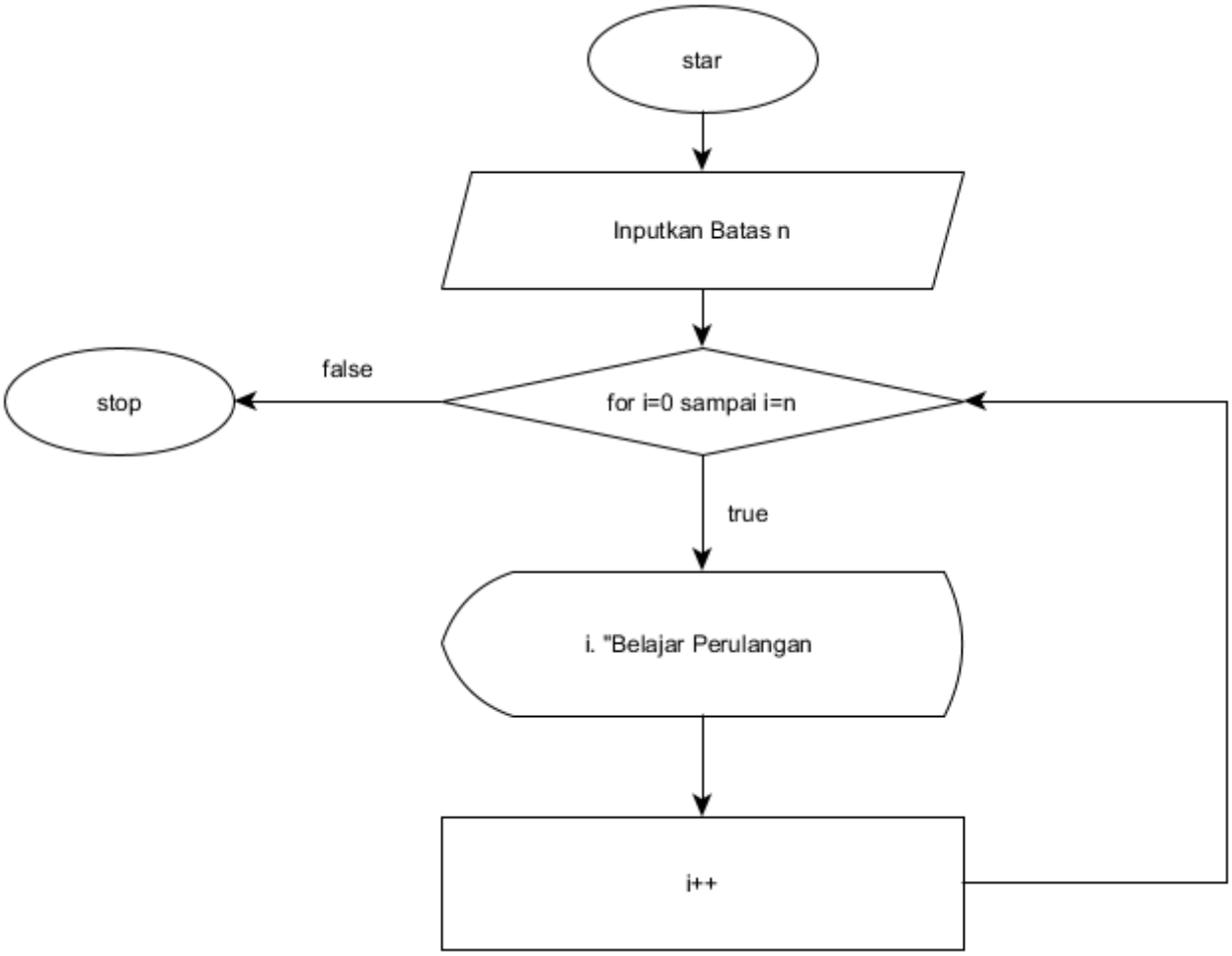
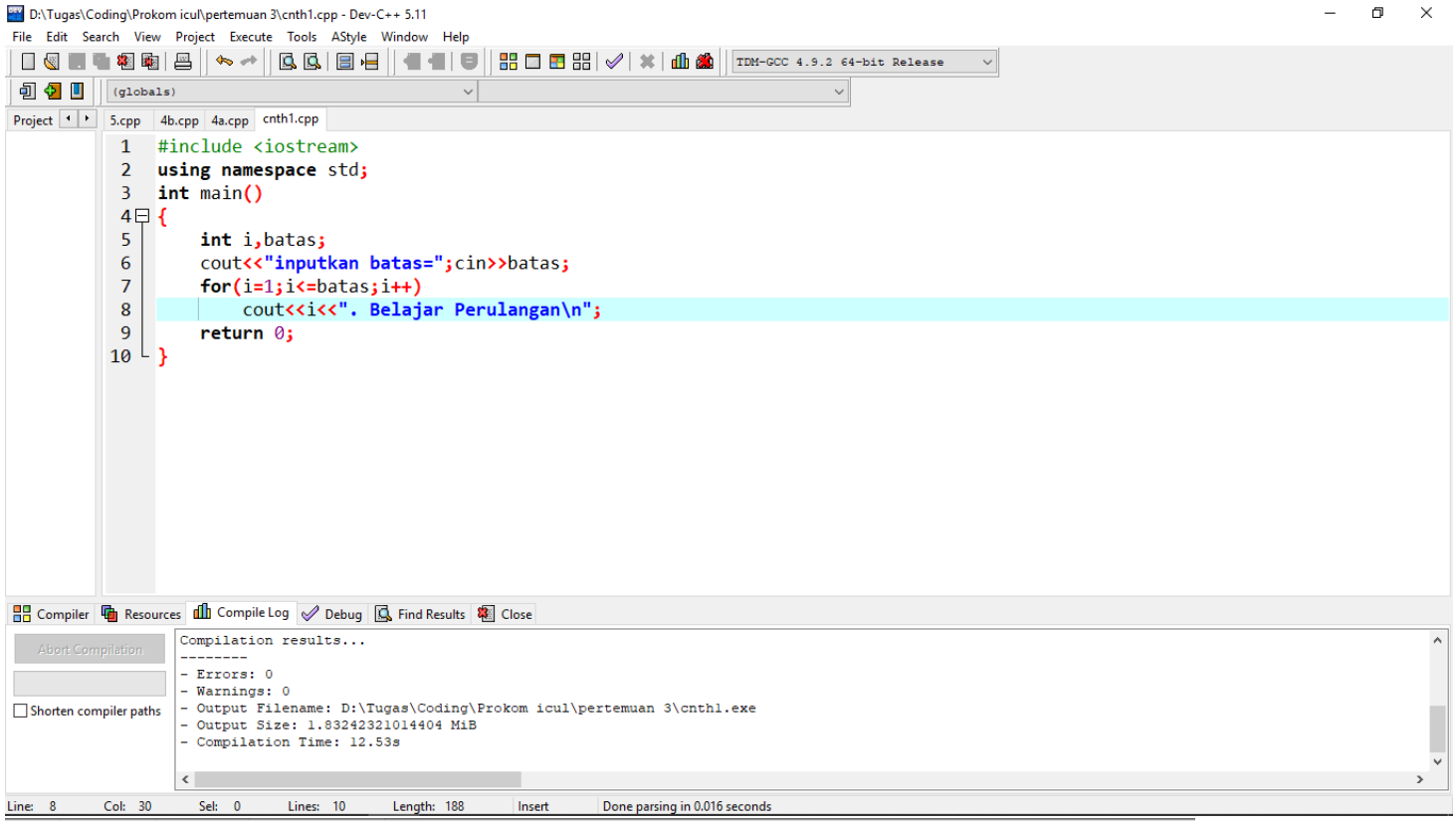
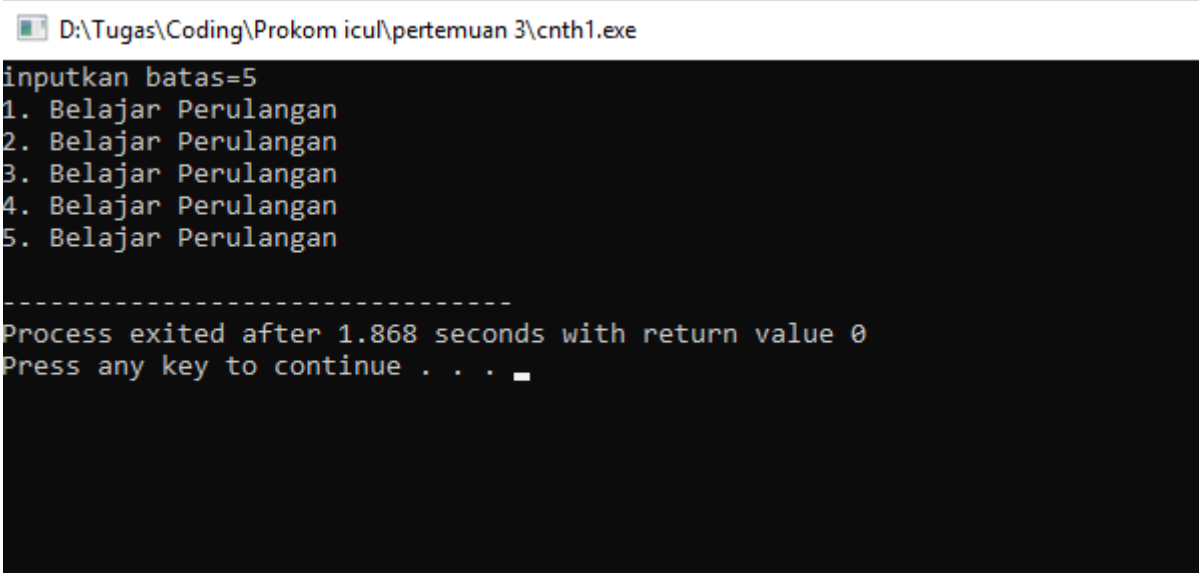
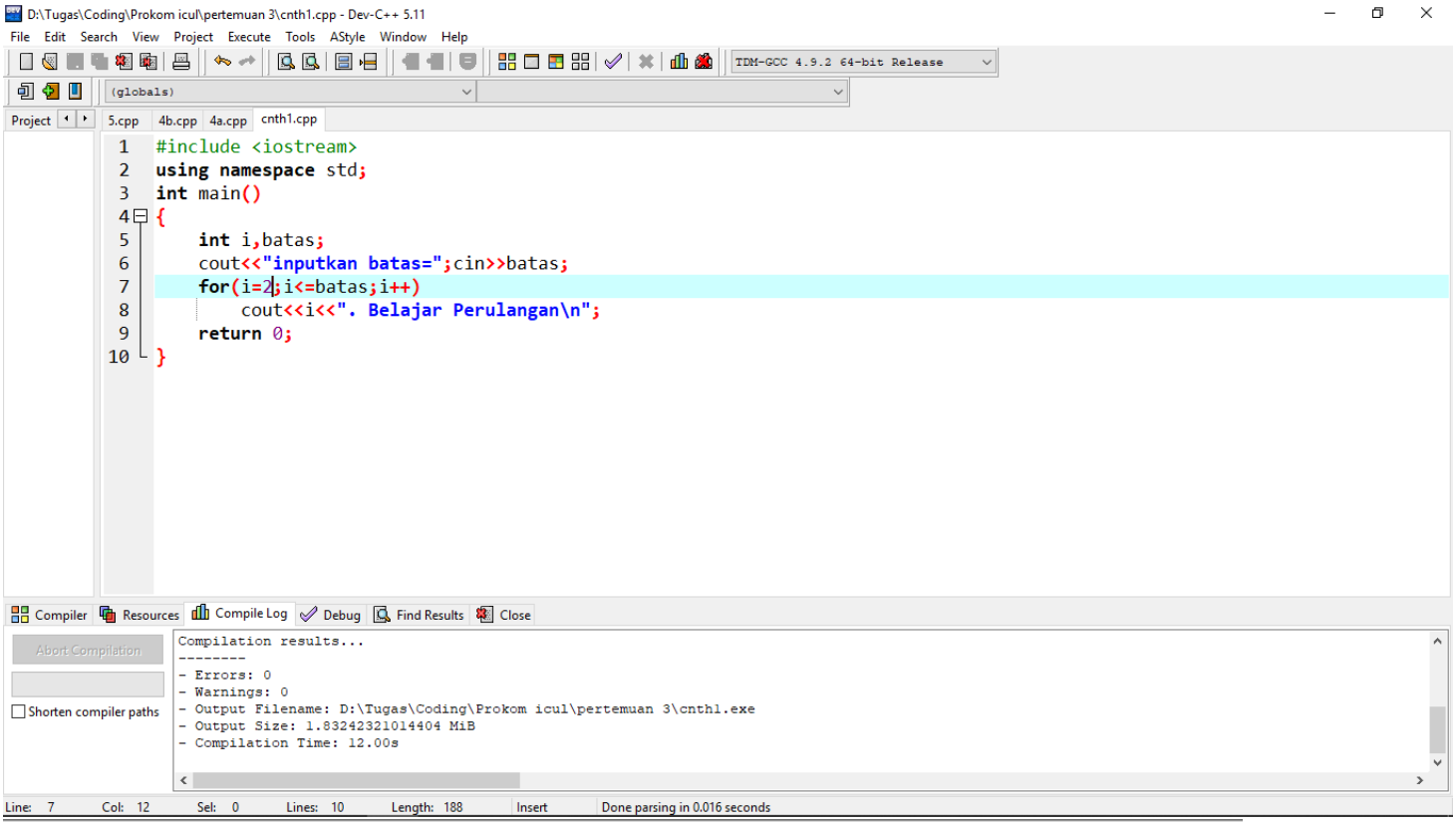
1. Program 1
    a) Salinlah program pada contoh 1 dan jalankan!

