LAPORAN PRAKTIKUM

ALGORITMA PEMROGRAMAN

DI SUSUN OLEH :

Muhammad Faiz Akbar (2100018361)

SELASA 13.30 – Kelas G

PROGRAM STUDI INFORMATIKA

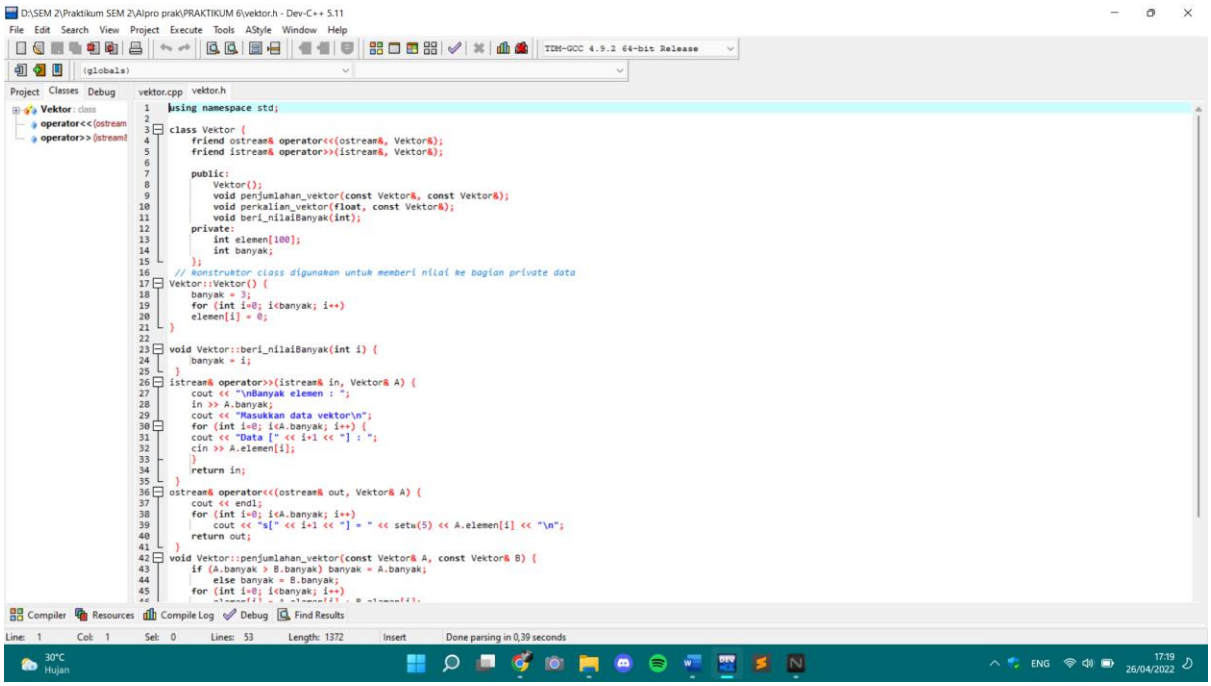
FAKULTAS TEKNOLOGI INDUSTRI

UNIVERSITAS AHMAD DAHLAN

APRIL 2022

KEGIATAN 6

1. Class Vektor selengkapnya disajikan di bawah ini, namakan vektor.h.

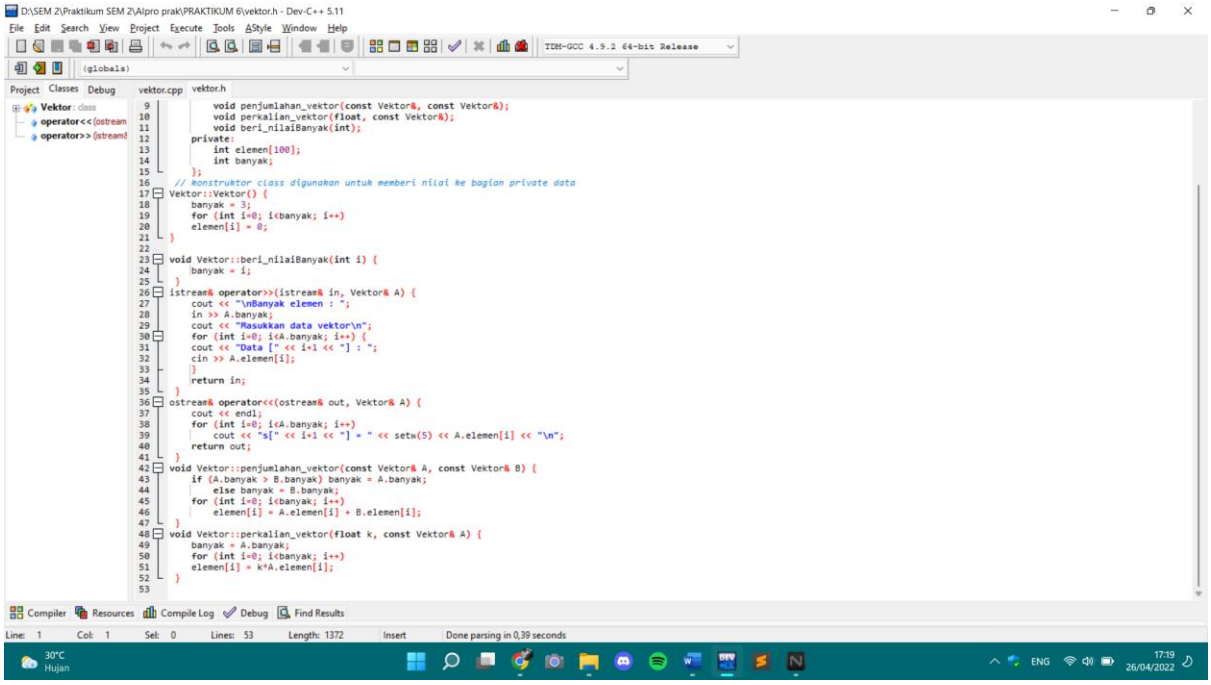


```
using namespace std;

class Vektor {
    friend ostream& operator<<(ostream&, Vektor&);
    friend istream& operator>>(istream&, Vektor&);

    public:
        Vektor();
        void penjumlahan_vektor(const Vektor&, const Vektor&);
        void perkalian_vektor(float, const Vektor&);
        void beri_nilaiBanyak(int);
    private:
        int elemen[100];
        int banyak;
