

Nama : Helmi Efendi Lubis

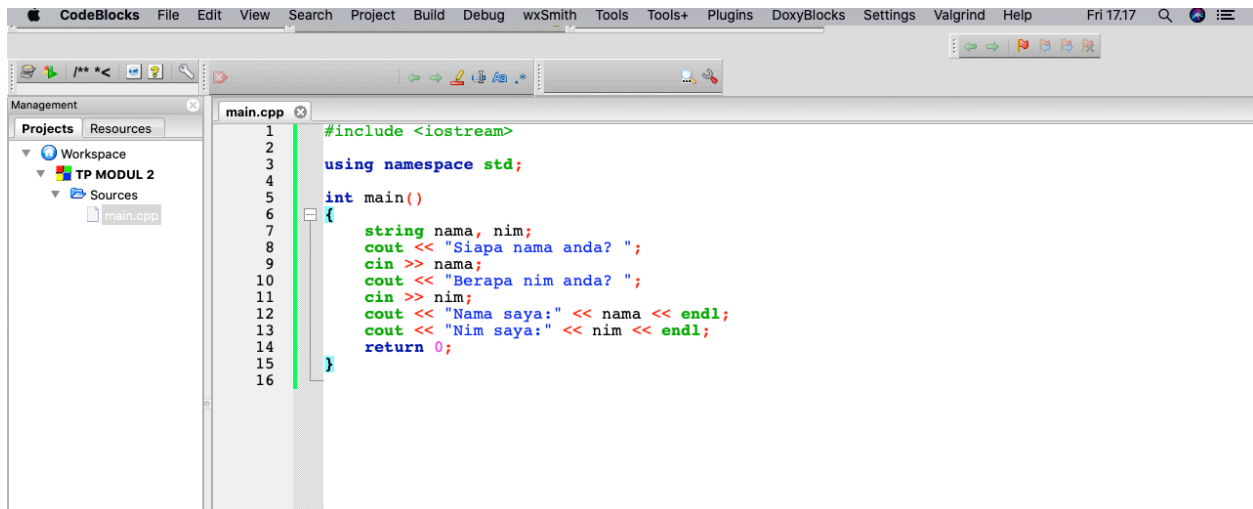
NIM : 1301223338

TP MODUL 2

1. Input/Output

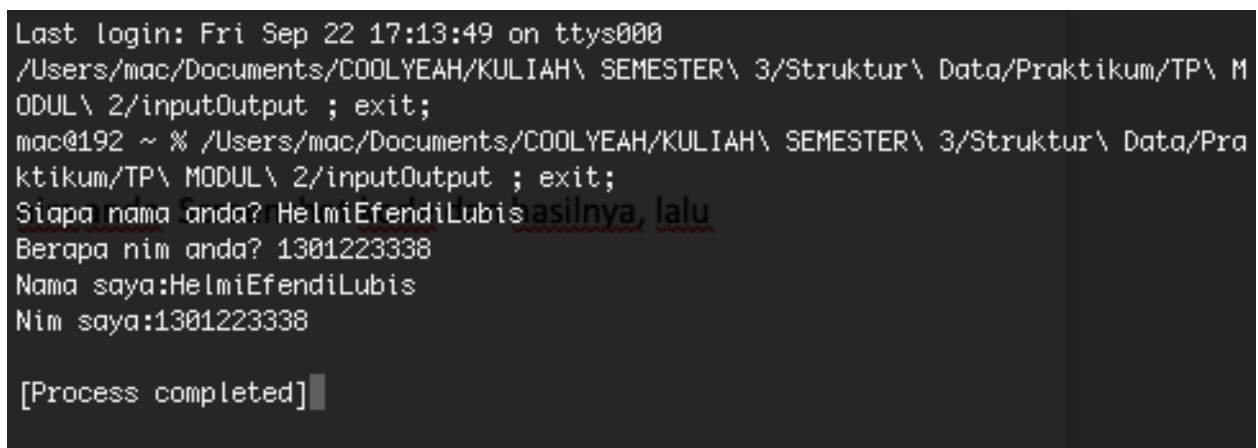
- a) Masukkan nama lengkap anda dan nim anda. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

Kode:



```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     string nama, nim;
8     cout << "Siapa nama anda? ";
9     cin >> nama;
10    cout << "Berapa nim anda? ";
11    cin >> nim;
12    cout << "Nama saya:" << nama << endl;
13    cout << "Nim saya:" << nim << endl;
14    return 0;
15 }
16
```

