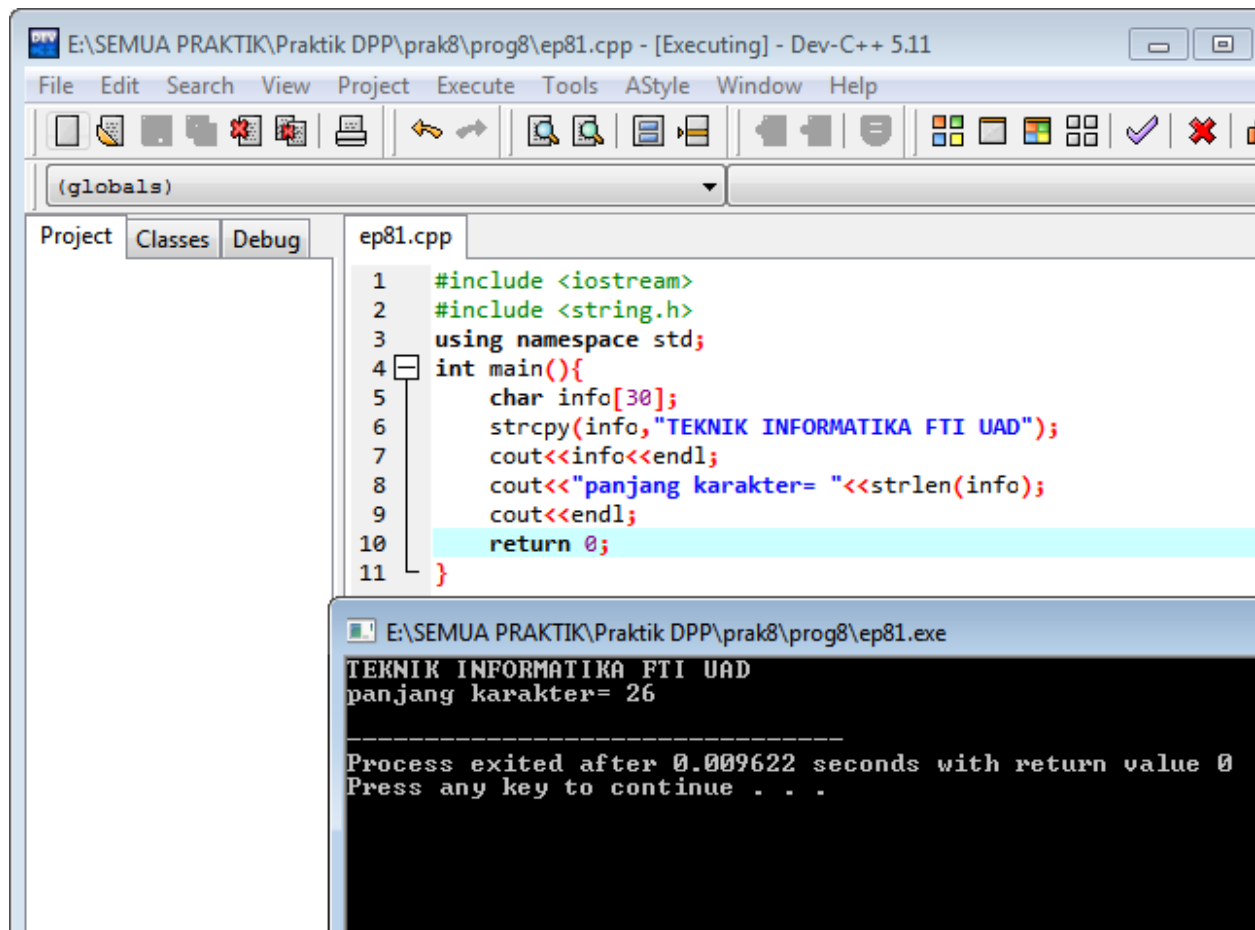


LAPORAN PRAKTIKUM
DASAR PEMROGRAMAN



DISUSUN OLEH:
EKO RACHMAT SATRIYO (2100018142)
SABTU 07.30-KELAS C

PROGRAM STUDI TEKNIK INFORMATIKA
FAKULTAS TEKNOLOGI INDUSTRI
UNIVERSITAS AHMAD DAHLAN
DESEMBER 2021



The image shows a screenshot of the Dev-C++ 5.11 IDE. The main window displays the source code for a C++ program named `ep81.cpp`. The code includes `<iostream>` and `<string.h>`, uses the `std` namespace, and defines a `main` function. Inside `main`, a character array `info` of size 30 is declared, and the string `"TEKNIK INFORMATIKA FTI UAD"` is copied into it. The program then outputs the string and its length using `cout` and `strlen`, followed by a `return 0;` statement.

