Nama   : Helmi Efendi Lubis
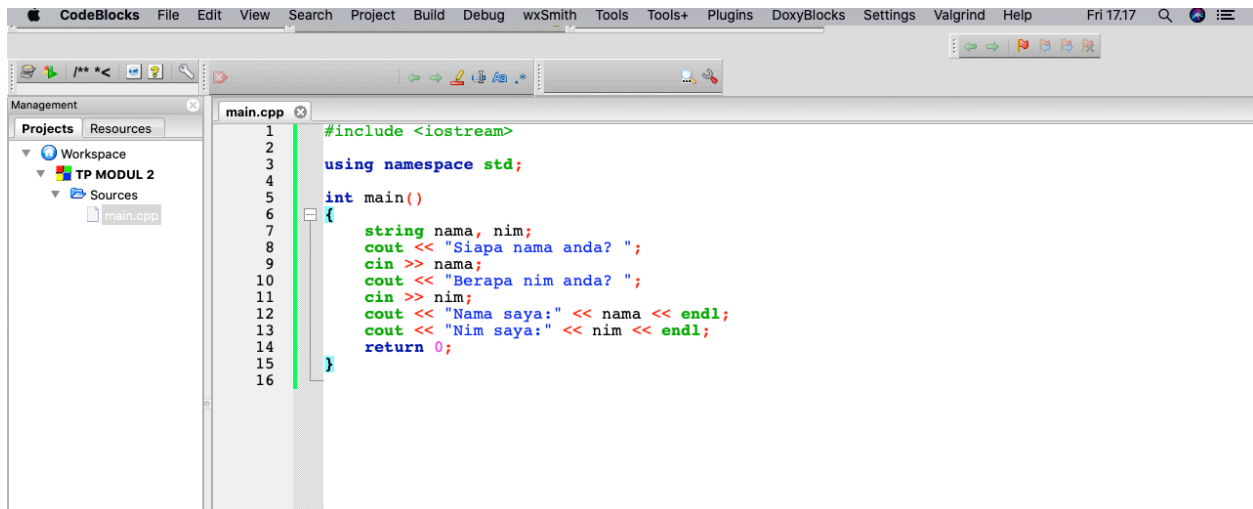NIM   : 1301223338

TP MODUL 2

1. Input/Output

a) Masukkan nama lengkap anda dan nim anda. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

Kode:

Hasil:

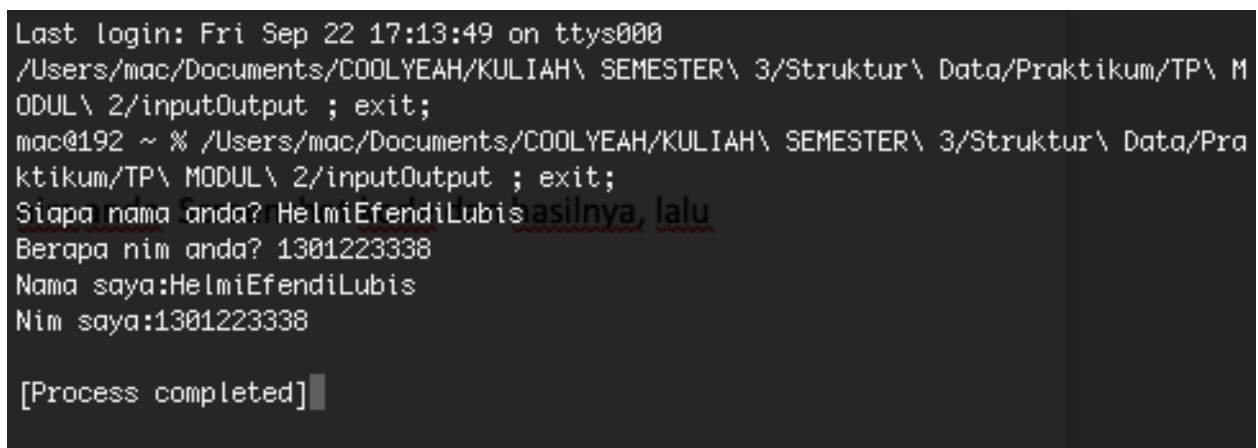b) Masukkan nama pertama anda dan nim anda. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