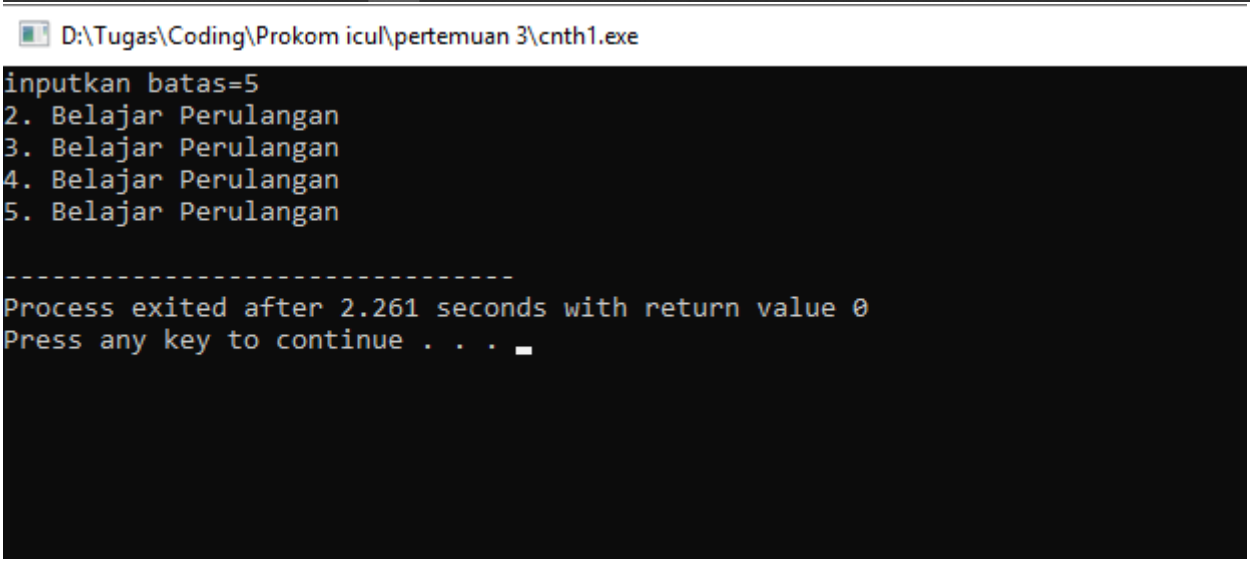




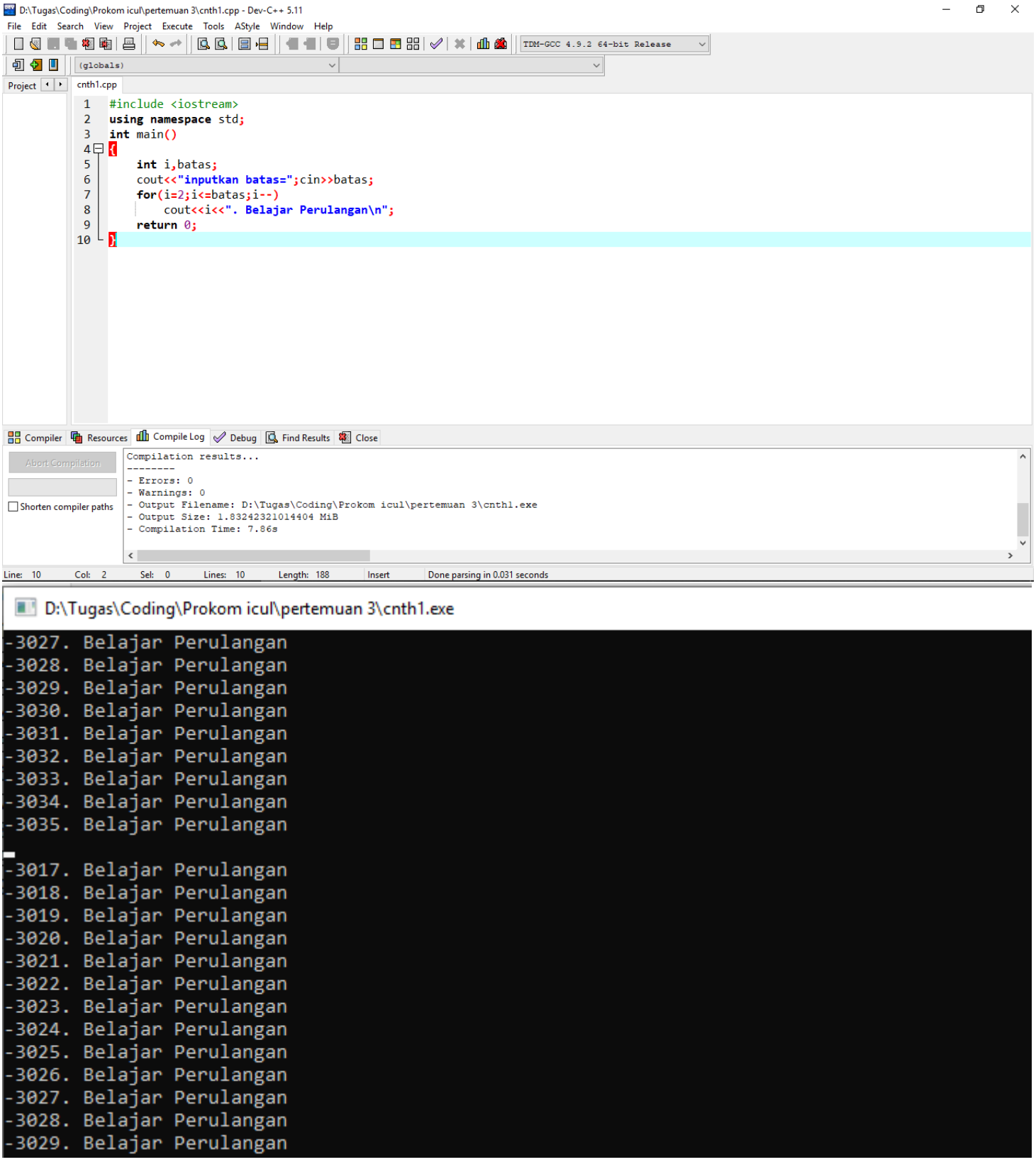


b) Bagaimana output program 1 bila " i=1 diganti dengan "i=2" ; "i++ diganti dengan "i—",i+=1. Apa kesimpulan anda !

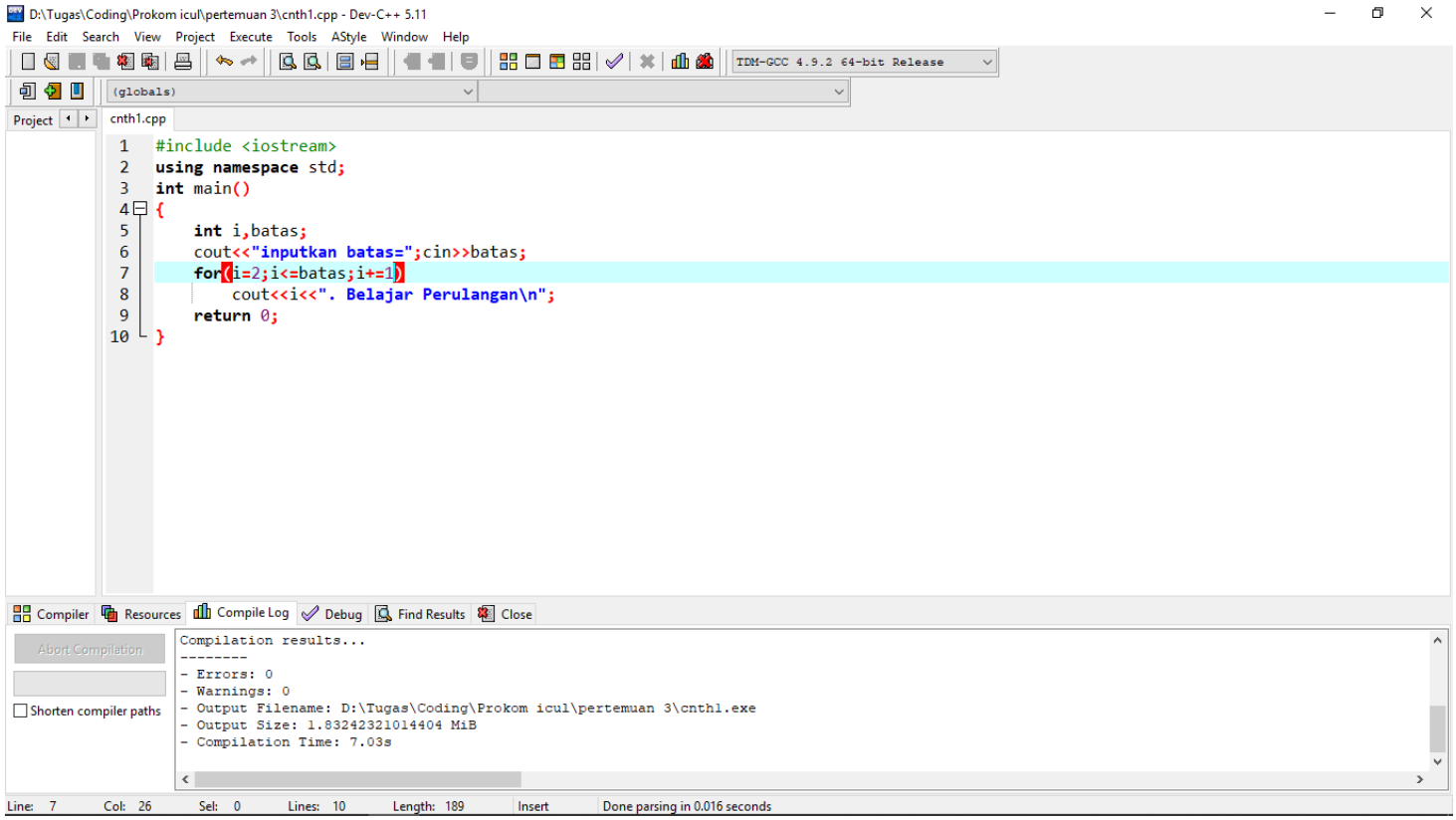


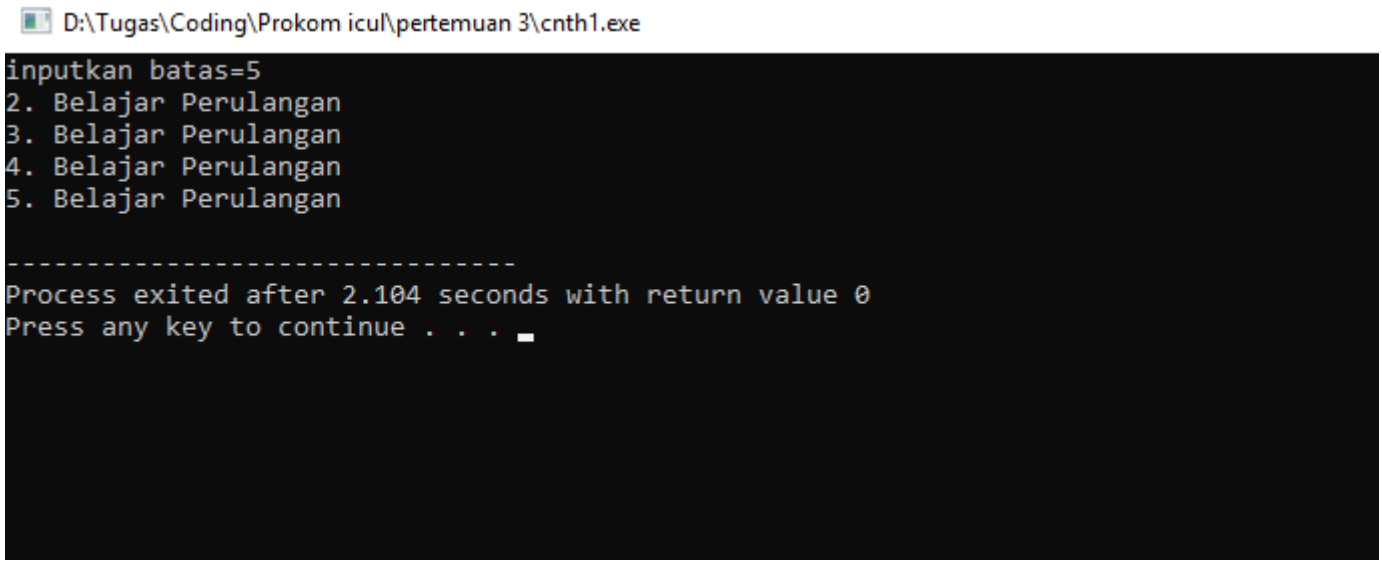


Keterangan = jika nilai i=1 diganti menjadi i=2 , maka proses looping akan dimulai dari angka 2 seperti pada screen yang ditampilkan



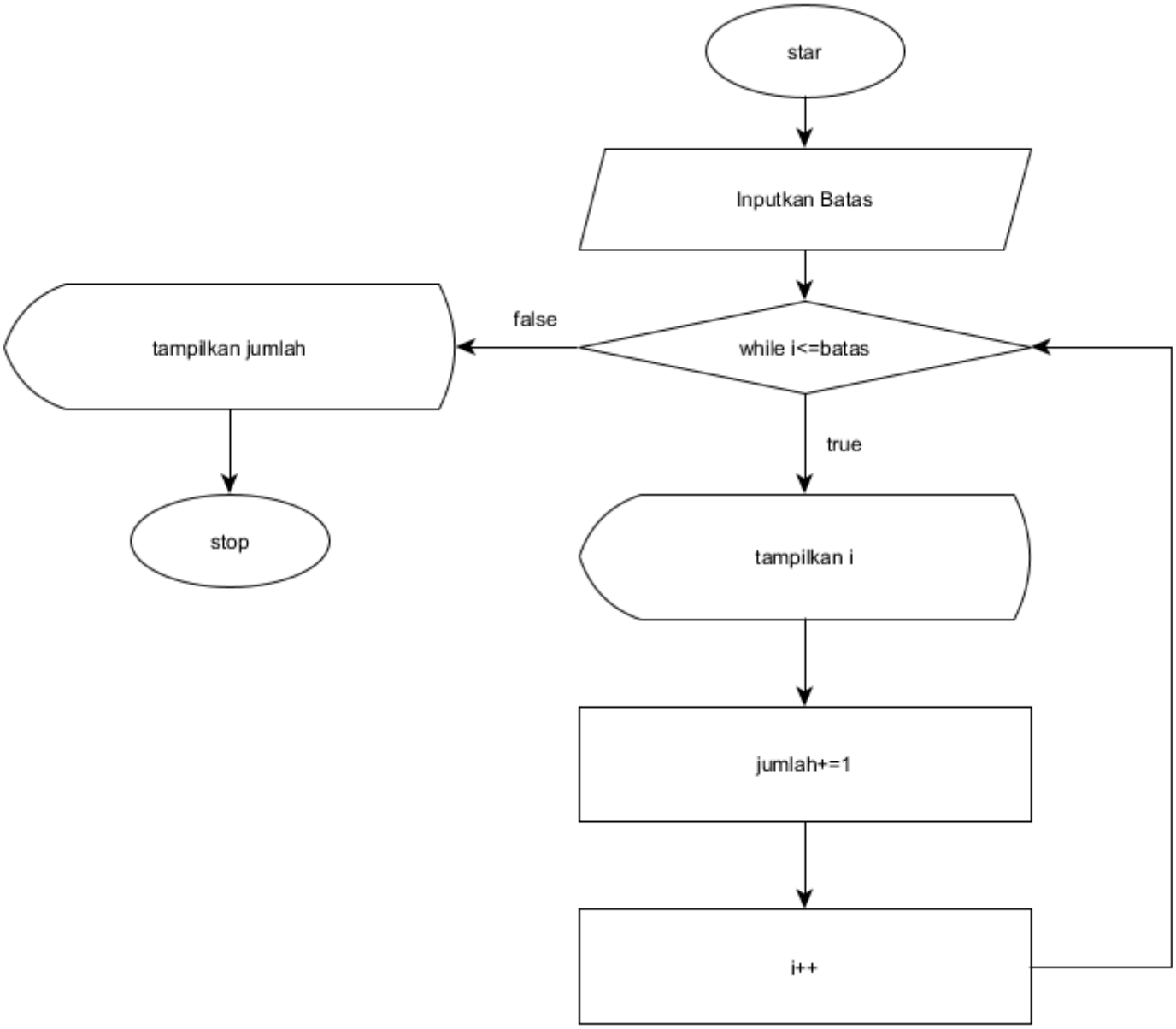
Keterangan = ketika statement proses tidak sesuai dengan statmen batas, maka perulangan akan terjadi hingga batas angka dari type data yang digunakan, seperti permasalahan diatas. Hal ini karena oprator yang digunakan adalah decrement, yang artinya melawan statement 1 dan 2 dari syntax for yang digunakan.

