

**LAPORAN PRAKTIKUM
ALGORITMA PEMROGRAMAN**



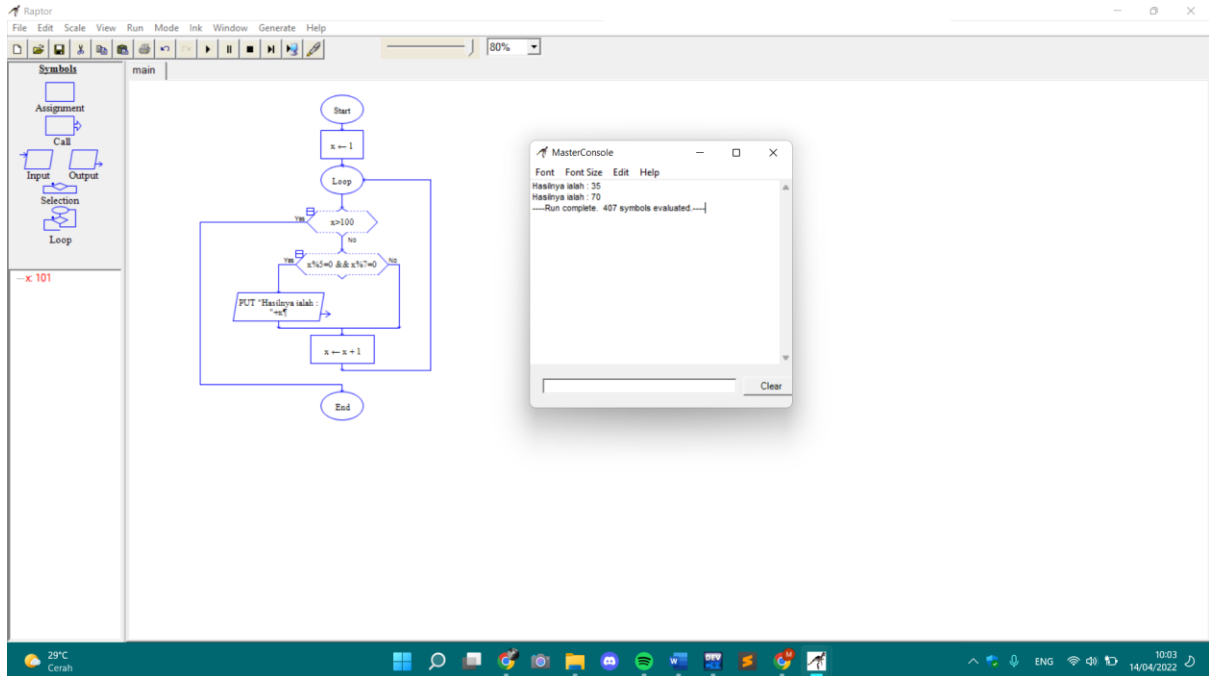
**DI SUSUN OLEH :
Muhammad Faiz Akbar (2100018361)
SELASA 13.30 – Kelas G**