Kode:

```cpp
#include <iostream>

using namespace std;

int main()
{
    string nama, nim;
    cout << "Siapa nama anda? ";
    cin >> nama;
    cout << "Berapa nim anda? ";
    cin >> nim;
    cout << "Nama saya:" << nama << endl;
    cout << "Nim saya:" << nim << endl;
    return 0;
}
```

Hasil:


```
Last login: Fri Sep 22 17:14:00 on ttys000
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/inputOutput ; exit;
Siapa nama anda? Helmi
Berapa nim anda? 1301223338
Nama saya:Helmi
Nim saya:1301223338

[Process completed]
```

2. Operasi Matematika

Kode:
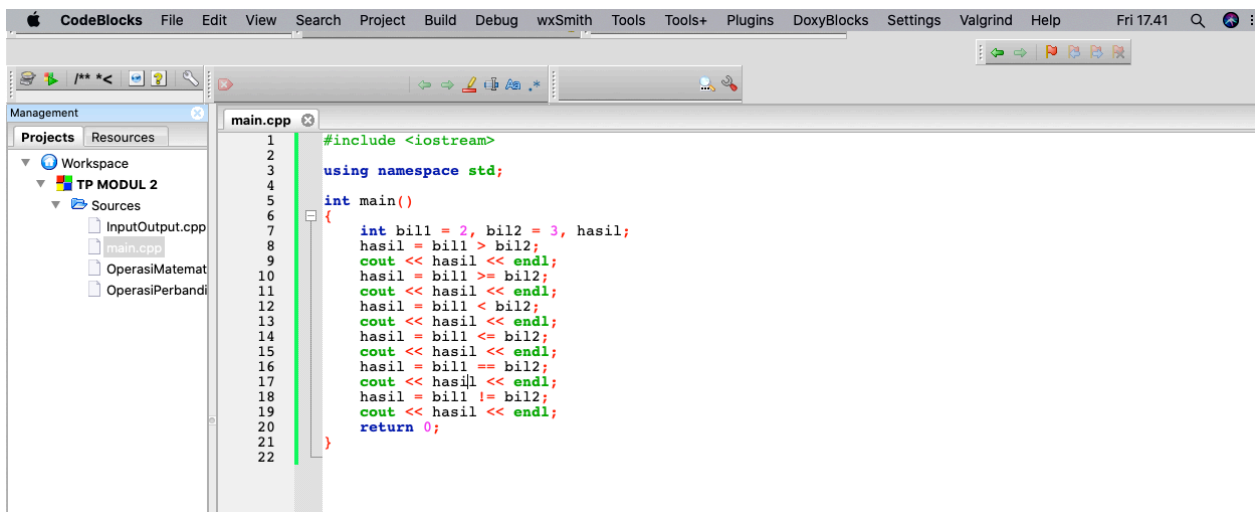


```cpp
#include <iostream>

using namespace std;

int main()
{
    int bil1 = 3, bil2 = 4, hasil1;
    float bil3 = 3.0, bil4 = 4.0, hasil2;
    hasil1 = bil1 + bil2;
    cout << hasil1 << endl;
    hasil1 = bil1 - bil2;
    cout << hasil1 << endl;
    hasil1 = bil1 * bil2;
    cout << hasil1 << endl;
    hasil1 = bil1 / bil2; // integer division
    cout << hasil1 << endl;
    hasil1 = bil2 / bil1; // integer division
    cout << hasil1 << endl;
    hasil1 = bil1 % bil2; // modulo
    cout << hasil1 << endl;
    hasil1 = bil2 % bil1; // modulo
    cout << hasil1 << endl;
    hasil2 = bil3 / bil4;
    cout << hasil2 << endl;
    return 0;
}
```

Hasil:

3. Operasi Perbandingan

Kode:


```cpp
#include <iostream>

using namespace std;

int main()
{
    int bil1 = 2, bil2 = 3, hasil;
    hasil = bil1 > bil2;
    cout << hasil << endl;
    hasil = bil1 >= bil2;
    cout << hasil << endl;
    hasil = bil1 < bil2;
    cout << hasil << endl;
    hasil = bil1 <= bil2;
    cout << hasil << endl;
    hasil = bil1 == bil2;
    cout << hasil << endl;
    hasil = bil1 != bil2;
    cout << hasil << endl;
    return 0;
}
```
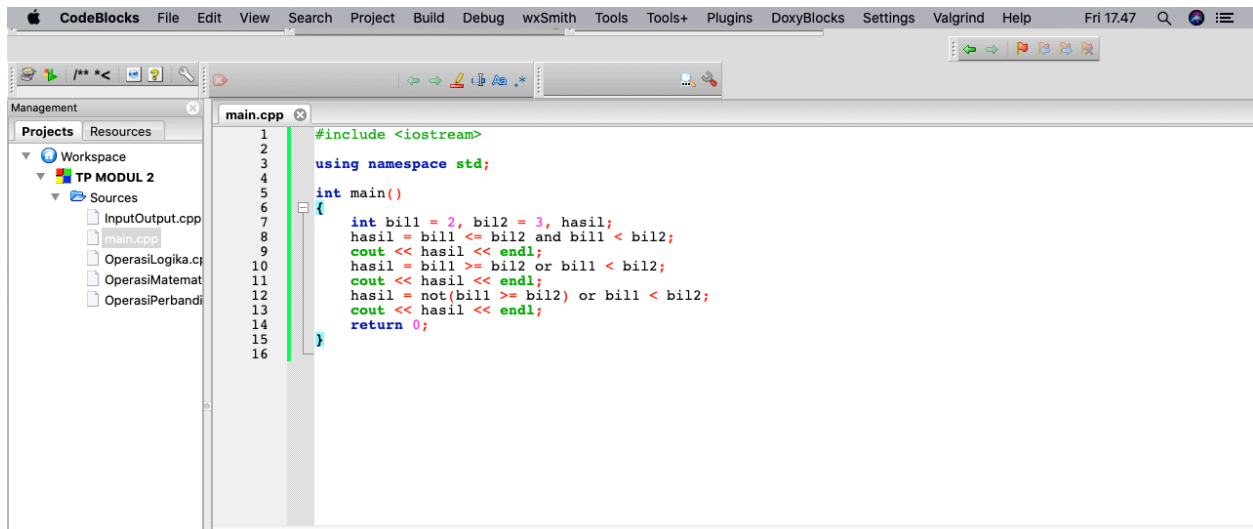
Hasil:

4. Operasi Logika

Kode:

Hasil:

Penggunaan struktur control

5. Percabangan if-else

Kode:

Hasil:

```
Last login: Fri Sep 22 20:22:58 on ttys000
/Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Praktikum/TP\ M
ODUL\ 2/percabangan ; exit;
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/percabangan ; exit;
80
Bukan A

[Process completed]
```

```
Last login: Fri Sep 22 20:23:05 on ttys001
/Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Praktikum/TP\ M
ODUL\ 2/percabangan ; exit;
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/percabangan ; exit;
81
A

[Process completed]
```

```
Last login: Fri Sep 22 20:24:16 on ttys001
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/percabangan ; exit;
79
Bukan A

[Process completed]
```
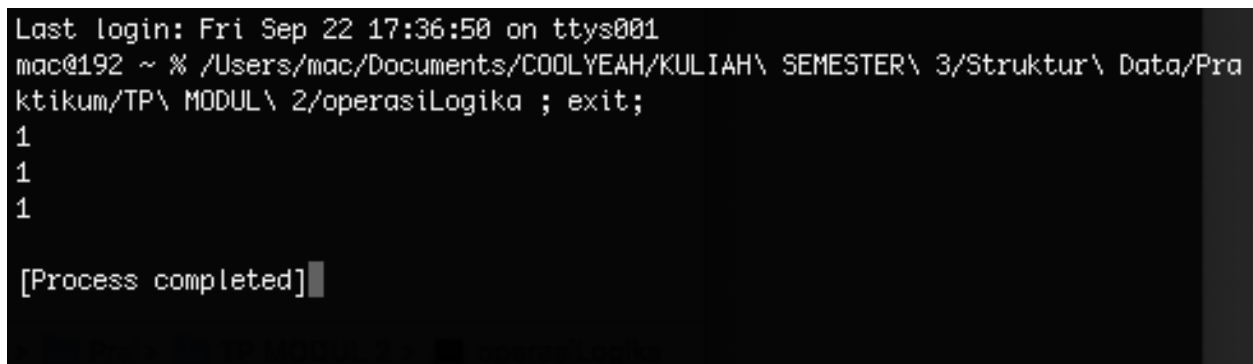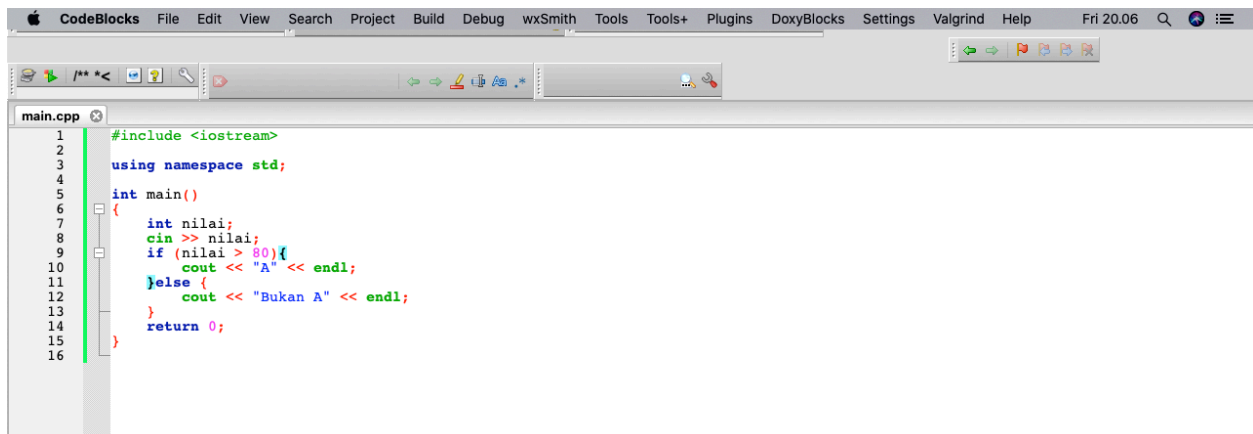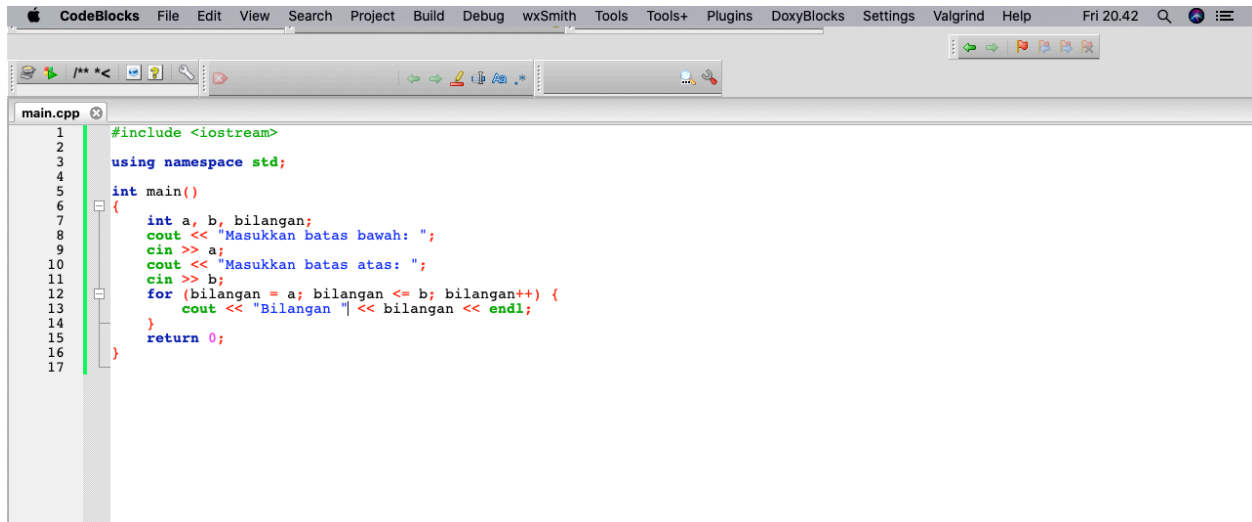
6. Perulangan for-to-do

