**Logo, company name

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**COMSATS University Islamabad (CUI)**

**MAD – Theory**

**Assignment 2**

***By***

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**Q1 - Array functions in JavaScript**

1. **Push**

const arr = [1, 2, 3];

arr.push(4, 5);

console.log(arr);

1. **Pop**

const arr = [1, 2, 3];

const lastElement = arr.pop();

console.log(lastElement);

console.log(arr);

1. **shift**

const arr = [1, 2, 3];

const firstElement = arr.shift();

console.log(firstElement);

console.log(arr);

1. **Unshift**

const arr = [1, 2, 3];

arr.unshift(0, -1);

console.log(arr);

1. **Slice**

const arr = [1, 2, 3, 4, 5];

const slicedArr = arr.slice(1, 4);

console.log(slicedArr);

1. **Splice**

const arr = [1, 2, 3, 4, 5];

arr.splice(2, 1, "a", "b");

console.log(arr);

1. **Concat**

const arr1 = [1, 2];

const arr2 = [3, 4];

const arr3 = [5, 6];

const mergedArr = arr1.concat(arr2, arr3);

console.log(mergedArr);

1. **Reverse**

const arr = [1, 2, 3, 4, 5];

arr.reverse();

console.log(arr);

1. **Join**

const arr = ["a", "b", "c"];

const str = arr.join("-");

console.log(str);

1. **IndexOf**

const arr = [1, 2, 3, 4, 5];

const index = arr.indexOf(3);

console.log(index);

**Q2: String functions in JavaScript**

1. **Length**

const str = "Hello, world!";

const length = str.length;

console.log(length);

1. **CharAt**

const str = "Hello, world!";

const char = str.charAt(1);

console.log(char);

1. **Concat**

const str1 = "Hello, ";

const str2 = "world!";

const newStr = str1.concat(str2);

console.log(newStr);

1. **ToLowerCase**

const str = "HELLO, WORLD!";

const newStr = str.toLowerCase();

console.log(newStr);

1. **ToUpperCase**

const str = "Hello, world!";

const newStr = str.toUpperCase();

console.log(newStr);

1. **Trim**

const str = " Hello, world! ";

const newStr = str.trim();

console.log(newStr);

1. **IndexOf**

const str = "Hello, world!";

const index = str.indexOf("world");

console.log(index);

1. **Replace**

const str = "Hello, world!";

const newStr = str.replace("world", "Universe");

console.log(newStr);

1. **Split**

const str = "Hello, world!";

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

console.log(arr);

**CHESS BOARD**

**Code**

import React from 'react';

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

const Board = () => {

  const boardSize = 8;

  const tileSize = 40;

  const board = [];

*// creation of the board takes place from here*

  for (let i = 0; i < boardSize; i++) {

    const row = [];

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

      const isBlack = (i + j) % 2 === 1;

      const tileStyle = isBlack ? styles.blackTile : styles.whiteTile;

      row.push(<View key={`${i}${j}`} style={[styles.tile, tileStyle]} />);

    }

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

  }

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

};

// Stylesheet

const styles = StyleSheet.create({

  container: {

    flex: 1,

    justifyContent: 'center',

    alignItems: 'center', },

  row: { flexDirection: 'row', },

  tile: {

    width: 40,

    height: 40,

  },

  whiteTile: { backgroundColor: 'white', },

  blackTile: { backgroundColor: 'black', },

});

export default Board;

**Output**

**A picture containing calendar

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