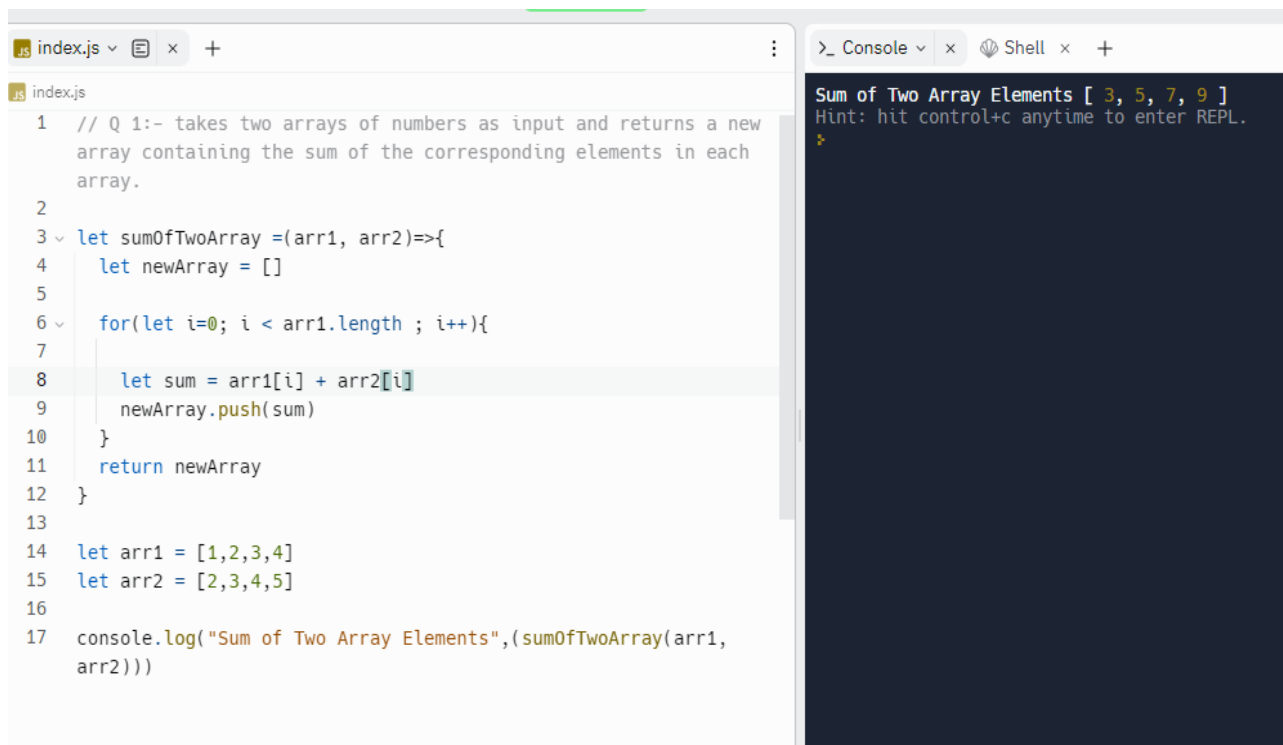
```
index.js
38
39 // Q 6:- Write a function that takes in two parameters, name and age, and
    uses a template literal to output a message like this: "My name is __ and I
    am __ years old."
40
41 let TemplateLiteral = (name , age)=>{
42   return `My name ${name} and I am ${age} years old.`
43 }
44
45 let name = "John";
46 let age = 26;
47
48 console.log(TemplateLiteral(name,age))
```

The console output on the right shows:

```
>_ Console x Shell x +
My name John and I am 26 years old.
Hint: hit control+c anytime to enter REPL.
```


(Array Method Questions in Js)

