4CS017 – Internet Software Architecture workshop sheet

Introduction to JavaScript

Make a copy of this document. Paste only your JavaScript code in the boxes after each question. Submit the document back.

1. Write a JavaScript program to display the current day and time in the following format.

   Today is : Tuesday.
   Current time is : 10 PM : 30 : 38

```
var todayDate = new Date();
var day = todayDate.getDay();

var weekday = ["Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday"];
var meridiem = todayDate.getHours() >= 12 ? " PM " : " AM ";

console.log("Today is: " + weekday[day]);
console.log("Current Time: " + todayDate.getHours() + meridiem + ": " + todayDate.getMinutes(
```

2. Write a JavaScript program to check whether the last digit of the three given positive integers is the same.

```
function lastDigit(a,b,c) {
    if (a % 10 == b % 10 && a % 10 == c % 10) {
        console.log(a, b, c, "Last digit are same");
    } else {
        console.log(a, b, c, "Last digit are not same");
    }
}
lastDigit(10,20,30)
```

3. Write a JavaScript program where the program takes a random integer between 1 to 10, the user is then prompted to input a guess number. If the user input matches with the guess number, the program will display a message "Good Work" otherwise display a message "Not matched".

```
function guessNumber() {
    var randomNumber = Math.floor(Math.random() * 10) + 1;
    userNumber = Number(prompt("Please enter a number from 1 to 10"));
    if (randomNumber == userNumber) {
        alert("Good Work");
    } else {
        alert("Not Matched. The number was " + randomNumber);
    }
}
guessNumber()
```

4. Declare a simple “Array” of “Object” of the following table.

Name	Age	Gender	Favorite Team
Ram	19	Male	FK Athens
Jagdish	23	Male	Mallorca
Bibina	21	Female	Girona
Sommer	27	Male	Shrewsbury
Sameera	23	Female	Internationale

Make use of iteration, functions, conditional statements and anything necessary to create a sentence for each row as follows:
“**Shyam** is **23** years of age. **His** favorite football team is **Lille**”.

```
function identity(name, age, gender, favourite_team) {
    this.name = name;
    this.age = age;
    this.gender = gender;
    this.favourite_team = favourite_team;
}

var identityOne = new identity("Ram", "19", "Male", "FK Athens");
var identityTwo = new identity("Jagdish", "23", "Male", "Mallorca");
var identityThree = new identity("Bibina", "21", "Female", "Girona");
var identityFour = new identity("Sommer", "27", "Male", "Shrewsbury");
var identityFive = new identity("Sameera", "23", "Female", "Internationale");
```

```
var totalIdentity = [];
totalIdentity.push(identityOne, identityTwo, identityThree, identityFour, identityFive);

for (let identity of totalIdentity) {
    if (identity.gender == "Male") {
        identity.gender = "His";
    } else {
        identity.gender = "Her";
    }
    console.log(identity.name + " is " + identity.age + " years of age. " + identity.gender +
}
```

5. Declare an **Object** of the following table.

Name	CS01	CS02	CS03	CS04
Ram	65	80	68	72
Jagdish	56	61	63	68
Bibina	51	48	63	55
Sommer	48	65	61	76
Sameera	65	45	86	96

Make use of iteration, functions, conditional statements and anything necessary to calculate the average marks of each person and show their respective grades based on their average marks.

Range of Marks	Grade	Remarks
70 - 100	A	Excellent: outstanding performance with only minor errors
60 - 69	B	Very Good: above the average standard but with some errors
50 - 59	C	Good: generally sound work with a number of notable errors
43 - 49	D	Satisfactory: fair but with significant shortcomings
40 - 42	E	Sufficient: performance meets the minimum criteria
0 - 39	F	Fail: performance does not meet the minimum criteria and considerable further work is required

```
function newstudents(name, cs01, cs02, cs03, cs04) {
    this.name = name;
    this.cs01 = cs01;
    this.cs02 = cs02;
    this.cs03 = cs03;
    this.cs04 = cs04;
}

var studentOne = new newstudents("Ram", 65, 80, 68, 72);
var studentTwo = new newstudents("Jagdish", 56, 61, 63, 68);
var studentThree = new newstudents("Bibina", 51, 48, 63, 68);
var studentFour = new newstudents("Sommer", 48, 65, 61, 76);
var studentFive = new newstudents("Sameera", 65, 45, 86, 96);
var totalStudents = [];

totalStudents.push(studentOne, studentTwo, studentThree, studentFour, studentFive);
console.log("Name       Marks       Grade       Remark");

for (let student of totalStudents) {
    var markScored = (student.cs01 + student.cs02 + student.cs03 + student.cs04)/4;
    if (markScored >= 70 && markScored <= 100){
        console.log(student.name + "        " + markScored + "         " + "A" + "          "

    } else if (markScored >= 60 && markScored <= 69) {
        console.log(student.name + "        " + markScored + "         " + "B" + "          "

    } else if (markScored >= 50 && markScored <= 59) {
        console.log(student.name + "        " + markScored + "         " + "C" + "          "

    } else if (markScored >= 43 && markScored <= 49) {
        console.log(student.name + "        " + markScored + "         " + "D" + "          "
```

```
    } else if (markScored >= 40 && markScored <= 43) {
        console.log(student.name + "        " + markScored + "         " + "E" + "         "

    } else if (markScored >= 0 && markScored <= 39) {
        console.log(student.name + "        " + markScored + "         " + "F" + "         "
    }
}
```