## Kelompok

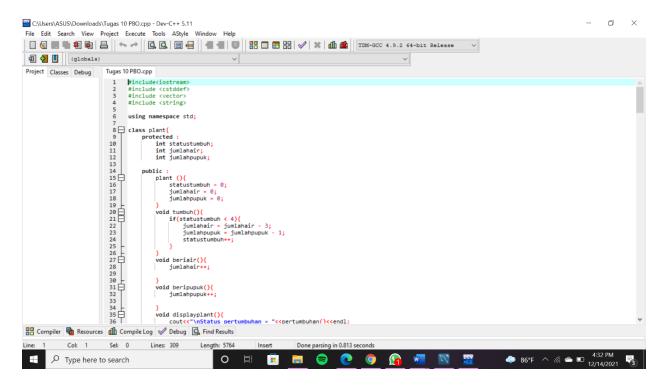
Jessica Inamora (20200801067)

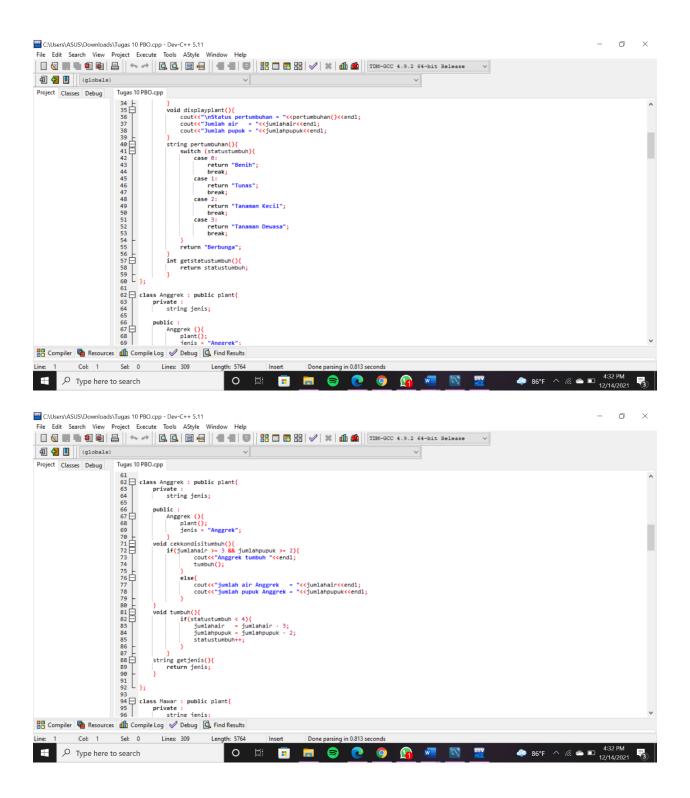
Lucia Bernadette Paruntu (20200801204)

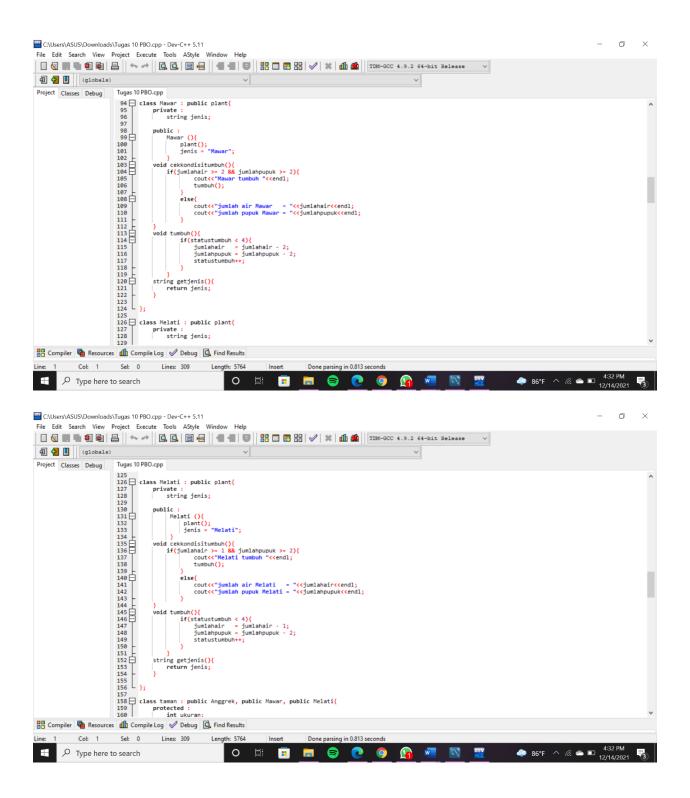
Alfariesta Chandra Perdana (20200801092)

