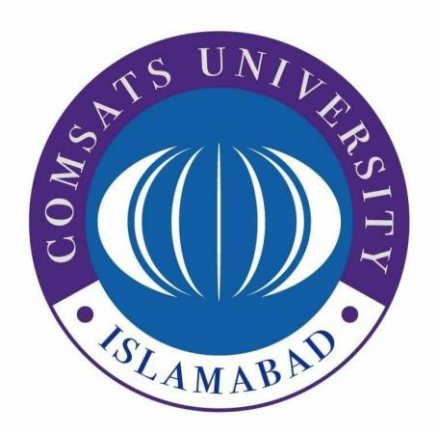


MOBILE APPLICATION DEVELOPMENT

ASSIGNMENT 02

NAME:

MUHAMMAD MUAAZ SHOAIB

REG. NO:

FA20-BCS-074

CLASS:

BCS-6B

SUBMITTED TO:

MR. MUHAMMAD KAMRAN

DATE:

19-MAR-2023

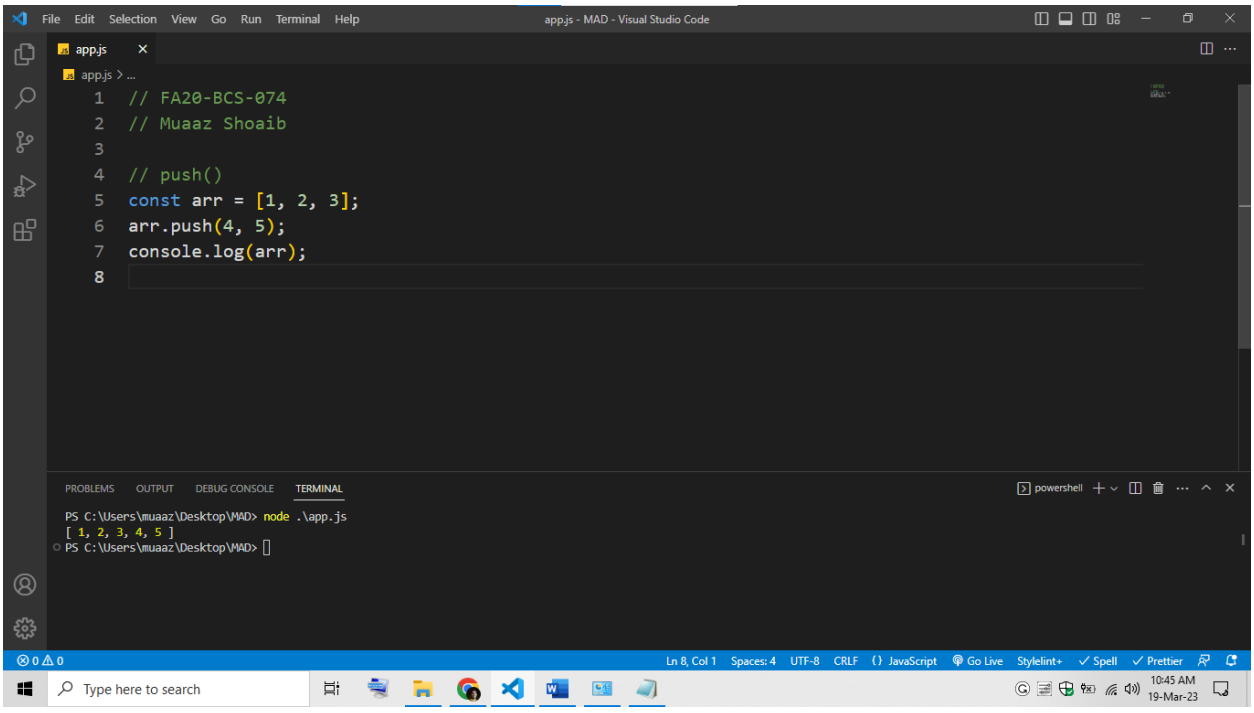
Q1: Array functions in JavaScript with examples.

push

This method adds one or more elements to the end of an array and returns the new length of the array.

```
// FA20-BCS-074
// Muaaz Shoaib

// push()
const arr = [1, 2, 3];
arr.push(4, 5);
console.log(arr);
```



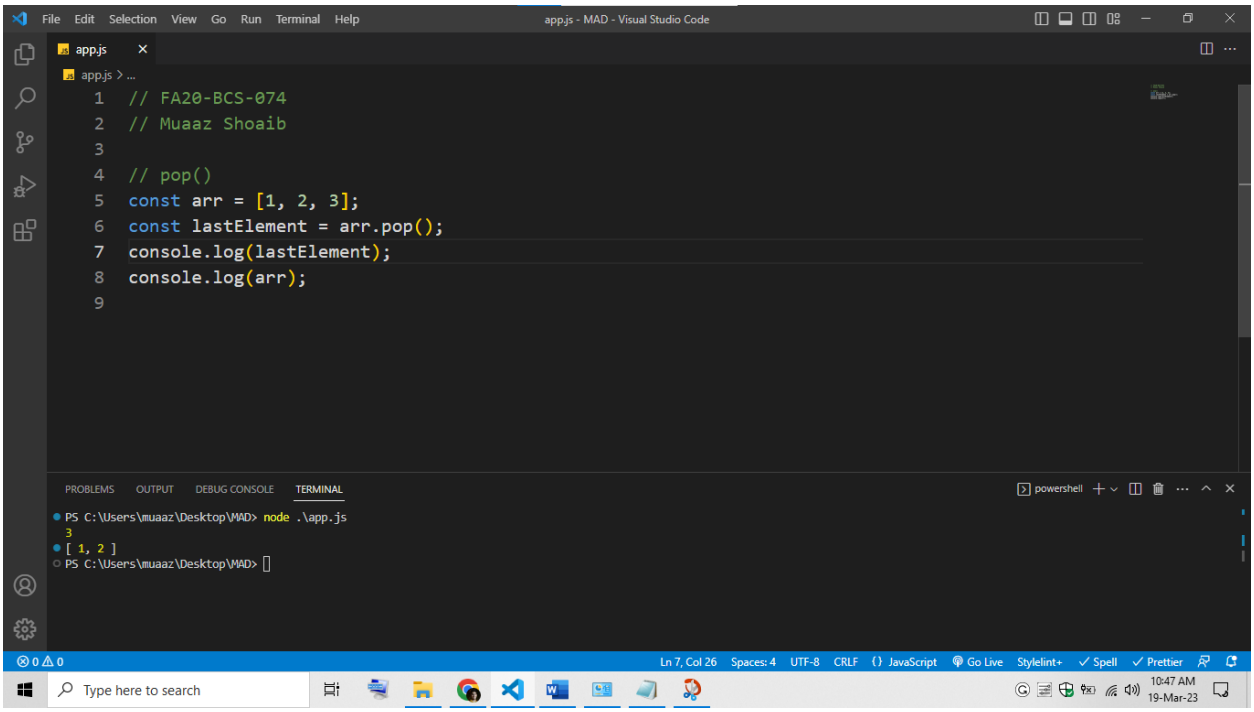
pop

This method removes the last element from an array and returns that element.

```
// FA20-BCS-074
// Muaaz Shoaib

// pop()
```

```
const arr = [1, 2, 3];
const lastElement = arr.pop();
console.log(lastElement);
console.log(arr);
```