**PROGRAM STUDI INFORMATIKA
FAKULTAS TEKNOLOGI INDUSTRI
UNIVERSITAS AHMAD DAHLAN
MARET 2022**

POST TEST 4

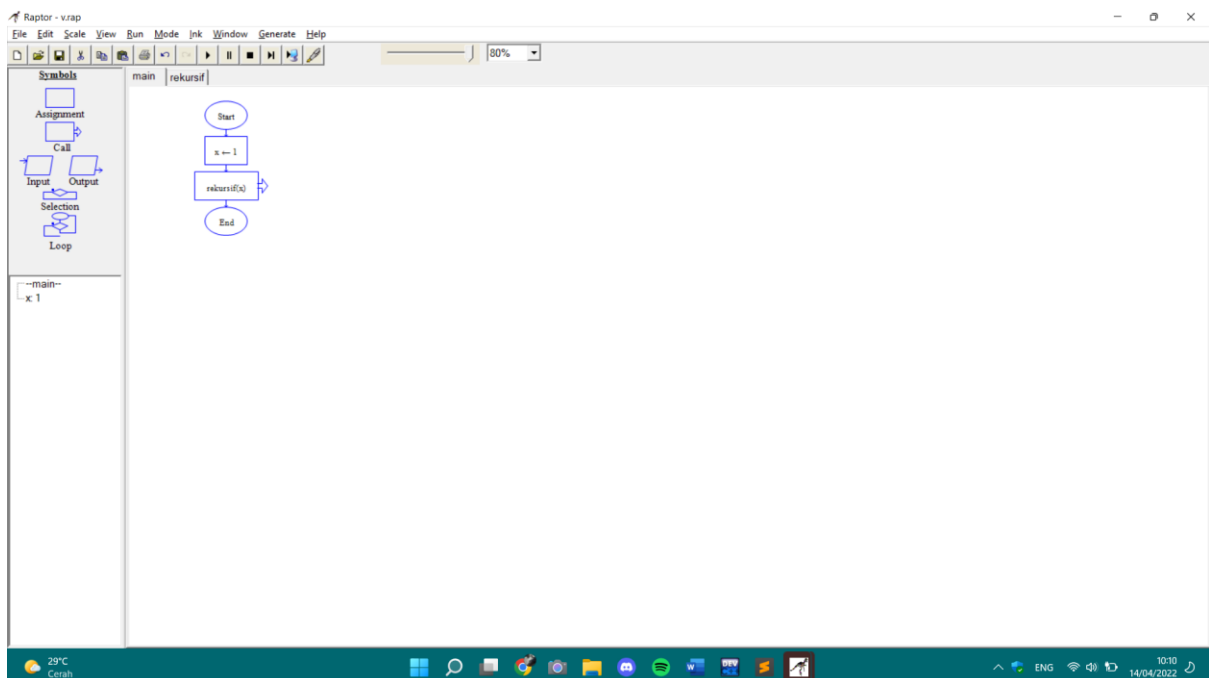
1. Membuat flowchart untuk mencetak bilangan yang habis dibagi 5 dan 7 antara 1 sampai dengan 100 secara iteratif kemudian dirubah ke rekursif