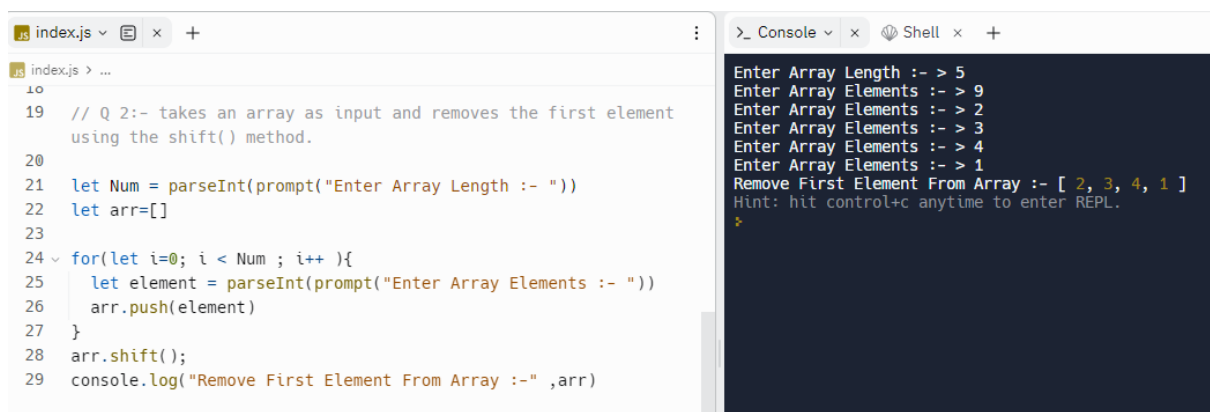
Q 1:- takes two arrays of numbers as input and returns a new array containing the sum of the corresponding elements in each array.



```
index.js
1 // Q 1:- takes two arrays of numbers as input and returns a new
  array containing the sum of the corresponding elements in each
  array.
2
3 let sumOfTwoArray =(arr1, arr2)=>{
4   let newArray = []
5
6   for(let i=0; i < arr1.length ; i++){
7
8     let sum = arr1[i] + arr2[i]
9     newArray.push(sum)
10  }
11  return newArray
12 }
13
14 let arr1 = [1,2,3,4]
15 let arr2 = [2,3,4,5]
16
17 console.log("Sum of Two Array Elements",(sumOfTwoArray(arr1,
  arr2)))
```

```
>_ Console x Shell x +
Sum of Two Array Elements [ 3, 5, 7, 9 ]
Hint: hit control+c anytime to enter REPL.
>
```

Q 2:- takes an array as input and removes the first element using the shift() method.



```
index.js > ...
19 // Q 2:- takes an array as input and removes the first element
   using the shift() method.
20
21 let Num = parseInt(prompt("Enter Array Length :- "))
22 let arr=[]
23
24 for(let i=0; i < Num ; i++){
25   let element = parseInt(prompt("Enter Array Elements :- "))
26   arr.push(element)
27 }
28 arr.shift();
29 console.log("Remove First Element From Array :-" ,arr)
```

```
>_ Console x Shell x +
Enter Array Length :- > 5
Enter Array Elements :- > 9
Enter Array Elements :- > 2
Enter Array Elements :- > 3
Enter Array Elements :- > 4
Enter Array Elements :- > 1
Remove First Element From Array :- [ 2, 3, 4, 1 ]
Hint: hit control+c anytime to enter REPL.
>
```

Q 3:- takes an array and a value as input and adds the value to the beginning of the array using the unshift() method. Return the modified array.

```
index.js
31
32 // Q 3:- takes an array and a value as input and adds the value
    to the beginning of the array using the unshift() method.
    Return the modified array.
33
34 let Num = parseInt(prompt("Enter Array Length :- "));
35 let arr=[]
36
37 for(let i=0; i < Num ; i++){
38     let element = parseInt(prompt("Enter Array Elements :- "))
39     arr.push(element)
40 }
41 arr.unshift(20);
42 console.log("Add First Element From Array :-",arr)
43
44
```

```
_ Console
Enter Array Length :- > 3
Enter Array Elements :- > 2
Enter Array Elements :- > 5
Enter Array Elements :- > 6
Add First Element From Array :- [ 20, 2, 5, 6 ]
Hint: hit control+c anytime to enter REPL.
>
```

