**TASK-08**

Population

**EXPLANATION:**

Write a program that predicts the size of a population of organisms. The program should ask the user for the starting number of organism, their average daily population increase (as percentage), and the number of days they will multiply. A loop should display the size of population for each day.

Input Validation :

Do not accept a number less than 2 for the starting size of population. Do not accept a negative number for average daily population increase. Do not accept a number less than 1 for the number of days they will multiply.

**INPUT:**

#include <iostream>

#include <windows.h>

#include <stdlib.h>

#include <conio.h>

using namespace std ;

void cin\_clear ()

{

Sleep (2000) ;

system("CLS") ;

cin.clear () ;

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

}

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 ;

}

}

}

int main ()

{

bool flag = true ;

while ( flag )

{

double population , increase , days ;

cout << "Please enter the initial number of organisms : " ;

while ( ! ( cin >> population ) || population < 2 )

{

cout << "No character or number less than 2 !" ;

cin\_clear () ;

cout << "Please enter the initial number of organisms : " ;

}

cout << "Please enter percent increase in population : " ;

while ( ! ( cin >> increase ) || increase < 1 )

{

cout << "No character or number less than 1 !" ;

cin\_clear () ;

cout << "Please enter percent increase in population : " ;

}

increase /= 100.0 ;

cout << "Please enter number of days they will multiply : " ;

while ( ! ( cin >> days ) || days < 1 )

{

cout << "No character or number less than 2 !" ;

cin\_clear () ;

cout << "Please enter number of days they will multiply : " ;

}

system ("CLS") ;

int i = 1 ;

while ( i <= days )

{

population = population + ( increase \* population ) ;

cout <<"DAY : " << i << endl ;

cout << "Population is : " << population << endl << endl ;

i++ ;

Sleep(800) ;

}

system("pause");

flag = continuationLoop() ;

}

}

**OUTPUT:**