- Secara iteratif

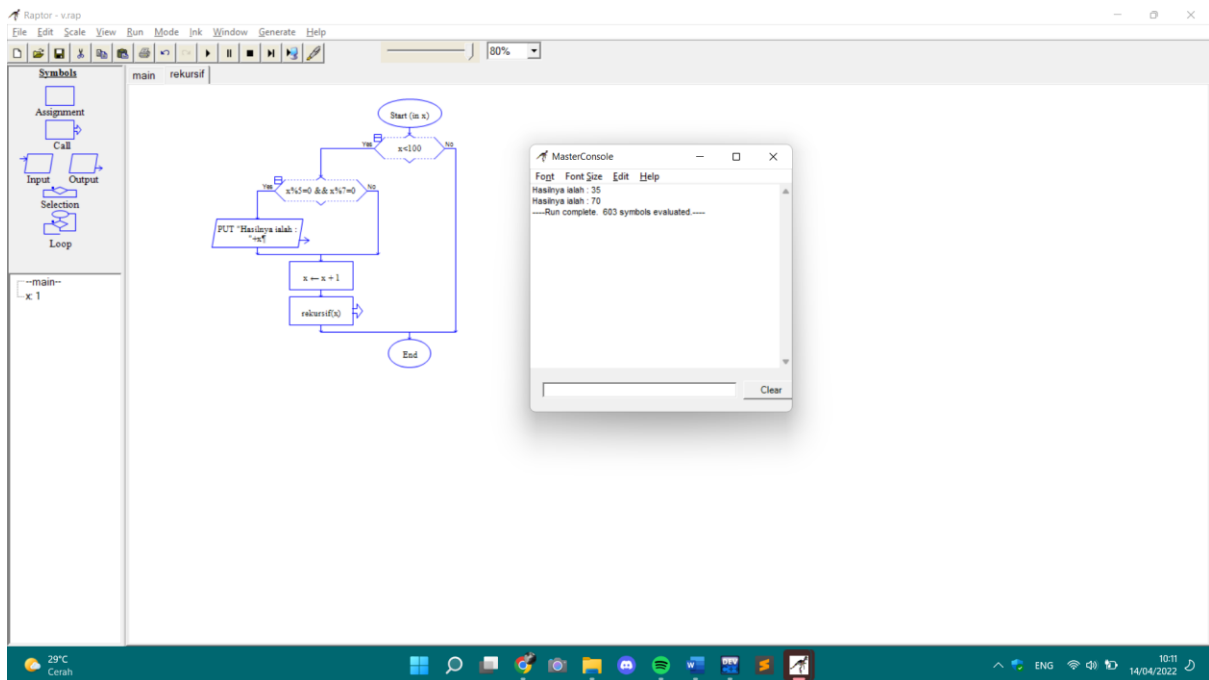


- Secara rekursif

Program utama



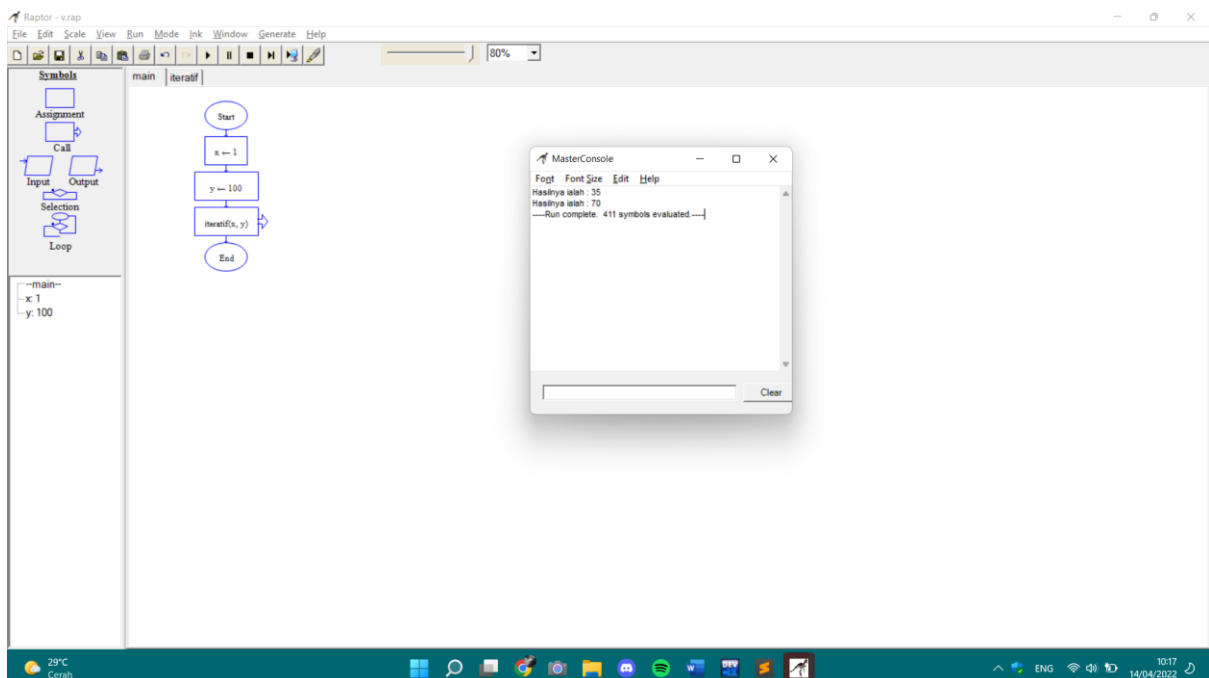
- Sub program



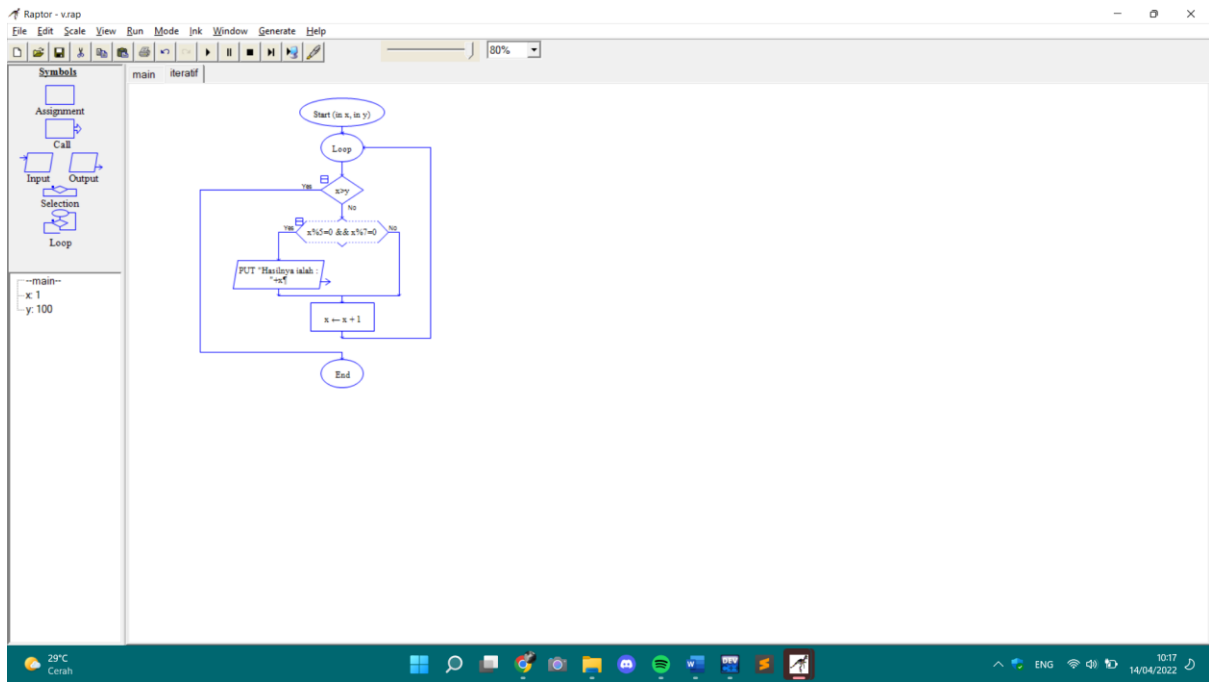
2. Menggunakan subprogram dalam flowchart untuk mencetak bilangan yang habis dibagi 5 dan 7 antara 1 sampai dengan 100 secara iteratif kemudian dirubah ke rekursif