Q 3:- takes an array as input and removes the last element using the pop() method. Return the modified array.

```
index.js
44
45 // Q 4:- Removes the last element from Array using the pop()
    method. Return the modified array.
46
47 let arr = [2,7,6,5,8,9]
48 console.log("Original Array is :-",arr)
49 arr.pop()
50
51 console.log("Removed last Element from Array :- ",arr)
```

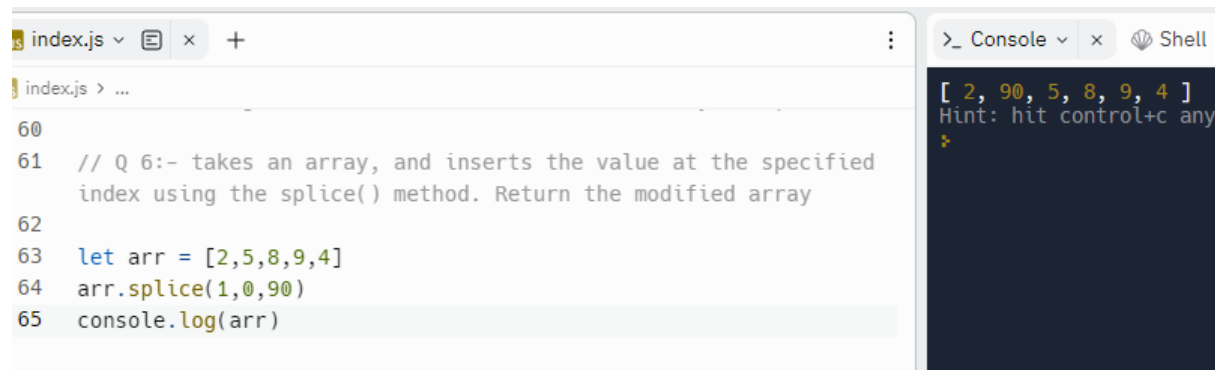
```
_ Console
Original Array is :- [ 2, 7, 6, 5, 8, 9 ]
Removed last Element from Array :- [ 2, 7, 6, 5, 8 ]
Hint: hit control+c anytime to enter REPL.
>
```

Q 4:- takes an array and a value as input and adds the value to the end of the array using the push() method. Return the modified array.

```
index.js
52
53 // Q 5:- takes an array and a value as input and adds the value
    to the end of the array using the push() method. Return the
    modified array.
54
55 let arr = [2,7,6,9]
56 console.log("Original Array is :-",arr)
57 arr.push(56)
58
59 console.log("Add the Element from last in Array :- ",arr)
60
```

```
_ Console
Original Array is :- [ 2, 7, 6, 9 ]
Add the Element from last in Array :- [ 2, 7, 6, 9, 56 ]
Hint: hit control+c anytime to enter REPL.
>
```