Kode:

```cpp
#include <iostream>

using namespace std;

int main()
{
    int a, b, bilangan;
    cout << "Masukkan batas bawah: ";
    cin >> a;
    cout << "Masukkan batas atas: ";
    cin >> b;
    for (bilangan = a; bilangan <= b; bilangan++) {
        cout << "Bilangan " << bilangan << endl;
    }
    return 0;
}
```

Hasil:


```
Last login: Fri Sep 22 20:25:01 on ttys001
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/perulangan ; exit;
Masukkan batas bawah: 1
Masukkan batas atas: 10
Bilangan 1
Bilangan 2
Bilangan 3
Bilangan 4
Bilangan 5
Bilangan 6
Bilangan 7
Bilangan 8
Bilangan 9
Bilangan 10

[Process completed]
```

7. Perulangan while-do

Kode:

main.cpp

```cpp
#include <iostream>

using namespace std;

int main()
{
    int bilangan, asli, jumlah;

    cout << "Masukkan bilangan asli: ";
    cin >> asli;

    bilangan = 1;
    jumlah = 0;
    while (bilangan <= asli) {
        if (bilangan % 2 == 0) {
            jumlah += bilangan;
        }
        bilangan++;
    }
    cout << "Jumlah bilangan genap: " << jumlah << endl;
    return 0;
}
```

Hasil:

```
Last login: Fri Sep 22 20:41:32 on ttys001
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/perulanganwhile ; exit;
Masukkan bilangan asli: 10
Jumlah bilangan genap: 30

[Process completed]
```

8. Fungsi

Kode:

main.cpp

```cpp
#include <iostream>

using namespace std;

int kendaraan_1301223338(int kapasitas_kendaraan, int jumlah_penumpang) {
    int jumlah;
    jumlah = jumlah_penumpang / kapasitas_kendaraan;
    if (jumlah_penumpang % kapasitas_kendaraan > 0) {
        jumlah++;
    }
    return jumlah;
}

int main()
{
    int kap_kendaraan, jum_penumpang, banyak_kendaraan;
    cout << "Masukkan kapasitas kendaraan: ";
    cin >> kap_kendaraan;
    cout << "Masukkan jumlah penumpang: ";
    cin >> jum_penumpang;
    banyak_kendaraan = kendaraan_1301223338(kap_kendaraan, jum_penumpang);
    cout << "Banyak kendaraan yang disewa " << banyak_kendaraan << endl;
    return 0;
}
```

Hasil:

9. Prosedur

Kode:


```cpp
#include <iostream>

using namespace std;

void tukar_1301223338(int *a, int *b) {
    int temp;
    temp = *a;
    *a = *b;
    *b = temp;
}

int main() {
    int bil1, bil2;
    cout << "Masukkan bilangan pertama: ";
    cin >> bil1;
    cout << "Masukkan bilangan kedua: ";
    cin >> bil2;
    cout << "Sebelum pertukaran:\n";
    cout << "Bil 1: " << bil1 << " bil 2: " << bil2 << endl;
    tukar_1301223338(&bil1, &bil2);
    cout << "Setelah pertukaran:\n";
    cout << "Bil 1: " << bil1 << " bil 2: " << bil2 << endl;
    return 0;
}
```