- Secara iteratif

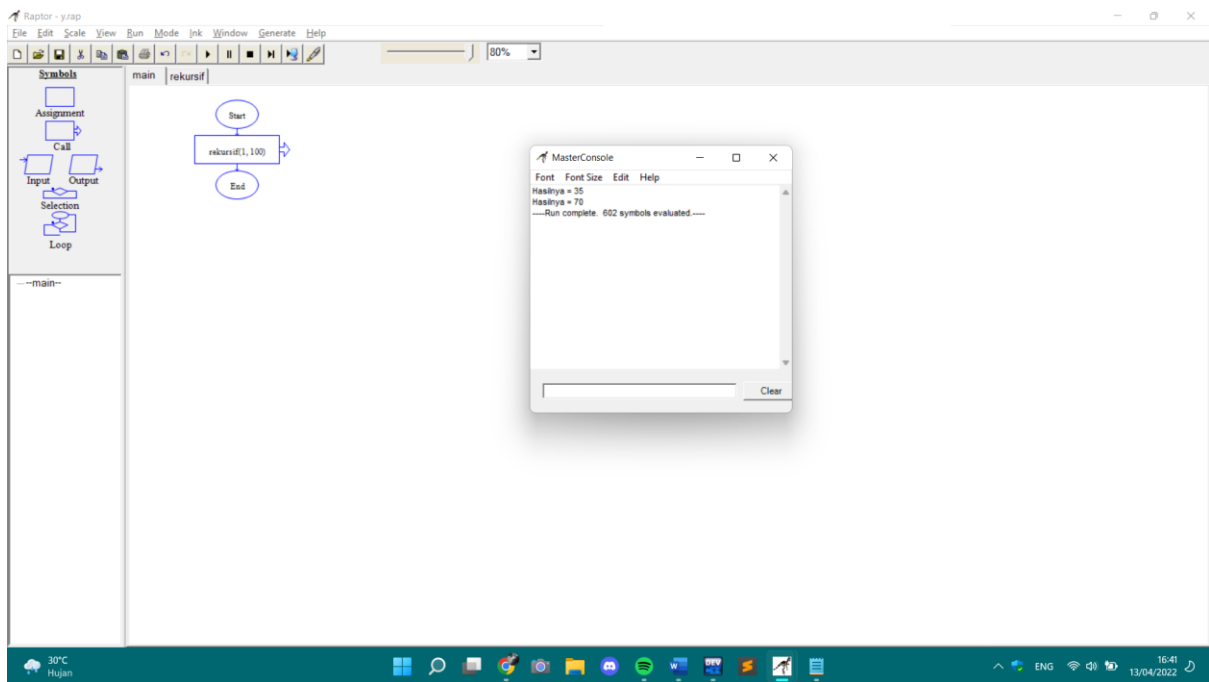
Program utama



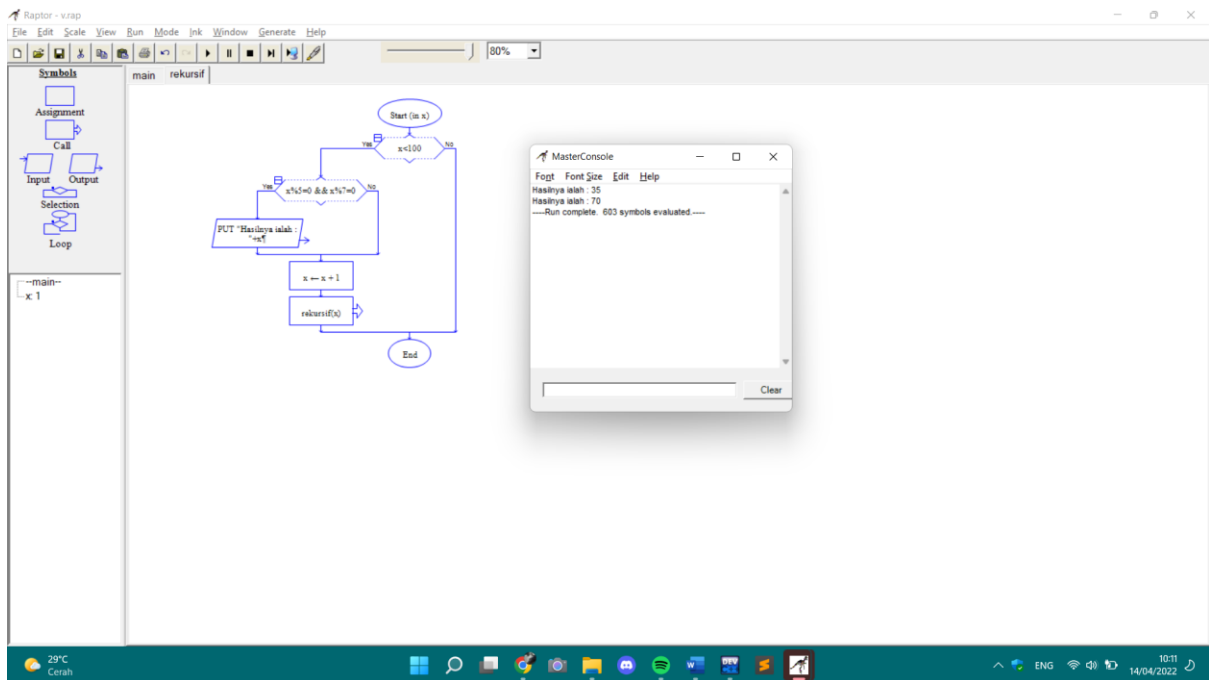
- Subprogram



- Secara Rekursif Program Utama

