

**LAPORAN PRAKTIKUM
ALGORITMA PEMROGRAMAN**

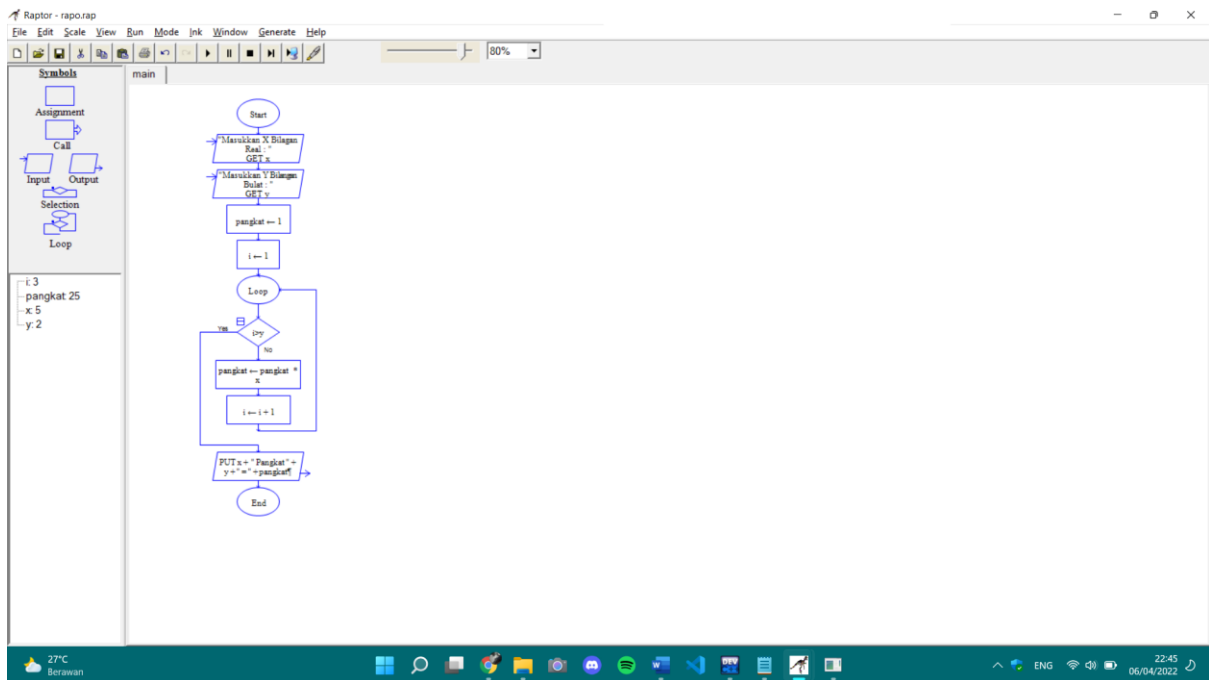


**DI SUSUN OLEH :
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SELASA 13.30 – Kelas G**

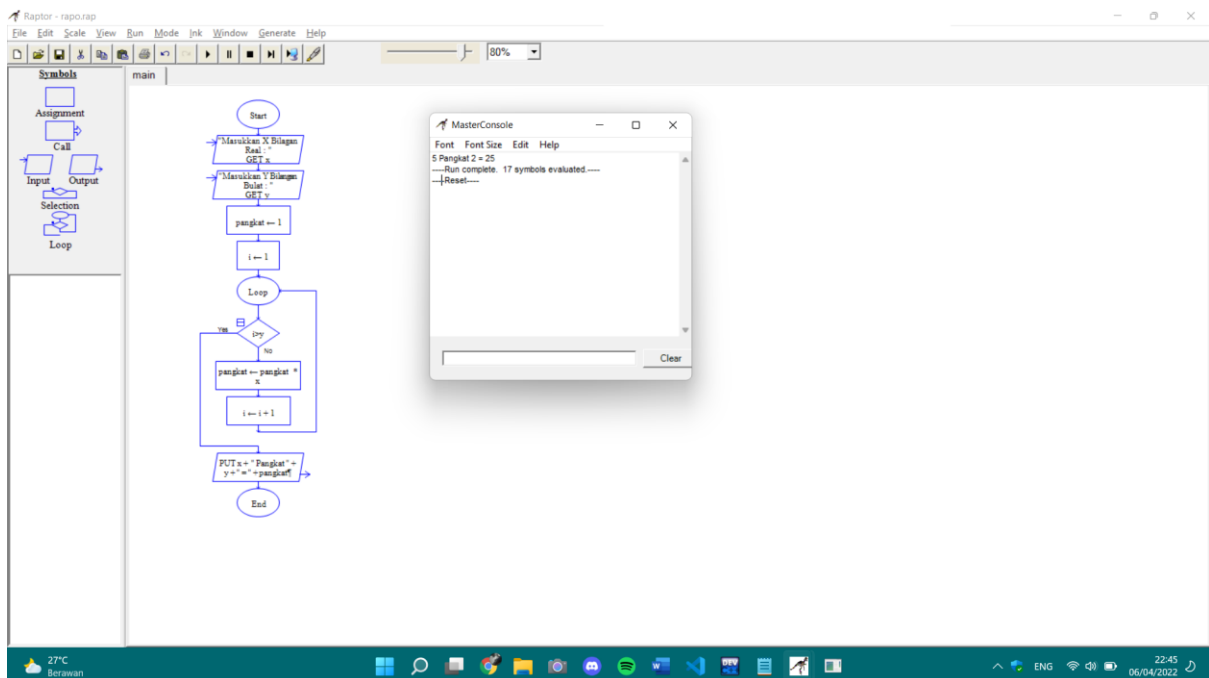
**PROGRAM STUDI INFORMATIKA
FAKULTAS TEKNOLOGI INDUSTRI
UNIVERSITAS AHMAD DAHLAN
MARET 2022**

POST TEST 3

1. Membuat flowchart untuk menghitung nilai $x(\text{pangkat})^y$ dengan x bilangan real dan y bilangan bulat baik negatif maupun positif