Below the code editor, the console window shows the output of the program. It displays the string `TEKNIK INFORMATIKA FTI UAD` and the message `panjang karakter= 26`. At the bottom, it indicates that the process exited after 0.009622 seconds with a return value of 0, and prompts the user to press any key to continue.

```
1  #include <iostream>
2  #include <string.h>
3  using namespace std;
4  int main(){
5      char info[30];
6      strcpy(info,"TEKNIK INFORMATIKA FTI UAD");
7      cout<<info<<endl;
8      cout<<"panjang karakter= "<<strlen(info);
9      cout<<endl;
10     return 0;
11 }
```

E:\SEMUA PRAKTIK\Praktik DPP\prak8\prog8\ep81.exe

TEKNIK INFORMATIKA FTI UAD
panjang karakter= 26

Process exited after 0.009622 seconds with return value 0
Press any key to continue . . .

Menuliskan dan menjalankan program

The image shows a screenshot of the Dev-C++ 5.11 IDE. The main window displays the source code for a file named `ep81.cpp`. The code is as follows:

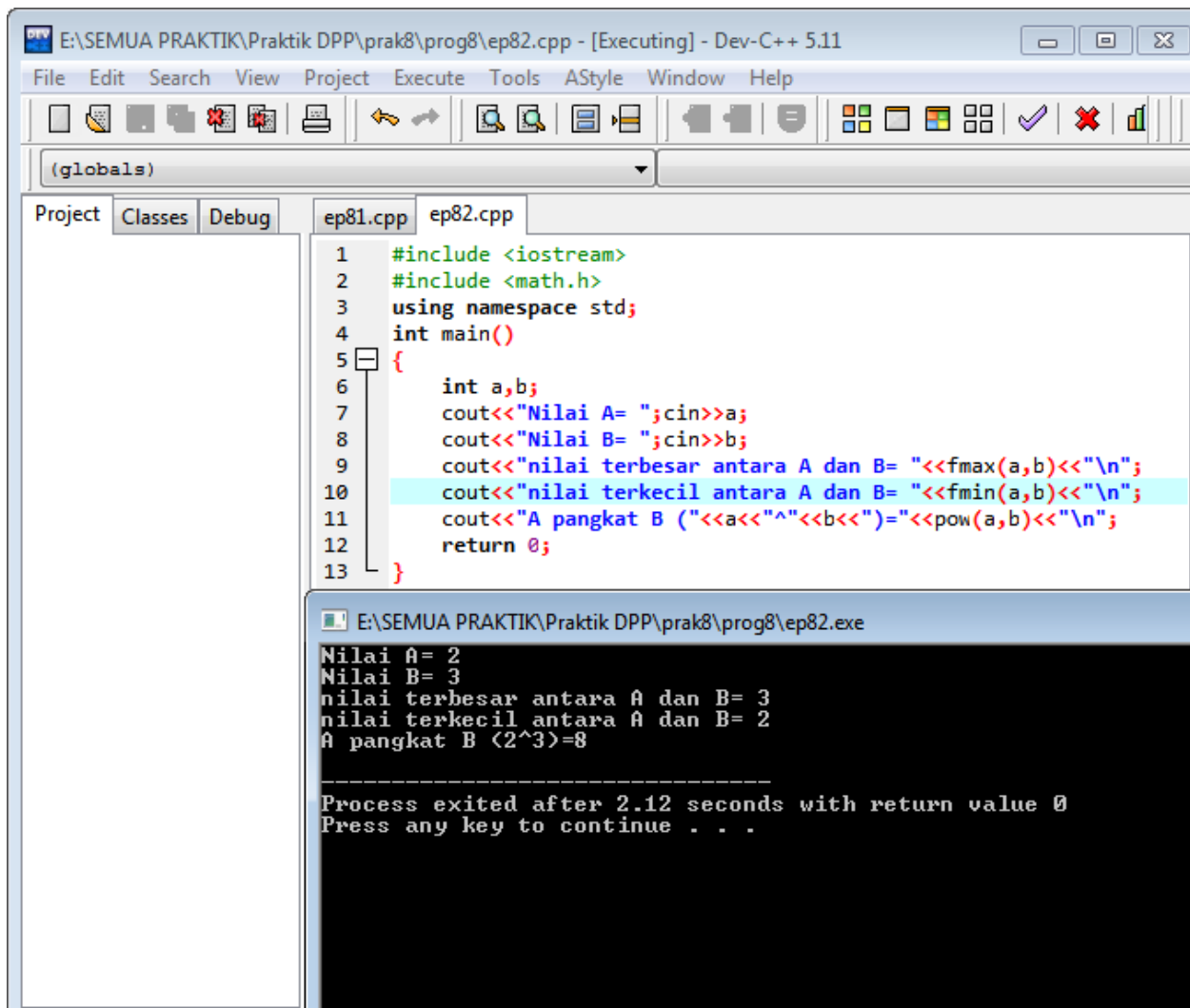
```
1  #include <iostream>
2  #include <string.h>
3  using namespace std;
4  int main(){
5      char info[30];
6      strcpy(info, "TEKNIK INFORMATIKA 2021 UAD");
7      cout<<info<<endl;
8      cout<<"panjang karakter= "<<strlen(info);
9      cout<<endl;
10     return 0;
11 }
```