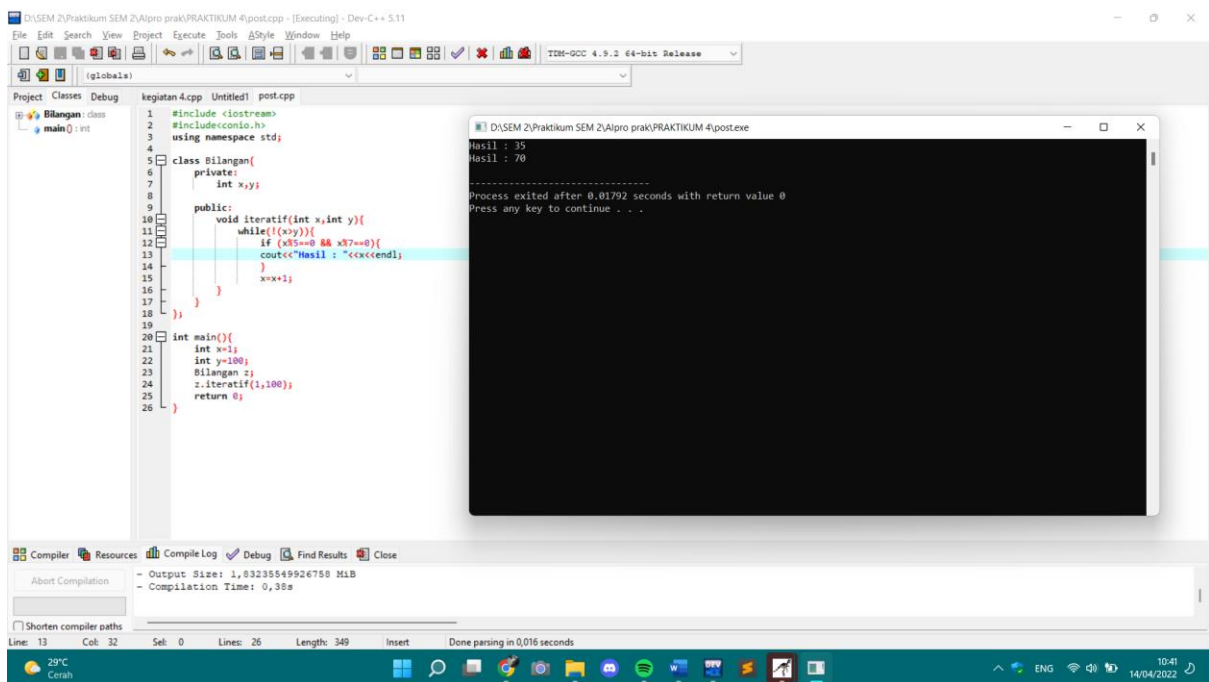


- Subprogram

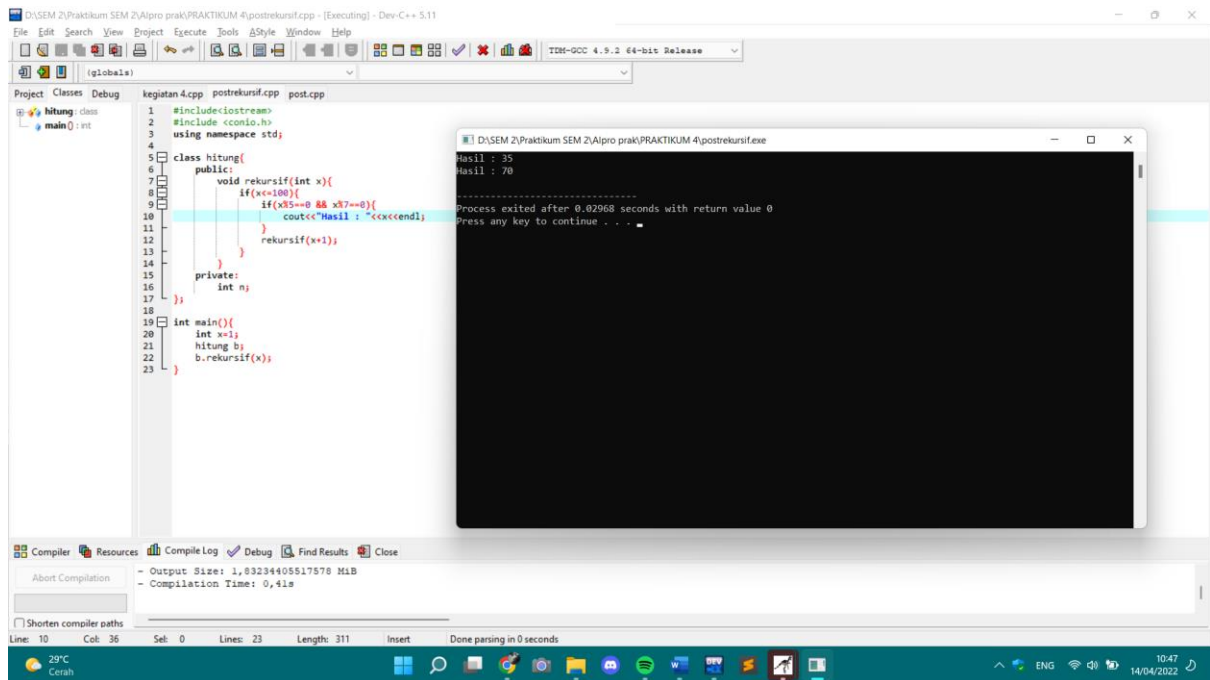


3. Mengkonversikan hasil dari flowchart nomor 1 dan 2 menjadi program C++