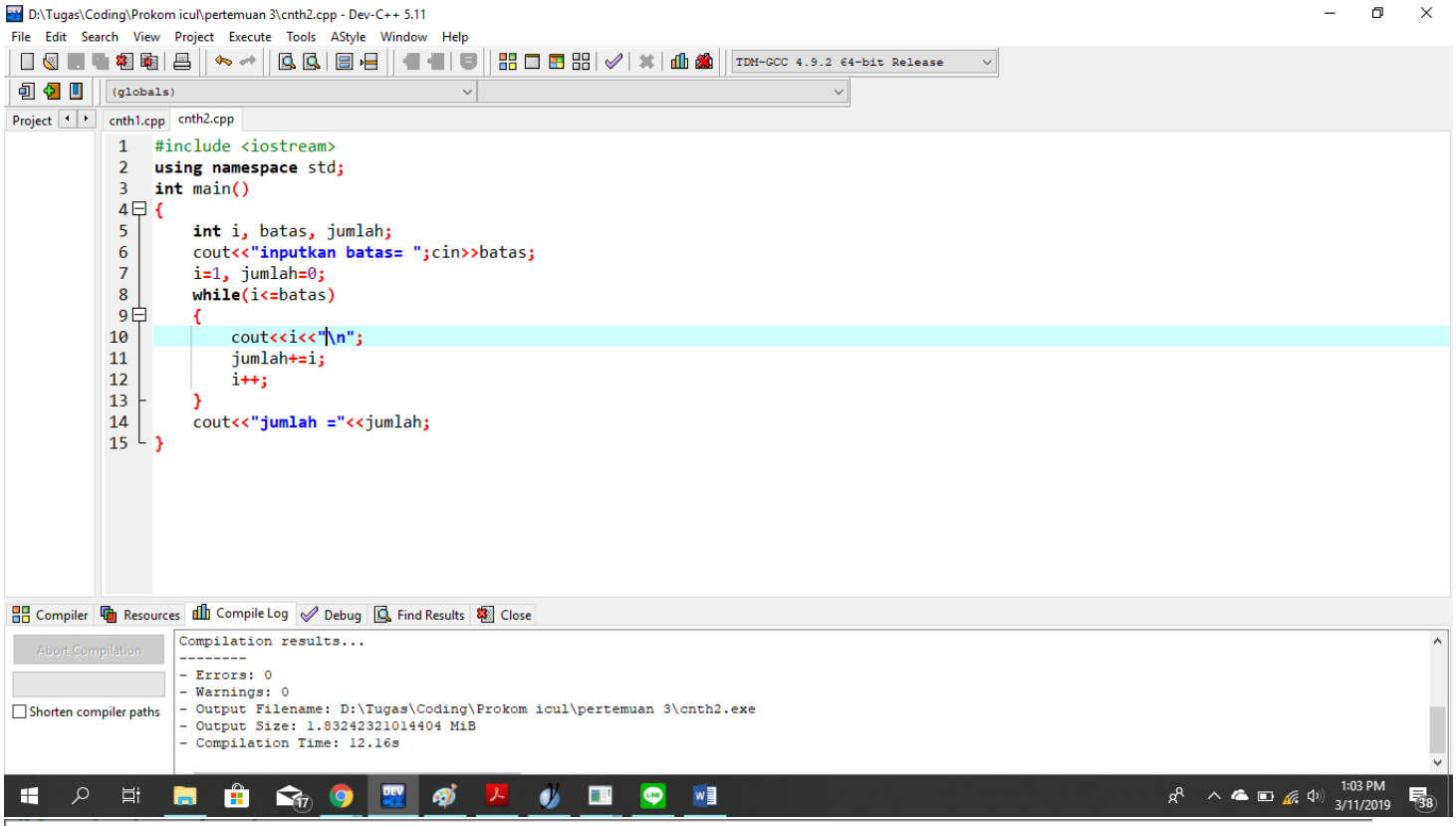


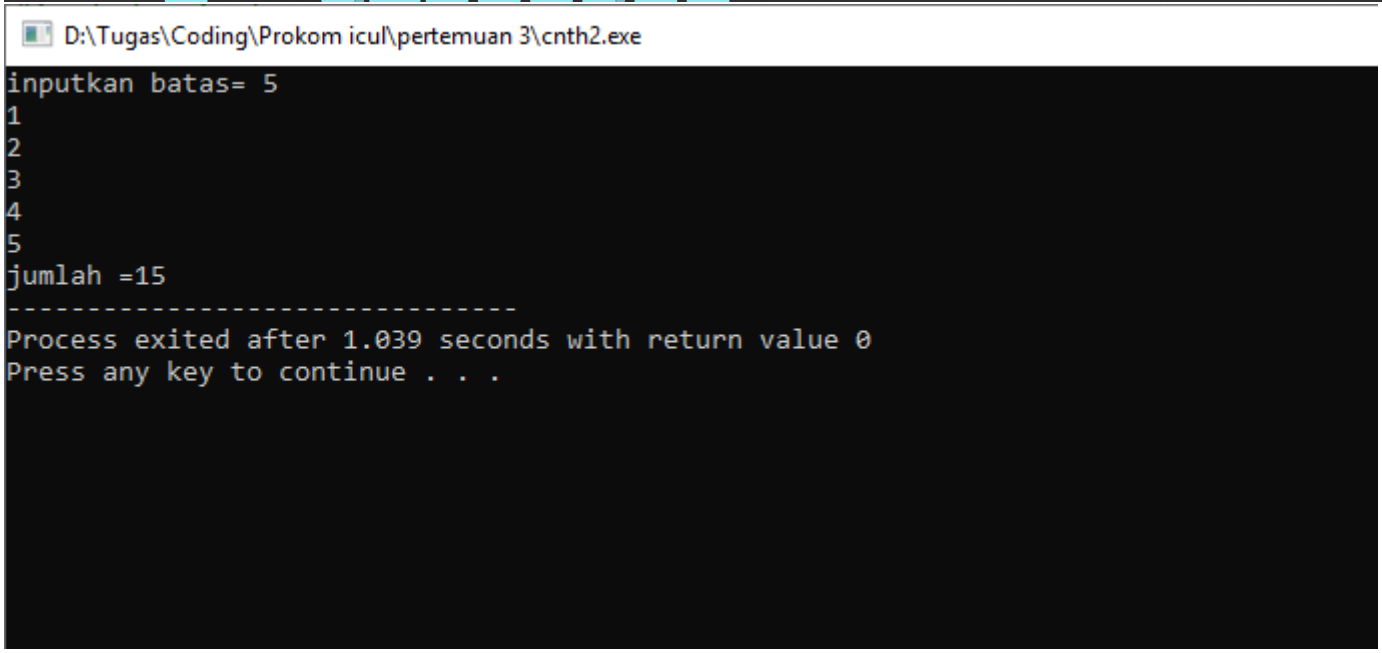


Keterangan = penggunaan opretaor i+=1 menghasilkan proses yang sama dengan i++ sehingga system berjalan sebagaimana mestinya.

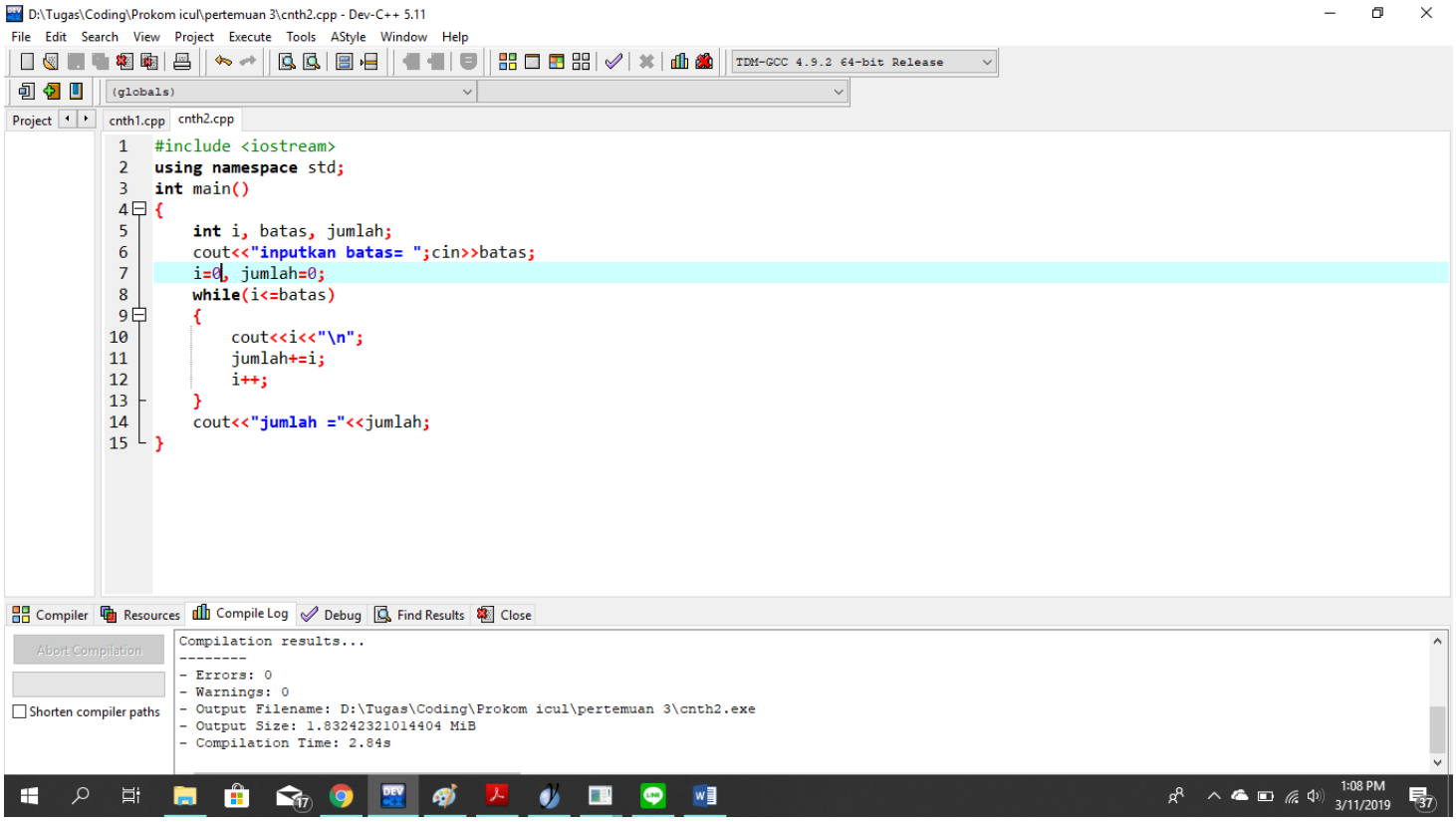
2. Program 2
   a) Salinlah program pada contoh 2 dan jalankan!

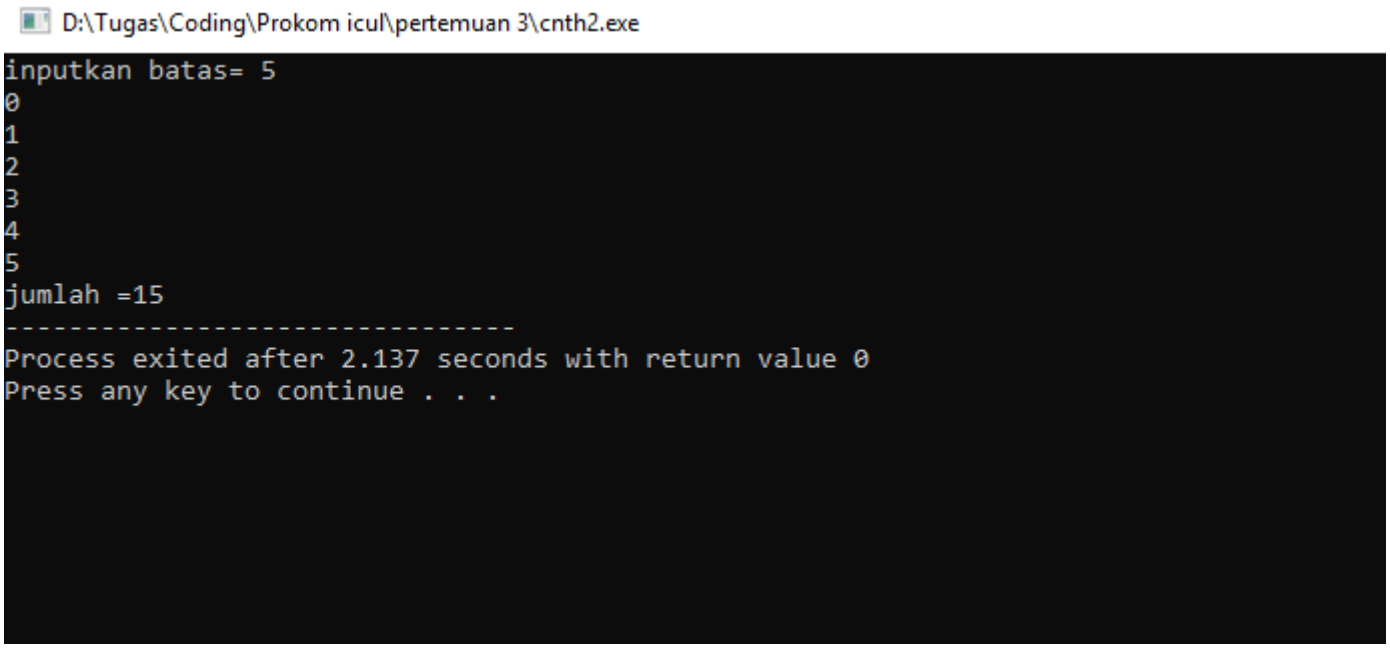

star
Inputkan Batas
while i<=batas
false
tampilkan jumlah
stop
true
tampilkan i
jumlah+=1
i++