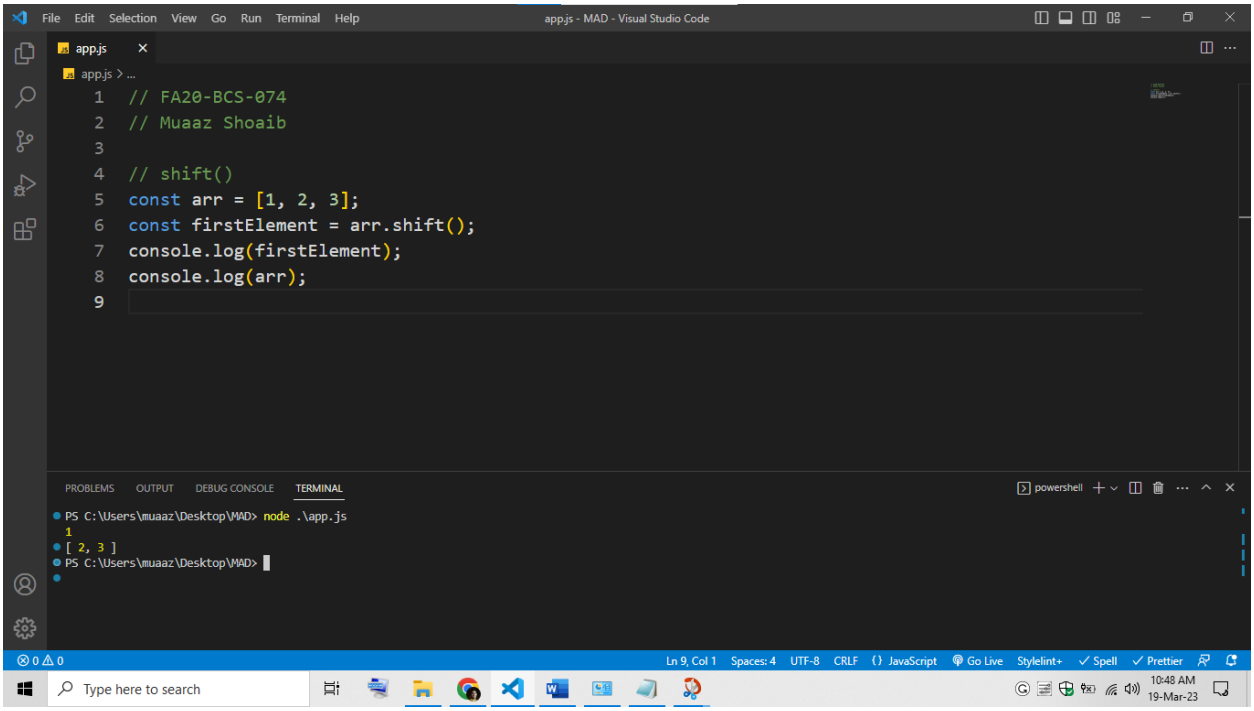


shift

This method removes the first element from an array and returns that element.

```
// FA20-BCS-074
// Muaaz Shoaib

// shift()
const arr = [1, 2, 3];
const firstElement = arr.shift();
console.log(firstElement);
console.log(arr);
```

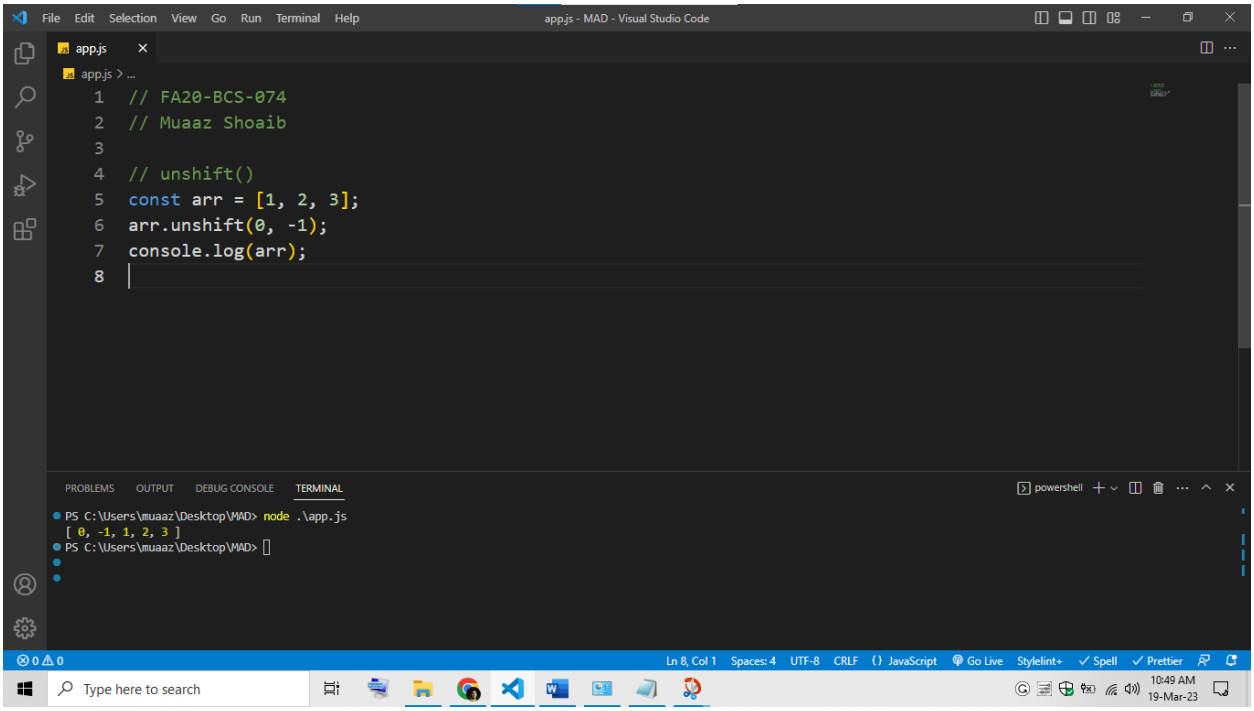


unshift

This method adds one or more elements to the beginning of an array and returns the new length of the array.

```
// FA20-BCS-074
// Muaaz Shoaib

// unshift()
const arr = [1, 2, 3];
arr.unshift(0, -1);
console.log(arr);
```

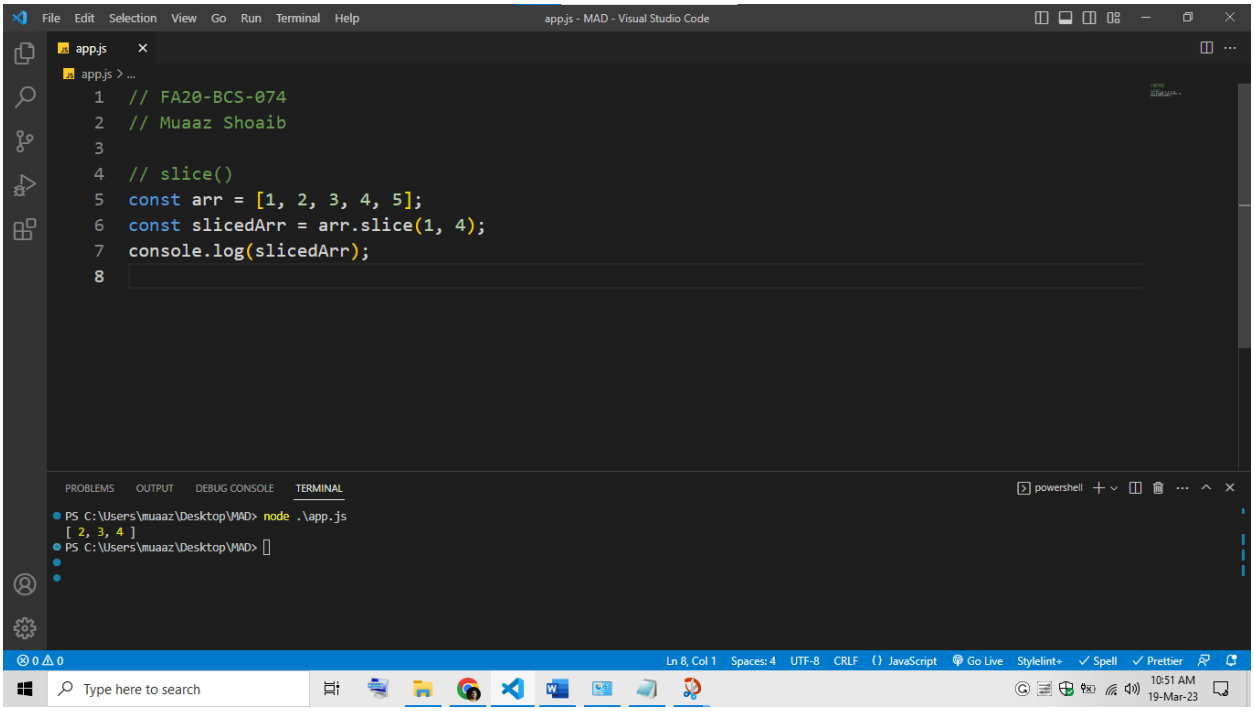


slice

This method returns a shallow copy of a portion of an array into a new array.

```
// FA20-BCS-074
// Muaaz Shoaib

// slice()
const arr = [1, 2, 3, 4, 5];
const slicedArr = arr.slice(1, 4);
console.log(slicedArr);
```