Below the code editor, a console window titled `E:\SEMUA PRAKTIK\Praktik DPP\prak8\prog8\ep81.exe` shows the program's output:

```
TEKNIK INFORMATIKA 2021 UAD
panjang karakter= 27

-----
Process exited after 0.01605 seconds with return value 0
Press any key to continue . . .
```

Mengubah menjadi TEKNIK INFORMATIKA 2021 UAD dan hasil outputnya



The screenshot displays the Dev-C++ 5.11 IDE. The main window shows the source code for `ep82.cpp`. The code includes `<iostream>` and `<math.h>`, uses the `std` namespace, and defines a `main` function. Inside `main`, two integers `a` and `b` are declared. The program prompts the user to enter values for `a` and `b`. It then calculates the maximum of `a` and `b` using `fmax`, the minimum using `fmin`, and the power of `a` to the `b` using `pow`. The results are printed to the console.

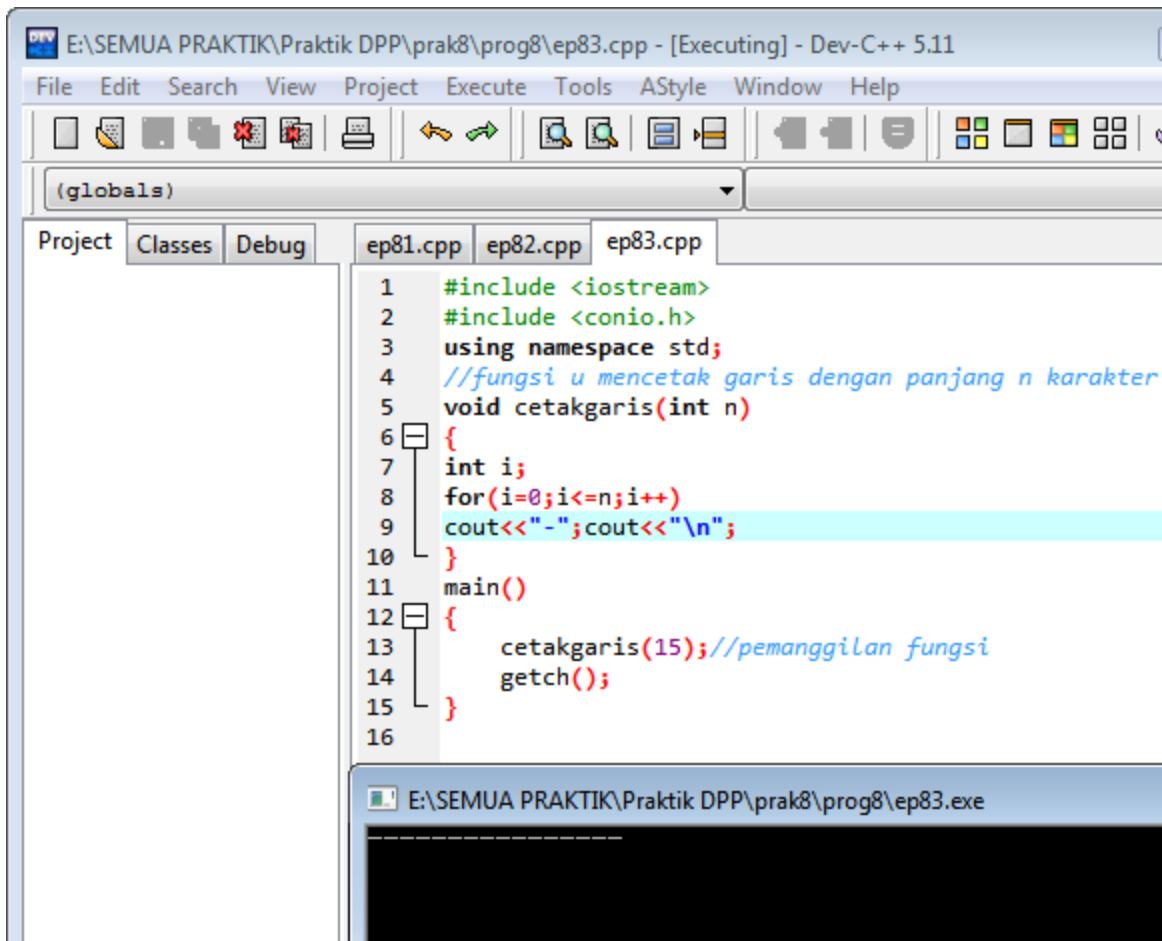
```
1 #include <iostream>
2 #include <math.h>
3 using namespace std;
4 int main()
5 {
6     int a,b;
7     cout<<"Nilai A= ";cin>>a;
8     cout<<"Nilai B= ";cin>>b;
9     cout<<"nilai terbesar antara A dan B= "<<fmax(a,b)<<"\n";
10    cout<<"nilai terkecil antara A dan B= "<<fmin(a,b)<<"\n";
11    cout<<"A pangkat B ("<<a<<"^"<<b<<")="<<pow(a,b)<<"\n";
12    return 0;
13 }
```