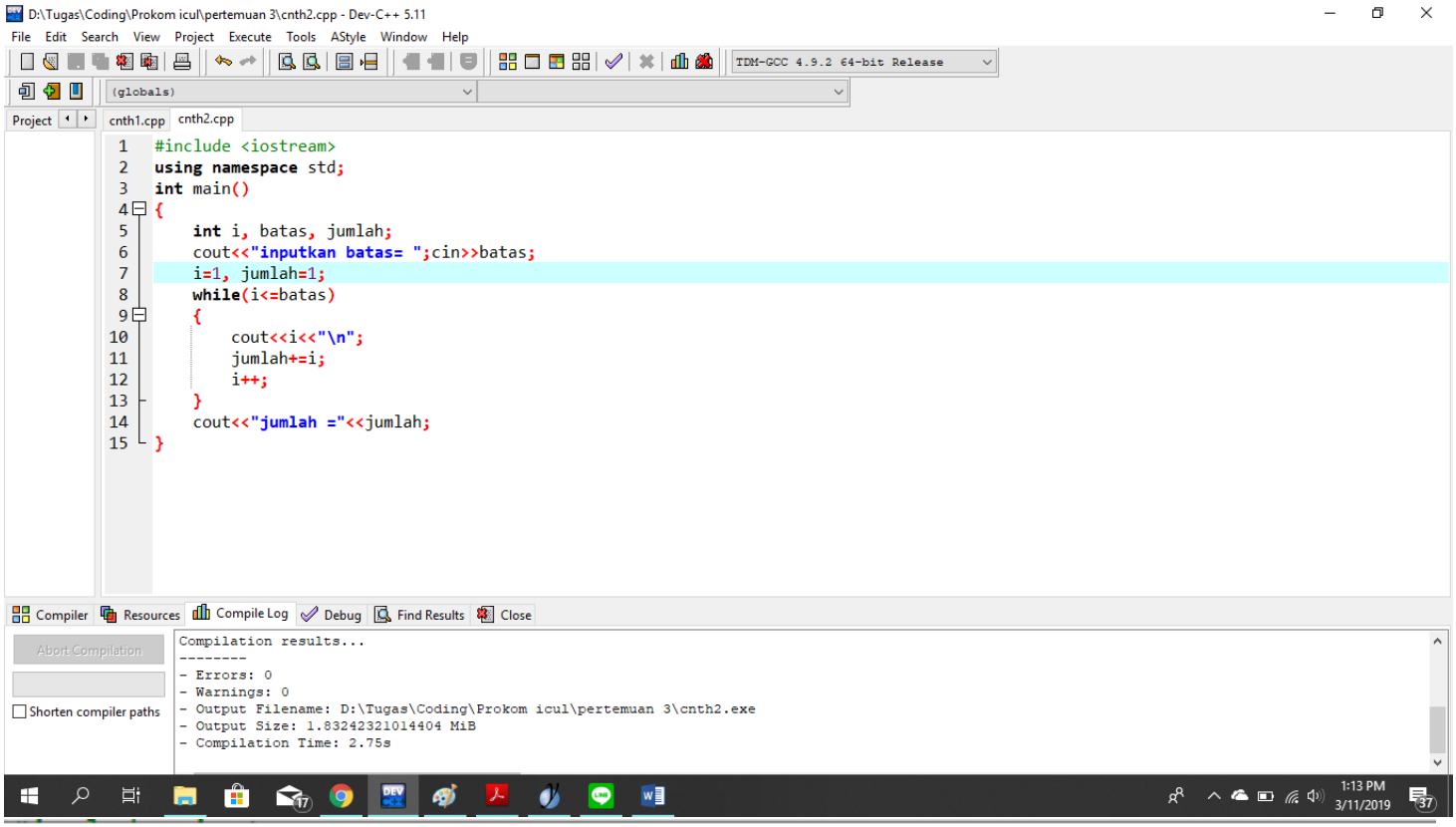


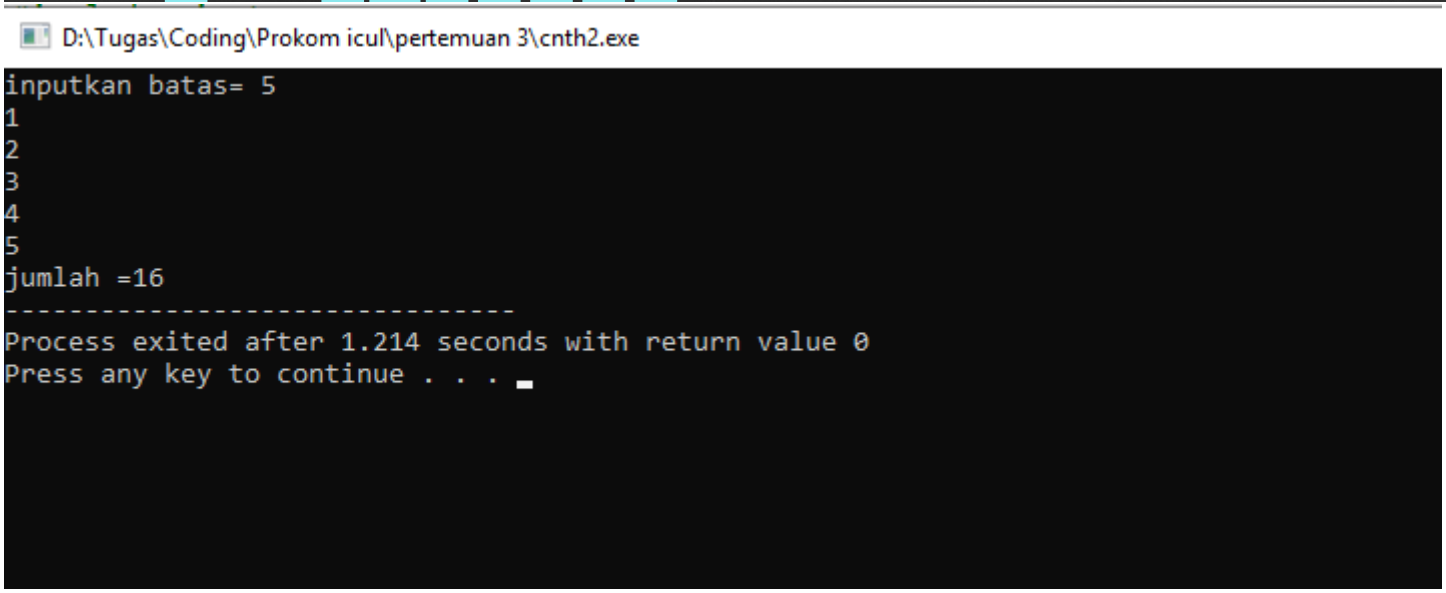
b) Bagaimana output program contoh 2 bila “i=1 diganti dengan “i=0”; jumlah=0 diganti dengan “jumlah=1”. Pelajari dan apa kesimpulan anda?





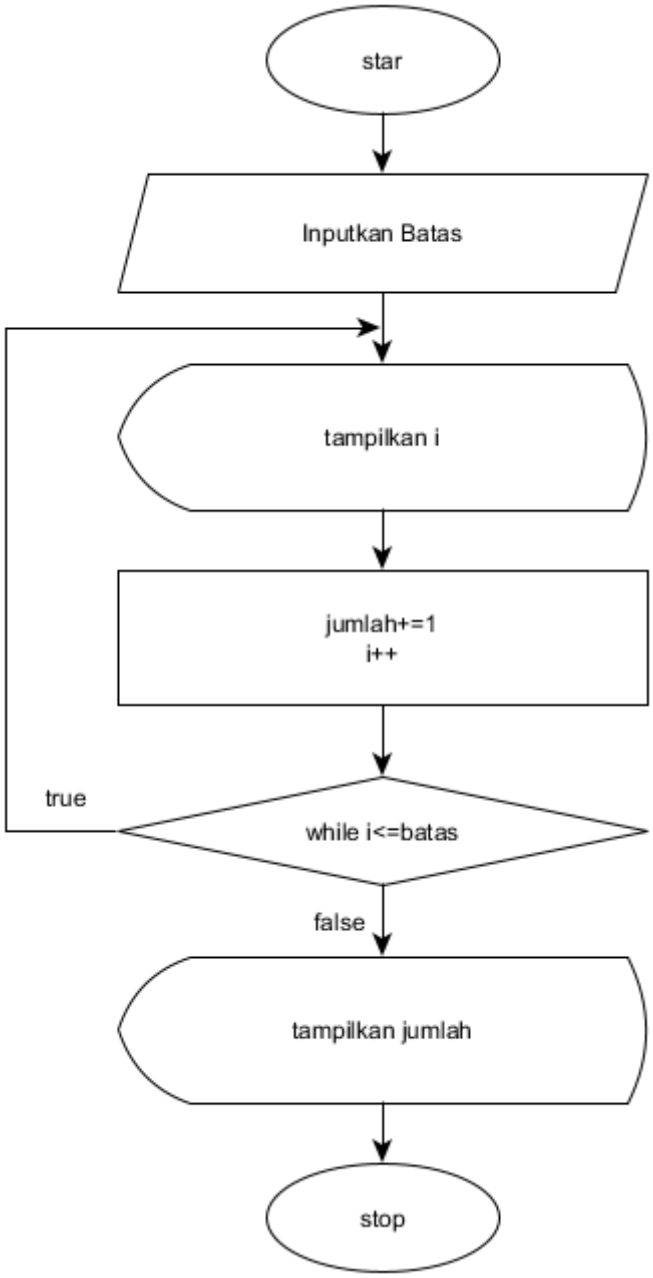
Keterangan = ketika i dirubah menjadi sama dengan 0, maka perulangan program dimulai dari angka 0 dan kemudian berlanjut hingga nilai batas.

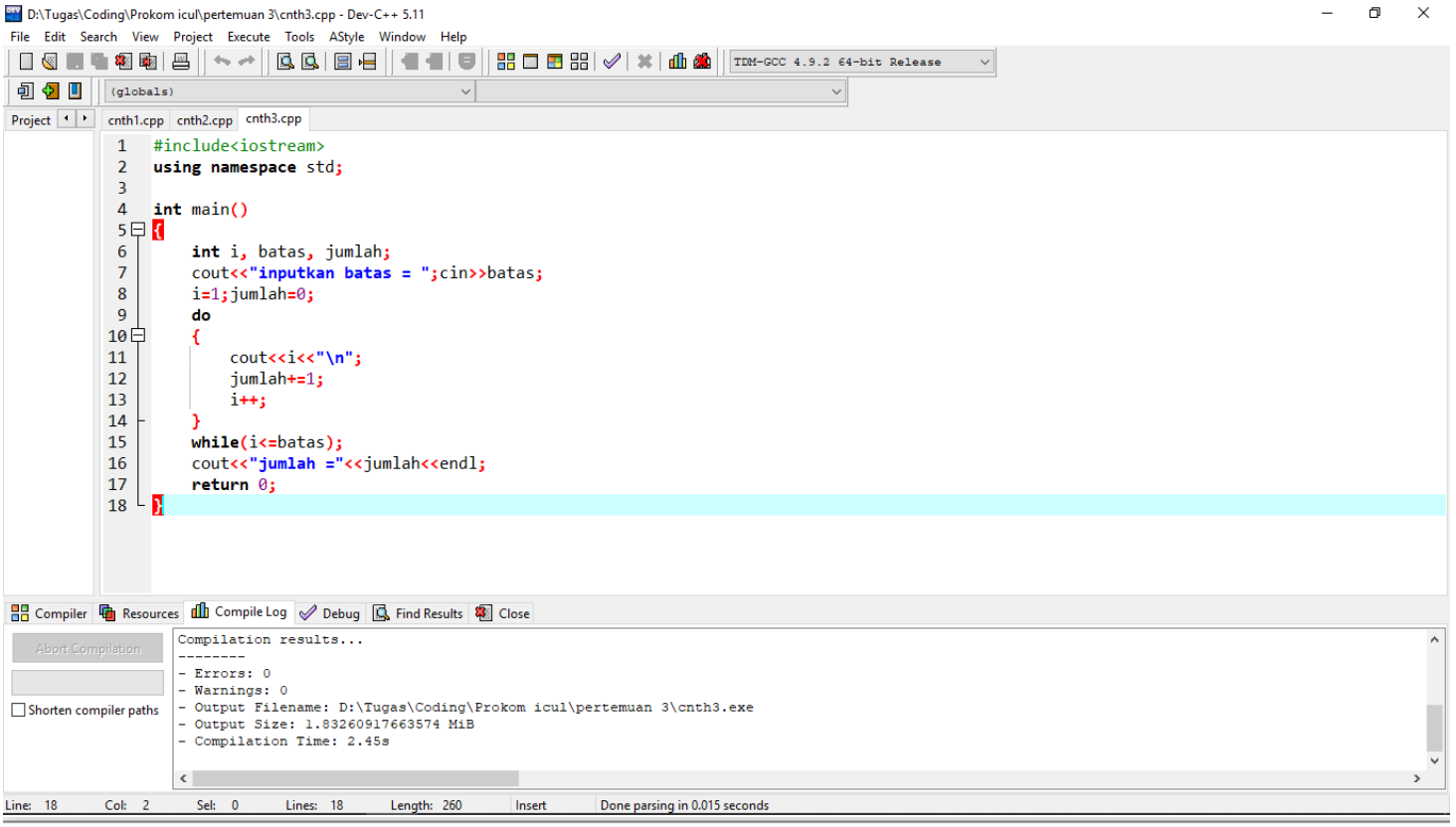


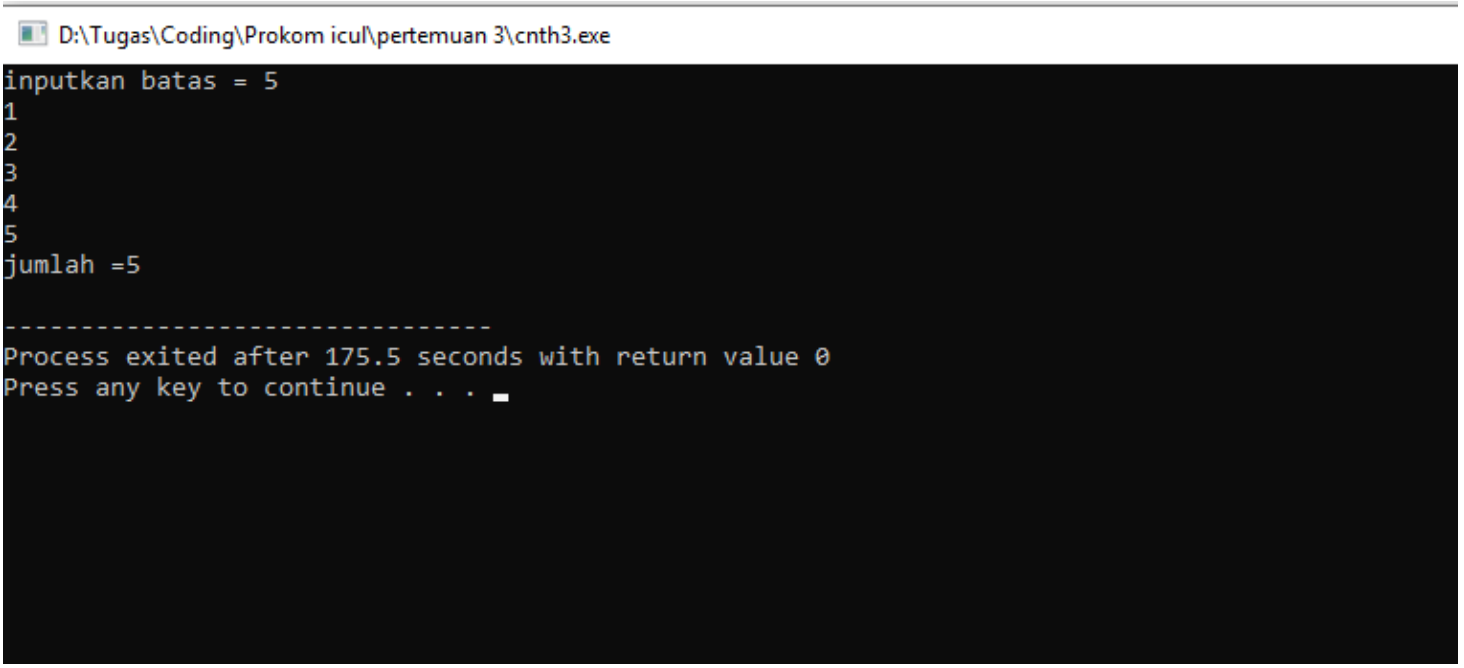


Keterangan = jika inisiasi jumlah dirubah menjadi =1, maka nilai perulangan penjumlahan pada program akan bernilai lebih 1 dari nilai yang seharusnya.