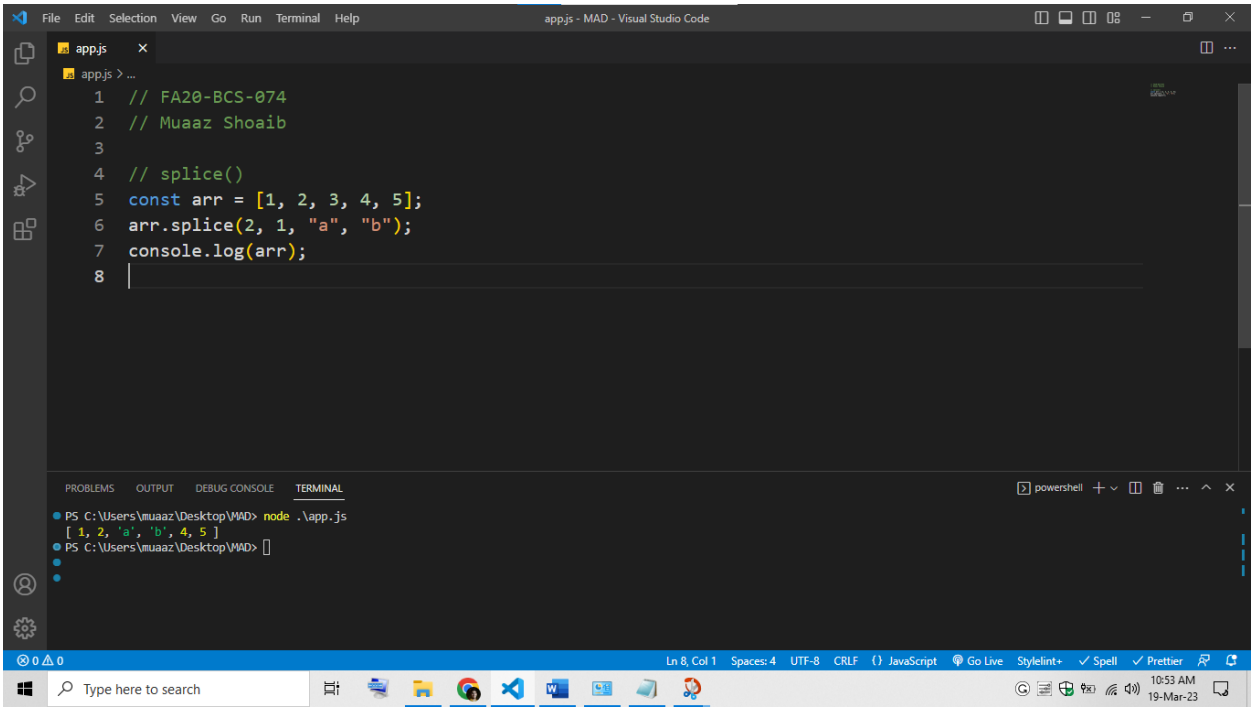


splice

This method changes the contents of an array by removing or replacing existing elements and/or adding new elements.

```
// FA20-BCS-074
// Muaaz Shoaib

// splice()
const arr = [1, 2, 3, 4, 5];
arr.splice(2, 1, "a", "b");
console.log(arr);
```

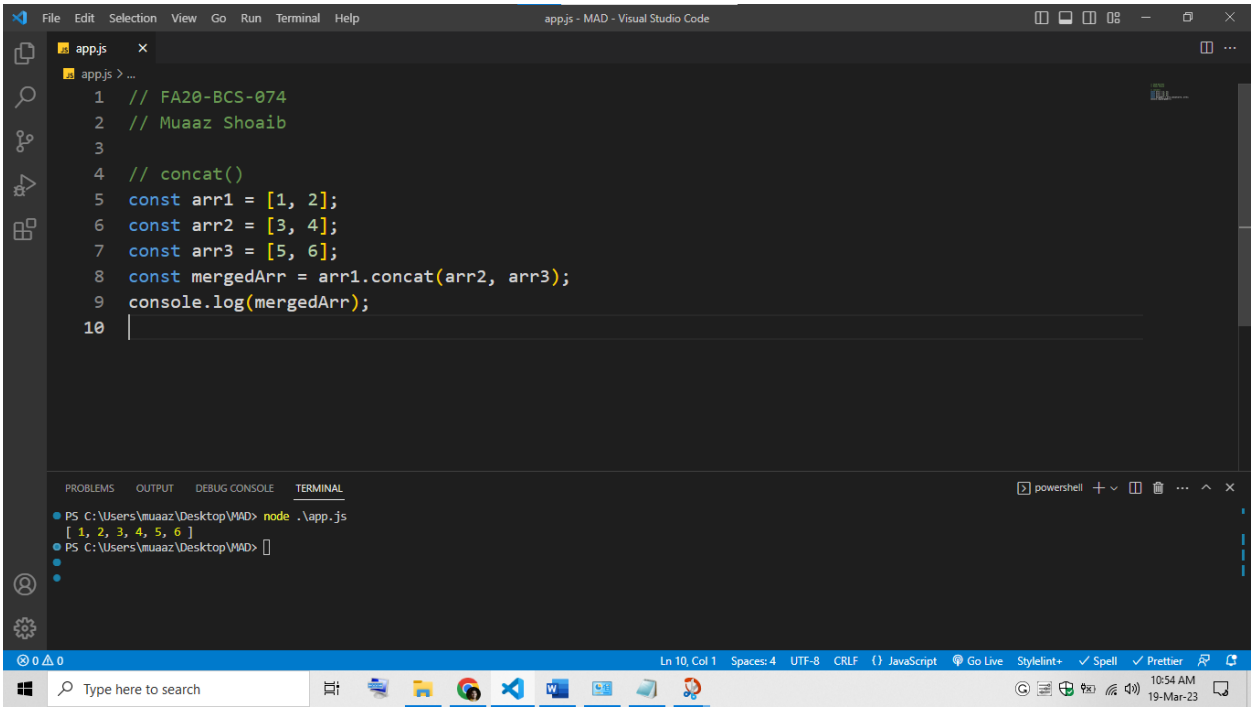


concat

This method merges two or more arrays into a new array.

```
// FA20-BCS-074
// Muaaz Shoaib

// concat()
const arr1 = [1, 2];
const arr2 = [3, 4];
const arr3 = [5, 6];
const mergedArr = arr1.concat(arr2, arr3);
console.log(mergedArr);
```

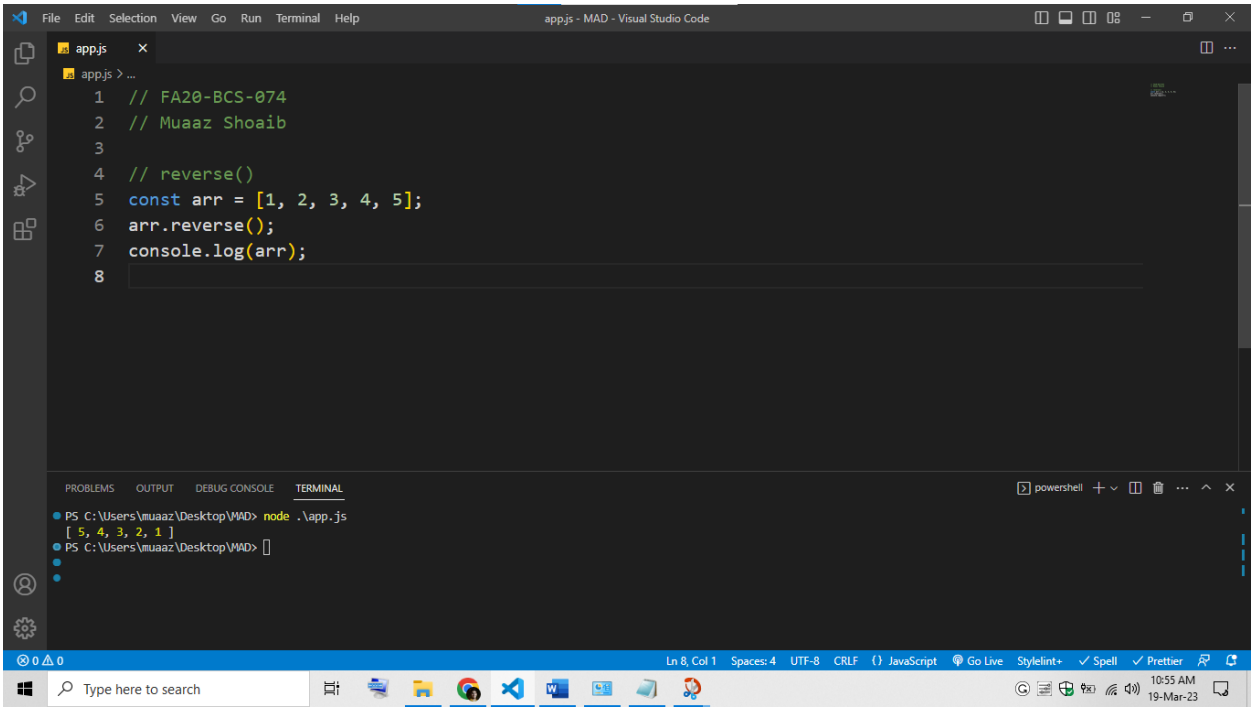


reverse

This method reverses the order of the elements in an array.

```
// FA20-BCS-074
// Muaaz Shoaib

// reverse()
const arr = [1, 2, 3, 4, 5];
arr.reverse();
console.log(arr);
```