- Program iteratif dari nomor 1



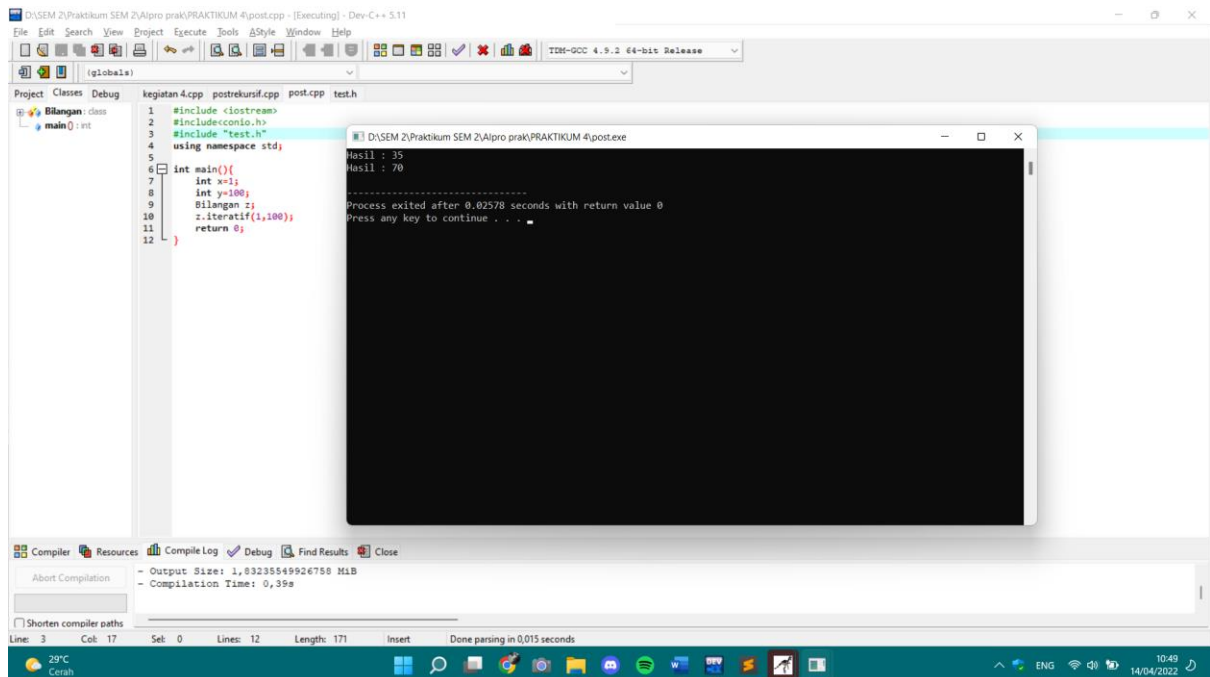
- Rekursif dari nomor 1



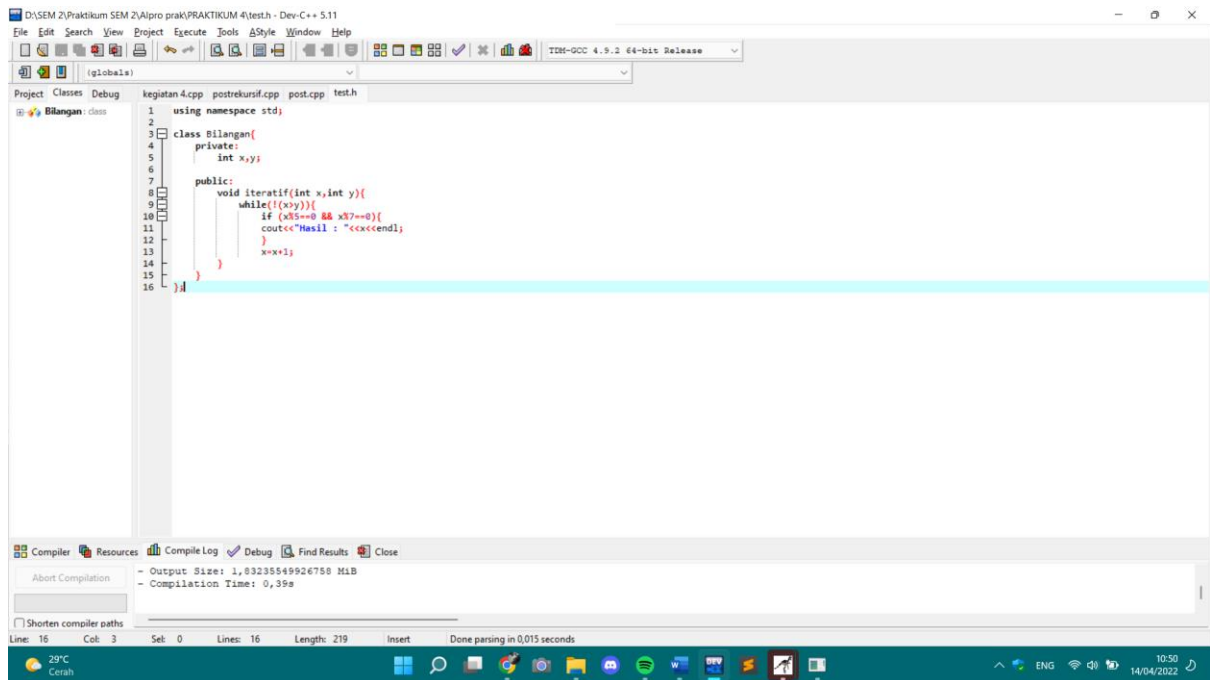
Hasil pengkonversian nomor 2 menjadi C++

