**TASK-13**

Binary to Decimal Conversion

**EXPLANATION:**

Modify Task 12 of Lab-03 so it may accept binary number of any bits and converts it into decimal number using loop.

**INPUT:**

#include <iostream>//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Libraries\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#include <cmath>

#include <conio.h>

#include <stdlib.h>

#include <windows.h>

using namespace std ;

int continuationLoop ()

{

bool check = true , flag = true ;

char option ;

while ( check )

{

system("CLS") ;

cout << "Do you want to continue (y/n) : " ;

option = getch() ;

if ( option == 'y' )

{

system ("CLS") ;

return 1 ;

}

else if ( option == 'n' )

{

return 0 ;

}

}

}

main ()

{//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Variable decleration\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

bool flag = true ;

while ( flag )

{

long long int number , num , remainder , digits = 0 , z , i = 0 ;

cout << "Please enter a binary number : " ;

while ( ! ( cin >> number ) )

{

cin.clear () ;

cin.ignore ( INT\_MAX , '\n' ) ;

cout << "Error !! Please enter an integral value. " ;

Sleep(1000) ;

system ("CLS") ;

cout << "Please enter a binary number : " ;

}

while ( number != 0)

{

remainder = number % 10 ;

digits = ( digits ) + ( remainder \* pow ( 2 , i ) ) ;

number /= 10 ;

++i;

}

system ("CLS") ;

cout << "Decimal number is " << digits << endl ;

system("pause") ;

flag = continuationLoop () ;

}

}

**OUTPUT:**





