**TASK-18**

**Find a Unique Problem.**

**EXPLANATION:**

A program to find sum, average, product, difference, division of numbers using loops and functions.

The user just needs to enter whether he wants sum, product, difference, or division and the total numbers. The program asks the user, the input numbers and gives the result at the end.

**INPUT:**

#include <iostream>

#include <iomanip>

#include <cmath>

#include <conio.h>

#include <stdlib.h>

#include <string.h>

using namespace std;

int average ()

{

int n , i;

double num , sum , average;

cout << " Enter the numbers of data: ";

cin >> n;

for(i = 0; i < n; ++i)

{

cout << i + 1 << ". Enter number: ";

cin >> num ;

sum += num ;

}

average = sum / n ;

system ("CLS") ;

cout << "Average of "<< i <<" numbers is = " << average ;

}

int addition ()

{

int n , i;

double num , sum , average;

cout << " Enter the numbers of data: ";

cin >> n;

for(i = 0; i < n; ++i)

{

cout << i + 1 << ". Enter number: ";

cin >> num ;

sum += num ;

}

system ("CLS") ;

cout << "Sum of "<<i<<" numbers is = " << sum ;

}

int sumaverage ()

{

int n , i;

double num , sum , average;

cout << " Enter the numbers of data: ";

cin >> n;

for(i = 0; i < n; ++i)

{

cout << i + 1 << ". Enter number: ";

cin >> num ;

sum += num ;

}

average = sum / n ;

system ("CLS") ;

cout << "Average of " << i << " numbers is = " << average << endl << endl ;

cout << "Sum of " << i << " numbers is = " << sum ;

}

int difference ()

{

double num\_1 , num\_2 , num\_3 ;

cout << "Please enter first no. = " ;

cin >>num\_1;

cout << "Please enter second no. = " ;

cin >> num\_2 ;

num\_3 = num\_1 - num\_2 ;

system ("CLS") ;

cout << "Your answer is = " << num\_3 << endl ;

}

int product ()

{

int n , i;

double num , product=1;

cout << " Enter the numbers of data: ";

cin >> n;

for(i = 0; i < n; i++)

{

cout << i + 1 << ". Enter number: ";

cin >> num ;

product \*= num ;

}

system ("CLS") ;

cout << "Product of " << i << " numbers is : " << product ;

}

int division ()

{

double num\_1 , num\_2 , num\_3 ;

cout << "Please enter dividend = " ;

cin >>num\_1;

cout << "Please enter divisor = " ;

cin >> num\_2 ;

num\_3 = num\_1 / num\_2 ;

system ("CLS") ;

cout << "Your answer is = " << num\_3 << endl ;

}

int main ()

{

cout << "For sum , subtraction , product , division , average or average + sum " << endl << endl ;

cout << "Please enter sum , difference , product , division , average or sum\_average respectively " << endl << endl ;

cout << "Press any key to continue !! " ;

getch () ;

system ("CLS") ;

a:

string calculation ;

cout << "What calcualtion do you want : ";

cin >> calculation ;

system ("CLS") ;

if (calculation == "sum"){

addition ();

}

else if( calculation == "average"){

average();

}

else if( calculation == "product"){

product();

}

else if ( calculation == "sumaverage"|| calculation=="averagesum"){

sumaverage () ;

}

else if ( calculation == "division"){

division () ;

}

else if ( calculation == "subtraction" )

{

difference() ;

}

else {

cout << "Please enter sum or product or average!!!";

}

getch() ;

system ("CLS");

goto a;

}

**OUTPUT:**

As the program uses conditions so the output varies.