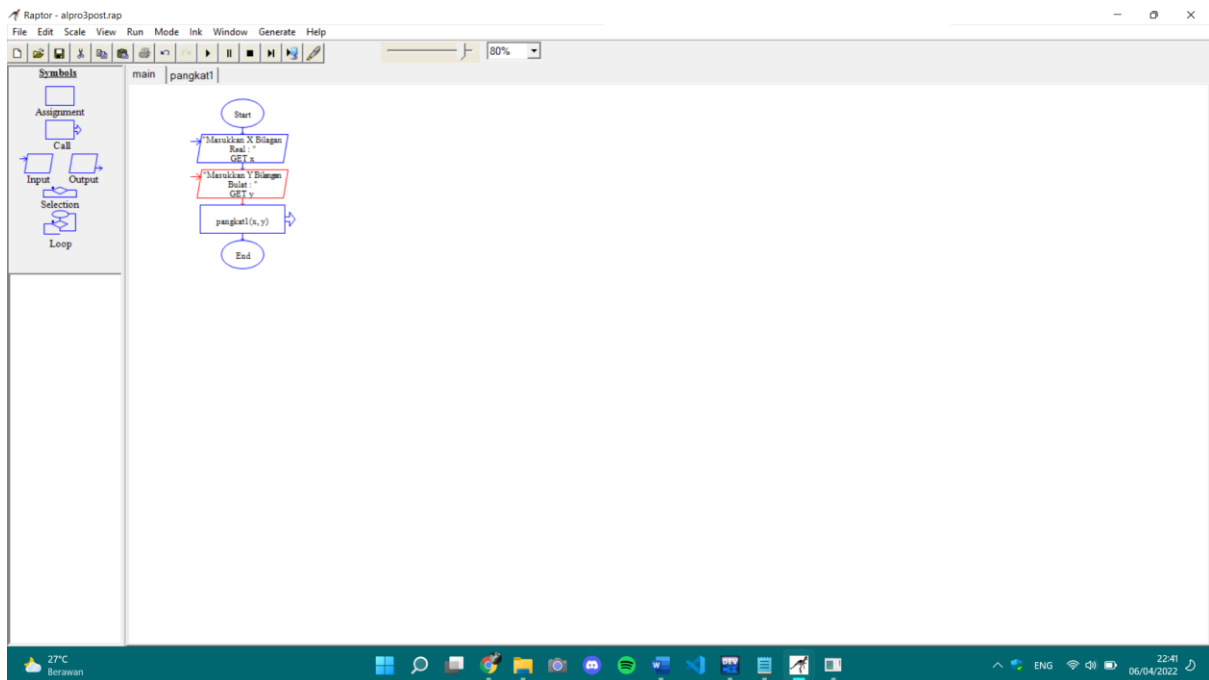
- Menjalankan Program



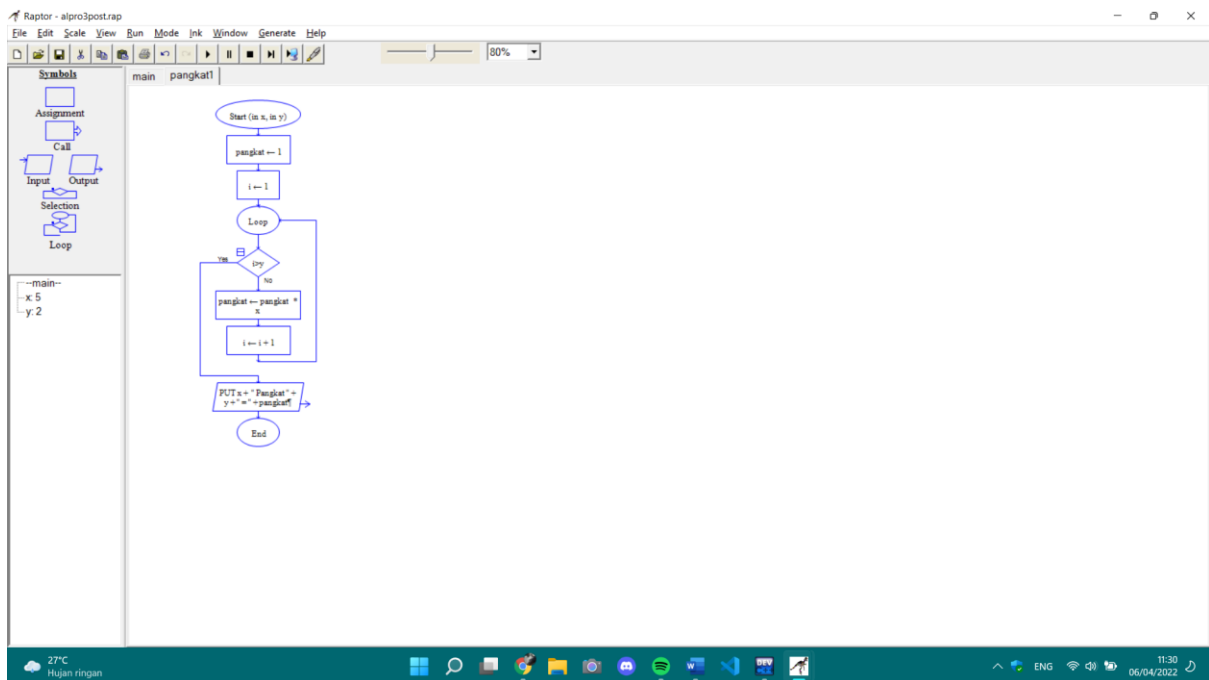
Terbukti benar bahwa 5 pangkat 2 adalah 25.

2. Menggunakan subprogram dalam flowchart untuk menghitung nilai $x(\text{pangkat})^y$ dengan x bilangan real dan y bilangan bulat baik negatif maupun positif.