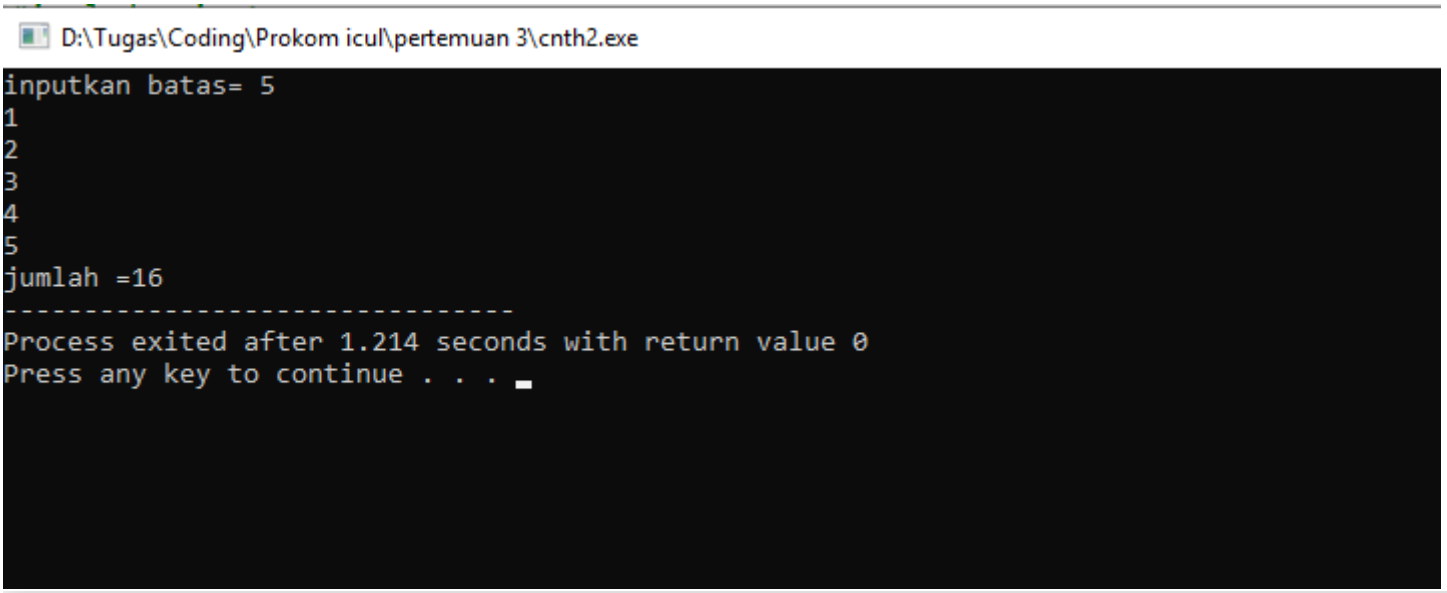
3. Program 3
    a) Salinlah program pada contoh 3 dan jalankan !

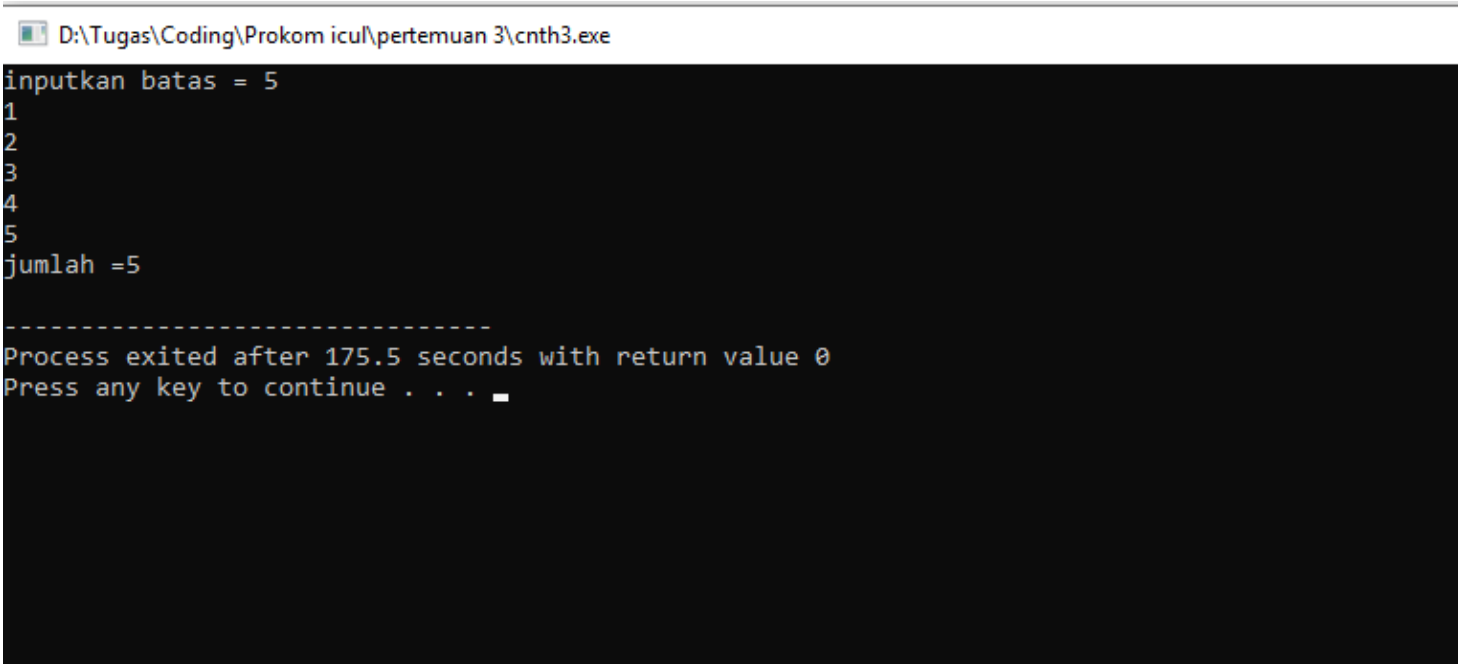

star
Inputkan Batas
tampilkan i
jumlah+=1
i++
true
while i<=batas
false
tampilkan jumlah
stop





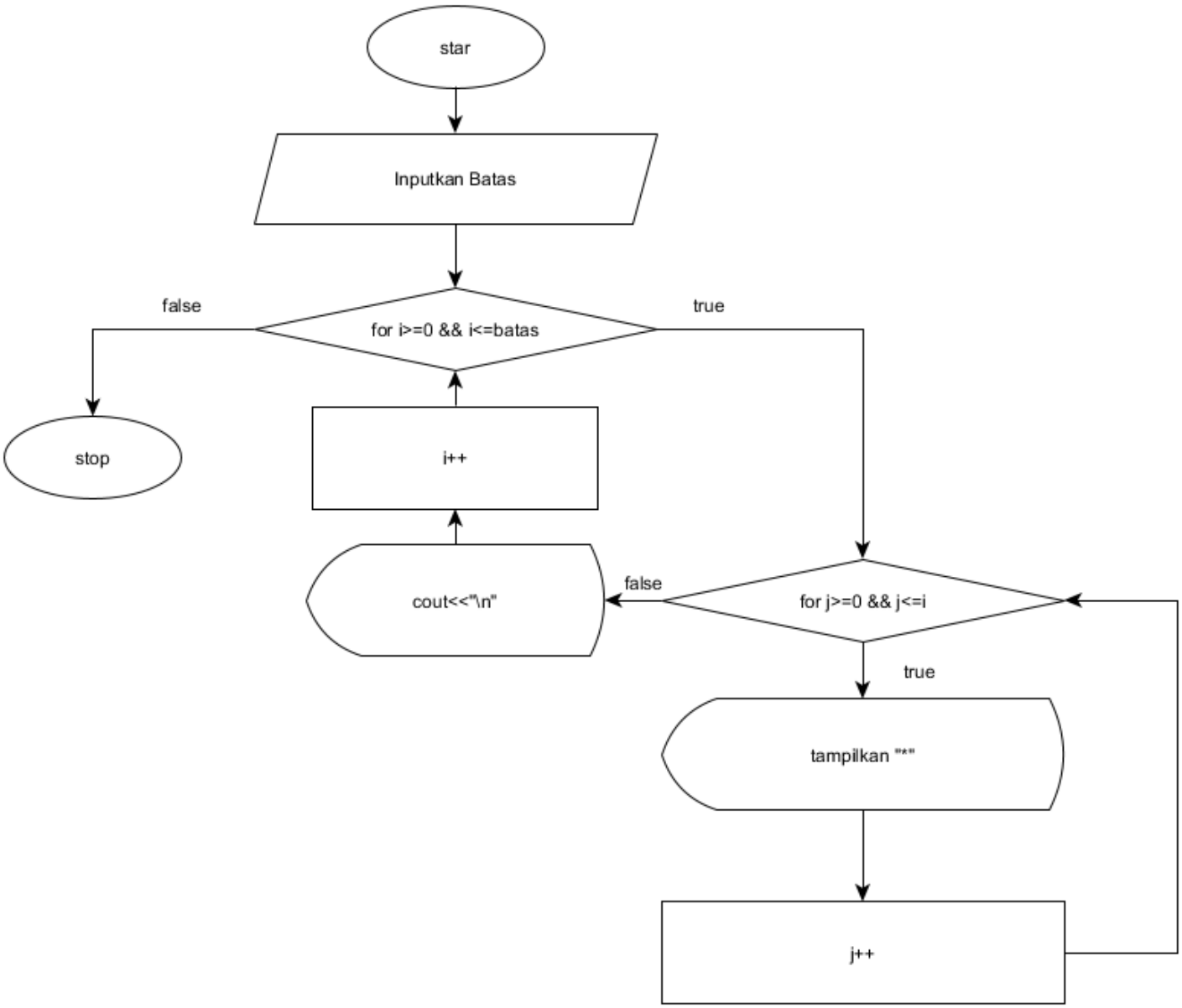
b) Pelajari dan apa perbedaan antara program contoh 2 dan contoh 3? jelaskan!

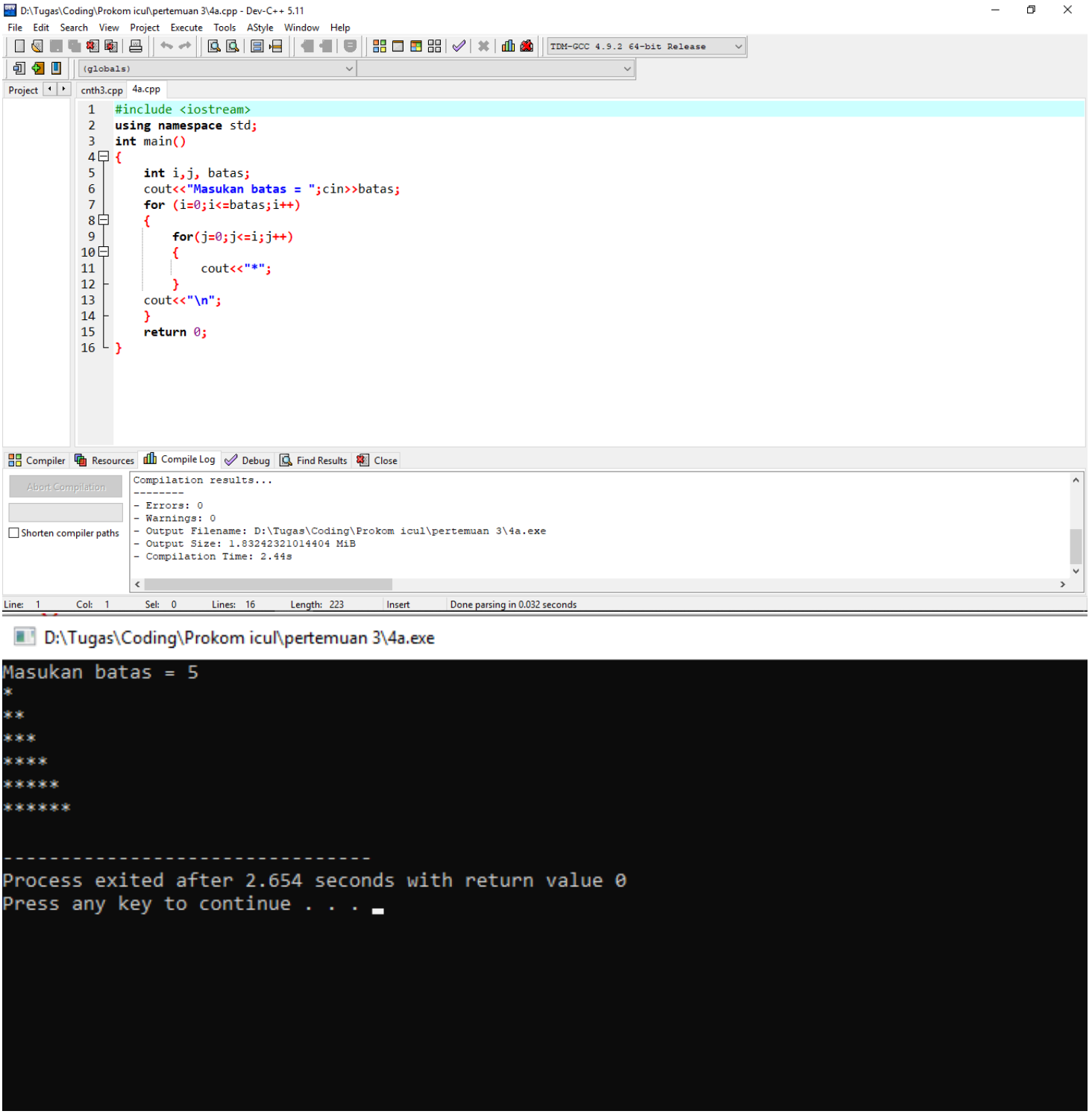




Keterangan = Perbedaan dapat dilihat dari hasil jumlah anatra program 2 dan program 3. Pada program 2, operator masuk kedalam fungsi while, sehingga nilai jumlah akan di update berdasarkan nilai i yang dihasilkan oleh perulangan while tersebut. Sedangkan pada program 3, jumlah yang ditampilkan adalah jumlah terakhir dari i karena jumlah tidak di update dari perulangan while, melainkan masuk kedalam statement do, sehingga nilai awalan variable jumlah selalu 0 tiap terjadi perulangan, dan akan bernilai sama dengan batas perulangan tersebut.