    };
  // konstruktor class digunakan untuk memberi nilai ke bagian private data
Vektor::Vektor() {
    banyak = 3;
    for (int i=0; i<banyak; i++)
    elemen[i] = 0;
}

void Vektor::beri_nilaiBanyak(int i) {
    banyak = i;
  }
istream& operator>>(istream& in, Vektor& A) {
    cout << "\nBanyak elemen : ";
    in >> A.banyak;
    cout << "Masukkan data vektor\n";
    for (int i=0; i<A.banyak; i++) {
    cout << "Data [" << i+1 << "] : ";
    cin >> A.elemen[i];
    }
    return in;
}
ostream& operator<<(ostream& out, Vektor& A) {
    cout << endl;
    for (int i=0; i<A.banyak; i++)
        cout << "s[" << i+1 << "] = " << setw(5) << A.elemen[i] << "\n";
    return out;
}
void Vektor::penjumlahan_vektor(const Vektor& A, const Vektor& B) {
    if (A.banyak > B.banyak) banyak = A.banyak;
        else banyak = B.banyak;
    for (int i=0; i<banyak; i++)
```



```
        void penjumlahan_vektor(const Vektor&, const Vektor&);
        void perkalian_vektor(float, const Vektor&);
        void beri_nilaiBanyak(int);
    private:
        int elemen[100];
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  // konstruktor class digunakan untuk memberi nilai ke bagian private data
Vektor::Vektor() {
    banyak = 3;
    for (int i=0; i<banyak; i++)
    elemen[i] = 0;
}

void Vektor::beri_nilaiBanyak(int i) {
    banyak = i;
  }
istream& operator>>(istream& in, Vektor& A) {
    cout << "\nBanyak elemen : ";
    in >> A.banyak;
    cout << "Masukkan data vektor\n";
    for (int i=0; i<A.banyak; i++) {