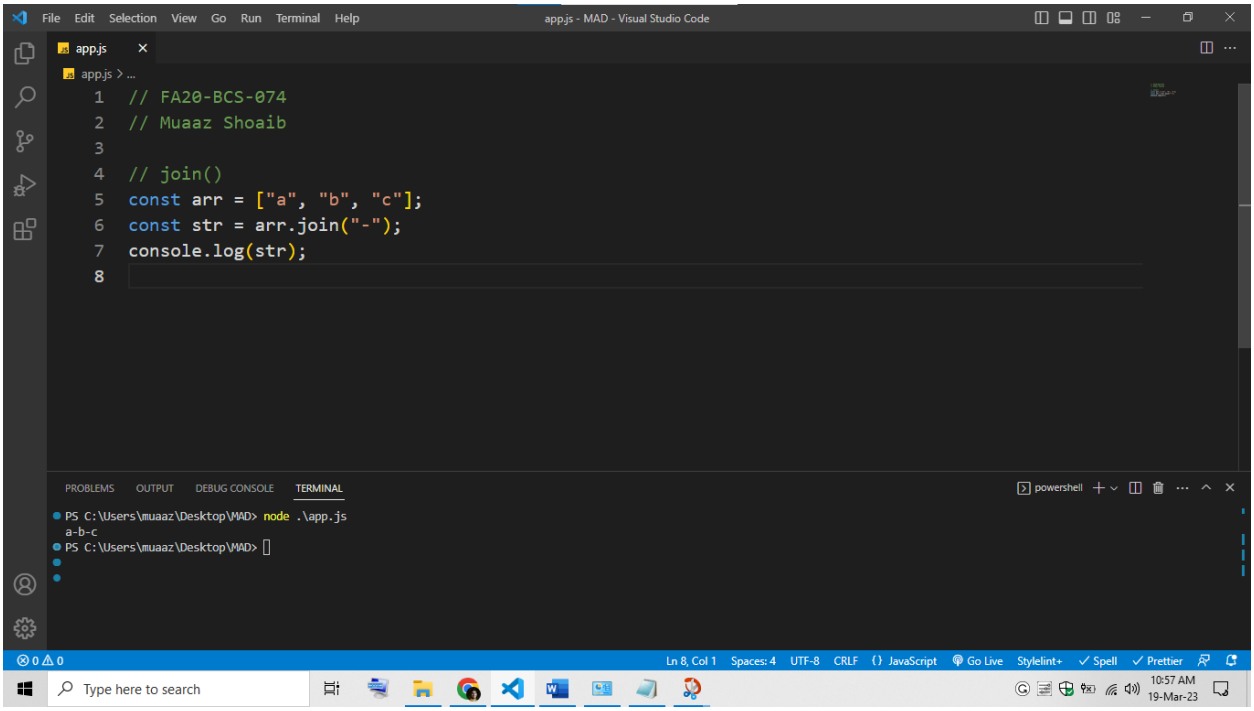


join

This method joins all elements of an array into a string.

```
// FA20-BCS-074
// Muaaz Shoaib

// join()
const arr = ["a", "b", "c"];
const str = arr.join("-");
console.log(str);
```

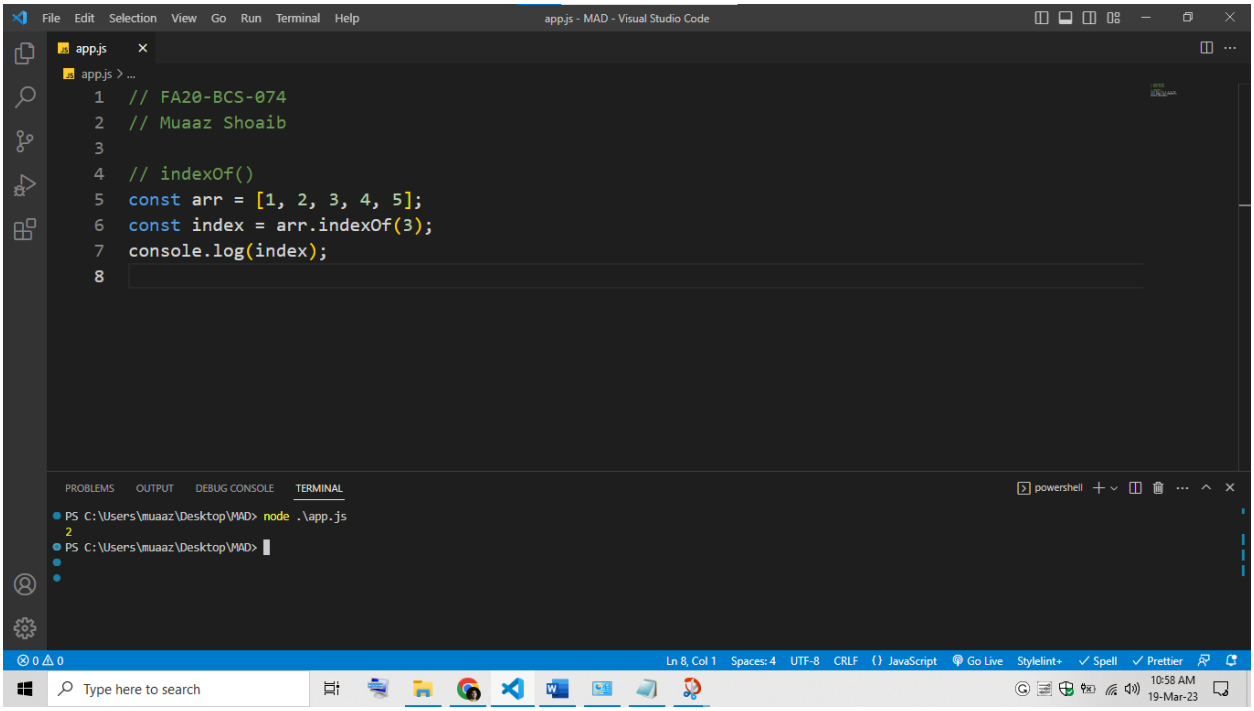


indexOf

This method returns the first index at which a given element can be found in an array, or -1 if it is not present.

```
// FA20-BCS-074
// Muaaz Shoaib

// indexOf()
const arr = [1, 2, 3, 4, 5];
const index = arr.indexOf(3);
console.log(index);
```