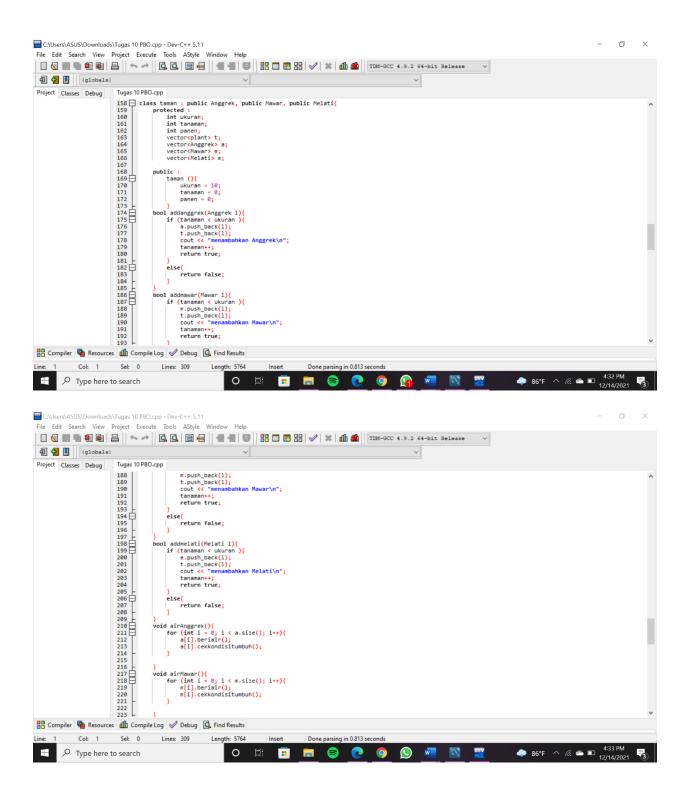
Muhamad Faisal Setiawan (20200801187)

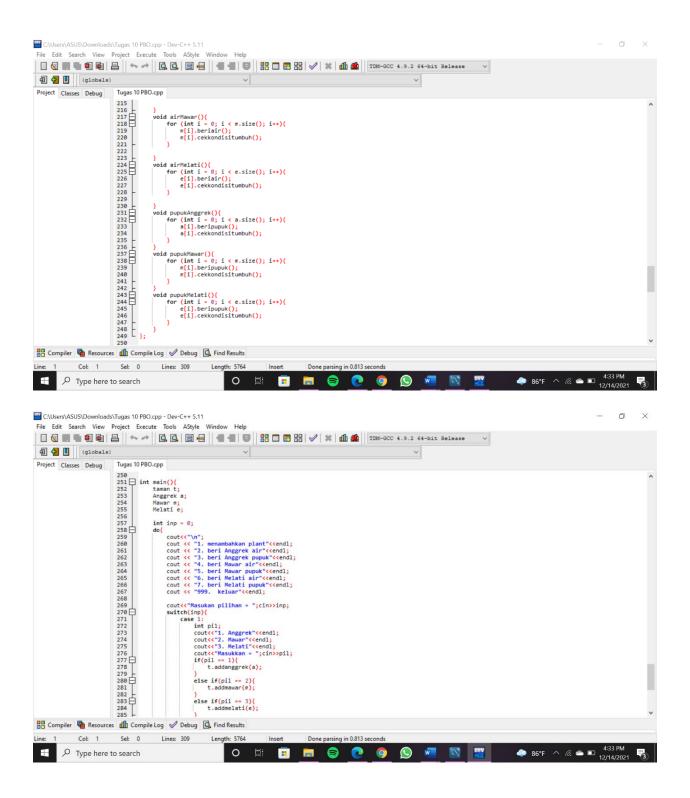
Bagas Syaputra (20200801176)