The console window shows the output of the program:

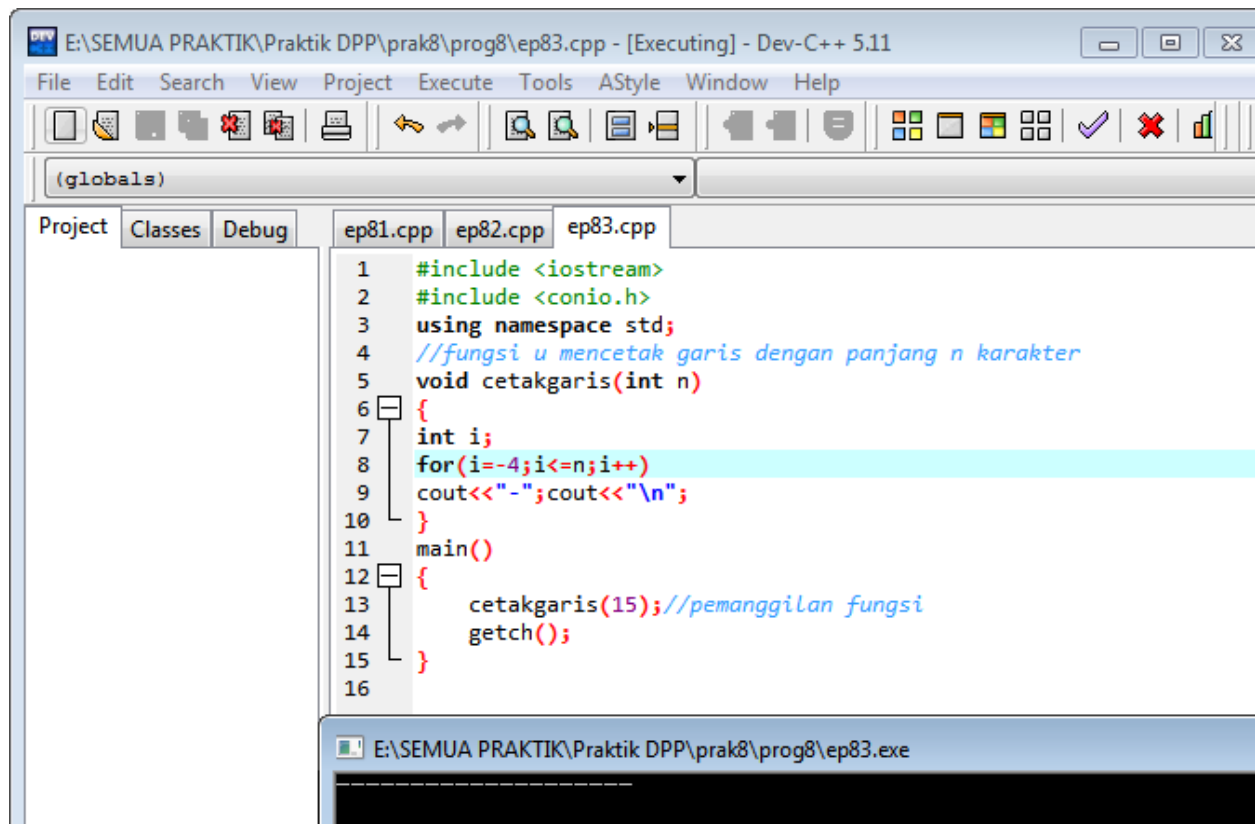
```
Nilai A= 2
Nilai B= 3
nilai terbesar antara A dan B= 3
nilai terkecil antara A dan B= 2
A pangkat B (2^3)=8

-----
Process exited after 2.12 seconds with return value 0
Press any key to continue . . .
```