4. Buat program untuk menampilkan pola gambar berikut :
   a) *
      **
      ***
      ****

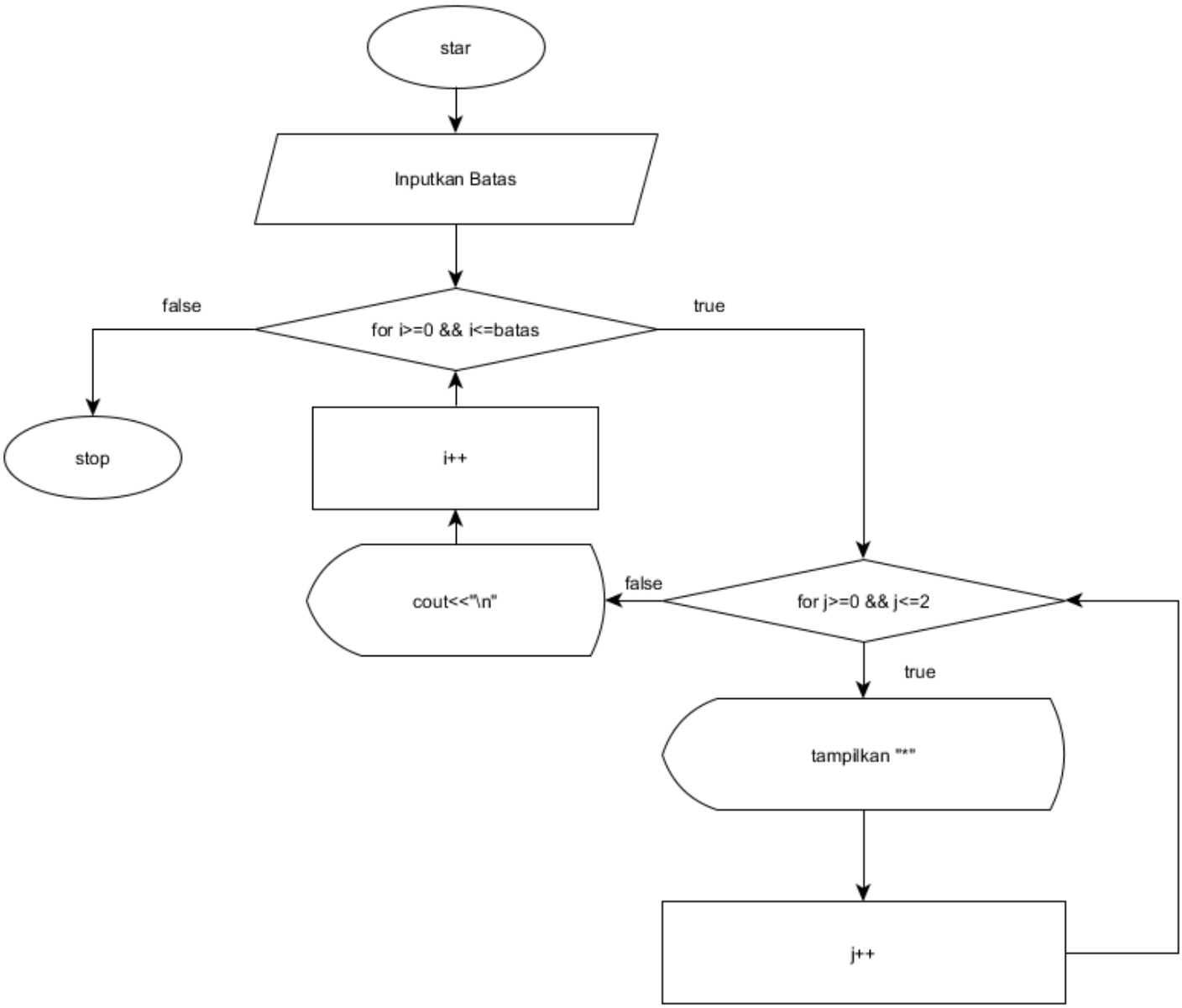

star
Inputkan Batas
false
for i>=0 && i<=batas
true
stop
i++
cout<<"\n"
false
for j>=0 && j<=i
true
tampilkan "*"
j++

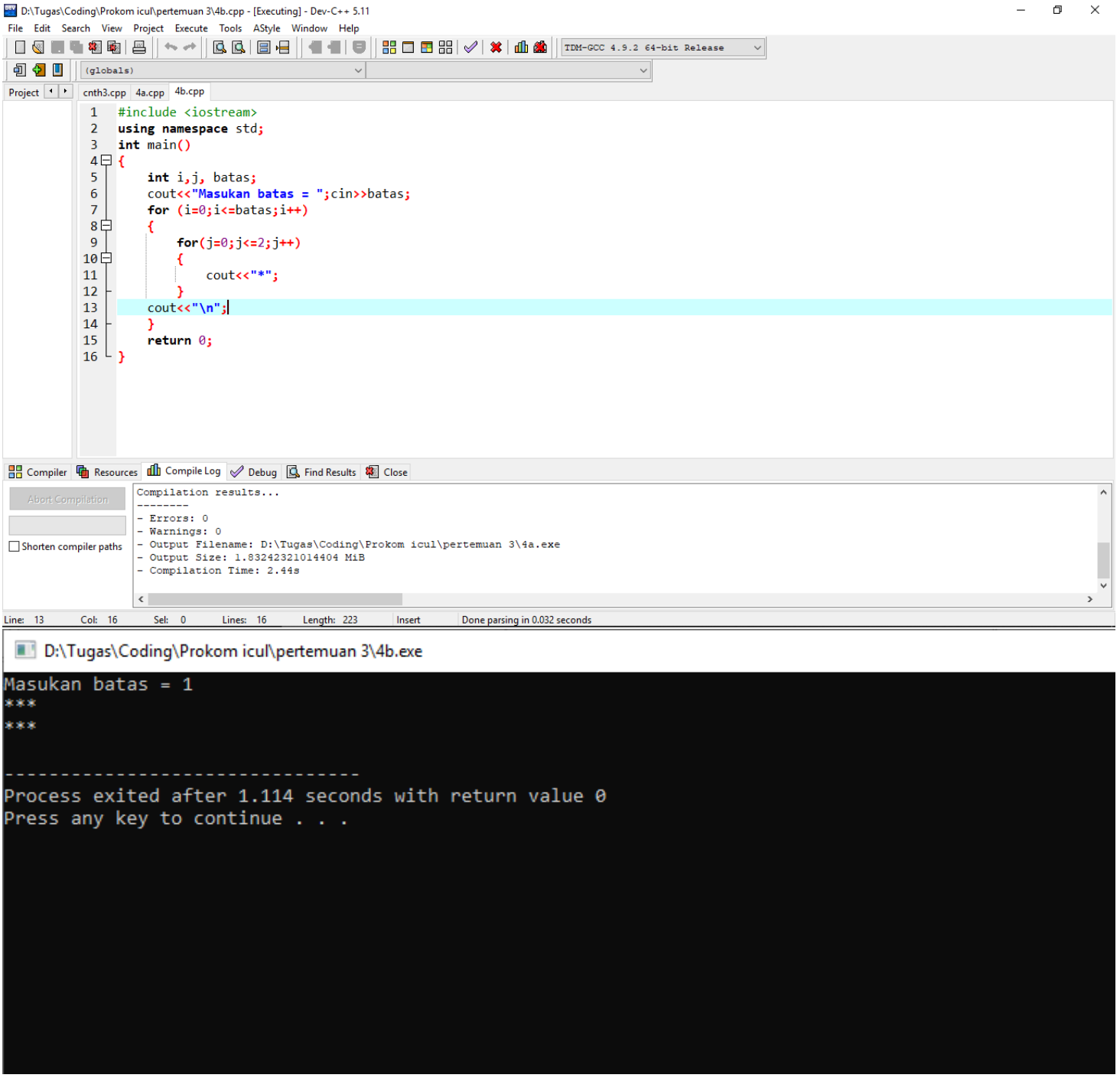

D:\Tugas\Coding\Prokom icul\pertemuan 3\4a.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project
cnth3.cpp
4a.cpp
#include <iostream>
using namespace std;
int main()
{
int i,j, batas;
cout<<"Masukan batas = ";cin>>batas;
for (i=0;i<=batas;i++)
{
for(j=0;j<=i;j++)
{
cout<<"*";
}
cout<<"\n";
}
return 0;
}
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Shorten compiler paths
Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Tugas\Coding\Prokom icul\pertemuan 3\4a.exe
- Output Size: 1.83242321014404 MiB
- Compilation Time: 2.44s
Line: 1 Col: 1 Sel: 0 Lines: 16 Length: 223 Insert Done parsing in 0.032 seconds
D:\Tugas\Coding\Prokom icul\pertemuan 3\4a.exe
Masukan batas = 5
*
**
***
****
*****
******

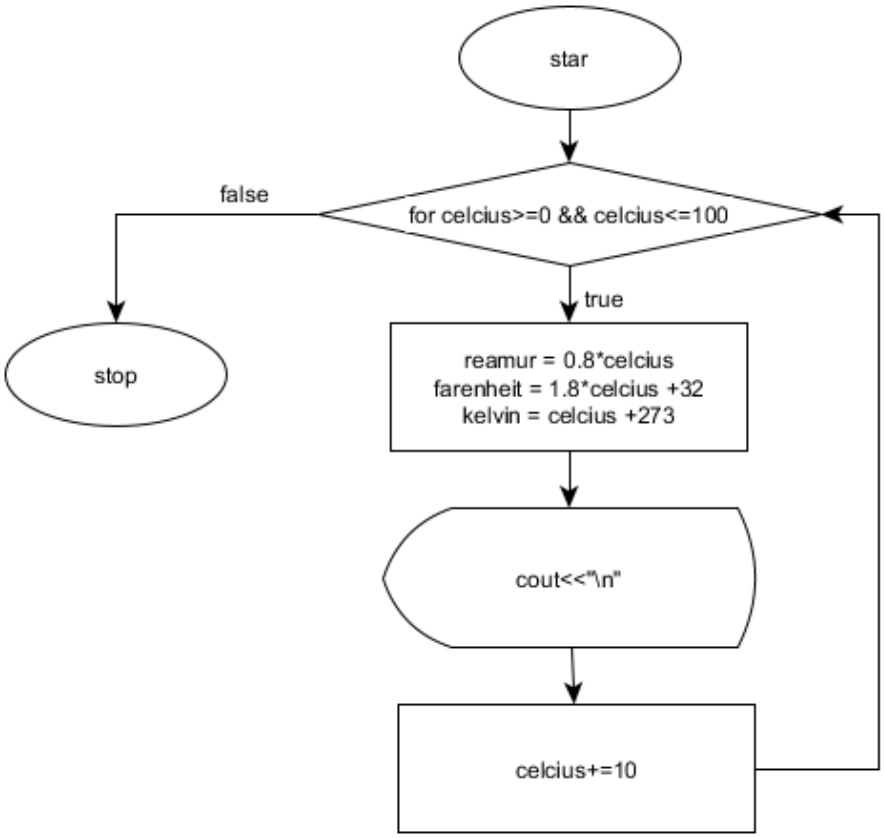
Process exited after 2.654 seconds with return value 0
Press any key to continue . . .

b) ***
***


star
Inputkan Batas
for i>=0 && i<=batas
false
true
stop
i++
cout<<"\n"
false
for j>=0 && j<=2
true
tampilkan "*"
j++



5. Buat program untuk menampilan table konversi suhu dari satuan celcius ke reamur, Fahrenheit dan kelvin. Suhu dari 0^{o} sampai 100^{o} C dengan kenaikan 10^{o} C.



D:\Tugas\Coding\Prokom icul\pertemuan 3\5.cpp - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 4.9.2 64-bit Release

(globals)