Hasil:

```
Last login: Fri Sep 22 20:56:53 on ttys001
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/prosedur ; exit;
Masukkan bilangan pertama: 1
Masukkan bilangan kedua: 2
Sebelum pertukaran:
Bil 1: 1 bil 2: 2
Setelah pertukaran:
Bil 1: 2 bil 2: 1

[Process completed]
```
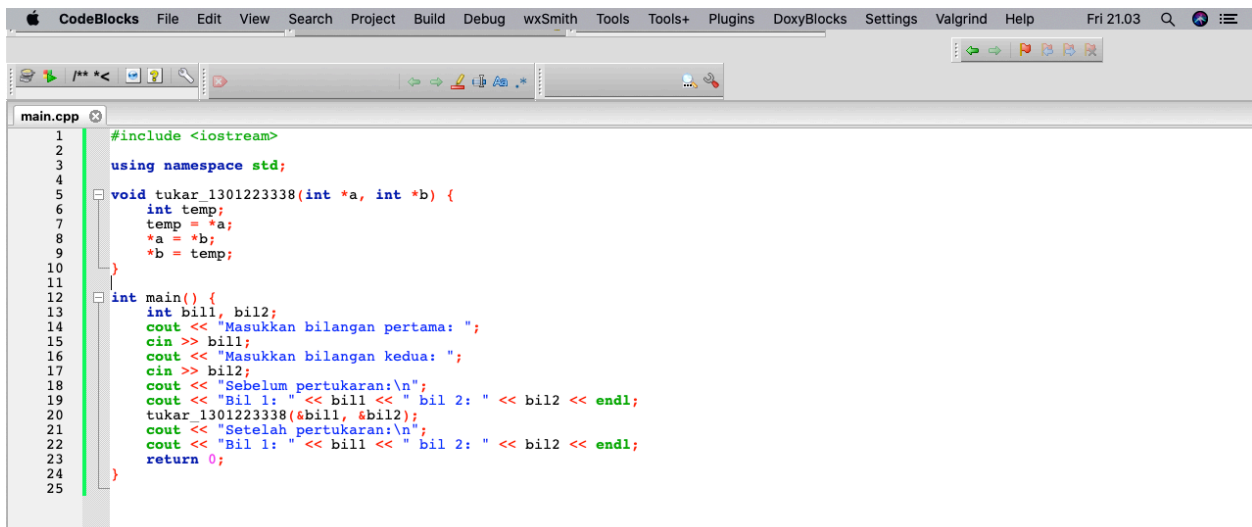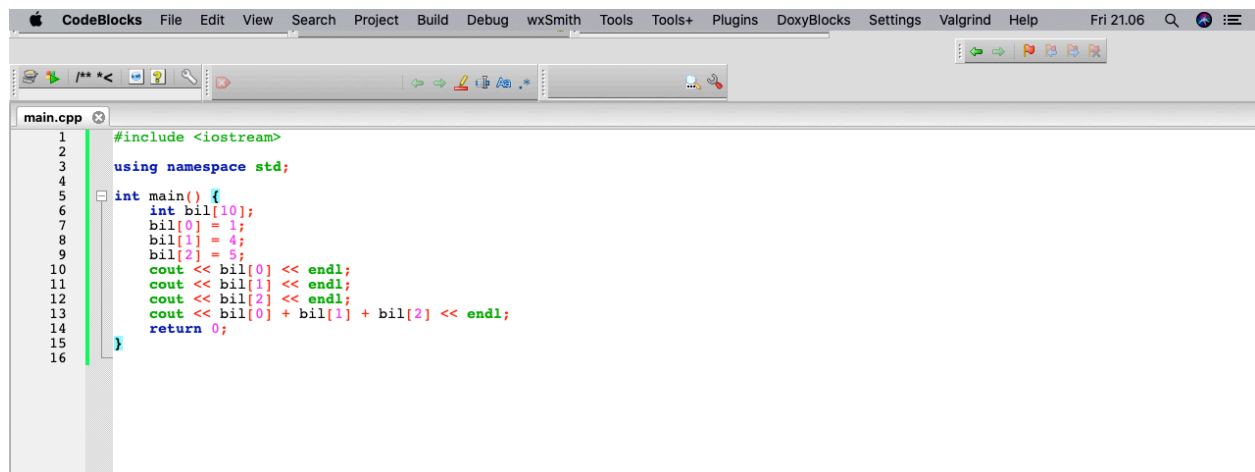
10. Array

Kode:


```cpp
#include <iostream>

using namespace std;

int main() {
    int bil[10];
    bil[0] = 1;
    bil[1] = 4;
    bil[2] = 5;
    cout << bil[0] << endl;
    cout << bil[1] << endl;
    cout << bil[2] << endl;
    cout << bil[0] + bil[1] + bil[2] << endl;
    return 0;
}
```

Hasil:


```
Last login: Fri Sep 22 21:02:24 on ttys001
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/array ; exit;
1
4
5
10

[Process completed]
```