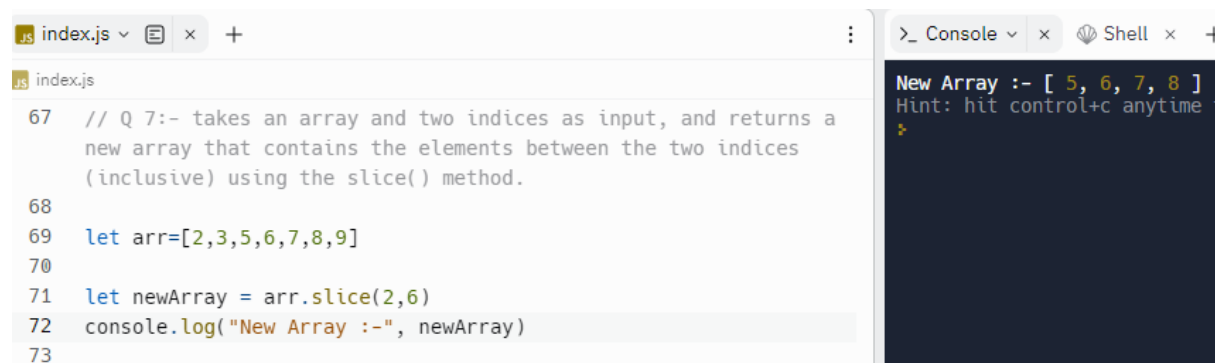
Q 6:- takes an array, and inserts the value at the specified index using the splice() method. Return the modified array.



```
index.js > ...
60
61 // Q 6:- takes an array, and inserts the value at the specified
    index using the splice() method. Return the modified array
62
63 let arr = [2,5,8,9,4]
64 arr.splice(1,0,90)
65 console.log(arr)
```

Console output: [2, 90, 5, 8, 9, 4]
Hint: hit control+c any

Q 7:- takes an array and two indices as input, and returns a new array that contains the elements between the two indices (inclusive) using the slice() method.



```
index.js
67 // Q 7:- takes an array and two indices as input, and returns a
    new array that contains the elements between the two indices
    (inclusive) using the slice() method.
68
69 let arr=[2,3,5,6,7,8,9]
70
71 let newArray = arr.slice(2,6)
72 console.log("New Array :-", newArray)
73
```

Console output: New Array :- [5, 6, 7, 8]
Hint: hit control+c anytime

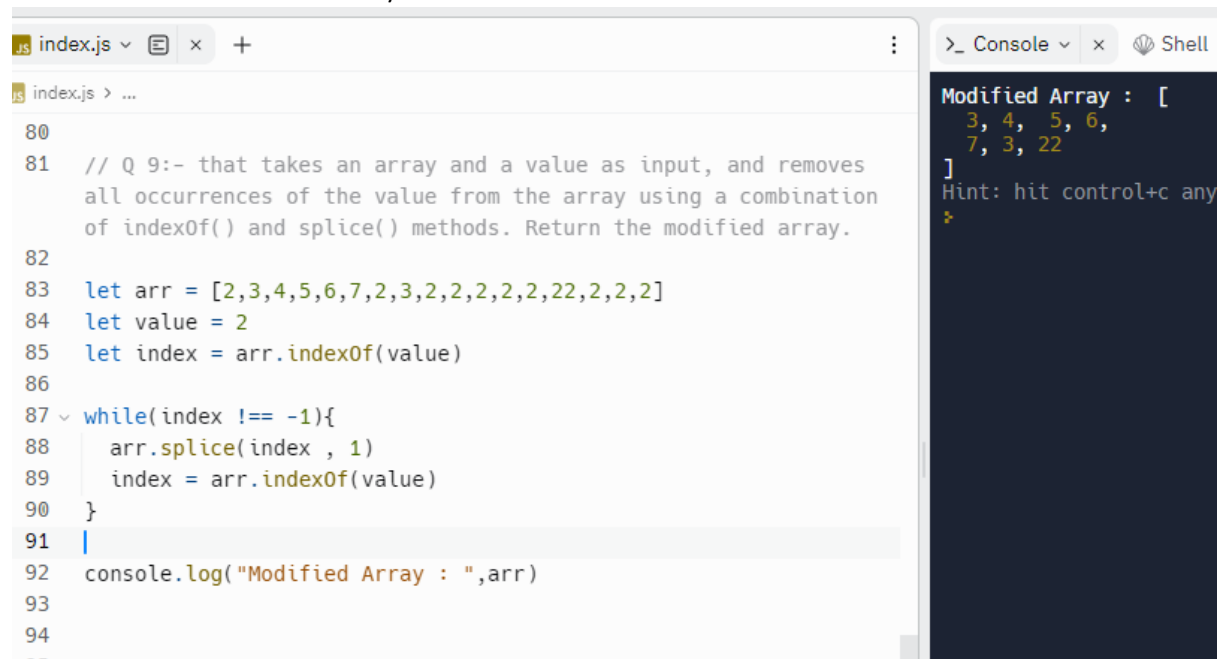
Q 8:- takes an array and a value as input, and returns a Boolean indicating whether the value is present in the array using the includes() method.



```
index.js
73
74 // Q 8:- takes an array and a value as input, and returns a
    Boolean indicating whether the value is present in the array
    using the includes() method.
75
76 let arr = ['Java','C','C##','Html','Css','Python','Javascript']
77
78 console.log(arr.includes('Html'))
79 console.log(arr.includes(456))
```