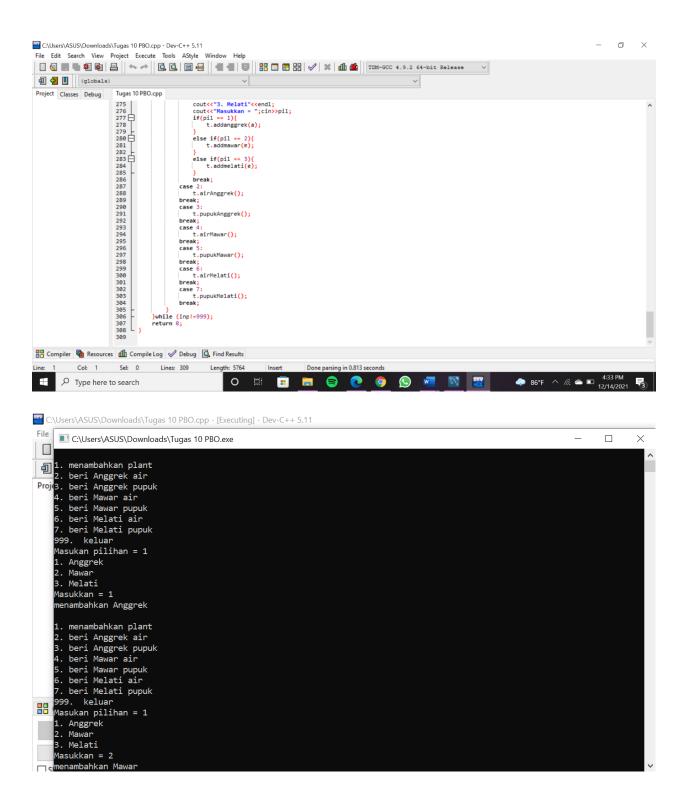


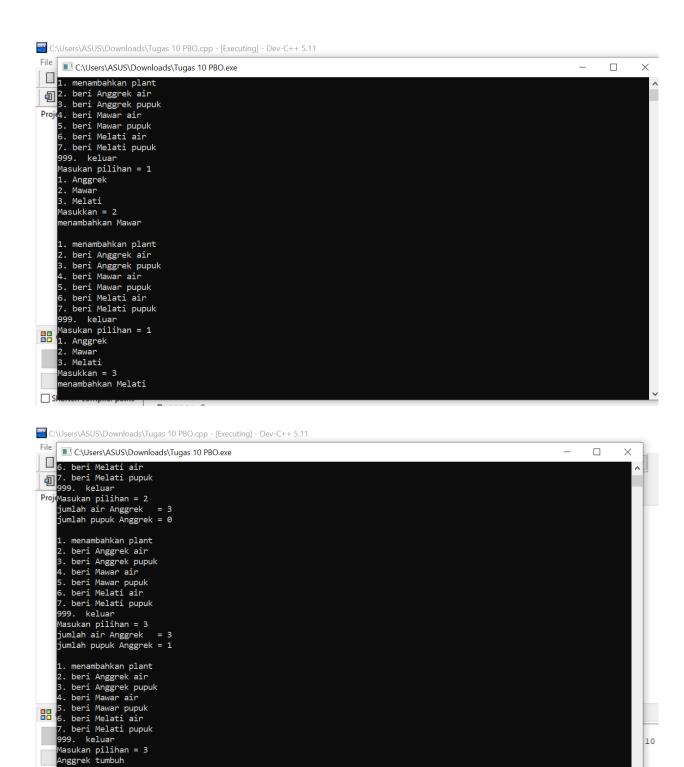


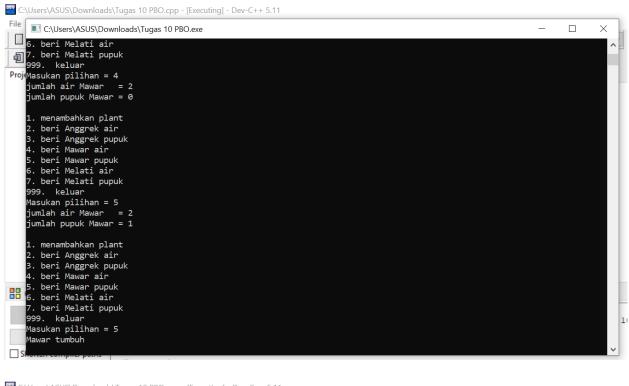


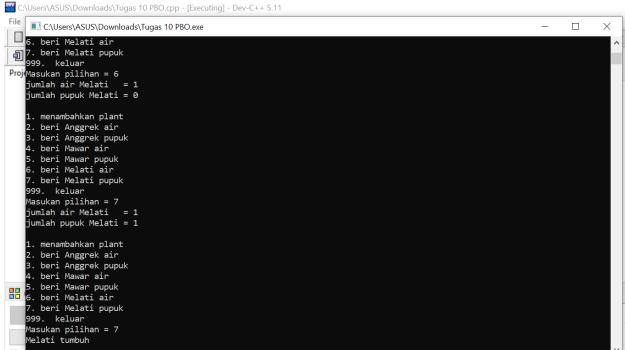












```
#include<iostream>
#include <cstddef>
#include <vector>
#include <string>
using namespace std;
class plant{
       protected:
              int statustumbuh;
              int jumlahair;
              int jumlahpupuk;
       public:
              plant (){
                     statustumbuh = 0;
                     jumlahair = 0;
                     jumlahpupuk = 0;
              }
              void tumbuh(){
                     if(statustumbuh < 4){
                            jumlahair = jumlahair - 3;
                            jumlahpupuk = jumlahpupuk - 1;
```

```
statustumbuh++;
       }
}
void beriair(){
       jumlahair++;
}
void beripupuk(){
       jumlahpupuk++;
}
void displayplant(){
       cout<<"\nStatus pertumbuhan = "<<pertumbuhan()<<endl;</pre>
       cout<<"Jumlah air = "<<jumlahair<<endl;</pre>
       cout<<"Jumlah pupuk = "<<jumlahpupuk<<endl;</pre>
}
string pertumbuhan(){
       switch (statustumbuh){
              case 0:
                      return "Benih";
                      break;
              case 1:
                      return "Tunas";
```

```
break;
                             case 2:
                                    return "Tanaman Kecil";
                                    break;
                             case 3:
                                    return "Tanaman Dewasa";
                                    break;
                      }
                     return "Berbunga";
              }
              int getstatustumbuh(){
                     return statustumbuh;
              }
};
class Anggrek : public plant{
  private:
    string jenis;
  public:
    Anggrek (){
       plant();
       jenis = "Anggrek";
```

```
}
  void cekkondisitumbuh(){
    if(jumlahair \geq 3 \&\& jumlahpupuk \geq 2){
                             cout<<"Anggrek tumbuh "<<endl;</pre>
                             tumbuh();
                      }
                      else{
                             cout<<"jumlah air Anggrek = "<<jumlahair<<endl;</pre>
                             cout<<"jumlah pupuk Anggrek = "<<jumlahpupuk<<endl;</pre>
                      }
  }
  void tumbuh(){
                      if(statustumbuh < 4){
                             jumlahair = jumlahair - 3;
                             jumlahpupuk = jumlahpupuk - 2;
                             statustumbuh++;
                      }
