***COMSATS UNIVERSITY ISLAMABAD ATTOCK CAMPUS***



**Lab** **Assignment no:1**

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Course:Mobile Application Development

# Problem 1:

Write program to print the kth digit from last. E.g. input 23617 and k=4 output 3. *(Hint: String Functions)*

**function kthDgitFromLast(n, k)**

**{**

**if (k <= 0)**

**{**

**document.write(-1);**

**return;**

**}**

**var diviser = parseInt(Math.pow(10, k - 1));**

**if (diviser > n)**

**{**

**document.write(-1);**

**}**

**else**

**{**

**document.write(parseInt((n / diviser) % 10));**

**}**

**}**

**var n = 23617;**

**var k = 4;**

**kthDigitFromLast(n, k);**

## Problem 2:

Write program to find sum of all digits. Input 23618 output 2+3+6+1+8=20 *(Hint: String Functions)*

*(Hint: convert string to array and then use reduce function)*

**Solution:**

**var value = 25687,**

**sum = value**

**.toString()**

**.split('')**

**.map(Number)**

**.reduce(function (a, b) {**

**return a + b;**

**}, 0);**

**console.log(sum);**

## Problem 3:

Write program to find sum of even digits. Input 23617 output 2+6=8.

**function getSum(n)**

**{**

**n = Math.floor(n/10);**

**let isOdd = (n % 2 == 1) ? false : true;**

**let sumEven = 0;**

**while (n != 0) {**

**if (isOdd)**

**sumEven += n % 10;**

**isOdd = !isOdd;**

**n = Math.floor(n/10);**

**}**

**document.write("Sum even = " + sumEven);**

**}**

**let n = 23617;**

**getSum(n);**

*(Hint: Convert string to array and use filter function)*

## Problem 4:

Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10.

**function NumberAndSquare(number ,size){**

**for(i= number; i <= size; i++) {**

**console.log("Number " + i +" Square of Number " + i\*i+" cube of number "+i\*i\*i );**

**}**

**}**

**NumberAndSquare(0, 10);**

## Problem 5:

Develop and demonstrate JavaScript script that uses functions for the following problems:

1. Parameter: A string
2. Output: The position in the string of the left-most vowel
3. Parameter: A number
4. Output: The number with its digits in the reverse order

**var str = "llllkkellllbcdefghi";**

**if(isNaN(str))**

**{**

**str = str.toUpperCase();**

**for(var i = 0; i < str.length; i++) {**

**var chr = str.charAt(i);**

**if(chr == 'A' || chr == 'E' || chr == 'I' || chr == 'O' || chr == 'U')break;**

**}**

**if( i < str.length )**

**alert("The position of the left most vowel is "+(i+1));**

**else**

**alert("No vowel found in the entered string");**

**}**

**var num=12345,rev=0,remainder;**

**numstr = 12345;**

**while(num!=0) {**

**remainder = num%10;**

**num = parseInt(num/10);**

**rev = rev \* 10 + remainder;**

**}**

**alert("Reverse of "+numstr+" is "+rev);**

## Problem 6:

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 guess number, the program will display a message "You WIN" otherwise display a message "Not matched".

**var y = Math.floor(Math.random() \* 10 + 1);**

**var x = parseInt(prompt("Enter a Value", "0"), 10);**

**while(guess<3) {**

**var guess = 1;**

**if(x == y)**

**{**

**alert("CONGRATULATIONS!!! YOU GUESSED IT RIGHT IN "**

**+ guess + " GUESS ");**

**}**

**else if(x > y) /\* if guessed number is greater**

**than actual number\*/**

**{**

**guess++;**

**alert("OOPS SORRY!! TRY A SMALLER NUMBER");**

**}**

**else**

**{**

**guess++;**

**alert("OOPS SORRY!! TRY A GREATER NUMBER")**

**}**

**}**

## Problem 7:

Write a JavaScript program to check whether 10 appears in first or last position of a given array of integers. The array length must be greater or equal to 2.

**function first\_last\_1(nums)**

**{**

**var end\_pos = nums.length - 1;**

**return nums[0] == 10 || nums[end\_pos] == 10;**

**}**

**console.log(first\_last\_1([10, 3, 5]));**

## Problem 8:

Write a JavaScript function that returns a passed string with letters in alphabetical order.

**Example string: 'comsats'**

**Expected Output: 'acmost'**

**function makeAlphabet(str) {**

**var arr = str.split(''),**

**alpha = arr.sort().join('').replace(/\s+/g, '');**

**return alpha;**

**}**

**console.log(makeAlphabet("comsat"));**