Menuliskan dan menjalankan program



Menuliskan dan menjalankan program



Mengubah nilai variabel

```
1 #include <iostream>
2 #include <conio.h>
3 using namespace std;
4 //fungsi u mencetak garis dengan panjang n karakter
5 void cetakgaris(int n)
6 {
7     int i;
8     for(i=0;i<=n;i++)
9         cout<<"-";cout<<"\n";
10 }
11 main()
12 {
13     cetakgaris(2); //pemanggilan fungsi
14     getch();
15 }
16
```

E:\SEMUA PRAKTIK\Praktik DPP\prak8\prog8\ep83.exe

Mengubah pemanggilan fungsi

```
1 #include <iostream>
2 #include <conio.h>
3 using namespace std;
4 int luas(int x,int y){
5     int hasil;
6     return hasil = x*y;
7 }
8 float kll(int r){
9     float keliling,phi=22/7;
10    keliling=2*phi*r;
11    return keliling;
12 }
13 void cetakgaris(int n){
14     int i;
15     cout<<"\n\n";
16     for(i=0;i<=n;i++)
17         cout<<"-";cout<<"\n";
18 }
19 int main(){
20     int p=0,l=0;
21     float K;
22     cout<<"Menghitung luas Persegi 4"<<endl;
23     cout<<"\nMasukkan panjang: ";cin>>p;
24     cout<<"\nMasukkan lebar: ";cin>>l;
25     cout<<endl<<"luas = "<<luas(p,l); //fungsi called
26     cetakgaris(20); //fungsi called
27     cout<<"\n\n";
28     cout<<"Keliling lingkaran\n ";
29     cout<<"masukkan r = ";cin>>l;
30     K=kll(l); //fungsi called
31     cout<<"Keliling lingkaran = "<<K;
32     getch();
33 }
```

E:\SEMUA PRAKTIK\Praktik DPP\prak8\prog8\ep84.exe

Menghitung luas Persegi 4

Masukkan panjang: 4

Masukkan lebar: 2

luas = 8

Keliling lingkaran

masukkan r = 7

Keliling lingkaran = 42

Process exited after 46.37 seconds with return value 0

Press any key to continue . . .

Menuliskan dan hasil program

The screenshot shows the Dev-C++ IDE with a C++ program open and running. The program defines two functions: `luas` for calculating the area of a square and `kll` for calculating the circumference of a circle. The `main` function uses these functions with specific inputs and prints the results.

```
1 #include <iostream>
2 #include <conio.h>
3 using namespace std;
4 int luas(int x,int y){
5     int hasil;
6     return hasil = x*y;
7 }
8 float kll(int r){
9     float keliling,phi=22/7;
10    keliling=2*phi*r;
11    return keliling;
12 }
13 void cetakgaris(int n){
14     int i;
15     cout<<"\n\n";
16     for(i=0;i<=n;i++)
17         cout<<"-";cout<<"\n";
18 }
19 int main(){
20     int p=0,l=0;
21     float K;
22     cout<<"Menghitung luas Persegi 4"<<endl;
23     cout<<"\nMasukkan panjang: ";cin>>p;
24     cout<<"\nMasukkan lebar: ";cin>>l;
25     cout<<endl<<"luas = "<<luas(p,l);//fungsi called
26     cetakgaris(20);//fungsi called
27     cout<<"\n\n";
28     cout<<"Keliling lingkaran\n ";
29     cout<<"masukkan r = ";cin>>l;
30     K=kll(l);//fungsi called
31     cout<<"Keliling lingkaran = "<<K;
32     getch();
33 }
```

The execution output window shows the following text:

```
E:\SEMUA PRAKTIK\Praktik DPP\prak8\prog8\ep84.exe
Menghitung luas Persegi 4
Masukkan panjang: 3
Masukkan lebar: 2
luas = 6
-----
Keliling lingkaran
masukkan r = 14
Keliling lingkaran = 84
-----
Process exited after 14.91 seconds with return value 0
Press any key to continue . . .
```

Input yang berbeda

Void=tidak memiliki nilai kembalian

Selain itu memiliki nilai kembalian.