- Iteratif

Program Utama



Subprogram



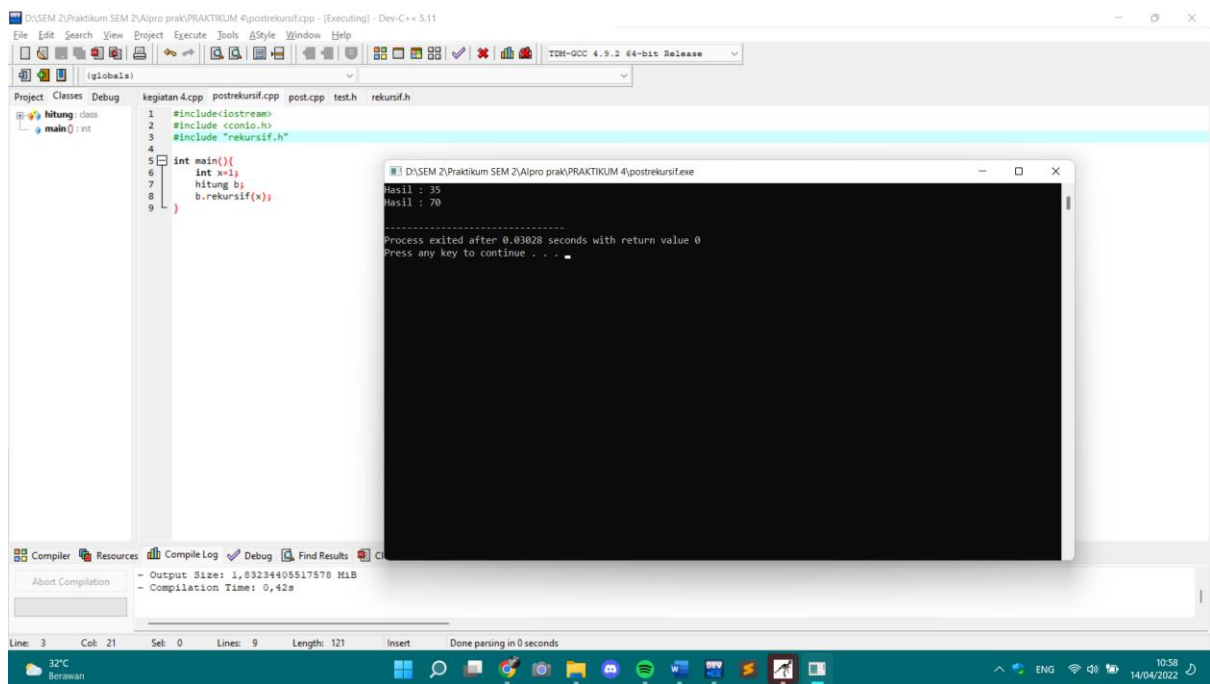
```
1 using namespace std;
2
3 class Bilangan{
4     private:
5         int x,y;
6
7     public:
8         void iteratif(int x,int y){
9             while(!x||!y){
10                 if (x%5==0 && x%7==0){
11                     cout<<"Hasil : "<<x<<endl;
12                 }
13                 x=x+1;
14             }
15         }
16 }
```

Compiler Output:

```
- Output Size: 1,83235549926750 MiB
- Compilation Time: 0,39s
```

- Rekursif

Program utama



```
1 #include<iostream>
2 #include <conio.h>
3 #include "rekursif.h"
4
5 int main(){
6     int x=1;
7     hitung b;
8     b.rekursif(x);
9 }
```

Execution Output:

```
Hasil : 35
Hasil : 70
.....
Process exited after 0.03028 seconds with return value 0
Press any key to continue . . .
```

Subprogram

The screenshot shows a C++ IDE window titled "D:\SEM 2\Praktikum SEM 2\Alpro prak\PRAKTIKUM 4\rekursifh - Dev-C++ 5.11". The main editor displays the following code:

```
1 using namespace std;
2
3 class hitung{
4 public:
5     void rekursif(int x){
6         if(x<=100){
7             if(x%5==0 && x%7==0){
8                 cout<<"Hasil : "<<x<<endl;
9             }
10            rekursif(x+1);
11        }
12    }
13 private:
14     int n;
15 };
```

The code defines a class named `hitung` with a public method `rekursif` that takes an integer `x` as input. The method uses a recursive approach to calculate the sum of numbers from 1 to `x`. It includes a base case where `x` is less than or equal to 100, and a recursive call `rekursif(x+1)`. The output is printed as "Hasil : " followed by the value of `x` and a newline character. The class also has a private member variable `n`.

The IDE's status bar at the bottom shows "Line: 15 Col: 3 Sel: 0 Lines: 15 Length: 213 Insert Done parsing in 0 seconds". The Windows taskbar at the bottom indicates the system temperature is 32°C, the location is Berawan, and the date is 14/04/2022.