

LAPORAN PRAKTEK
ALGORITMA PEMROGRAMAN



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prak.h

```
1  #include <iostream>
2  #include <iomanip>
3  #include <conio.h>
4  using namespace std;
5  class Vektor{
6      friend ostream&operator<<(ostream&,Vektor&);
7      friend istream&operator>>(istream&,Vektor&);
8  public:
9      Vektor();
10     void penjumlahan_vektor(const Vektor&,const Vektor&);
11     void perkalian_vektor(float,const Vektor&);
12     void beri_nilaiBanyak(int);
13 private:
14     int elemen[100];
15     int banyak;
16 };
17
18 Vektor::Vektor(){
19     banyak = 3;
20     for (int i = 0; i<banyak;i++)
21         elemen[i]=0;
22 }
23 void Vektor::beri_nilaiBanyak(int i){
24     banyak = i;
25 }
26 istream& operator>>(istream& in, Vektor&A){
27     cout<<"\nBanyak elemen : ";
28     in>>A.banyak;
29     cout<<"Masukkan data vektor\n";
30     for(int i = 0; i < A.banyak;i++){
31         cout<<"Data ["<<i+1<<"] : ";
32         cin>>A.elemen[i];
33     }
34     return in;
```

```

35 }
36 ostream& operator<<(ostream& out,Vektor& A){
37     cout<<endl;
38     for (int i = 0; i < A.banyak; i++){
39         cout<<"s["<<i+1<<" ] = "<<setw(5)<<A.elemen[i]<<"\n";
40     }
41     return out;
42 }
43 void Vektor::penjumlahan_vektor(const Vektor& A,const Vektor&
44     if (A.banyak > B.banyak){
45         banyak = A.banyak;
46     }
47     else{
48         banyak = B.banyak;
49     }
50     for (int i = 0; i<banyak; i++){
51         elemen[i] = A.elemen[i] + B.elemen[i];
52     }
53 }
54 void Vektor::perkalian_vektor(float k,const Vektor&A){
55     banyak = A.banyak;
56     for(int i = 0; i <banyak;i++){
57         elemen[i]=k*A.elemen[i];
58     }
59 }

