

**Name:** Muhammad Shahzaib Shaheen

**Registration number:** FA20-BCS-040 **Section: 6-**B

**Subject: Mobile Application Development**

**Assignment #: 0**2(Theory)

**Submitted to:** DR. SALEEM

**String Functions**

let str = "  Shahzaib Shaheen ";

let upperCaseStr = str.toUpperCase();

console.log(upperCaseStr);

let lowerCaseStr = str.toLowerCase();

console.log(lowerCaseStr);

let strLength = str.length;

console.log(strLength);

let index = str.indexOf("shah");

console.log(index);

let subStr = str.substring(7, 12);

console.log(subStr);

let newStr = str.replace("World", "Universe");

console.log(newStr);

let firstName = "naeem";

let lastName = "y";

let fullName = firstName + " " + lastName;

console.log(fullName);

let trimmedStr = str.trim();

console.log(trimmedStr);

let includesSubStr = str.includes("shah");

console.log(includesSubStr);

let arr = str.split(", ");

console.log(arr);

let repeatedStr = "abc".repeat(3);

console.log(repeatedStr);

let numStr = "42";

let num = Number(numStr);

console.log(num);

let newNumStr = num.toString();

console.log(newNumStr);

let dateString = "2023-04-15";

let dateObj = new Date(dateString);

console.log(dateObj);

let arr = [9,5,367,34,5];

let arrLength = arr.length;

console.log(arrLength);

let firstElement = arr[0];

console.log(firstElement);

arr.push(6);

console.log(arr);

arr.pop();

console.log(arr);

arr.unshift(0);

console.log(arr);

arr.shift();

console.log(arr);

let sliceArr = arr.slice(1, 4);

console.log(sliceArr);

arr.splice(2, 2, 6, 7);

console.log(arr);

let arr2 = [8, 9, 10];

let concatArr = arr.concat(arr2);

console.log(concatArr);

let reverseArr = arr.reverse();

console.log(reverseArr);

let sortArr = arr.sort();

console.log(sortArr);

let index = arr.indexOf(5);

console.log(index);

let includesElement = arr.includes(3);

console.log(includesElement);

let squaredArr = arr.map(num => num \*\* 2);

console.log(squaredArr);

let filteredArr = arr.filter(num => num % 2 === 0);

console.log(filteredArr);

let sum = arr.reduce((acc, num) => acc + num);

console.log(sum);

Chess Board:

import React from 'react';

import { StyleSheet, View, Text } from 'react-native';

export default function ChessBoard() {

  const ROWS = 8;

  const COLUMNS = 8;

  const board = [];

  // Create the chess board as a 2D array

  for (let i = 0; i < ROWS; i++) {

    const row = [];

    for (let j = 0; j < COLUMNS; j++) {

      // Determine the color of the square based on its position

      const squareColor = (i + j) % 2 === 0 ? '#F0D9B5' : '#B58863';

      row.push(

        <View key={`${i}${j}`} style={[styles.square, { backgroundColor: squareColor }]}>

          <Text>{`${i}${j}`}</Text>

        </View>

      );

    }

    board.push(<View key={i} style={styles.row}>{row}</View>);

  }

  return (

    <View style={styles.container}>

      {board}

    </View>

  );

}

const styles = StyleSheet.create({

  container: {

    flex: 1,

    flexDirection: 'column',

    justifyContent: 'center',

    alignItems: 'center',

    backgroundColor: '#FFF',

  },

  row: {

    flex: 1,

    flexDirection: 'row',

  },

  square: {

    width: 40,

    height: 40,

    alignItems: 'center',

    justifyContent: 'center',

  },

});

**ChessBoard:**

import React from 'react';

import { StyleSheet, View, Text } from 'react-native';

export default function ChessBoard() {

  const ROWS = 8;

  const COLUMNS = 8;

  const board = [];

  // Create the chess board as a 2D array

  for (let i = 0; i < ROWS; i++) {

    const row = [];

    for (let j = 0; j < COLUMNS; j++) {

      // Determine the color of the square based on its position

      const squareColor = (i + j) % 2 === 0 ? '#F0D9B5' : '#B58863';

      row.push(

        <View key={`${i}${j}`} style={[styles.square, { backgroundColor: squareColor }]}>

          <Text>{`${i}${j}`}</Text>

        </View>

      );

    }

    board.push(<View key={i} style={styles.row}>{row}</View>);

  }

  return (

    <View style={styles.container}>

      {board}

    </View>

  );

}

const styles = StyleSheet.create({

  container: {

    flex: 1,

    flexDirection: 'column',

    justifyContent: 'center',

    alignItems: 'center',

    backgroundColor: '#FFF',

  },

  row: {

    flex: 1,

    flexDirection: 'row',

  },

  square: {

    width: 40,

    height: 40,

    alignItems: 'center',

    justifyContent: 'center',

  },

});

**Output:**