1.

```
#include <iostream>
using namespace std;

/// jawaban soal uts no. 1
struct buku{
   int kode, tgl_pinjam, tgl_kembali, denda;
   string judul, terlambat, transaksi;
};

struct mhs{
   string nama, kelas, status;
   int kodeAnggota, no_telpon;
   buku bukupinjam[3];
};

/// jawaban soal uts no. 2
mhs mahasiswa[3];

int main(){

   int total = 0;
   for (int i = 0; i < 3; i++){
      for (int j = 0; j < 3; j++){
         total = total + mahasiswa[i].bukupinjam[j].denda;
      }

      if (total >= 500000){
         cout << "Nama\t: " << mahasiswa[i].nama << endl;
         cout << "Kode\t: " << mahasiswa[i].kodeAnggota << endl;
         cout << "Kelas\t: " << mahasiswa[i].kelas << endl;
      }

   total = 0;
   }
}
```

2. Jawaban digabung dicodingan no 1.
3.

```
#include<iostream>
using namespace std;

int deret(int n){
     if(n == 0){
     return 0;
     }
     else if(n == 1){
     return 1;
     }
```

```
    else if(n == 2){
    return 2;
    }
    else if (n == 5){
    return deret(n-1) + (2*deret(n-2));
    // deret(4) + 2* deret(3)
    // deret(3) + deret(2) + deret(1) + 2* (deret(2) + deret(1) + deret(0))
    // (deret(2) + deret(1) + deret(0) + 2 + 1 + 2* (2 + 1+ 0)
    // (2 + 1 + 0 ) + 3 + 2*(3)
    // 3 + 3 + 6 = 12
    } else {
    return (deret(n-1) + deret(n-2)) + deret(n-3);
    // deret(2) + deret(1) + deret(0)
    // 2 + 1 + 0 = 3
    }
}

int main(){
    int n;
    cout << "Masukkan nilai n :";
    cin >> n; //n = 3
    cout << deret(n);
}

 //1, 5, 7, 9
 //n1 =1
 //n2 =5
 //n3 =7
 //n4 =9
 //int deret(int n){ //n = 3
 //  if(n == 1){
 //     return 1;
 //}
 //else{
 //  return deret(n-1) + 2;
 //deret(2) + 2
 //deret(1) + 2 + 2
  //1 + 2 + 2 =5
  //}
  //}
```

4. Rumus pencarian nilai metode binary search : T = a + i / 2

- Kuis Praktikum Alpro Lanjut

```
#include <iostream>
using namespace std;

struct Data{
   int id;
   string nama, tujuan, jenis;
};
```

```
    int jumlahPesanan;
    Data dataPesanan[100];

void inputdata(){

    cout << "Masukkan jumlah penumpang yang akan ditambahkan: ";
    cin >> jumlahPesanan;

    for (int i = 0; i < jumlahPesanan; i++){

    cout << "-----Input Data Penumpang-----\n";
        dataPesanan[i].id = i;
        cout << "Id Penumpang : ";
        cin >> dataPesanan[i].id;
                cout << "Nama Penumpang : ";
                cin>>dataPesanan[i].nama;
                cout << "Tujuan Perjalanan : ";
        cin>>dataPesanan[i].tujuan;
        cout << "Jenis Perjalanan (Gold, Silver, Bronze) : ";
        cin>>dataPesanan[i].jenis;
    }
}
void lihatdata(){
    cout << "Data Penumpang:" << endl;
    cout << "ID\tNama" << endl;
    for (int i = 0; i < jumlahPesanan; ++i) {
    cout << dataPesanan[i].id << "\t" << dataPesanan[i].nama << endl;
    }
}
void caridata(){
 int idCari;
    cout << "Masukkan ID penumpang yang ingin dicari: ";
    cin >> idCari;

    bool ditemukan = false;
    for (int i = 0; i < jumlahPesanan; ++i) {
        if (dataPesanan[i].id == idCari) {
            cout << "Data Penumpang:" << endl;
            cout << "ID: " << dataPesanan[i].id<< endl;
            cout << "Nama: " << dataPesanan[i].nama<< endl;
            cout << "Umur: " << dataPesanan[i].tujuan<< endl;
            cout << "Penyakit: " << dataPesanan[i].jenis<< endl;
            ditemukan = true;
            break;
        }
    }

    if (!ditemukan) {
        cout << "Data penumpang dengan ID " << idCari << " tidak ditemukan." << endl;
    }
}
```

```
int main(){

   int pilih_1;
   string ulang;

   do{
      cout << "MENU : " << endl;
      cout <<
"+=====================================================+"<< endl;
      cout << "|               MENU TIKET PESANAN               |" << endl;
      cout <<
"|=====================================================|"<< endl;
      cout << "| 1. Input Data Perjalanan                      |" << endl;
      cout << "| 2. Lhat Data Perjalanan                       |" << endl;
      cout << "| 3. Cari Data Perjalanan                       |" << endl;
      cout << "| 4. Exit                                       |" << endl;
      cout << "+=====================================================+"
<< endl;
      cout << "Pilih Menu : ";
      cin >> pilih_1;
   if (pilih_1 == 1){
                     inputdata ();
      cout << "============================================================"
<< endl;
                     }
   if (pilih_1 == 2){
      lihatdata ();
      cout << "============================================================"
<< endl;
   }
   if (pilih_1 == 3){
      caridata ();
      cout << "============================================================"
<< endl;
   }
   if (pilih_1 == 4){

      cout <<"|   TERIMAKASIH ATAS KUNJUNGAN ANDA\t|\n";
      cout <<"| Semoga Perjalanan Anda Menyenangkan\t|\n";
      cout << "============================================================"
<< endl;
   }
   cout<<"Mau Ulangi Lagi? (Y/N) ";
         cin>>ulang;}
         while(ulang == "y" || ulang == "Y");

}
```