    cout << "Data [" << i+1 << "] : ";
    cin >> A.elemen[i];
    }
    return in;
}
ostream& operator<<(ostream& out, Vektor& A) {
    cout << endl;
    for (int i=0; i<A.banyak; i++)
        cout << "s[" << i+1 << "] = " << setw(5) << A.elemen[i] << "\n";
    return out;
}
void Vektor::penjumlahan_vektor(const Vektor& A, const Vektor& B) {
    if (A.banyak > B.banyak) banyak = A.banyak;
        else banyak = B.banyak;
    for (int i=0; i<banyak; i++)
        elemen[i] = A.elemen[i] + B.elemen[i];
}
void Vektor::perkalian_vektor(float k, const Vektor& A) {
    banyak = A.banyak;
    for (int i=0; i<banyak; i++)
    elemen[i] = k*A.elemen[i];
}
```
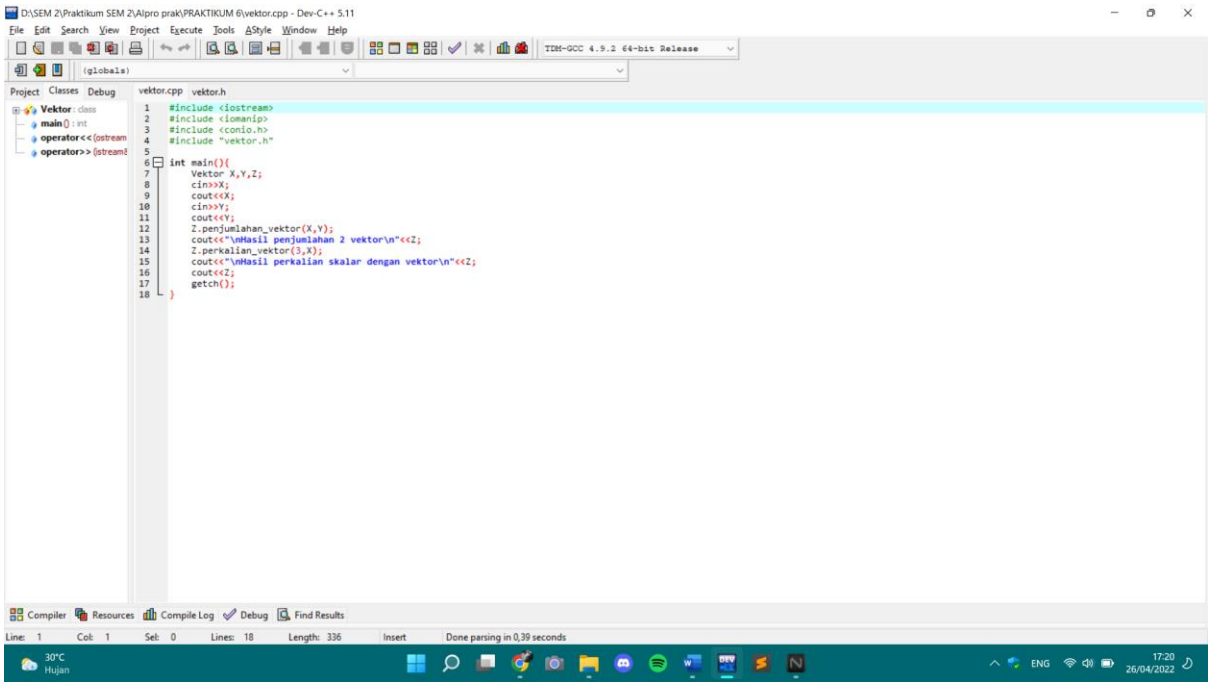
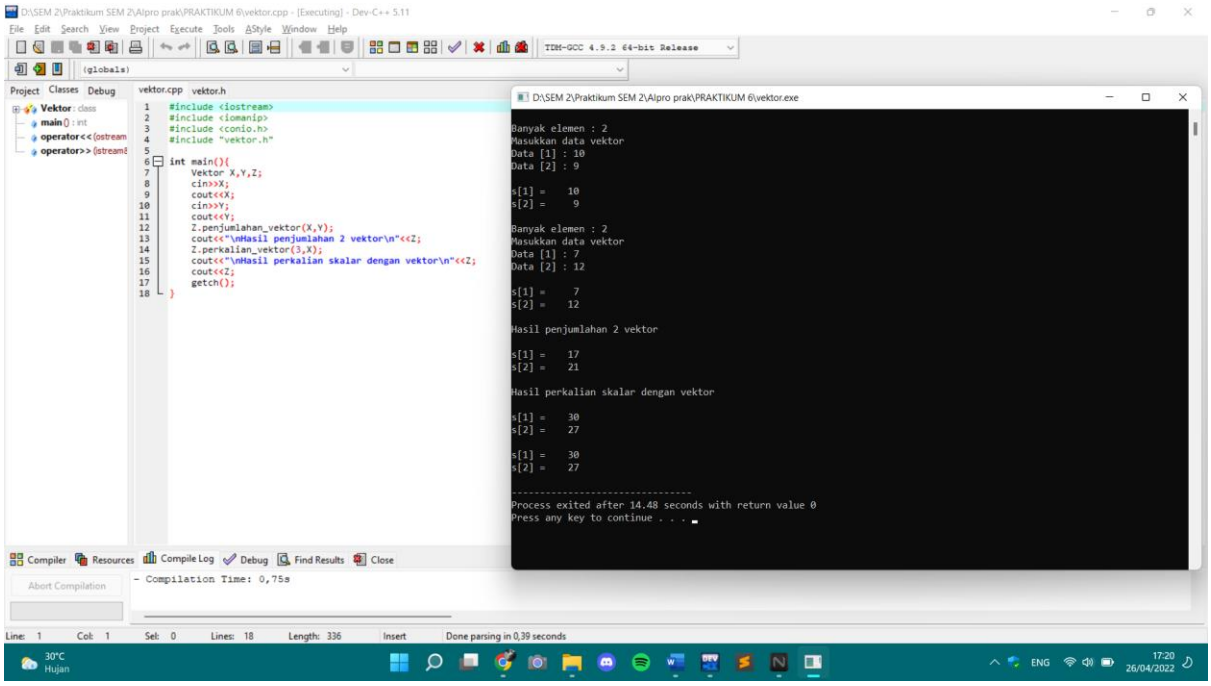