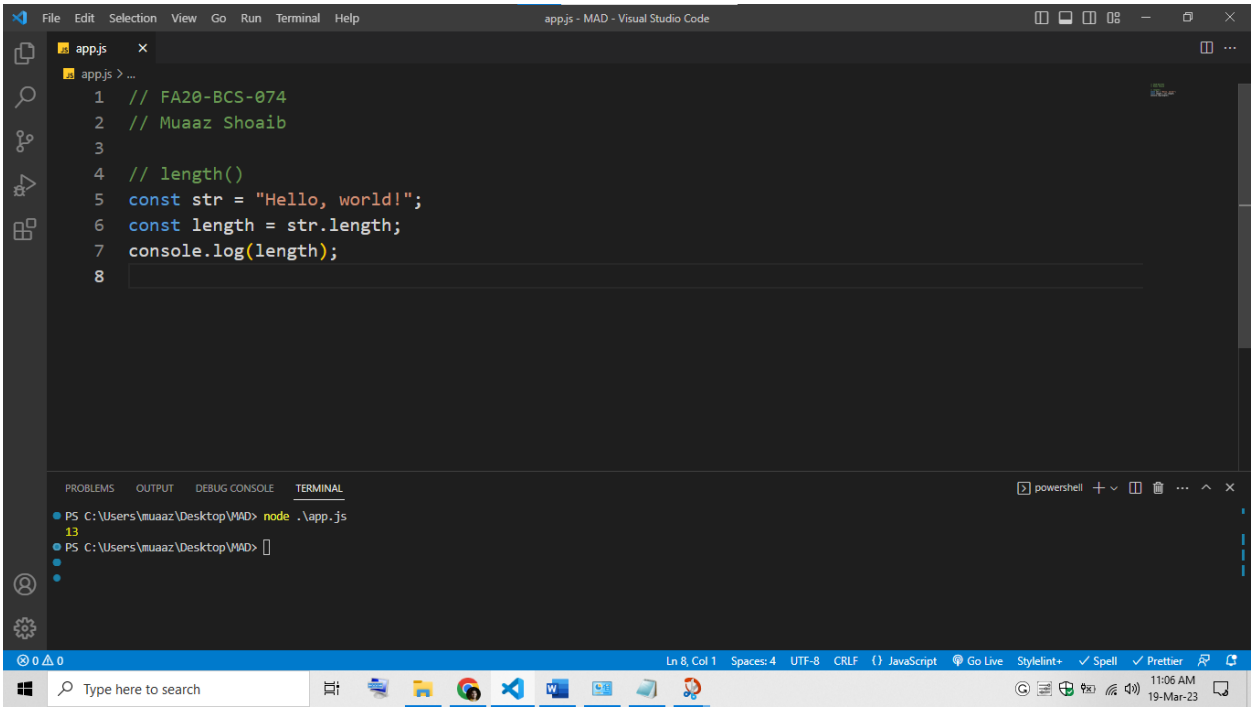
Q2: String functions in JavaScript with example.

length

This property returns the length of a string.

```
// FA20-BCS-074
// Muaaz Shoaib

// length()
const str = "Hello, world!";
const length = str.length;
console.log(length);
```

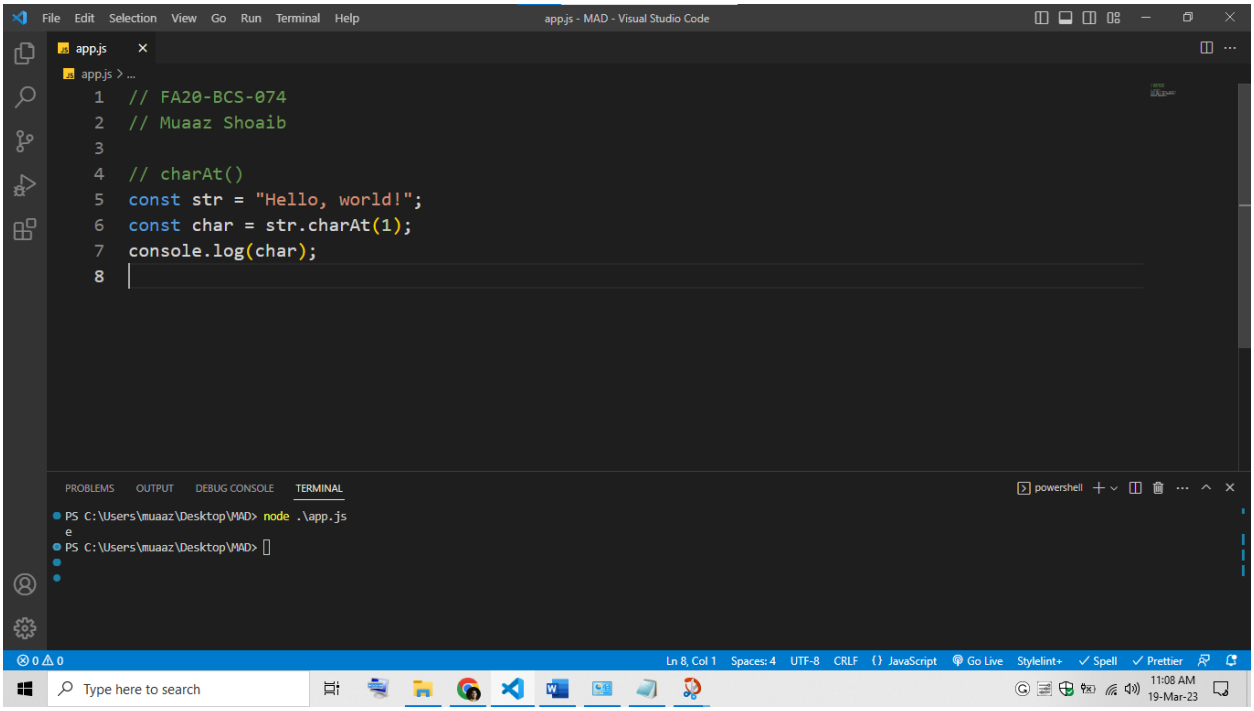


charAt

This method returns the character at a specified index in a string.

```
// FA20-BCS-074
// Muaaz Shoaib

// charAt()
const str = "Hello, world!";
const char = str.charAt(1);
console.log(char);
```

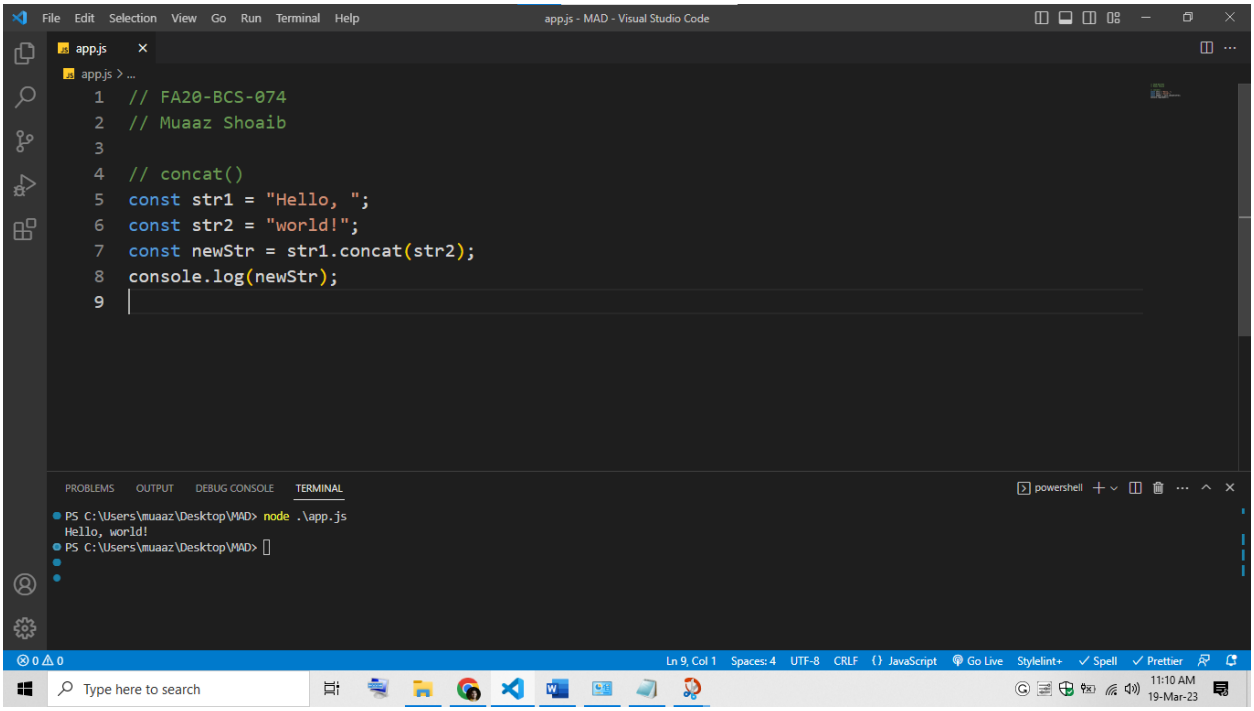


concat

This method concatenates two or more strings and returns the new string.

```
// FA20-BCS-074
// Muaaz Shoaib

// concat()
const str1 = "Hello, ";
const str2 = "world!";
const newStr = str1.concat(str2);
console.log(newStr);
```