The screenshot shows the Dev-C++ 5.11 IDE with a project named "ep85.cpp" being executed. The code in the editor is as follows:

```
1 #include <iostream>
2 #include <conio.h>
3 using namespace std;
4 void tambah2(int &a){
5     a=a+2;
6 }
7 main()
8 {
9     int x;
10    cout<<"Nilai X=";cin>>x;
11    cout<<"Nilai awal x: "<<x<<"\n";
12    tambah2(x);
13    cout<<"Nilai x setelah pemanggilan fungsi= "<<x<<"\n";
14    getch();
15 }
```

The output window shows the following results:

```
E:\SEMUA PRAKTIK\Praktik DPP\prak8\prog8\ep85.exe
Nilai X=2
Nilai awal x: 2
Nilai x setelah pemanggilan fungsi= 4
```

Menuliskan program dan outputnya

The screenshot displays the Dev-C++ 5.11 IDE. The title bar indicates the file path is `E:\SEMUA PRAKTIK\Praktik DPP\prak8\prog8\ep86.cpp` and it is in the state of [Executing]. The menu bar includes File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, and Help. The toolbar contains various icons for file operations, editing, and execution. The left sidebar shows the 'Project' tab with a tree view containing 'ep86.cpp'. The main editor window displays the following C++ code:

```
1  #include <iostream>
2  #include <conio.h>
3  using namespace std;
4  int pangkat(int a,int b){
5      int hasil,i;
6      hasil=1;
7      for(i=1;i<=b;i++)
8          hasil*=a;
9      return hasil;
10 }
11 main(){
12     int x,y,hsl;
13     cout<<"Nilai X= ";cin>>x;
14     cout<<"Nilai Y= ";cin>>y;
15     hsl=pangkat(x,y);
16     cout<<x<<" Pangkat "<<y<<"="<<hsl;
17 }
```

Below the code editor, a console window titled `E:\SEMUA PRAKTIK\Praktik DPP\prak8\prog8\ep86.exe` shows the program's output:

```
Nilai X= 2
Nilai Y= 3
2 Pangkat 3=8
-----
Process exited after 3.234 seconds with return value 0
Press any key to continue . . .
```

Menuliskan program dan outputnya

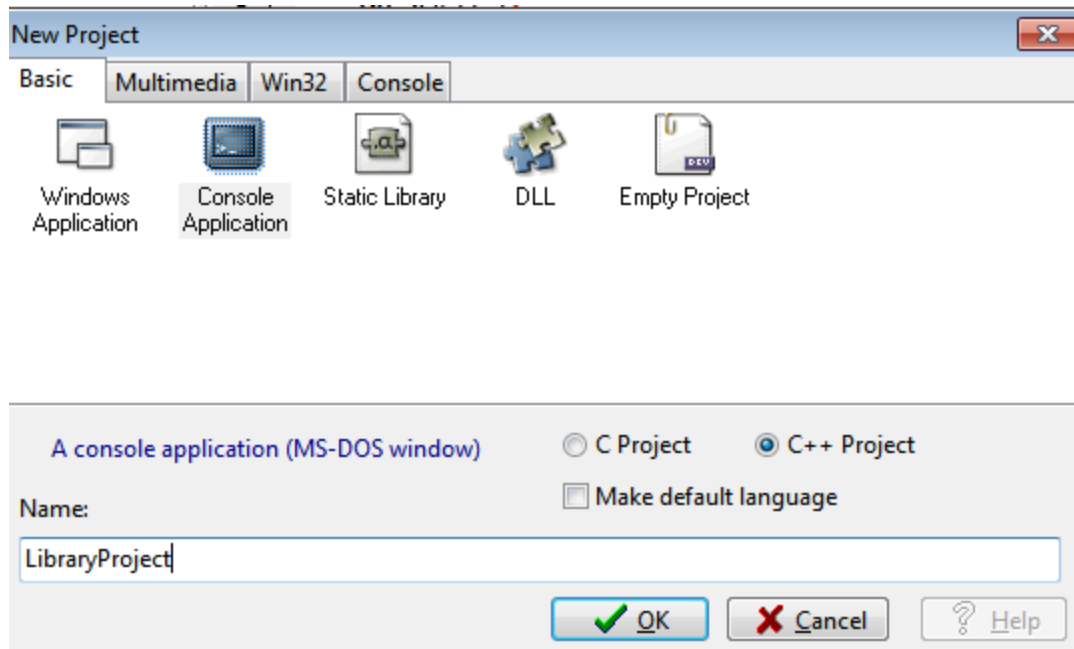
The screenshot displays the Dev-C++ 5.11 IDE with a C++ program named `ep86.cpp` being executed. The code defines a `pangkat` function that calculates the power of a number `a` raised to `b`. The `main` function prompts the user for values of `X` and `Y`, calls the `pangkat` function, and prints the result. The output window shows the program's execution with inputs 2 and 5, resulting in the output 32.

```
1  #include <iostream>
2  #include <conio.h>
3  using namespace std;
4  int pangkat(int a,int b){
5      int hasil,i;
6      hasil=1;
7      for(i=1;i<=b;i++)
8          hasil*=a;
9      return hasil;
10 }
11 main(){
12     int x,y,hsl;
13     cout<<"Nilai X= ";cin>>x;
14     cout<<"Nilai Y= ";cin>>y;
15     hsl=pangkat(x,y);
16     cout<<x<<" Pangkat " <<y<<"="<<hsl;
17 }
```