  string getjenis(){
    return jenis;
  }
};
```

```
class Mawar : public plant{
  private:
    string jenis;
  public:
    Mawar (){
       plant();
       jenis = "Mawar";
  void cekkondisitumbuh(){
    if(jumlahair \geq 2 \&\& jumlahpupuk \geq 2){
                             cout<<"Mawar tumbuh "<<endl;</pre>
                             tumbuh();
                      }
                      else{
                             cout<<"jumlah air Mawar = "<<jumlahair<<endl;</pre>
                             cout<<"jumlah pupuk Mawar = "<<jumlahpupuk<<endl;</pre>
                      }
  }
  void tumbuh(){
                      if(statustumbuh < 4){
                             jumlahair = jumlahair - 2;
```

```
jumlahpupuk = jumlahpupuk - 2;
                             statustumbuh++;
                      }
  string getjenis(){
    return jenis;
  }
};
class Melati : public plant{
  private:
    string jenis;
  public:
     Melati (){
       plant();
       jenis = "Melati";
  void cekkondisitumbuh(){
    if(jumlahair >= 1 && jumlahpupuk >= 2){
                             cout<<"Melati tumbuh "<<endl;
                             tumbuh();
```

```
}
                      else{
                             cout<<"jumlah air Melati = "<<jumlahair<<endl;</pre>
                             cout<<"jumlah pupuk Melati = "<<jumlahpupuk<<endl;</pre>
                      }
  }
  void tumbuh(){
                      if(statustumbuh < 4){
                             jumlahair = jumlahair - 1;
                             jumlahpupuk = jumlahpupuk - 2;
                             statustumbuh++;
                      }
               }
  string getjenis(){
    return jenis;
  }
};
class taman : public Anggrek, public Mawar, public Melati{
       protected:
              int ukuran;
              int tanaman;
```

```
int panen;
       vector<plant> t;
       vector<Anggrek> a;
       vector<Mawar> m;
       vector<Melati> e;
public:
       taman (){
              ukuran = 10;
              tanaman = 0;
              panen = 0;
       }
bool addanggrek(Anggrek l){
       if (tanaman < ukuran ){
              a.push_back(l);
              t.push_back(l);
              cout << "menambahkan Anggrek\n";</pre>
              tanaman++;
              return true;
       }
       else{
              return false;
       }
```

```
}
bool addmawar(Mawar l){
       if (tanaman < ukuran ){
               m.push_back(l);
               t.push_back(l);
               cout << "menambahkan \ Mawar \ ";
               tanaman++;
               return true;