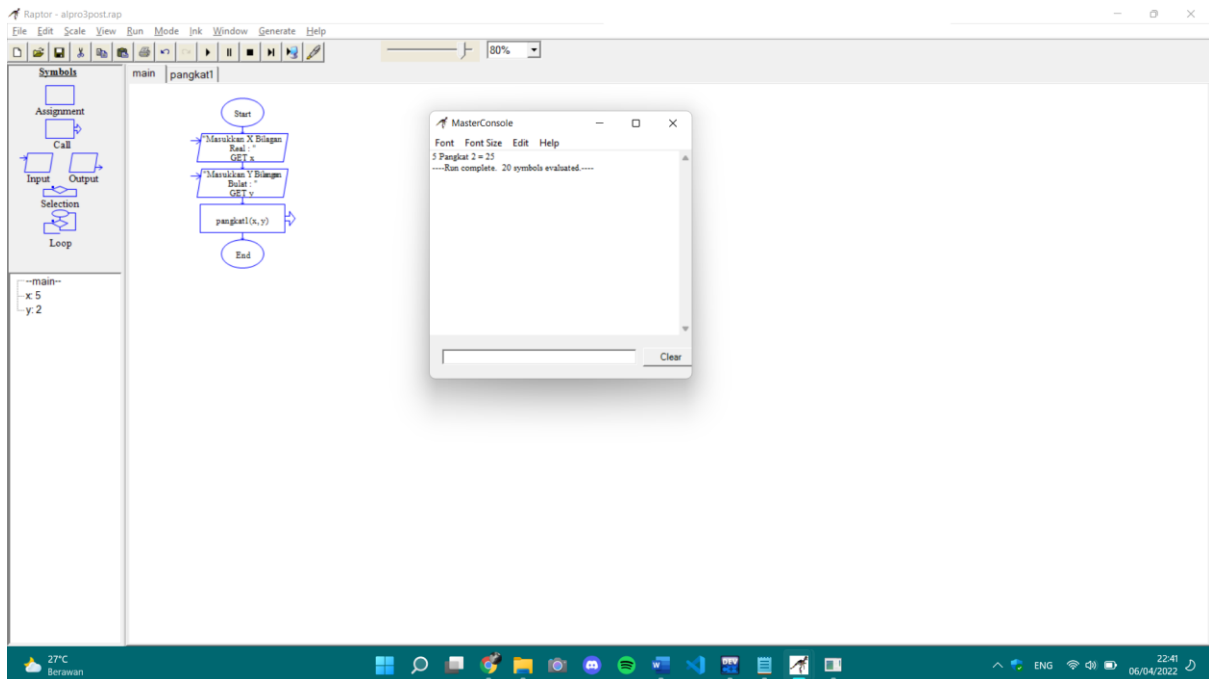
- Screenshot program utama



- Screenshot sub program



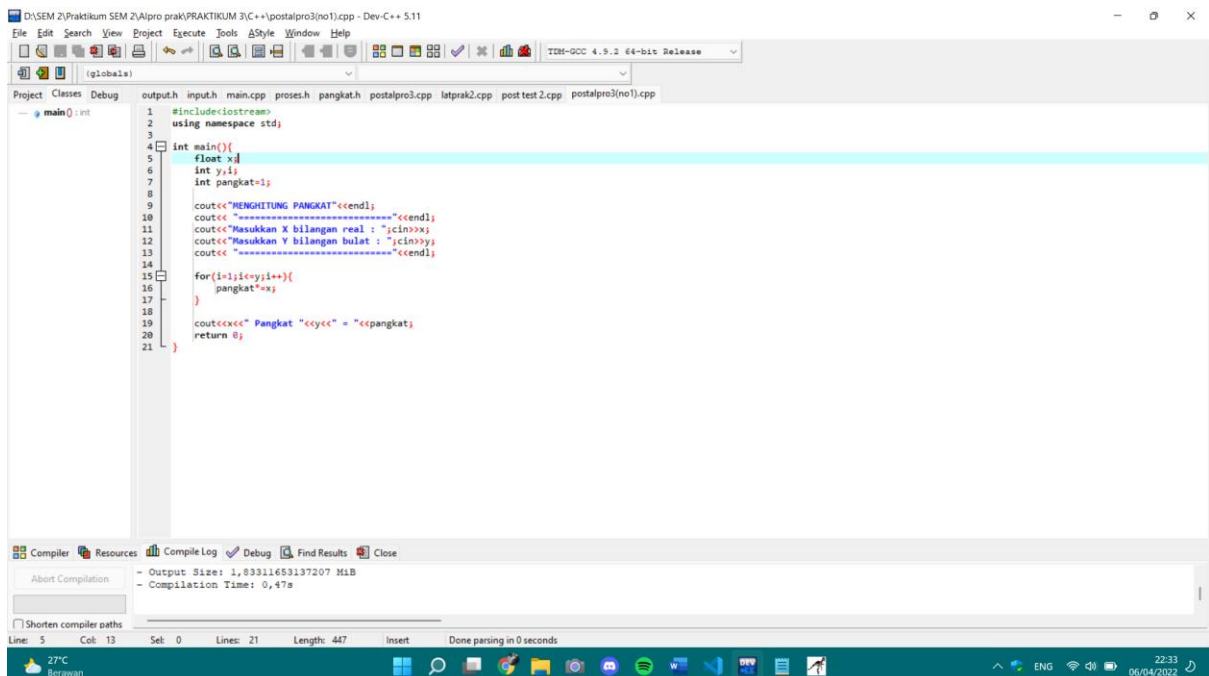
- *Screenshot menjalankan program*



Terbukti benar bahwa 5 pangkat 2 adalah 25.