2. Implementasi untuk menggunakan class Vektor di atas diberikan berikut ini, namakan Vektor.cpp.



- Menjalankan Program

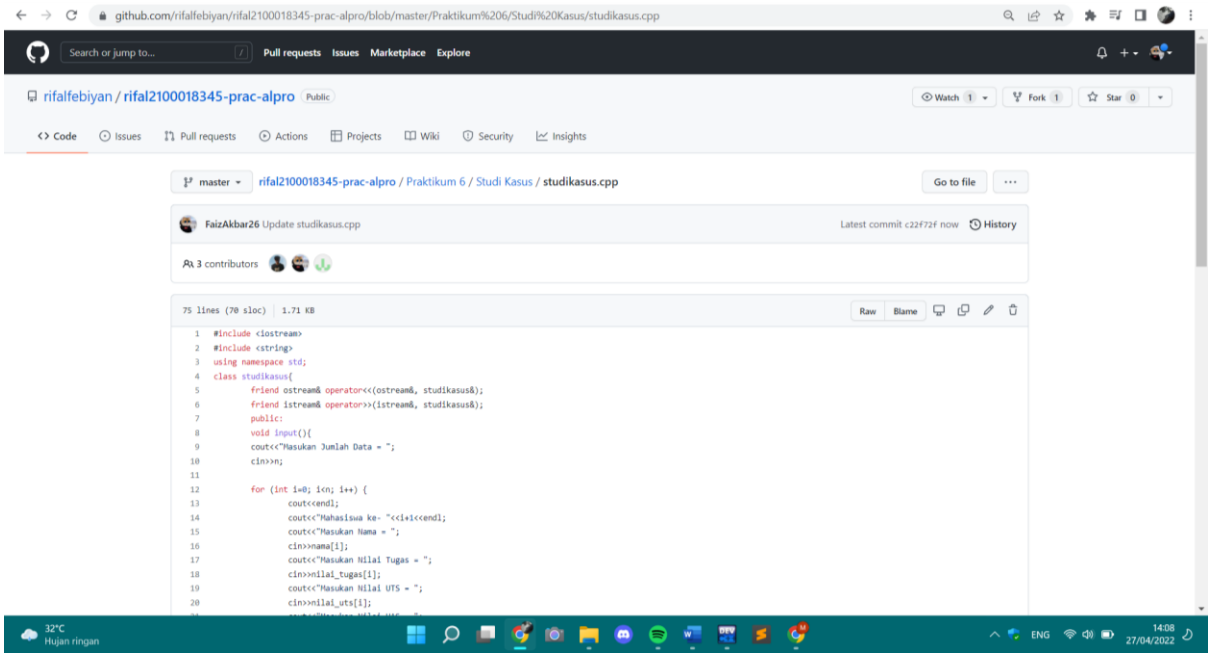


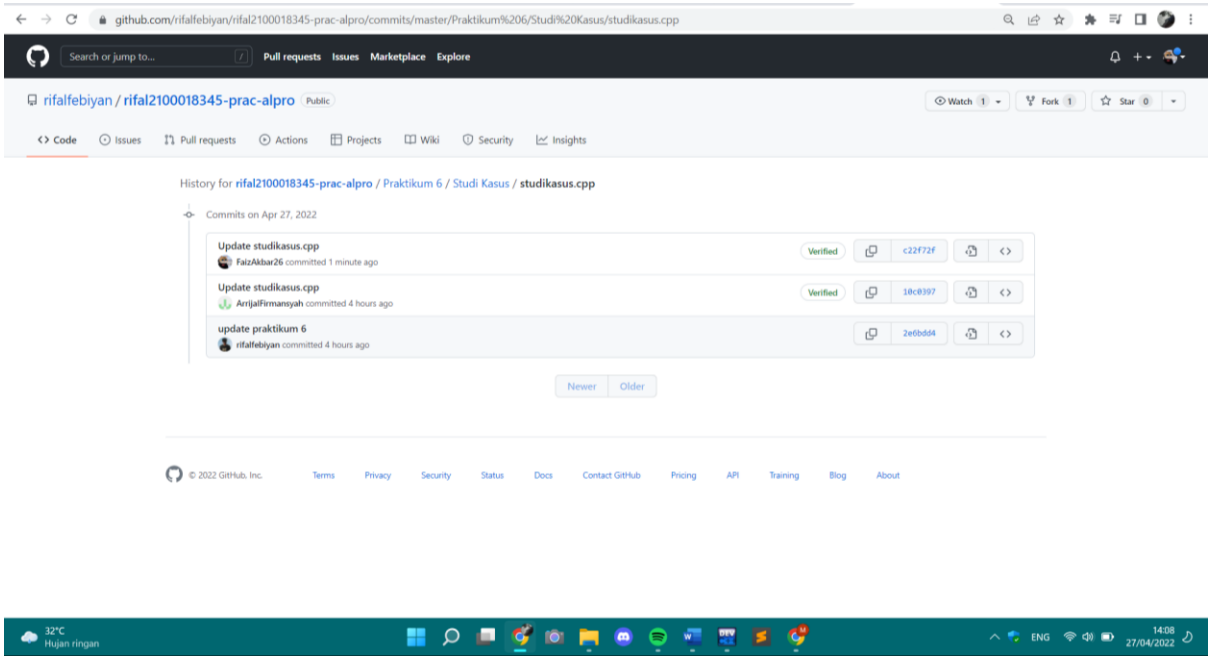
Maka akan tampil hasil penjumlahan 2 vektor dan hasil perkalian skalar dengan vector.

STUDI KASUS

Dengan nama kelompok :

- Rifal febiyan
- Muhammad Faiz Akbar
- Arrijal Firmansyah





Link repository : https://github.com/rifalfebiyan/rifal2100018345-prac alpro/blob/master/Praktikum%206/Studi%20Kasus/studikasus.cpp