Console output: true
false
Hint: hit co

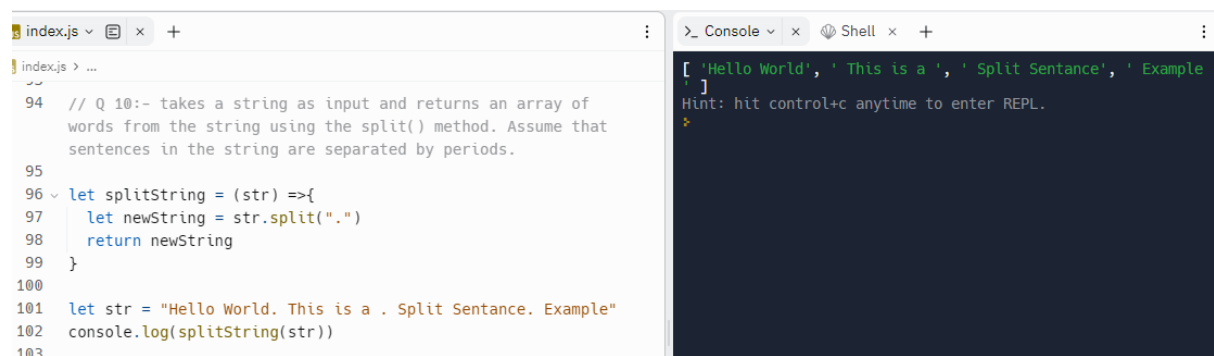
Q 9:- that takes an array and a value as input, and removes all occurrences of the value from the array using a combination of `indexOf()` and `splice()` methods. Return the modified array.



```
index.js > ...  
80  
81 // Q 9:- that takes an array and a value as input, and removes  
    all occurrences of the value from the array using a combination  
    of indexOf() and splice() methods. Return the modified array.  
82  
83 let arr = [2,3,4,5,6,7,2,3,2,2,2,2,22,2,2,2]  
84 let value = 2  
85 let index = arr.indexOf(value)  
86  
87 while(index !== -1){  
88   arr.splice(index, 1)  
89   index = arr.indexOf(value)  
90 }  
91  
92 console.log("Modified Array : ",arr)  
93  
94  
95
```

Modified Array : [3, 4, 5, 6, 7, 3, 22]
Hint: hit control+c any

Q 10:- takes a string as input and returns an array of words from the string using the `split()` method. Assume that sentences in the string are separated by periods.



```
index.js > ...  
94 // Q 10:- takes a string as input and returns an array of  
    words from the string using the split() method. Assume that  
    sentences in the string are separated by periods.  
95  
96 let splitString = (str) =>{  
97   let newString = str.split(".")  
98   return newString  
99 }  
100  
101 let str = "Hello World. This is a . Split Sentence. Example"  
102 console.log(splitString(str))  
103
```

['Hello World', ' This is a ', ' Split Sentence', ' Example']
Hint: hit control+c anytime to enter REPL.