Hasil:



```
Last login: Fri Sep 22 17:13:49 on ttys000
/Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Praktikum/TP\ M
ODUL\ 2/inputOutput ; exit;
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/inputOutput ; exit;
Siapa nama anda? HelmiEfendiLubis
Berapa nim anda? 1301223338
Nama saya:HelmiEfendiLubis
Nim saya:1301223338

[Process completed]
```

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

Kode:

The screenshot shows the CodeBlocks IDE interface. The 'Management' pane on the left shows a project named 'TP MODUL 2' with a source file 'main.cpp'. The main editor displays the following C++ code:

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     string nama, nim;
8     cout << "Siapa nama anda? ";
9     cin >> nama;
10    cout << "Berapa nim anda? ";
11    cin >> nim;
12    cout << "Nama saya:" << nama << endl;
13    cout << "Nim saya:" << nim << endl;
14    return 0;
15 }
16
```

Hasil:

The screenshot shows the terminal output of the program. It displays the last login time, the current directory, and the execution of the program. The program prompts for a name and a nim, and then outputs the entered values.

```
Last login: Fri Sep 22 17:14:00 on ttys000
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pro
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:

The screenshot shows the CodeBlocks IDE interface. The 'Management' pane on the left shows a project named 'TP MODUL 2' with a source file 'main.cpp'. The main editor displays the following C++ code:

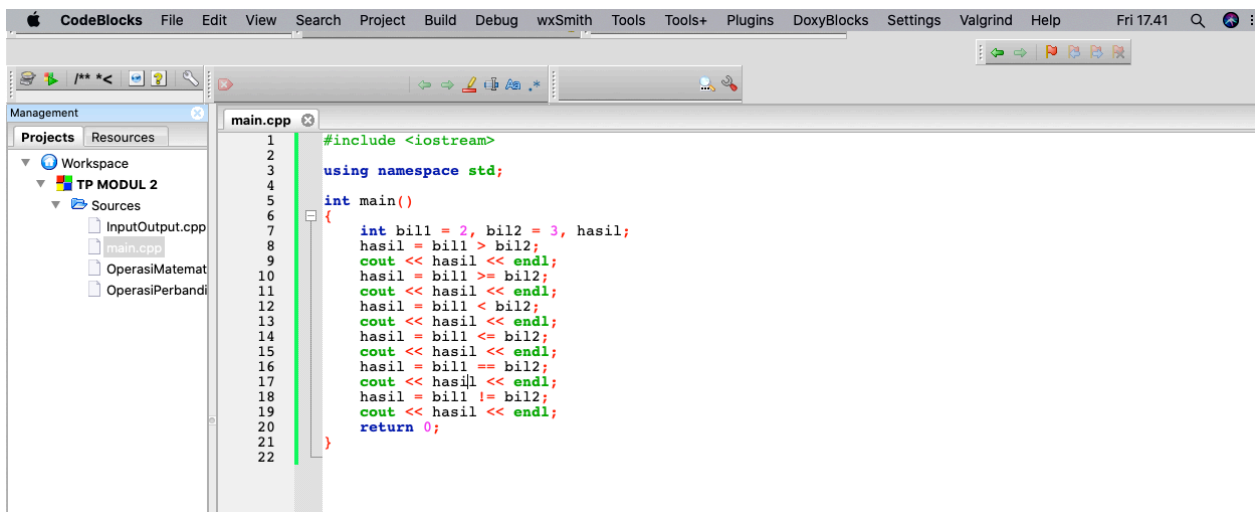
```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int bil1 = 3, bil2 = 4, hasil1;
8     float bil3 = 3.0, bil4 = 4.0, hasil2;
9     hasil1 = bil1 + bil2;
10    cout << hasil1 << endl;
11    hasil1 = bil1 - bil2;
12    cout << hasil1 << endl;
13    hasil1 = bil1 * bil2;
14    cout << hasil1 << endl;
15    hasil1 = bil1 / bil2; // integer division
16    cout << hasil1 << endl;
17    hasil1 = bil2 / bil1; // integer division
18    cout << hasil1 << endl;
19    hasil1 = bil1 % bil2; // modulo
20    cout << hasil1 << endl;
21    hasil1 = bil2 % bil1; // modulo
22    cout << hasil1 << endl;
23    hasil2 = bil3 / bil4;
24    cout << hasil2 << endl;
25    return 0;
26 }
27
```

Hasil:

```
Last login: Fri Sep 22 17:25:38 on ttys000
/Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Praktikum/TP\ M
ODUL\ 2/operasiMatematika ; exit;
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/operasiMatematika ; exit;
5 ▶ int main(){
6     int bil1 = 3, bi
7     float bil3 = 3.6
8     hasil1 = bil1 +
9     cout << hasil1 <
10    hasil1 = bil1 -
11    cout << hasil1 <
12    hasil1 = bil1 *
```