        }
       else{
               return false;
        }
}
bool addmelati(Melati l){
       if (tanaman < ukuran ){
               e.push_back(l);
               t.push_back(l);
               cout << "menambahkan \ Melati \backslash n";
               tanaman++;
               return true;
        }
       else{
               return false;
```

```
}
}
void airAnggrek(){
       for (int i = 0; i < a.size(); i++){
               a[i].beriair();
               a[i].cekkondisitumbuh();
        }
}
void airMawar(){
       for (int i = 0; i < m.size(); i++){
               m[i].beriair();
               m[i].cekkondisitumbuh();
        }
}
void airMelati(){
       for (int i = 0; i < e.size(); i++){
               e[i].beriair();
               e[i].cekkondisitumbuh();
        }
}
```

```
void pupukAnggrek(){
              for (int i = 0; i < a.size(); i++){
                      a[i].beripupuk();
                      a[i].cekkondisitumbuh();
               }
       }
       void pupukMawar(){
              for (int i = 0; i < m.size(); i++)
                      m[i].beripupuk();
                      m[i].cekkondisitumbuh();
               }
       }
       void pupukMelati(){
              for (int i = 0; i < e.size(); i++){
                      e[i].beripupuk();
                      e[i].cekkondisitumbuh();
               }
       }
};
int main(){
       taman t;
       Anggrek a;
```

```
Mawar m;
Melati e;
int inp = 0;
do{
       cout << "\n";
       cout << "1. menambahkan plant"<<endl;</pre>
       cout << "2. beri Anggrek air"<<endl;</pre>
       cout << "3. beri Anggrek pupuk"<<endl;</pre>
       cout << "4. beri Mawar air" << endl;
       cout << "5. beri Mawar pupuk"<<endl;</pre>
       cout << "6. beri Melati air"<<endl;</pre>
       cout << "7. beri Melati pupuk"<<endl;</pre>
       cout << "999. keluar" << endl;
       cout<<"Masukan pilihan = ";cin>>inp;
       switch(inp){
               case 1:
                       int pil;
                       cout<<"1. Anggrek"<<endl;</pre>
                       cout << "2. Mawar" << endl;
                       cout<<"3. Melati"<<endl;
                       cout<<"Masukkan = ";cin>>pil;
```

```
if(pil == 1){
              t.addanggrek(a);
       }
       else if(pil == 2){
              t.addmawar(m);
       }
       else if(pil == 3){
              t.addmelati(e);
       }
       break;
case 2:
       t.airAnggrek();
break;
case 3:
       t.pupukAnggrek();
break;
case 4:
       t.airMawar();
break;
case 5:
       t.pupukMawar();
break;
case 6:
```