Q11:- that takes an array of strings as input and returns a new array where each element is a string in reverse order using a combination of `split()` and `reverse()` methods.

```
index.js  x  +
104 // Q11:- that takes an array of strings as input and returns a
    new array where each element is a string in reverse order
    using a combination of split() and reverse() methods.
105
106 let arr = ['hello', 'Javascript', 'World']
107 let reverseArray = []
108
109 for(let i=0 ; i< arr.length; i++){
110     let indexofString = arr[i]
111
112     let splitString = indexofString.split("")
113     let ReverseString = splitString.reverse()
114
115     let JoinString = ReverseString.join('')
116
117     reverseArray.push(JoinString)
118 }
119
120 console.log(reverseArray)
121
```

```
_ Console  x  Shell  x  +
[ 'olleh', 'tpircsavaJ', 'dlrow' ]
Hint: hit control+c anytime to enter
```

(Destructuring Assignment, Spread and Rest Operator)

Answer :-1

```
index.js  x  +
index.js > ...
1 // ***Destructuring Assignment, Spread and Rest Operator***//
2
3 //Q 1:- What will be the output of the following code snippet?
4 const arr1 = [1, 2, 3];
5 const arr2 = [...arr1,4, 5, 6];
6 console.log(arr2);
7
```

```
_ Console  x  Shell
[ 1, 2, 3, 4, 5, 6 ]
Hint: hit control+c anyt
```

Answer :-2

```
index.js  x  +
index.js > ...
8 // Q 2:- What will be the output of the following code snippet?
9 const user = { name: 'John', age: 30 };
10 const { name, age } = user;
11 console.log(user["name"]);
12
```

```
_ Console
John
Hint: hit
```

Answer :-3



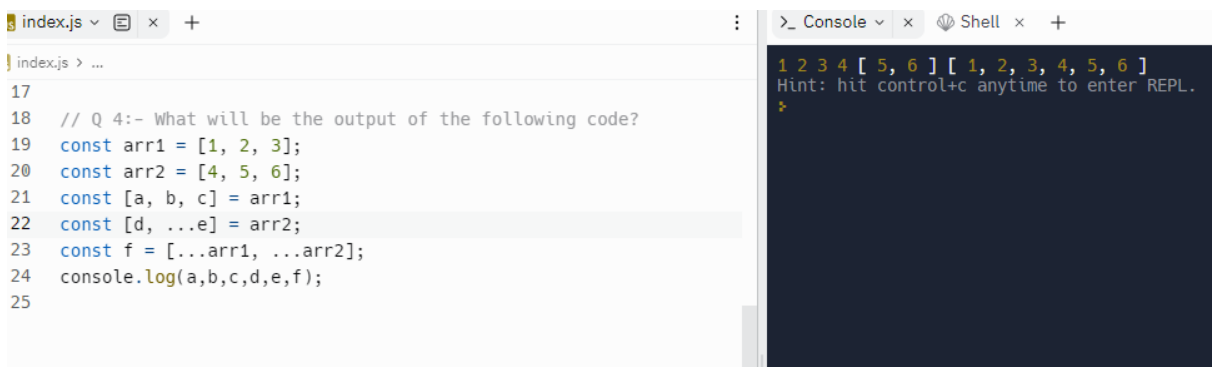
The screenshot shows a code editor with a file named `index.js`. The code is as follows:

```
12
13 // Q 3:- What will be the output of the following code snippet?
14 const obj1 = { a: 1, b: 2 };
15 const obj2 = { ...obj1, c: 3 };
16 console.log(obj2);
17
```

The console on the right displays the output of the code:

```
{ a: 1, b: 2, c: 3 }
Hint: hit control+c at
```

Answer :-4



The screenshot shows a code editor with a file named `index.js`. The code is as follows:

```
17
18 // Q 4:- What will be the output of the following code?
19 const arr1 = [1, 2, 3];
20 const arr2 = [4, 5, 6];
21 const [a, b, c] = arr1;
22 const [d, ...e] = arr2;
23 const f = [...arr1, ...arr2];
24 console.log(a,b,c,d,e,f);
25
```