```

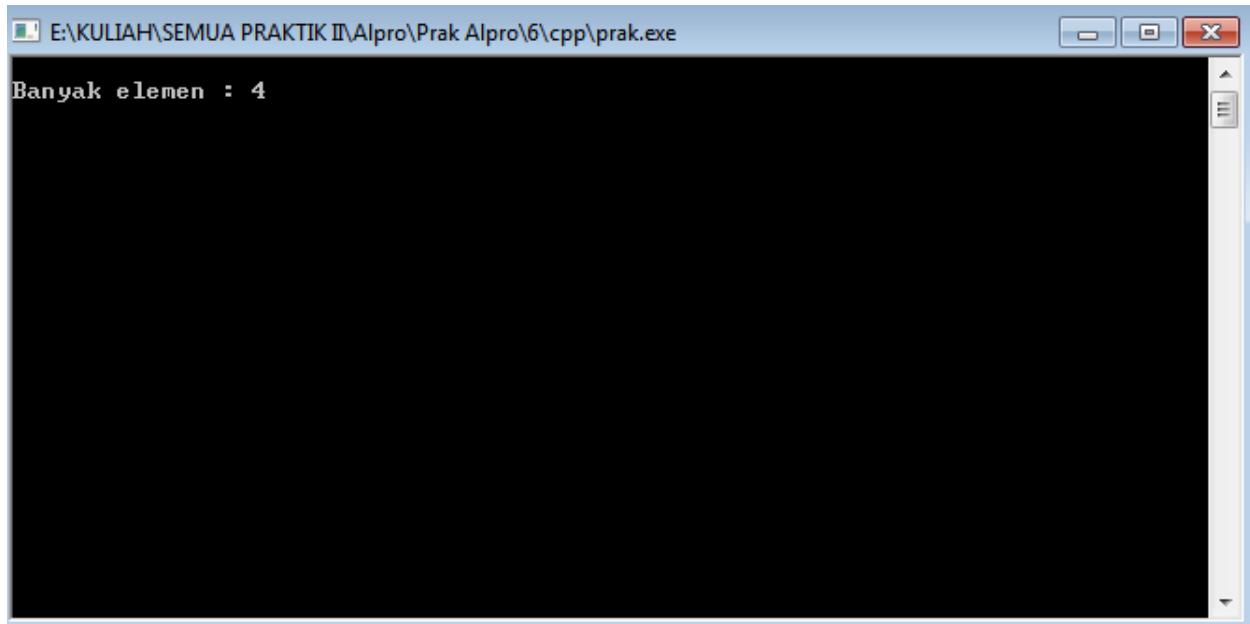
Membuat prak.h

```

1 #include "prak.h"
2 main(){
3     Vektor x,y,z;
4     cin>>x;
5     cout<<x;
6     cin>>y;
7     cout<<y;
8     z.penjumlahan_vektor(x,y);
9     cout<<"\nHasil penjumlahan 2 vektor\n"<<z;
10    z.perkalian_vektor(3,x);
11    cout<<"\nHasil perkalian skalar dengan vektor\n"<<z;
12    getch();
13 }

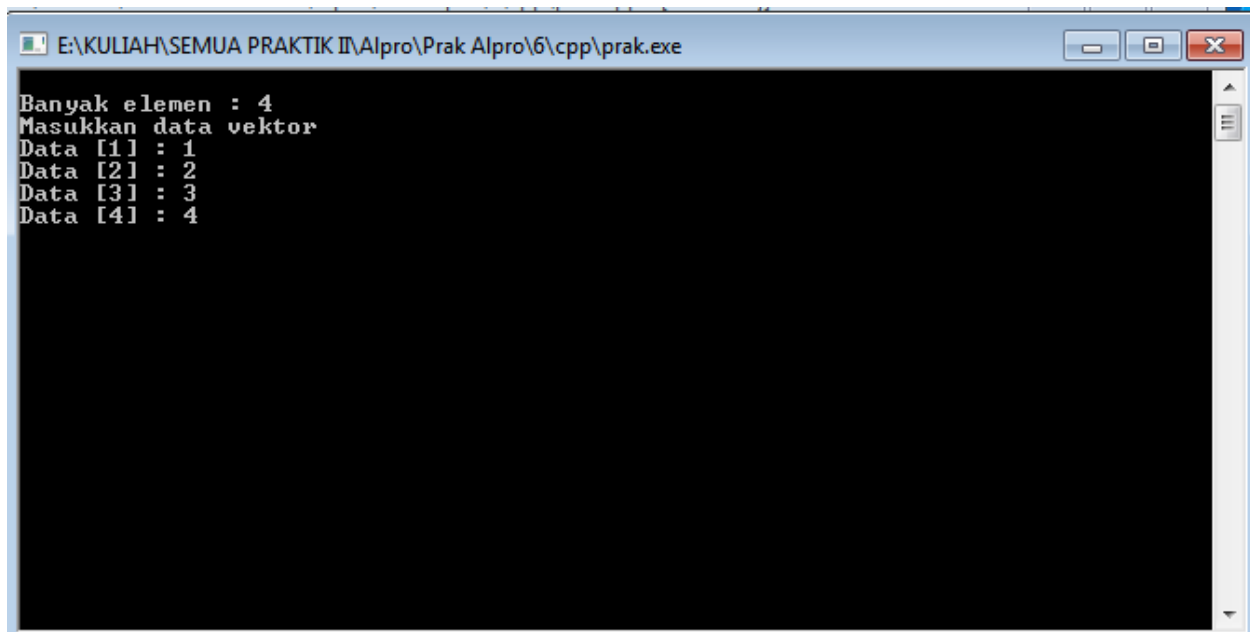
```

Membuat main.cpp



```
E:\KULIAH\SEMUA PRAKTIK II\Alpro\Prak Alpro\6\cpp\prak.exe
Banyak elemen : 4
```

Memasukkan banyak elemen



```
E:\KULIAH\SEMUA PRAKTIK II\Alpro\Prak Alpro\6\cpp\prak.exe
Banyak elemen : 4
Masukkan data vektor
Data [1] : 1
Data [2] : 2
Data [3] : 3
Data [4] : 4
```

Mengisi nilai elemen

```
E:\KULIAH\SEMUA PRAKTIK II\Alpro\Prak Alpro\6\cpp\prak.exe

Banyak elemen : 4
Masukkan data vektor
Data [1] : 1
Data [2] : 2
Data [3] : 3
Data [4] : 4

s[1] = 1
s[2] = 2
s[3] = 3
s[4] = 4

Banyak elemen : 2
Masukkan data vektor
Data [1] : 3
Data [2] : 5
```

Hasil elemen 1 kemudian memasukkan nilai ke 2

```
E:\KULIAH\SEMUA PRAKTIK II\Alpro\Prak Alpro\6\cpp\prak.exe

s[3] = 3
s[4] = 4

Banyak elemen : 2
Masukkan data vektor
Data [1] : 3
Data [2] : 5

s[1] = 3
s[2] = 5

Hasil penjumlahan 2 vektor

s[1] = 4
s[2] = 7
s[3] = 3
s[4] = 4

Hasil perkalian skalar dengan vektor

s[1] = 3
s[2] = 6
s[3] = 9
s[4] = 12
```

Hasil penjumlahan dan perkalian

Link repo:

<https://github.com/142Eko/Prak-alpro/tree/master/6/Kode>