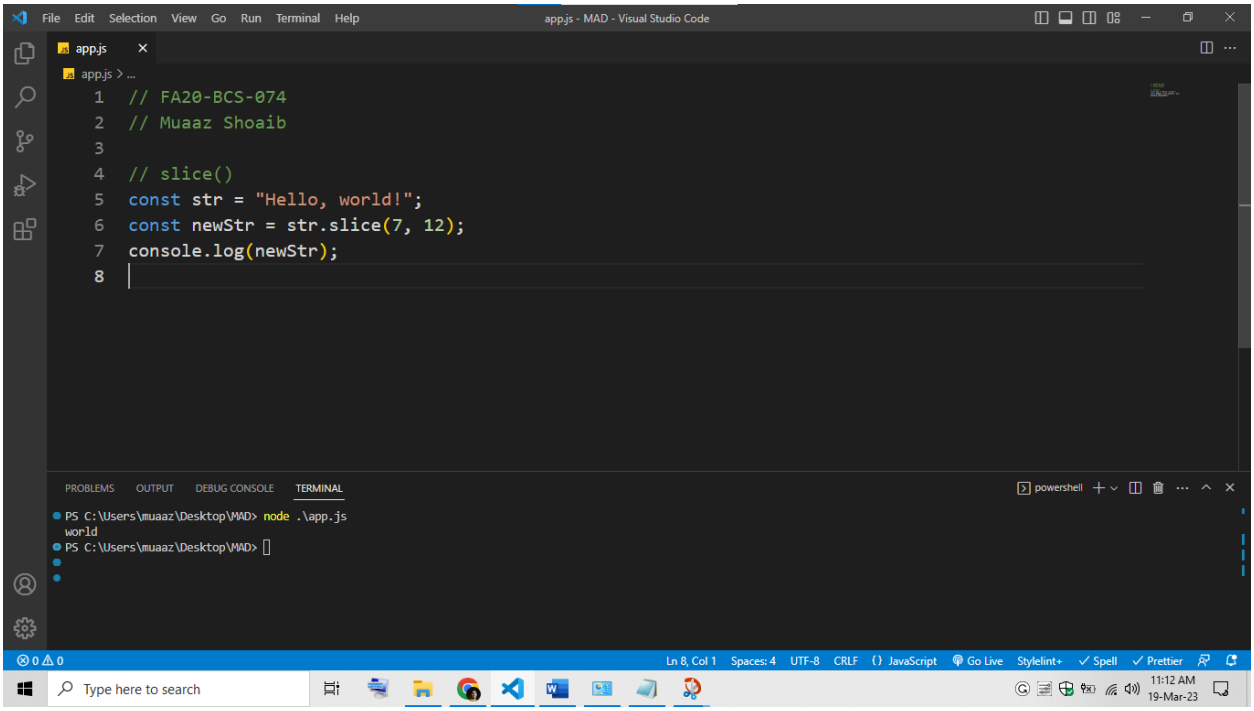


slice

This method returns a portion of a string into a new string.

```
// FA20-BCS-074
// Muaaz Shoaib

// slice()
const str = "Hello, world!";
const newStr = str.slice(7, 12);
console.log(newStr);
```

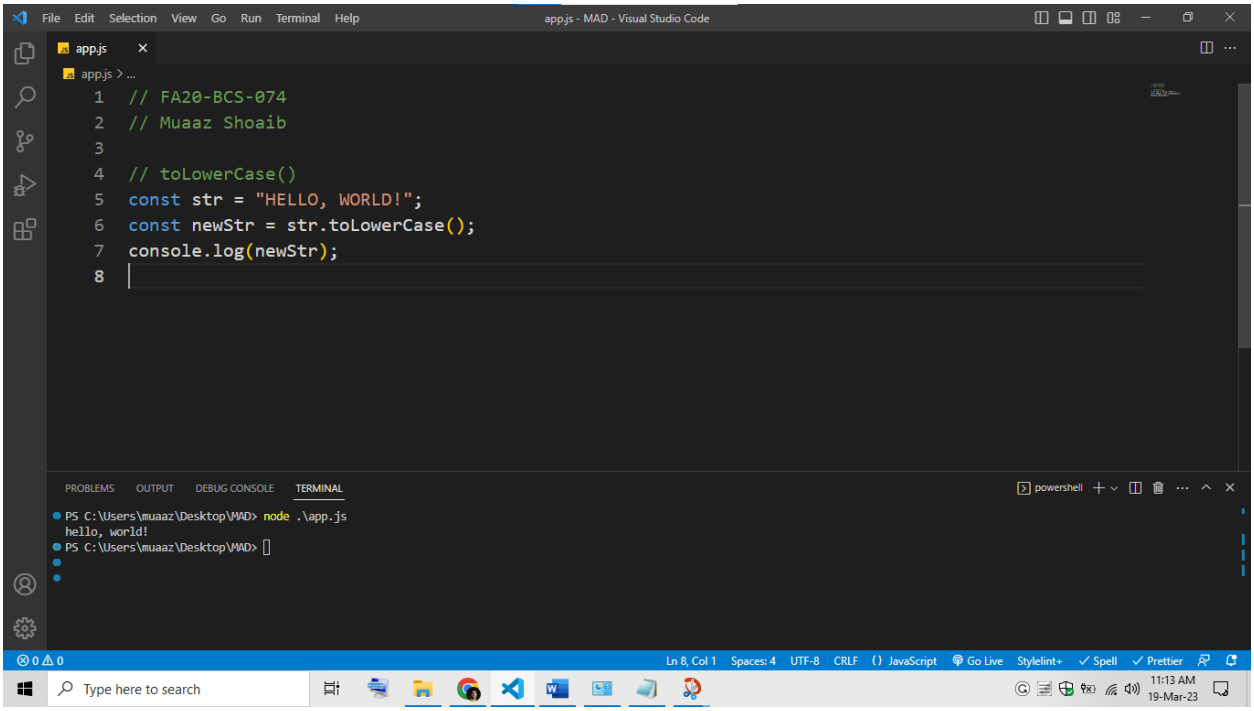


toLowerCase

This method returns a new string with all characters in lowercase.

```
// FA20-BCS-074
// Muaaz Shoaib

// toLowerCase()
const str = "HELLO, WORLD!";
const newStr = str.toLowerCase();
console.log(newStr);
```

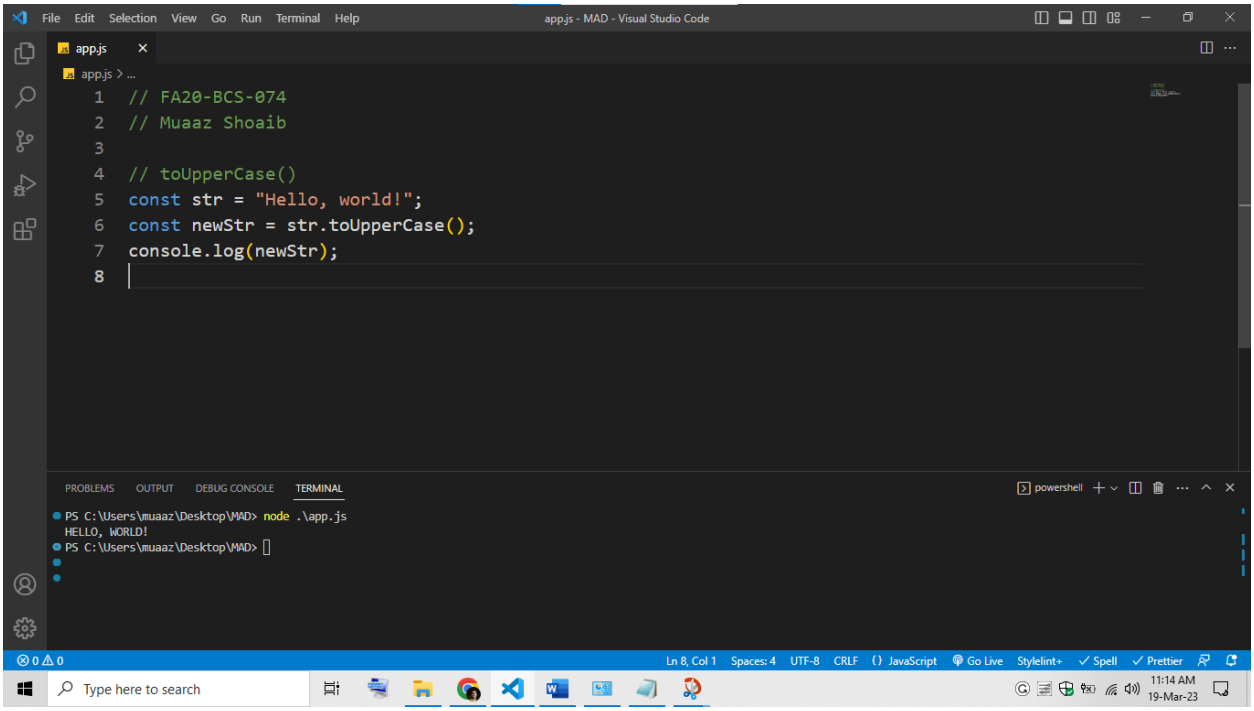


toUpperCase

This method returns a new string with all characters in uppercase.

```
// FA20-BCS-074
// Muaaz Shoaib

// toUpperCase()
const str = "Hello, world!";
const newStr = str.toUpperCase();
console.log(newStr);
```

