PRAKTIKUM 16

STRUCTURE dan ARRAY

Praktikum 16.1. Buatlah program untuk mencetak transkrip mahasiswa berikut

```
#include <iostream>
#include <iomanip>
#include <stdio.h>
using namespace std;

struct DataMatakuliah
{
    string KodeMK;
    string NamaMK;
    char NH;
    short bobot;
    short SKS;
};

struct DataMahasiswa
{ string Nopokok;
  string Namamhs;
  short JumlahMK;
  struct DataMatakuliah MK[70];
  short TotalSKS;
  float IPK;
};
 struct DataMahasiswa MHS[40];

   short i,j, JumBobotSKS, BobotSKS;

 void inputMHS()
 {
    cout<<"PROGRAM CETAK TRANSKRIP NILAI"<<endl;
    cout<<"-----------------------------"<<endl;
    cout<<"Masukkan Data Mahasiswa ke-"<<i+1<<" :"<<endl;
    cout<<"  Nomor Pokok      "<<":";cin>>MHS[i].Nopokok;
    cout<<"  Nama Mahasiswa   "<<":";cin>>MHS[i].Namamhs;
    cout<<"  Jumlah Matakuliah"<<":";cin>>MHS[i].JumlahMK;
 }

 void garis()
 {
    for(int col=0;col<=96;col++)
    cout<<"-";
    cout<<endl;
 }
 void cetak()
 { system("CLS");
  cout<<"                                                TRANSKRIP
NILAI"<<endl<<endl;

  cout<<"  No. Pokok   :"<<MHS[i].Nopokok<<endl;
  cout<<"  Nama MHS    :"<<MHS[i].Namamhs<<endl;
  garis(); //Buat Garis
  cout<<"| "<<setw(4)<<setiosflags(ios::left)<<"No."<<"|
"<<setw(8)<<"Kode MK"<<"| "<<setw(40)<<"Nama MK"<<"|
"<<setw(4)<<"NH"<<"|  "<<setw(8)<<"Bobot"<<"|
"<<setw(5)<<"SKS"<<"| "<<setw(12)<<"Bobot x SKS"<<"|"<<endl;
  garis(); //Buat Garis
  for(j=0;j<MHS[i].JumlahMK;j++)
    {
          cout<<"| "<<setw(4)<<setiosflags(ios::left)<<j+1<<"|
"<<setw(8)<<MHS[i].MK[j].KodeMK<<"|
"<<setw(40)<<MHS[i].MK[j].NamaMK<<"|
"<<setw(4)<<MHS[i].MK[j].NH<<"|
```

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"<<setw(8)<<MHS[i].MK[j].bobot<<"|
"<<setw(5)<<MHS[i].MK[j].SKS<<"|
"<<setw(12)<<MHS[i].MK[j].bobot*MHS[i].MK[j].SKS<<"|"<<endl;
    }
   garis(); //Buat Garis
   cout<<setw(40)<<"  Total Bobot * SKS"<<":
"<<JumBobotSKS<<endl;
   cout<<setw(40)<<"  Total SKS "<<":
"<<MHS[i].TotalSKS<<endl;
   cout<<setw(40)<<"  Indeks Prestasi Kumulatif (IPK)"<<":
"<<setprecision(2)<<MHS[i].IPK<<endl;
 }
int main()
{  char lagi='Y';
   i=0;
   while (lagi=='Y' || lagi=='y')
   {system("CLS");
    inputMHS();   //Panggil Fungsi inputMHS()
          j=0;
          MHS[i].TotalSKS=0;
          JumBobotSKS=0;
          while(j<MHS[i].JumlahMK)
          {     cout<<"  Masukkan Data Matakuliah Ke-
"<<j+1<<endl;
                cout<<"     Kode Matakuliah
:";cin>>MHS[i].MK[j].KodeMK;
                cout<<"     Nama Matakuliah
:";cin>>MHS[i].MK[j].NamaMK;
                cout<<"     Nilai
Huruf[A/B/D/D/E]:";cin>>MHS[i].MK[j].NH;

                if(MHS[i].MK[j].NH=='A')
                      MHS[i].MK[j].bobot=4;
                      else if(MHS[i].MK[j].NH=='B')
                            MHS[i].MK[j].bobot=3;
                      else if(MHS[i].MK[j].NH=='C')
                            MHS[i].MK[j].bobot=2;
                      else if(MHS[i].MK[j].NH=='D')
                            MHS[i].MK[j].bobot=1;
                      else MHS[i].MK[j].bobot=0;
                      cout<<"     Bobot Nilai
:"<<MHS[i].MK[j].bobot<<endl;
                   cout<<"     Nilai SKS [1/2/3/4]
:";cin>>MHS[i].MK[j].SKS;
                      MHS[i].TotalSKS+=MHS[i].MK[j].SKS;

    BobotSKS=MHS[i].MK[j].bobot*MHS[i].MK[j].SKS;
                      JumBobotSKS+=BobotSKS;
                      cout<<"     Bobot x SKS
:"<<BobotSKS<<endl;
                      cout<<"     Jumlah Bobot x SKS
:"<<JumBobotSKS<<endl;
                      cout<<"     Total SKS
:"<<MHS[i].TotalSKS<<endl;
                      MHS[i].IPK=JumBobotSKS/MHS[i].TotalSKS;


           j++;
          }
          cetak(); //Panggil Fungsi Cetak()
    i++;

    cout<<endl<<endl<<"  Input Transkrip Mahasiswa Lain [Y/T]:
";cin>>lagi;
   }

}
```