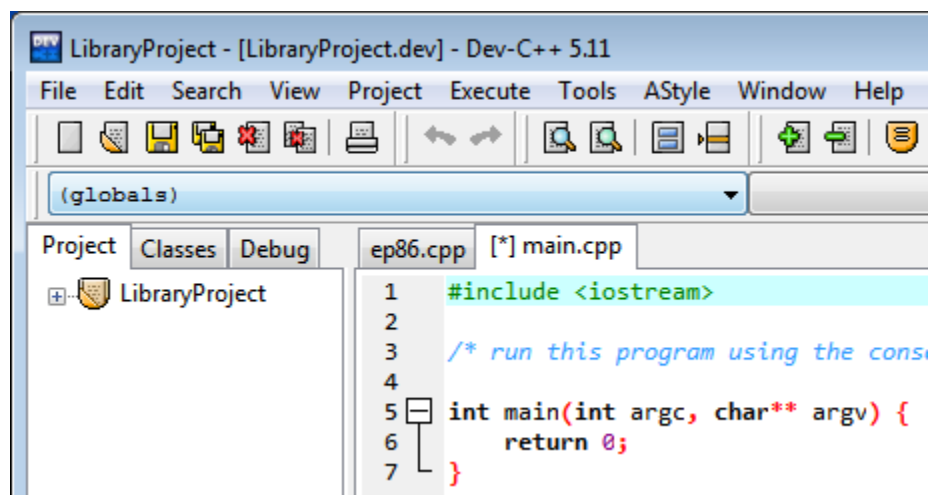
Output:

```
Nilai X= 2
Nilai Y= 5
2 Pangkat 5=32
-----
Process exited after 8.404 seconds with return value 0
Press any key to continue . . .
```