Project 5.cpp

```
1  //Konversi Suhu
2  #include <iostream>
3  #include <iomanip>
4  using namespace std;
5  int main()
6  {
7      float celcius, reamur,farenheit,kelvin;
8      cout<<"  Tabel Konversi Suhu\n";
9      cout<<"-------------------------\n";
10     for(int celcius=0;celcius<=100;celcius+=10)
11     {
12         reamur=4*celcius/5;
13         farenheit=9*celcius/5 +32;
14         kelvin=celcius +273;
15         cout<<setw(4)<<celcius<<setw(7)<<reamur<<setw(7)<<farenheit<<setw(7)<<kelvin<<endl;
16     }
17     cout<<"-------------------------\n";
18     return 0;
19 }
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

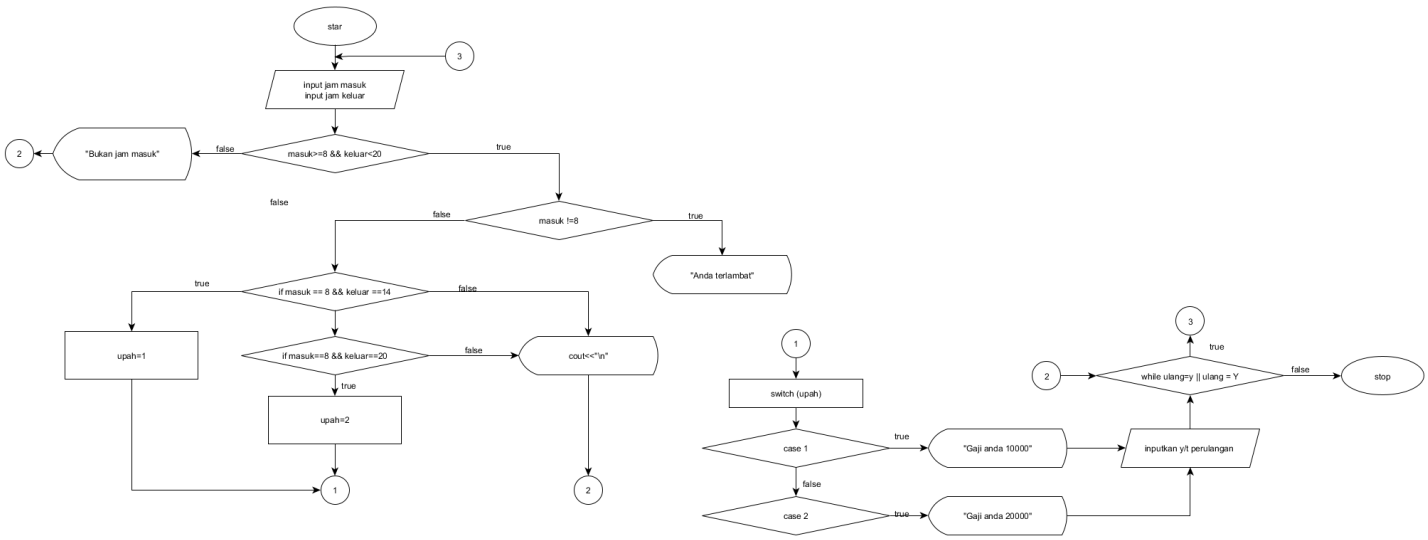
Shorten compiler paths

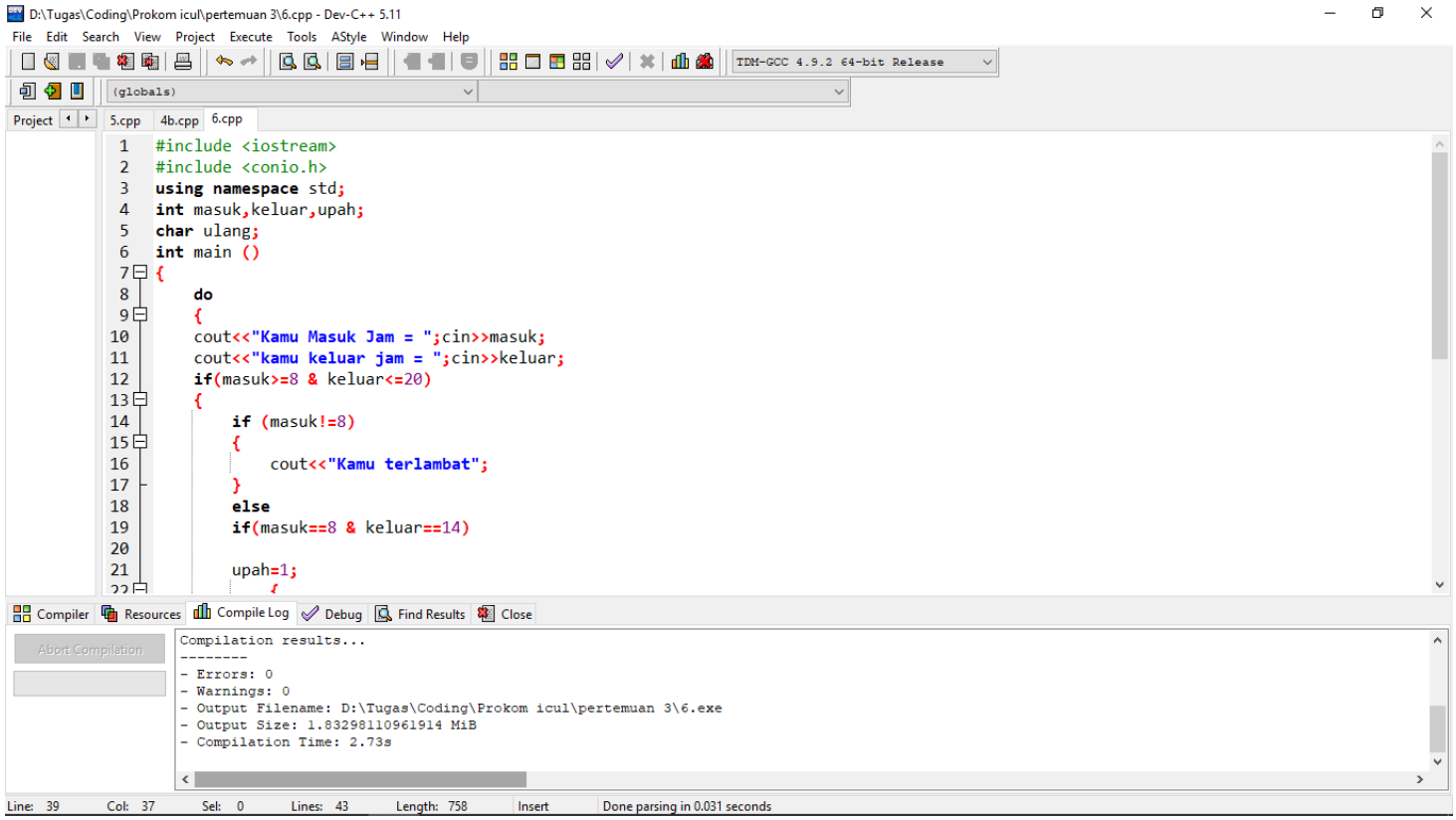
```
Compilation results...
--------
- Errors: 0
- Warnings: 0
- Output Filename: D:\Tugas\Coding\Prokom icul\pertemuan 3\5.exe
- Output Size: 1.83327865600586 MiB
- Compilation Time: 2.22s
```

Line: 19 Col: 2 Sel: 0 Lines: 19 Length: 485 Insert Done parsing in 0.016 seconds

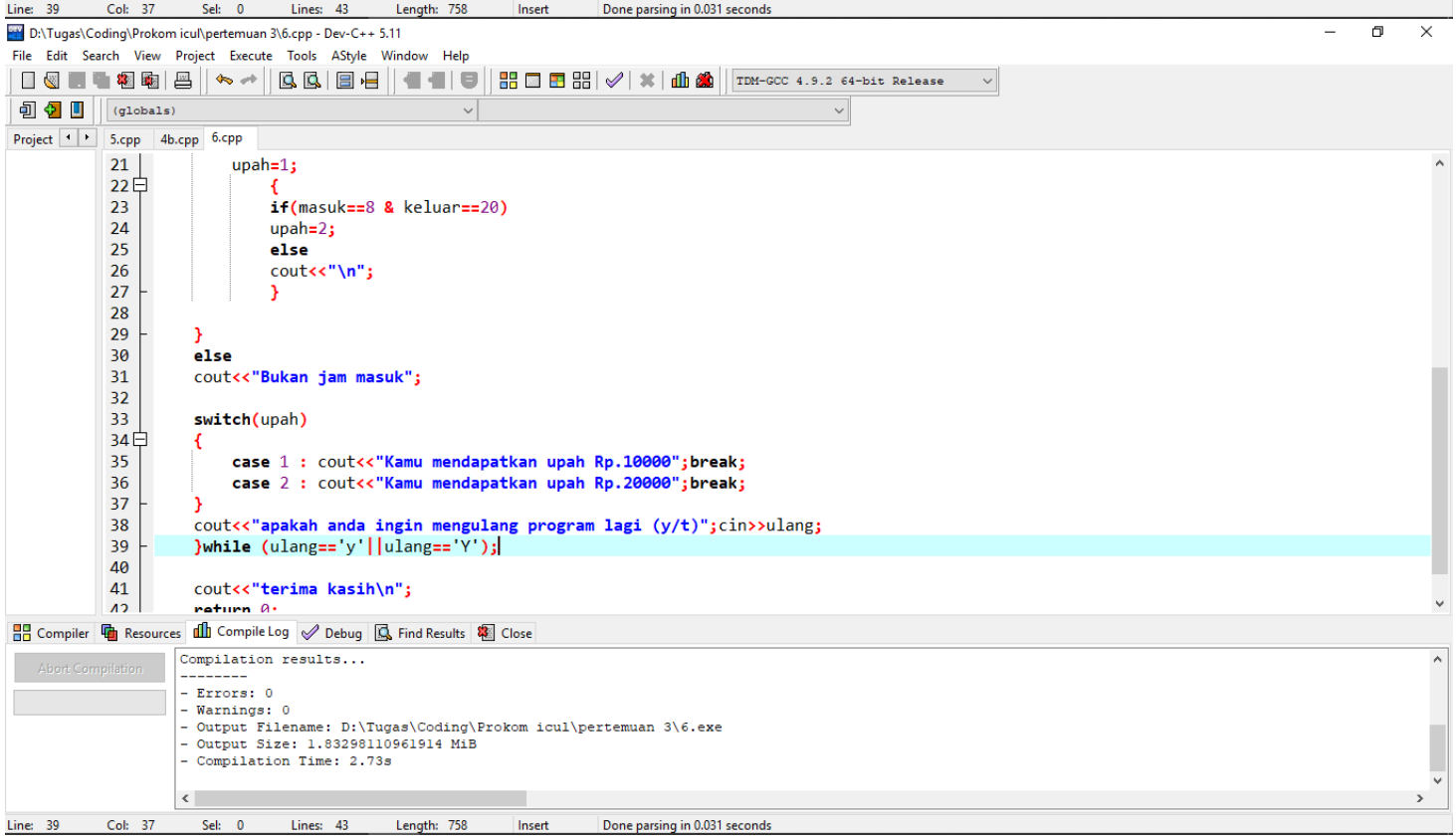
```
D:\Tugas\Coding\Prokom icul\pertemuan 3\5.exe
  Tabel Konversi Suhu
-------------------------
   0      0     32    273
  10      8     50    283
  20     16     68    293
  30     24     86    303
  40     32    104    313
  50     40    122    323
  60     48    140    333
  70     56    158    343
  80     64    176    353
  90     72    194    363
 100     80    212    373
-------------------------

--------------------------------
Process exited after 0.1039 seconds with return value 0
Press any key to continue . . .
```

6. Modifikasi tugas praktikum no 5 pada modul 2 menggunakan perulangan untuk mengkonfirmasi apakah user akan menghitung upah karyawan lagi(y/t)
7. 


D:\Tugas\Coding\Prokom icul\pertemuan 3\6.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project
5.cpp 4b.cpp 6.cpp
#include <iostream>
#include <conio.h>
using namespace std;
int masuk,keluar,upah;
char ulang;
int main ()
{
do
{
cout<<"Kamu Masuk Jam = ";cin>>masuk;
cout<<"kamu keluar jam = ";cin>>keluar;
if(masuk>=8 & keluar<=20)
{
if (masuk!=8)
{
cout<<"Kamu terlambat";
}
else
if(masuk==8 & keluar==14)
upah=1;
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Tugas\Coding\Prokom icul\pertemuan 3\6.exe
- Output Size: 1.83298110961914 MiB
- Compilation Time: 2.73s
Line: 39 Col: 37 Sel: 0 Lines: 43 Length: 758 Insert Done parsing in 0.031 seconds

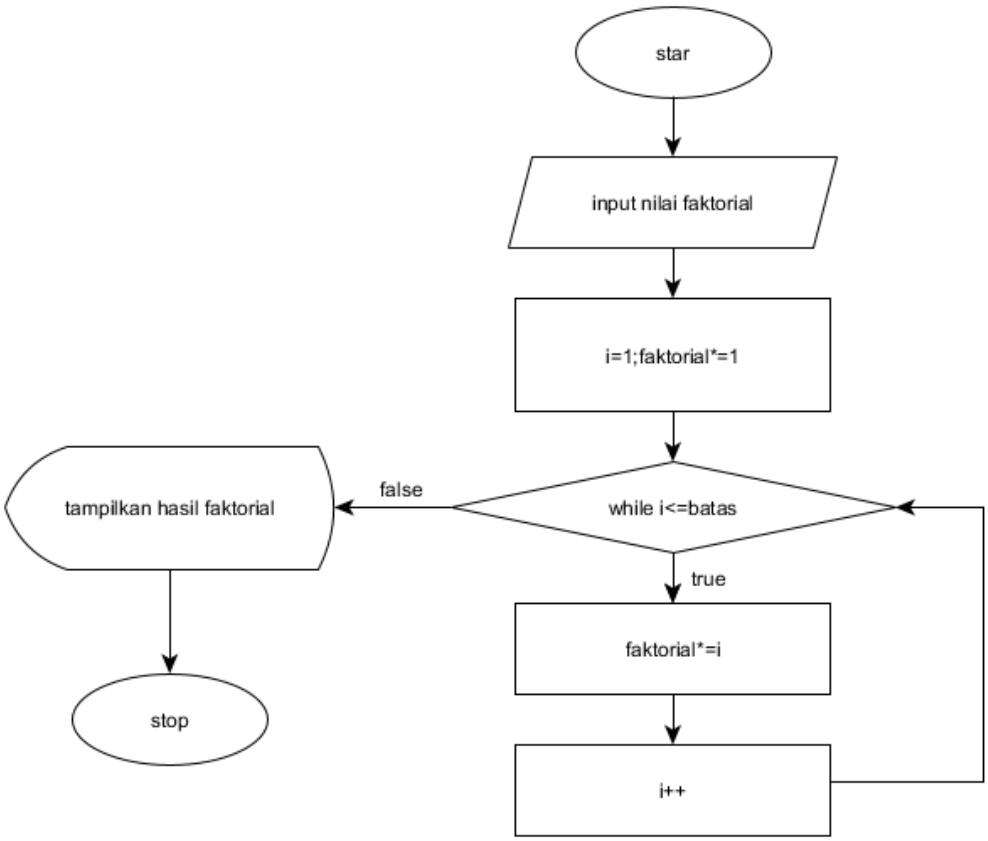

D:\Tugas\Coding\Prokom icul\pertemuan 3\6.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project
5.cpp 4b.cpp 6.cpp
upah=1;
{
if(masuk==8 & keluar==20)
upah=2;
else
cout<<"\n";
}
}
else
cout<<"Bukan jam masuk";
switch(upah)
{
case 1 : cout<<"Kamu mendapatkan upah Rp.10000";break;
case 2 : cout<<"Kamu mendapatkan upah Rp.20000";break;
}
cout<<"apakah anda ingin mengulang program lagi (y/t)";cin>>ulang;
}while (ulang=='y'||ulang=='Y');
cout<<"terima kasih\n";
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Compilation results...

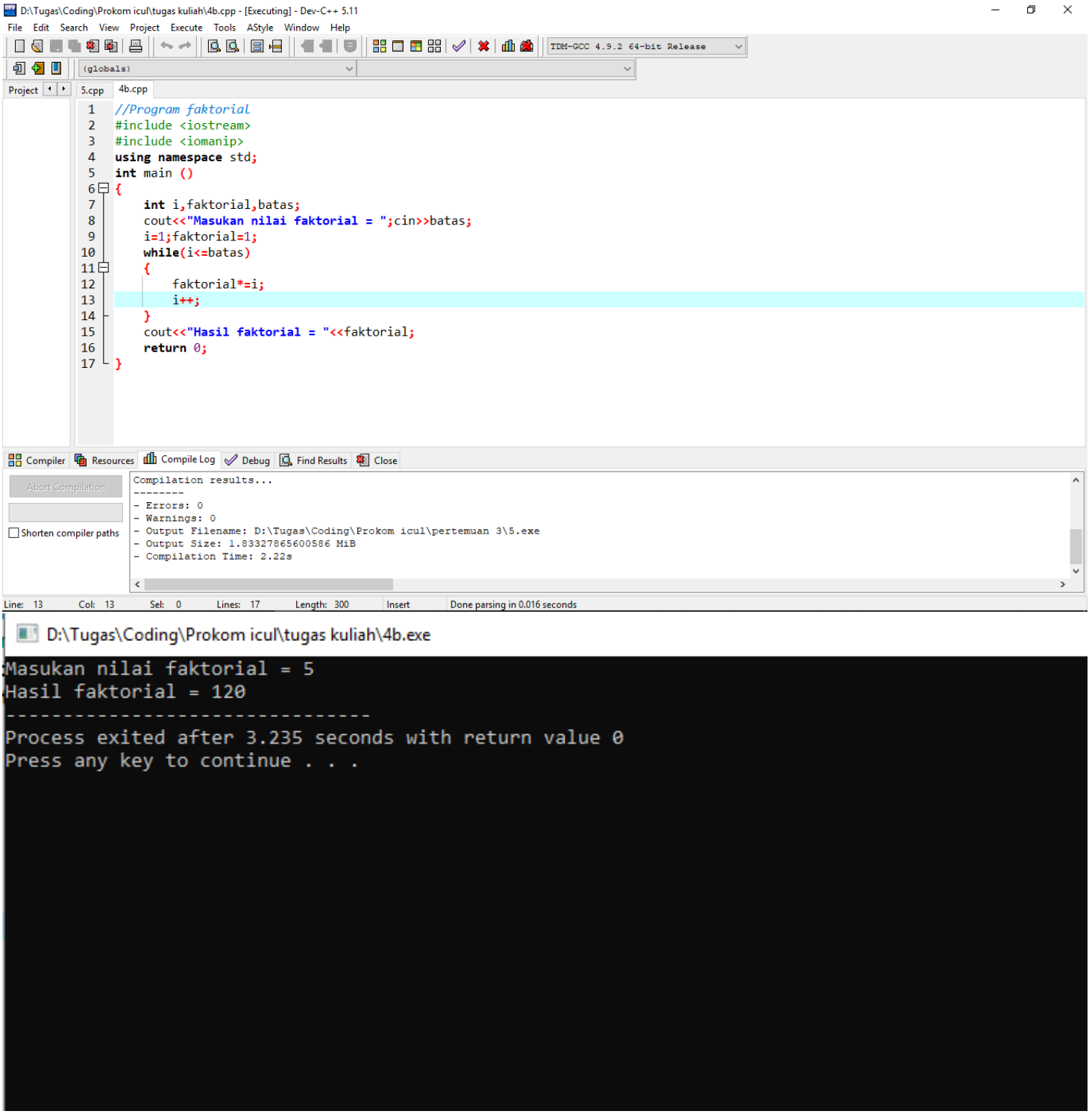
- Errors: 0
- Warnings: 0
- Output Filename: D:\Tugas\Coding\Prokom icul\pertemuan 3\6.exe
- Output Size: 1.83298110961914 MiB
- Compilation Time: 2.73s
Line: 39 Col: 37 Sel: 0 Lines: 43 Length: 758 Insert Done parsing in 0.031 seconds