The console on the right displays the output of the code:

```
1 2 3 4 [ 5, 6 ] [ 1, 2, 3, 4, 5, 6 ]
Hint: hit control+c anytime to enter REPL.
```

Answer :-5



The screenshot shows a code editor with a file named `index.js`. The code is as follows:

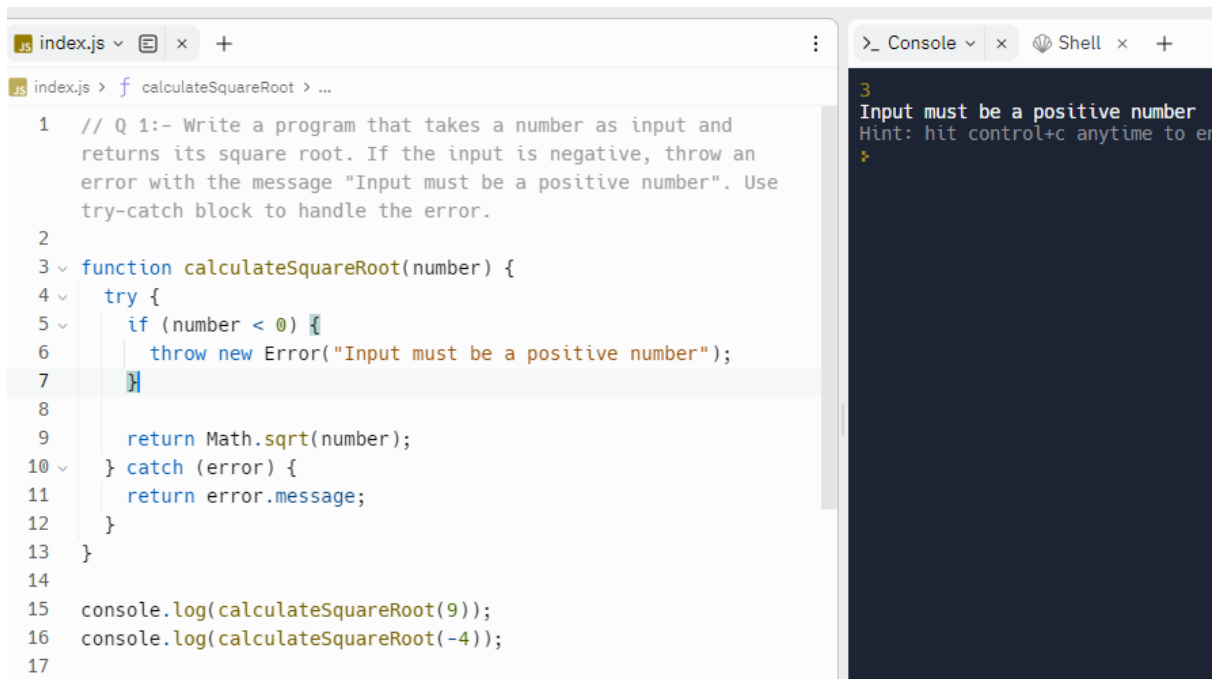
```
25
26 // Q 5:- What will be the output of the following code?
27
28 const obj = {
29   name: "John",
30   age: 30,
31   address: {street: "123 Main St", city: "Anytown",state: "CA"}
32 };
33 const { name, address: { city } } = obj;
34
35 console.log(name);
36 console.log(city);
37
```

The console on the right displays the output of the code:

```
John
Anytown
Hint: hit c
```

(Exception handling)