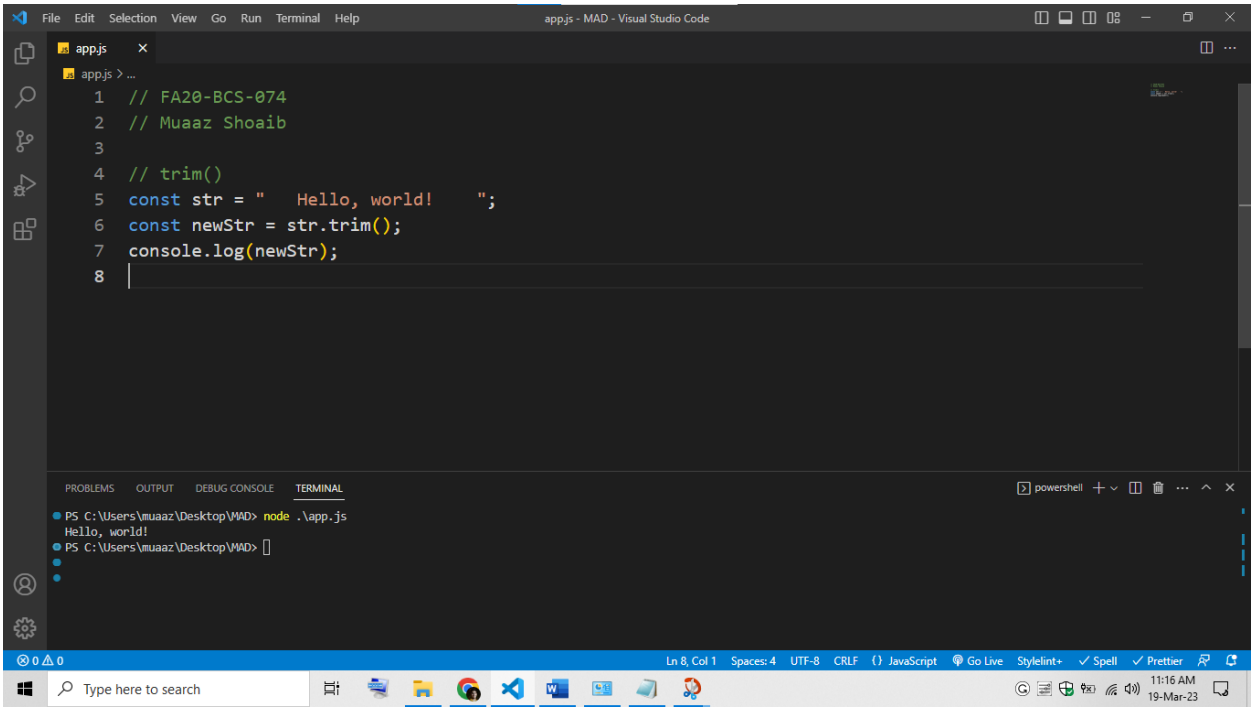


trim

This method removes whitespace from both ends of a string.

```
// FA20-BCS-074
// Muaaz Shoaib

// trim()
const str = "   Hello, world!    ";
const newStr = str.trim();
console.log(newStr);
```

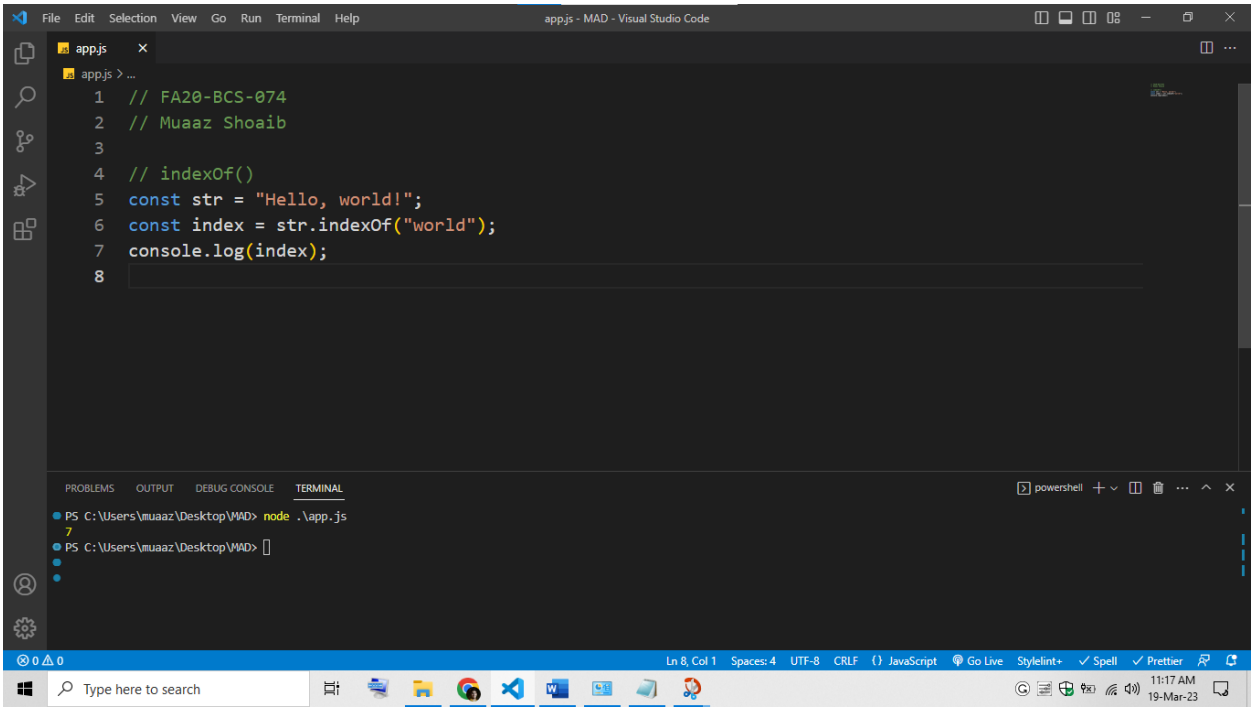


indexOf

This method returns the index of the first occurrence of a specified value in a string, or -1 if it is not found.

```
// FA20-BCS-074
// Muaaz Shoaib

// indexOf()
const str = "Hello, world!";
const index = str.indexOf("world");
console.log(index);
```

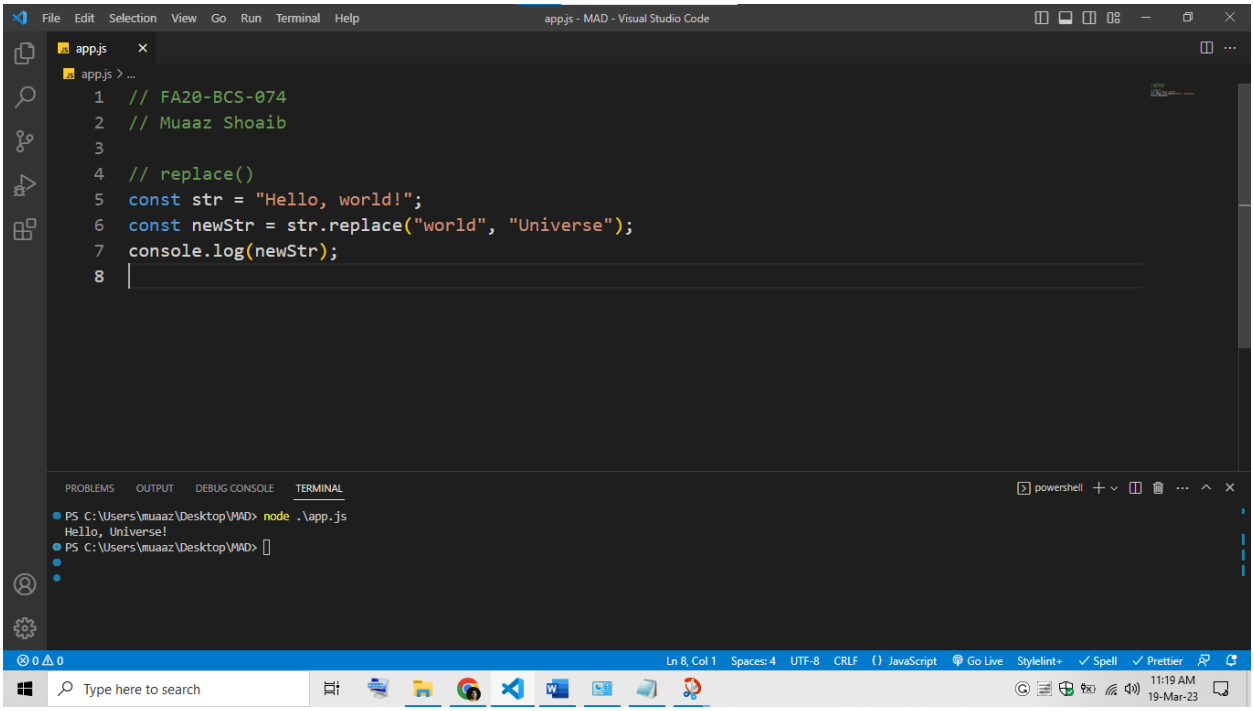


replace

This method replaces a specified value with another value in a string.

```
// FA20-BCS-074
// Muaaz Shoaib

// replace()
const str = "Hello, world!";
const newStr = str.replace("world", "Universe");
console.log(newStr);
```

