Fundamentals of Programming

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Lab TASK 4

#include<iostream>

#include<cmath>

using namespace std;

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int main()

{

// Task1 - Convert while into do while

int x=1;

do{

cout<<"enter a number :";

cin>>x;

}while(x>0);

// Use a do while loop to make a simple calculator.

int n1,n2;

char ch, R;

do{

cout<<"Enter a number :";

cin>>n1;

cout<<"Enter another number :";

cin>>n2;

cout<<"Enter A for Addition.";

cout<<"Enter S for Subtraction.";

cout<<"Enter M for Multiplition.";

cout<<"Enter D for Division.";

cout<<"Enter % for mod.";

cout<<"Enter P for power.";

cin>>ch;

switch(ch){

case 'A' : cout<<n1<<"+"<<n2<<"="<<n1+n2<<endl;

break;

case 'S' : cout<<n1<<"-"<<n2<<"="<<n1-n2<<endl;

break;

case 'M' : cout<<n1<<"x"<<n2<<"="<<n1\*n2<<endl;

break;

case 'D' : cout<<n1<<"/"<<n2<<"="<<n1/n2<<endl;

break;

case '%' : cout<<n1<<"%"<<n2<<"="<<n1%n2<<endl;

break;

case 'P' : cout<<n1<<"^"<<n2<<"="<<pow(n1,n2)<<endl;

break;

default : cout<<"Invalid Enrty."<<endl;

break;

}

cout<<"Press R to restart .";

cin>>R;

}while(R=='R');

// Task3-a compute sum of all even numbers between 2 and 100.

int s , i=1;

while(i<=100){

if(i%2==0) s=s+i;

i++;

}

cout<<"The sum of all even between 2 and 100 is :"<<s;

// Task3-b compute the sum of all squares between 1 and 100.

int s, x, p=2, i=1;

do{

s=s+i\*i;

i++;

}while(i<=100);

cout<<"Sum of all numbers is :"<<s;

// Task4-a compute powers of 2 from 0-20

int p, a=2, b=1;

while(b<=20){

p=pow(a,b);

b++;

cout<<p<<", ";

}

//Task4-b compute the sum of all odd numbers between a and b (a and b are taken as inputs)

int a, b, s;

cout<<"Enter a number:";

cin>>a;

cout<<"Enter another number :";

cin>>b;

while(a<=b){

if(a%2==1)

s=s+a;

a++;

}

cout<<s;

return 0;

}