```
D:\Tugas\Coding\Prokom icul\pertemuan 3\6.exe
Kamu Masuk Jam = 8
kamu keluar jam = 14

Kamu mendapatkan upah Rp.10000
apakah anda ingin mengulang program lagi (y/t) = y
Kamu Masuk Jam = 8
kamu keluar jam = 20
Kamu mendapatkan upah Rp.20000
apakah anda ingin mengulang program lagi (y/t) =
```

8. Buatlah program untuk menghitung factorial

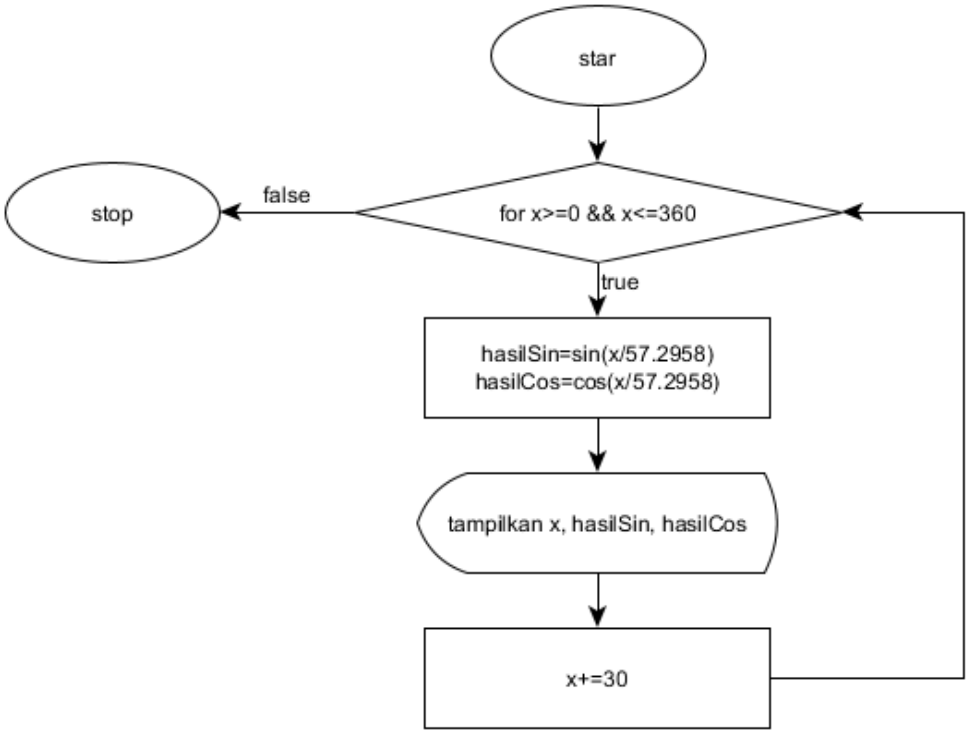


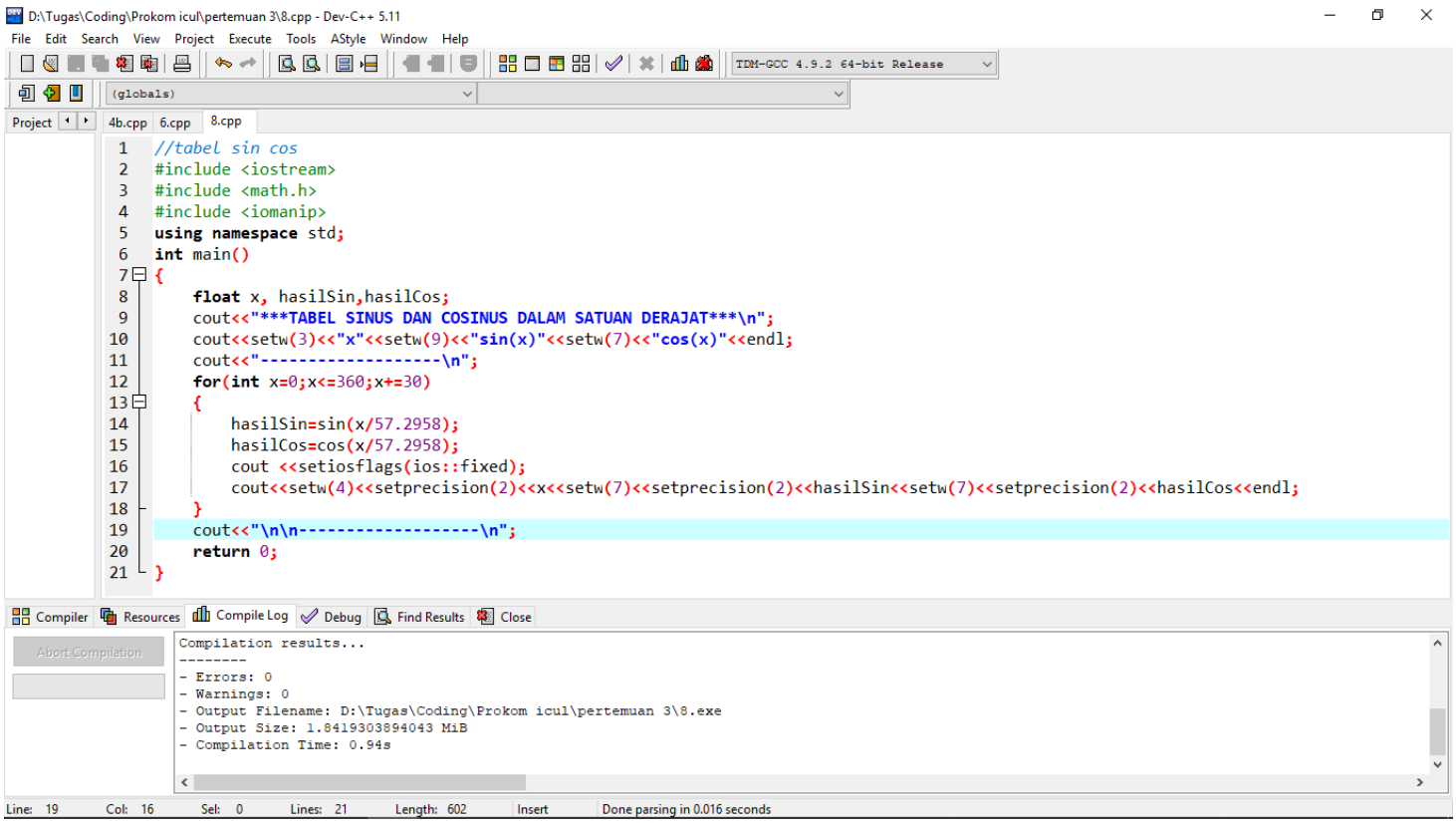

D:\Tugas\Coding\Prokom icul\tugas kuliah\4b.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project
5.cpp
4b.cpp
1 //Program faktorial
2 #include <iostream>
3 #include <iomanip>
4 using namespace std;
5 int main ()
6 {
7 int i,faktorial,batas;
8 cout<<"Masukan nilai faktorial = ";cin>>batas;
9 i=1;faktorial=1;
10 while(i<=batas)
11 {
12 faktorial*=i;
13 i++;
14 }
15 cout<<"Hasil faktorial = "<<faktorial;
16 return 0;
17 }
Compiler
Resources
Compile Log
Debug
Find Results
Close
Abort Compilation
Shorten compiler paths
Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Tugas\Coding\Prokom icul\pertemuan 3\5.exe
- Output Size: 1.83327865600586 MiB
- Compilation Time: 2.22s
Line: 13 Col: 13 Sel: 0 Lines: 17 Length: 300 Insert Done parsing in 0.016 seconds
D:\Tugas\Coding\Prokom icul\tugas kuliah\4b.exe
Masukan nilai faktorial = 5
Hasil faktorial = 120

Process exited after 3.235 seconds with return value 0
Press any key to continue . . .

9. Buatlah program tabel sin cos seperti dengan tampilan berikut!





D:\Tugas\Coding\Prokom icul\pertemuan 3\8.cpp - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 4.9.2 64-bit Release

(globals)

Project 4b.cpp 6.cpp 8.cpp

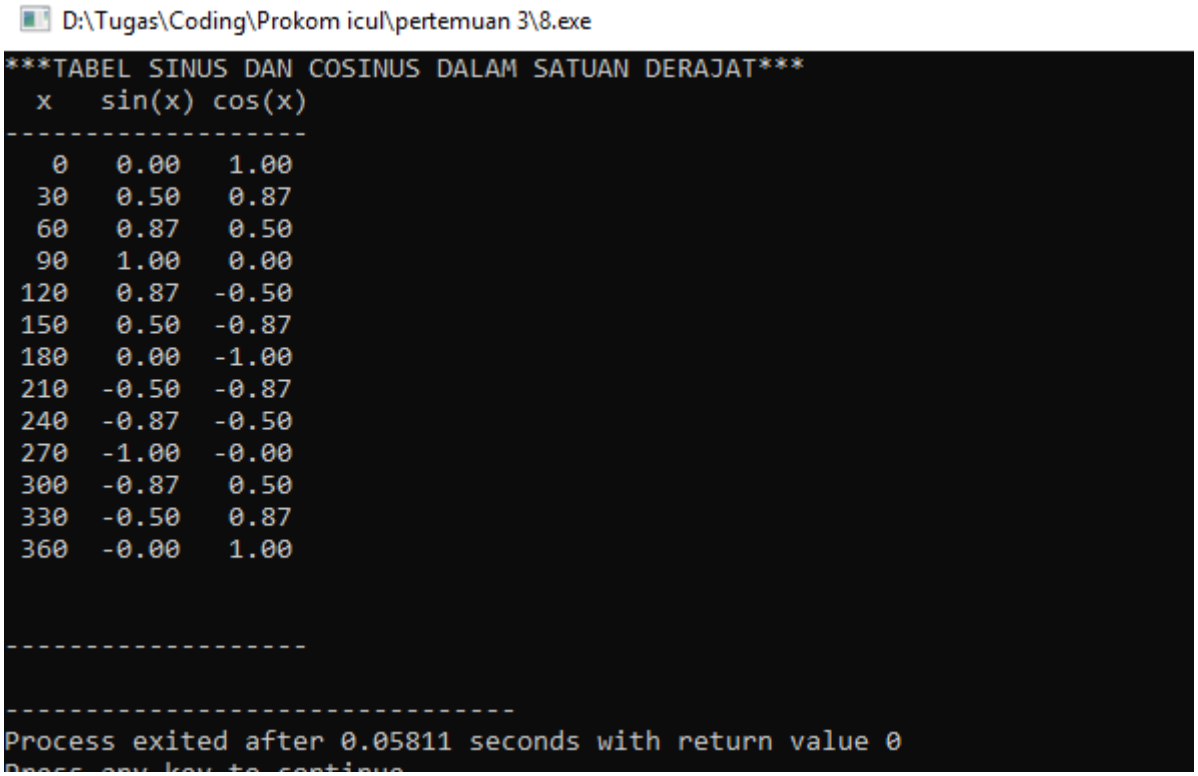
```
1  //tabel sin cos
2  #include <iostream>
3  #include <math.h>
4  #include <iomanip>
5  using namespace std;
6  int main()
7  {
8      float x, hasilSin,hasilCos;
9      cout<<"***TABEL SINUS DAN COSINUS DALAM SATUAN DERAJAT***\n";
10     cout<<setw(3)<<"x"<<setw(9)<<"sin(x)"<<setw(7)<<"cos(x)"<<endl;
11     cout<<"-------------------\n";
12     for(int x=0;x<=360;x+=30)
13     {
14         hasilSin=sin(x/57.2958);
15         hasilCos=cos(x/57.2958);
16         cout <<setiosflags(ios::fixed);
17         cout<<setw(4)<<setprecision(2)<<x<<setw(7)<<setprecision(2)<<hasilSin<<setw(7)<<setprecision(2)<<hasilCos<<endl;
18     }
19     cout<<"\n\n-------------------\n";
20     return 0;
21 }
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

```
Compilation results...
--------
- Errors: 0
- Warnings: 0
- Output Filename: D:\Tugas\Coding\Prokom icul\pertemuan 3\8.exe
- Output Size: 1.8419303894043 MiB
- Compilation Time: 0.94s
```

Line: 19 Col: 16 Sel: 0 Lines: 21 Length: 602 Insert Done parsing in 0.016 seconds


D:\Tugas\Coding\Prokom icul\pertemuan 3\8.exe
TABEL SINUS DAN COSINUS DALAM SATUAN DERAJAT
x sin(x) cos(x)
0 0.00 1.00
30 0.50 0.87
60 0.87 0.50
90 1.00 0.00
120 0.87 -0.50
150 0.50 -0.87
180 0.00 -1.00
210 -0.50 -0.87
240 -0.87 -0.50
270 -1.00 -0.00
300 -0.87 0.50
330 -0.50 0.87
360 -0.00 1.00
Process exited after 0.05811 seconds with return value 0