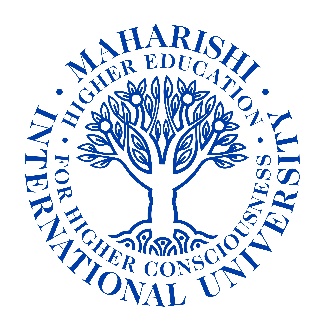
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**Assignment#3 – Problem Decomposition**

**Write the code for the following questions:**

**Question 2)** Write a program that will ask the user to enter a name and a letter. If the name starts with the letter, it should print ‘true’, else it should print ‘false’. (This question requires a basic if statement)

**Answer:**

let name = prompt("Please enter the your name:");

let letter = prompt("Please enter the letter");

if(name.charAt(0) == letter){

console.log("True")

}else{

console.log("false")

}

**Only write the processes for these questions**

**Question 3)** Write a program that will ask the user to enter a number ‘target’. It should roll a dice and if the result (dice) is equal to the selected target, it should print “You Won!”, if not, “You Lost”).

**Answer:**

**//get the target number from the user input prompt**

let number = parseInt(prompt("Please enter the number target:"));

// generate the random number upto 6

let result = (Math.random() \* 6) + 1**;// dice roll from 1 to 6**

**//compare number and result**

if (number == result) {

//Desplaying the result

console.log("Congratulation. You Won!");

} else {

//**Displaying the result**

console.log("Sorry Better Luck Next Time. You Lost!");

}

**Question 4)** Write a program that will ask a user to enter a letter. It should traverse through a list of names (Defined in code) and count how many names have at least one occurrence of the letter.

**Answer:**

**//Get the input letter from the user**

let letter = prompt("Please enter the letter:");

**//get the list of names**

let nameList = ["Suresh", "Rojin", "Aakash", "Pawan", "Dean"];

//Initializing the counter

let countNames = 0;

**//using the nested for loop**

for(let i = 0; i <nameList.length; i++){

let name = nameList[i];

let letterMatch = 0;

for(let j = 0; j<nameList.length; j++){

if(name[j].toUpperCase() === letter){

letterMatch++

break;

}

}

if(letterMatch >0){

countNames++;

}

}

**//displaying the name count**

console.log(countNames);

**Question 5)** Write a program that takes a list of grades and returns the pass rate for those grades. The passing grade is greater or equal to 70.

**Answer:**

**// get the list of grades**

let gradeLists = ["85","90","65","68","60","70"];

**//initializing the couner**

let count = 0;

**//travsrse through the grade**

for(let i = 0; i <gradeLists.length; i++){

**//Comparing the given grade individually with passing grade.**

if(gradeLists[i] >= 70){

count++

}

}

**//calculating the pass rate**

let passRate = (count/gradeLists.length)\*100;

**//displaying the passing Rate**

console.log("The passing rate among the given list of grate is:" +" " +passRate +"%");

**Question 1)** Write a program that will ask the user to enter 3 names separated by a comma ‘,’. It should print each name in a new line. (This question requires string operations)

**Answer:**

**//get the 3 name separated by comma**

let names = prompt("Please enter the 3 names separated by comma:");

// Ram, shyam, Hari

**//seperate the each name by comma**

let nam = names.split(',');

**//loop through the nam**

for (let i = 0; i < nam.length; i++) {

//**Displaying the separate name in new line**

console.log(nam[i].trim());

}