

LAPORAN PRAKTIKUM
DASAR PEMROGRAMAN



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PROGRAM STUDI TEKNIK INFORMATIKA
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The screenshot displays the Dev-C++ 5.11 IDE with a C++ program for matrix multiplication. The code is as follows:

```
1 #include <iostream>
2 using namespace std;
3 int main(){
4     int a,b,c,d;
5     int jumlah=0;
6     int t=1;
7     int data[a][b];
8     int data2[a][b];
9     int hsl [a][b];
10    cout<<"Masukkan ukuran matrix pertama[a][b]\n";
11    cout<<"Masukkan a=";cin>>a;
12    cout<<"Masukkan b=";cin>>b;
13    cout<<"Anda akan menggunakan Matrix "<<a<<"x"<<b<<endl;
14    cout<<"=====\n";
15    cout<<"Masukkan ukuran matrix kedua[c][d]\n";
16    cout<<"Masukkan c=";cin>>c;
17    cout<<"Masukkan d=";cin>>d;
18    cout<<"Anda akan menggunakan Matrix = "<<c<<"x"<<d<<endl;
19    cout<<"=====\n";
20
21    if(b!=c){
22        cout<<"Matrix tidak dapat dikalikan,mohon samakan nilai(b=c)";
23    }
24    else{
25        cout<<"Matriks pertama\n";
26        for(int b1=0; b1<a; b1++){
27            for(int k=0; k<b; k++){
28                cout<<"Data["<<b1<<"]["<<k<<"]=" ";
29                cin>>data[b1][k];
30            }
31        }
32    }
```

The console window on the right shows the program's output, including the prompt "Masukkan a=".

User memasukkan ukuran matrix

```
E:\SEMUA PRAKTIK\Praktik DPP\11\prog\post11.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
Project Classes Debug ep11.cpp modep11.cpp ep112.cpp 113.cpp cobapost.cpp post11.cpp post11cb.cpp
19 cout<<"=====\n";
20
21 if(b!=c){
22     cout<<"Matrix tidak dapat dikalikan, mohon samakan nilai(b=c)";
23 }
24
25
26 E:\SEMUA PRAKTIK\Praktik DPP\11\prog\post11.exe
27 Masukkan ukuran matrix pertama[a][b]
28 Masukkan a=2
29 Masukkan b=3
30 Anda akan menggunakan Matrix 2x3
31 =====
32 Masukkan ukuran matrix kedua[c][d]
33 Masukkan c=2
34 Masukkan d=3
35 Anda akan menggunakan Matrix = 2x3
36 =====
37 Matrix tidak dapat dikalikan, mohon samakan nilai(b=c)
38 =====
39 Process exited after 10.01 seconds with return value 0
40 Press any key to continue . . .
41
42
43
44
45
46
47 }
48 cout<<" ]<<endl;
```

Apabila kolom2 !=baris 1,akan muncul seperti ini(lihat baris 21)

```
E:\SEMUA PRAKTIK\Praktik DPP\11\prog\post11.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
Project Classes Debug ep11.cpp modep11.cpp ep112.cpp 113.cpp cobapost.cpp post11.cpp post11cb.cpp
22      cout<<"Matrix tidak dapat dikalikan,mohon samakan nilai(b=c)";
23  }
24  else{
25      cout<<"Matriks pertama\n";
26      for(int b1=0; b1<a; b1++){
27          for(int k=0; k<b; k++){
28              cout<<"Data["<<b1<<"]["<<k<<"]=" ";
29              cin>>data[b1][k];
30          }
31      }
32      cout<<"=====\n";
33      cout<<"Matriks kedua\n";
34      for(int x=0;x<c;x++){
35          for(int y=0;y<d;y++){
36              cout<<"Data["<<x<<"]["<<y<<"]=" ";
37              cin>>data2[x][y];
38          }
39      }
40      cout<<"Matriks ke 1"<<endl;
41      for(int cb=0; cb<a; cb++){
42          cout<<"\t";
43
44          for(int ck=0; ck<b; ck++){
45              cout<<data[cb][ck]<<"\t";
46          }
47      }
48      cout<<"]"<<endl;
49  }
50
51      cout<<endl;
```

E:\SEMUA PRAKTIK\Praktik DPP\11\prog\post11.exe
Masukkan ukuran matrix pertama[a][b]
Masukkan a=2
Masukkan b=2
Anda akan menggunakan Matrix 2x2
=====
Masukkan ukuran matrix kedua[c][d]
Masukkan c=2
Masukkan d=2
Anda akan menggunakan Matrix = 2x2
=====
Matriks pertama
Data[0][0]=

User memasukkan nilai matrix sebanyak nilai dari yang dimasukkan tadi

Karena terdapat perulangan pada baris 26 dan 33

The image shows a screenshot of a C++ IDE (Dev-C++ 5.11) with a project named "E:\SEMUA PRAKTIK\Praktik DPP\11\prog\post11.cpp". The code is a C++ program that calculates the product of two matrices. The code is as follows:

```
52      cout<<"Matriks ke 2"<<endl;
53      for(int cb2=0; cb2<c; cb2++){
54          cout<<"\t";
55
56          for(int ck2=0; ck2<d; ck2++){
57              cout<<data2[cb2][ck2]<<"\t";
58
59          }
60      }
61      cout<<"\n"<<endl;
62      for(int i=0; i<a; i++){
63          for(int j=0; j<d; j++){
64              for(int k=0; k<c; k++){
65                  jumlah=jumlah+data[i][k]*data2[k][j];
66              }
67              hsl[i][j]=jumlah;
68              jumlah=0;
69          }
70      }
71      cout<<endl;
72      cout<<"Hasil perkalian matrix: \n";
73      for(int i=0; i<a; i++){
74          cout<<"\t";
75          for(int j=0; j<d; j++){
76              cout<<hsl[i][j]<<"\t";
77          }
78          cout<<"\n";
79      }
80      cout<<endl;
81  }
```

The output of the program is shown in a separate window titled "E:\SEMUA PRAKTIK\Praktik DPP\11\prog\post11.exe". The output is as follows:

```
Data[0][0]= 1
Data[0][1]= 2
Data[1][0]= 2
Data[1][1]= 4
=====
Matriks kedua
Data[0][0]= 2
Data[0][1]= 3
Data[1][0]= 3
Data[1][1]= 5
Matriks ke 1
[ 1 2 1
  2 4 1

Matriks ke 2
[ 2 3 1
  3 5 1

Hasil perkalian matrix:
[ 8 16 1
  16 26 1

=====
Process exited after 21 seconds with return value 0
Press any key to continue . . .
```

Hasil output program dan Hasil perkalian dengan operasi yang ditunjukkan pada baris 62