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

- *Screenshot program C++ berdasarkan nomor 1*



- Menjalankan program (program C++ berdasarkan nomor 1)

The screenshot shows the Dev-C++ IDE with a C++ program being executed. The program calculates the power of a number. The source code in the editor is as follows:

```
1 #include<iostream>
2 using namespace std;
3
4 int main(){
5     float x;
6     int y,i;
7     int pangkat=1;
8
9     cout<<"MENGEHITUNG PANGKAT"<<endl;
10    cout<<"===== "<<endl;
11    cout<<"Masukkan X bilangan real : ";cin>>x;
12    cout<<"Masukkan Y bilangan bulat : ";cin>>y;
13    cout<<"===== "<<endl;
14
15    for(i=1;i<=y;i++){
16        pangkat*=x;
17    }
18
19    cout<<" Pangkat " <<y<<" = " <<pangkat;
20    return 0;
21 }
```

The output window shows the following text:

```
MENGEHITUNG PANGKAT
=====
Masukkan X bilangan real : 5
Masukkan Y bilangan bulat : 2
=====
5 Pangkat 2 = 25
Process exited after 1.579 seconds with return value 0
Press any key to continue . . .
```

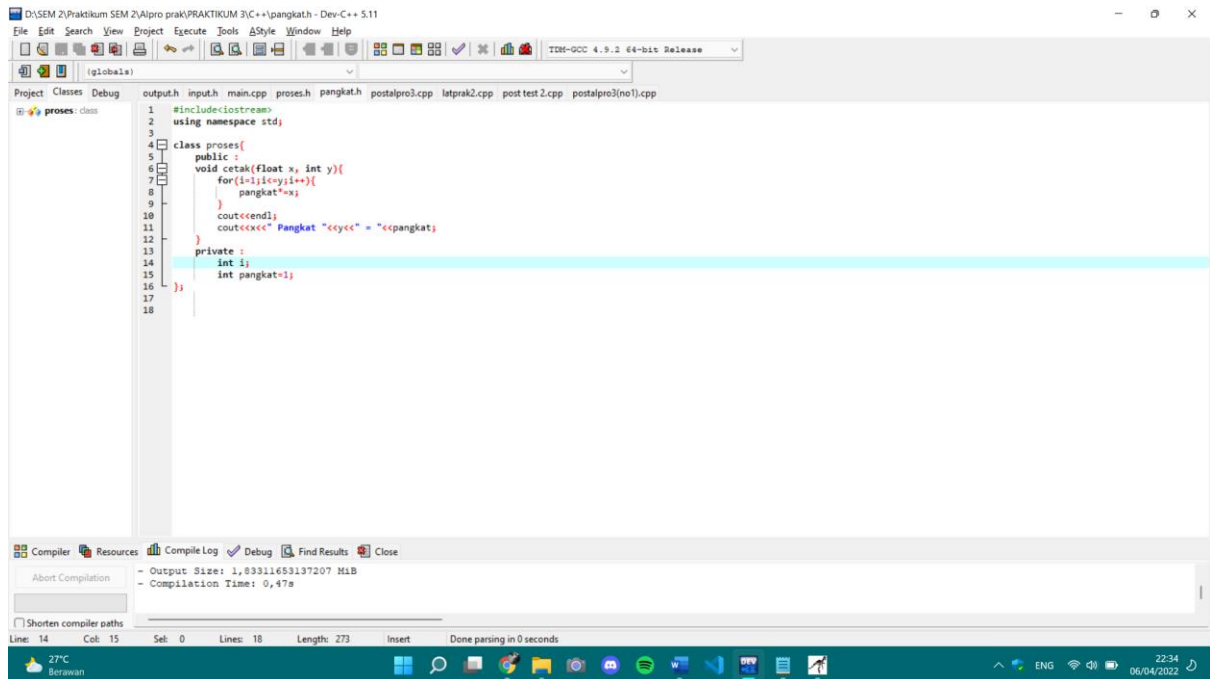
Hasilnya ialah 5 pangkat 2 = 25.

