**Program Statement:**

Write a program to randomly generate 10 numbers which are less than 100 and find their sum and average.

**Theory:**

C program to generate pseudo-random numbers using rand and random function.

As the random numbers are generated by an algorithm used in a function they are pseudo-

random, this is the reason that word pseudo is used.

Function rand() returns a pseudo- random number between 0 and RAND\_MAX. RAND\_MAX is a constant which is platform dependent and equals the maximum value returned by rand function.

After generating the numbers, to find sum of the numbers and eventually calculate average of the 10 randomly generated numbers using for loop.

Ex. If 10 random numbers are 1,2,3,4,5,6,7,8,9,10 then

Sum =

1+2+3+4+5+6+7+8+9+10

= 55

Average =

Sum / total count of generated numbers

= 55/10

=5.5

**Algorithm:**

1. Start

2. Read 10 numbers between 1 –100

3. For I = 1 to 10

4. num = rand() % 100+1;

5. Write num

6. sum + = num

7. Endfor

8. Write sum

9. Write average

10. End

**Program:**

//load header files

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

void main()

{

int num, i;

//declare varibles

float sum = 0;

//declaring sum in float as average can be float type

clrscr();

printf("Generating to random numbers in the range of 1 - 100.......\n");

//for loop in order to generate and add the numbers

for(i=1;i<=10;i++)

{

num = rand() % 100 + 1;

printf("%d ",num);

sum += num;

}

//write sum and average

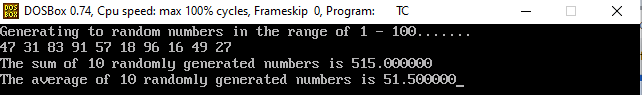
printf("\nThe sum of 10 randomly generated numbers is %f",sum);

printf("\nThe average of 10 randomly generated numbers is %f",float(sum/10));

getch();

}

**/\* Output**

****

**\*/**