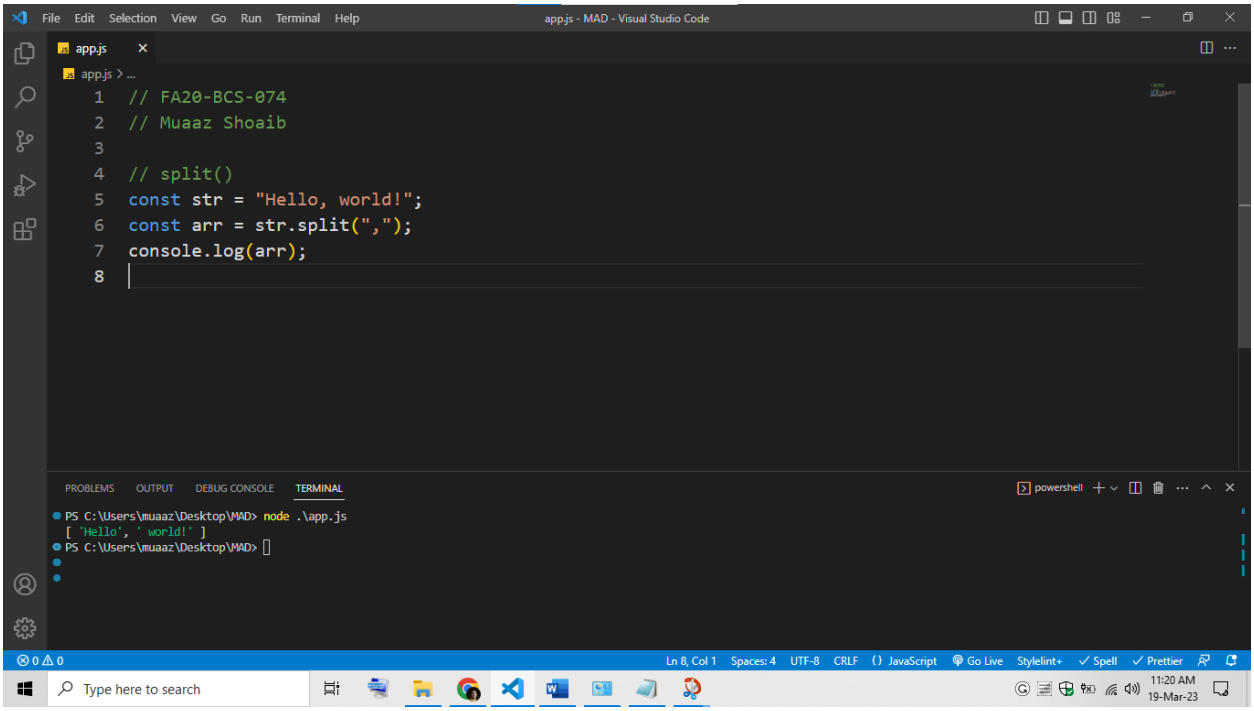


split

This method splits a string into an array of substrings based on a specified separator.

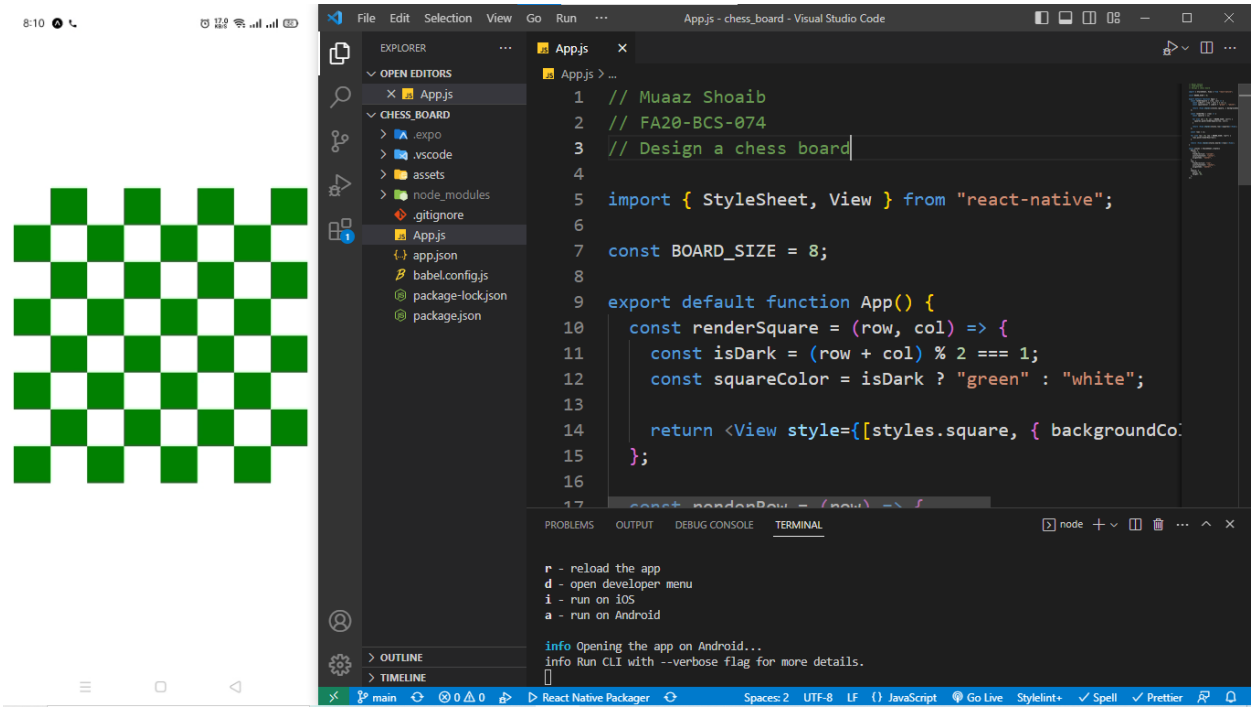
```
// FA20-BCS-074
// Muaaz Shoaib

// split()
const str = "Hello, world!";
const arr = str.split(",");
console.log(arr);
```



Q3: Design chess board UI in react native?

You will find a complete project by clicking on this link: https://github.com/muaazshoaib/chess_board



```
// Muaaz Shoaib
// FA20-BCS-074
// Design a chess board

import { StyleSheet, View } from "react-native";

const BOARD_SIZE = 8;

export default function App() {
  const renderSquare = (row, col) => {
    const isDark = (row + col) % 2 === 1;
    const squareColor = isDark ? "green" : "white";

    return <View style={[styles.square, {
backgroundColor: squareColor }]} />;
  };

  const renderRow = (row) => {
    const squares = [];

    for (let col = 0; col < BOARD_SIZE; col++) {
      squares.push(renderSquare(row, col));
    }

    return <View style={styles.row}>{squares}</View>;
  };

  const rows = [];

  for (let row = 0; row < BOARD_SIZE; row++) {
```

```
    rows.push(renderRow(row));
  }

  return <View style={styles.board}>{rows}</View>;
}

const styles = StyleSheet.create({
  board: {
    flex: 1,
    flexDirection: "column",
    justifyContent: "center",
    alignItems: "center",
  },
  row: {
    flexDirection: "row",
    justifyContent: "center",
    alignItems: "center",
  },
  square: {
    width: 42,
    height: 42,
  },
});
```