- Screenshot program utama (program C++ berdasarkan nomor 2)

The screenshot shows the Dev-C++ IDE with a C++ program. The source code in the editor is as follows:

```
1 #include<iostream>
2 #include "pangkat.h"
3 using namespace std;
4
5 int main(){
6     int y;
7     float x;
8     cout<<"Masukkan Nilai X : ";cin>>x;
9     cout<<"Masukkan Nilai Y : ";cin>>y;
10    proses proses;
11    proses.cetak(x,y);
12 }
```

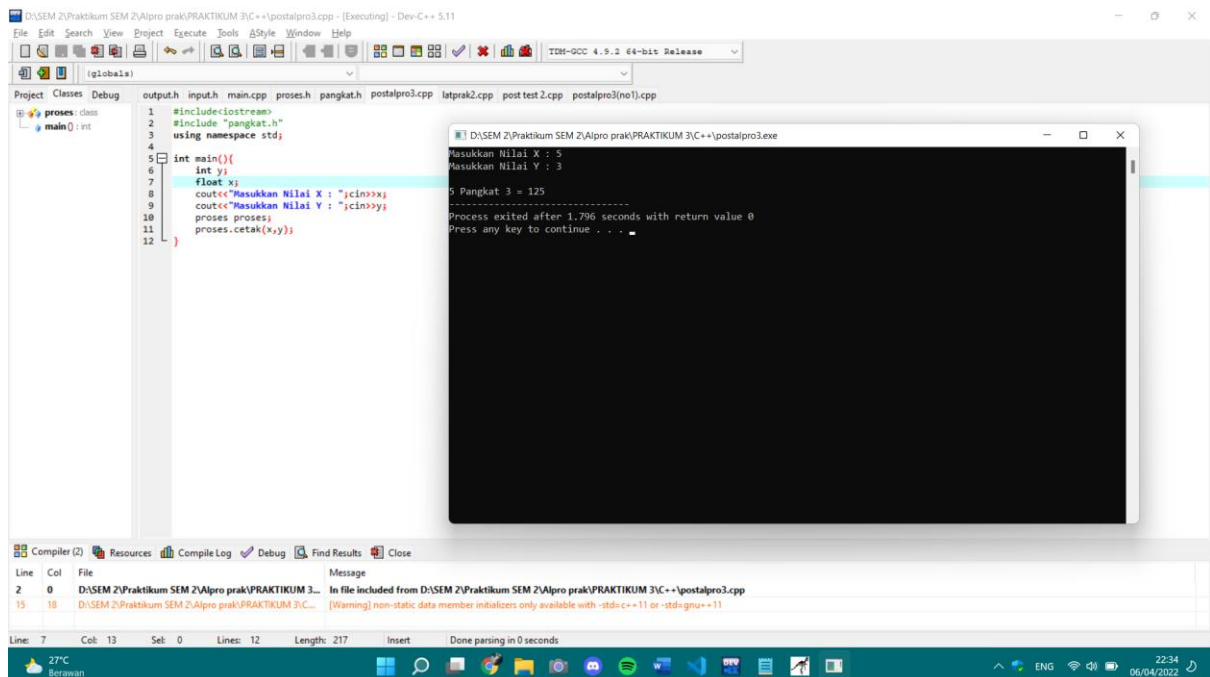
- Screenshot sub program (program C++ berdasarkan nomor 2)



```
1 #include<iostream>
2 using namespace std;
3
4 class proses{
5 public :
6     void cetak(float x, int y){
7         for(i=1;i<=y;i++){
8             pangkat*=x;
9         }
10        cout<<endl;
11        cout<<<<<< " Pangkat "<<y<<< " = "<<pangkat;
12    }
13 private :
14     int i;
15     int pangkat=1;
16 };
```

The screenshot shows a C++ IDE with the file 'proses.h' open. The code defines a class 'proses' with a public method 'cetak' that calculates the power of a number 'x' raised to 'y'. The compiler output at the bottom shows 'Output Size: 1,83311653137207 MiB' and 'Compilation Time: 0,47s'.

- Menjalankan Program (program C++ berdasarkan nomor 2)



```
1 #include<iostream>
2 #include "pangkat.h"
3 using namespace std;
4
5 int main(){
6     int y;
7     float x;
8     cout<<<"Masukkan Nilai X : ";cin>>x;
9     cout<<<"Masukkan Nilai Y : ";cin>>y;
10    proses proses;
11    proses.cetak(x,y);
12 }
```

The screenshot shows the same C++ IDE with the file 'postalpro3.cpp' open. The code calls the 'cetak' method of the 'proses' class. A terminal window is open, showing the execution of the program. The user enters '5' for X and '3' for Y. The output is '5 Pangkat 3 = 125'. The terminal also shows 'Process exited after 1,796 seconds with return value 0' and 'Press any key to continue . . . '.

Hasilnya ialah 5 pangkat 3 = 125.