Answer 1:-



```
index.js > f calculateSquareRoot > ...  
1 // Q 1:- Write a program that takes a number as input and  
  returns its square root. If the input is negative, throw an  
  error with the message "Input must be a positive number". Use  
  try-catch block to handle the error.  
2  
3 function calculateSquareRoot(number) {  
4   try {  
5     if (number < 0) {  
6       throw new Error("Input must be a positive number");  
7     }  
8  
9     return Math.sqrt(number);  
10  } catch (error) {  
11    return error.message;  
12  }  
13 }  
14  
15 console.log(calculateSquareRoot(9));  
16 console.log(calculateSquareRoot(-4));  
17
```

3
Input must be a positive number
Hint: hit control+c anytime to e

Answer 2:-



```
index.js > ...  
19 // Q 2:- Write a program that takes in two arguments and  
  returns their division. Handle the error when the second  
  argument is zero.  
20 function divideNumbers(dividend, divisor) {  
21   try {  
22     if (divisor === 0) {  
23       throw new Error("Division by zero is not allowed");  
24     }  
25  
26     return dividend / divisor;  
27   } catch (error) {  
28     return error.message;  
29   }  
30 }  
31  
32 // Example usage:  
33 console.log(divideNumbers(10, 2));  
34 console.log(divideNumbers(8, 0));
```

5
Division by zero is not allowed
Hint: hit control+c anytime to e

Answer 3:-

```
.js index.js v [icon] x +
index.js > ...

37 // Q3:- Write a program that takes in an array and an index and
    returns the value at that index. Handle the error if the index
    is out of bounds (i.e. greater than the length of the array).
38
39 function getValueAtIndex(arr, index) {
40   try {
41     if (index < 0 || index >= arr.length) {
42       throw new Error("Index out of bounds");
43     }
44
45     return arr[index];
46   } catch (error) {
47     return error.message;
48   }
49 }
50
51 // Example usage:
52 const myArray = [10, 20, 30, 40, 50];
53
54 console.log(getValueAtIndex(myArray, 2));
55 console.log(getValueAtIndex(myArray, 6));
56
```

30
Index out of bounds
Hint: hit control+c a

(Alert + Prompt + Confirm)

Answer 1:-

```
index.js
59 // ***** Alert , prompt, confirm*****
60
61 // Q 1:- Create a web page that asks the user to enter their
    name using a prompt box. Display a message using an alert box
    saying "Hello, [user's name]!".
62
63 let displayMsg = (name)=> `Hello ${name}`;
64
65 let user_Name = prompt("Enter Your Name :- ");
66 console.log(displayMsg(user_Name));
67
```

Enter Your Name :- > John
Hello John
Hint: hit control+c anytime

Answer 2:-


```
index.js x +
index.js
0/
68 // Q 2:- Write a program that asks the user to confirm if they
    are over 18 years old using the confirm box. If the user
    confirms, display a message using an alert box saying "You are
    eligible for voting". If the user cancels, display a message
    saying "Sorry, you are not eligible for voting".
69
70 let Year18 = confirm("You are 18 Year old ?");
71
72 if(Year18){
73     alert("you are Eligible for Voting")
74 }
75 else{
76     alert("You are not Eligible for Voting")
77 }
78
```

```
>_ Console x Shell x +
You are 18 Year old ? [y/n]: n
You are not Eligible for Voting
Hint: hit control+c anytime to ent
>
```

Answer 3:-

```
.js index.js x +
index.js
79 // Q 3:- Write a program that asks the user to enter a number
    using a prompt box. If the user enters a number, display the
    square of that number using the alert box. If the user enters
    an invalid input or cancels the prompt, display a message
    saying "Invalid input".
80
81 let Num = prompt("Enter Number :")
82
83 if (Num >0 && Num <=9){
84     console.log(`Squae of the ${Num} is : ${Num*Num}`)
85 }
86 else{
87     console.log("Enter Valid Input")
88 }
```

```
>_ Console x Shell x +
Enter Number :> 6
Squae of the 6 is : 36
Hint: hit control+c anyti
>
```