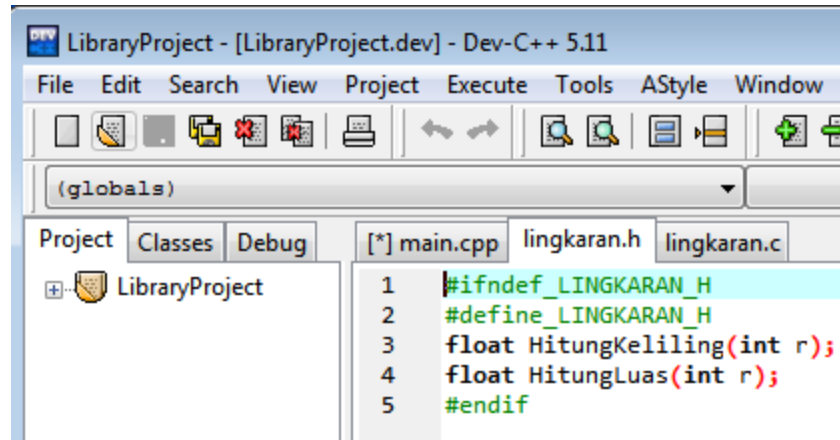
Input nilai yang berbeda



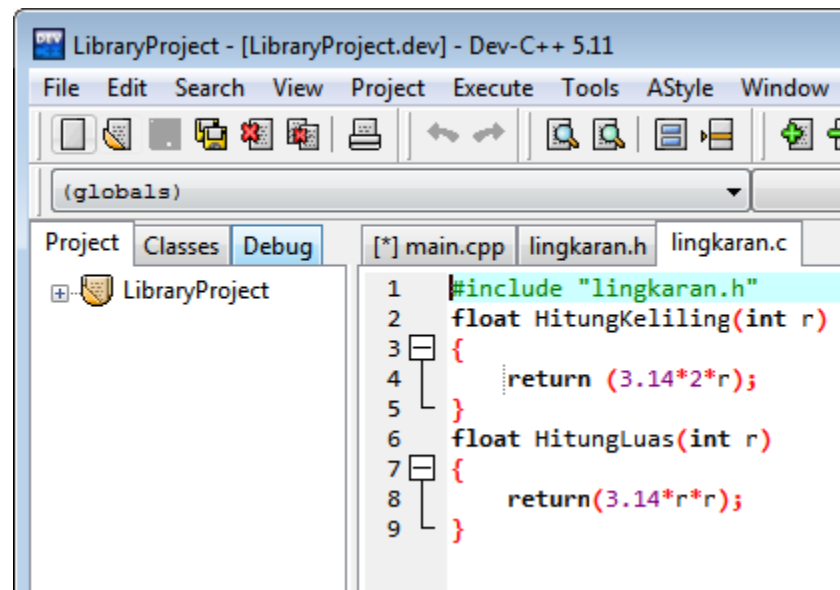
File->new,console,Library Project



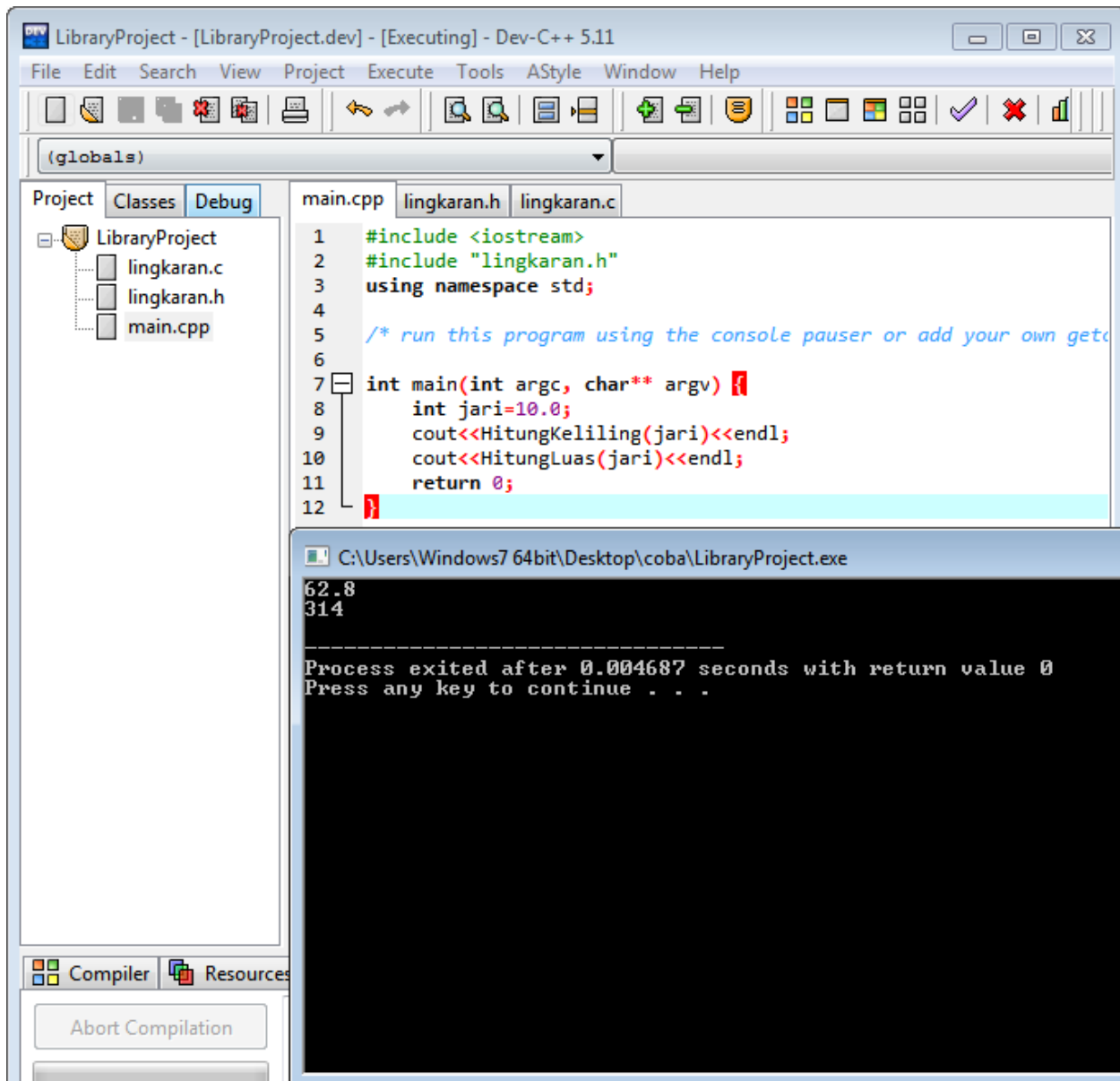
Menjadi main.cpp



Membuat lingkaran.h



Membuat lingkaran.c



Menuliskan program dan melakukan rebuild