3. Operasi Perbandingan

Kode:



```
#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;
}
```

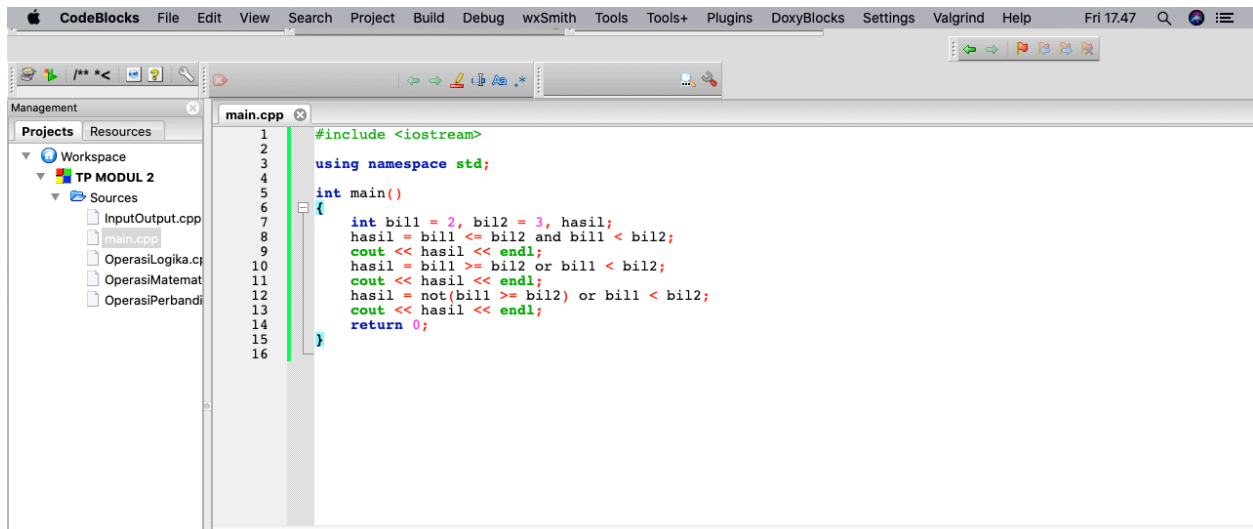
Hasil:

```
Last login: Fri Sep 22 17:26:31 on ttys001
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/operasiPerbandingan ; exit;
0
0
1
1
0
1

[Process completed]
```

4. Operasi Logika

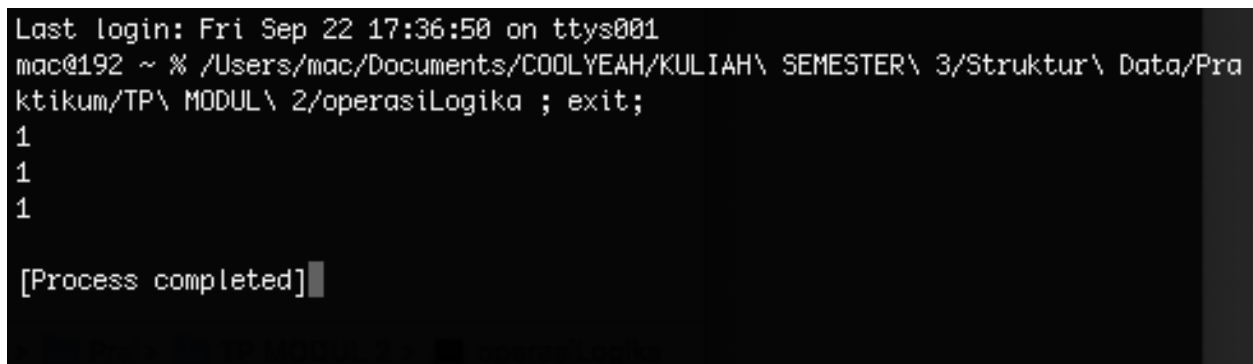
Kode:



The screenshot shows the CodeBlocks IDE with a project named 'TP MODUL 2'. The source file 'main.cpp' is open and contains the following C++ code:

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int bil1 = 2, bil2 = 3, hasil;
8     hasil = bil1 <= bil2 and bil1 < bil2;
9     cout << hasil << endl;
10    hasil = bil1 >= bil2 or bil1 < bil2;
11    cout << hasil << endl;
12    hasil = not(bil1 >= bil2) or bil1 < bil2;
13    cout << hasil << endl;
14    return 0;
15 }
16
```

Hasil:



The screenshot shows a terminal window with the following output:

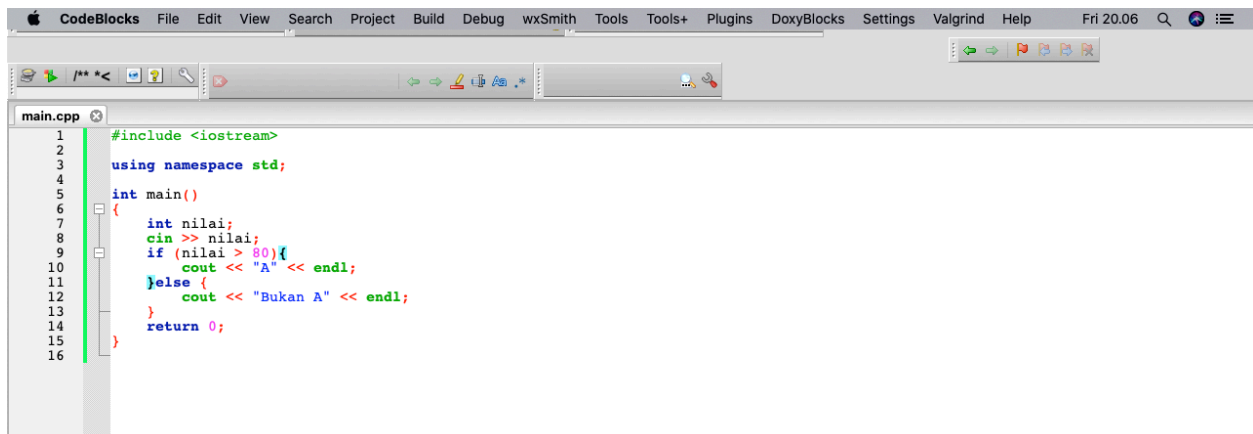
```
Last login: Fri Sep 22 17:36:50 on ttys001
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/operasiLogika ; exit;
1
1
1

[Process completed]
```

Penggunaan struktur control

5. Percabangan if-else

Kode:



The screenshot shows the CodeBlocks IDE with a project named 'TP MODUL 2'. The source file 'main.cpp' is open and contains the following C++ code:

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int nilai;
8     cin >> nilai;
9     if (nilai > 80){
10         cout << "A" << endl;
11     }else {
12         cout << "Bukan A" << endl;
13     }
14    return 0;
15 }
16
```

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

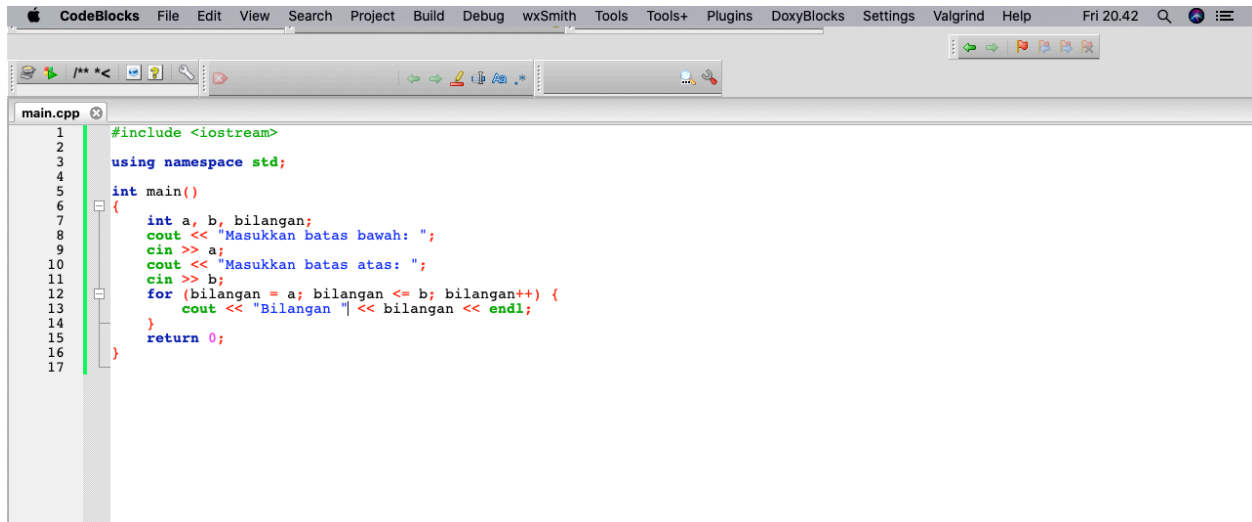
[Process completed]
```

```
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:



```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int a, b, bilangan;
8     cout << "Masukkan batas bawah: ";
9     cin >> a;
10    cout << "Masukkan batas atas: ";
11    cin >> b;
12    for (bilangan = a; bilangan <= b; bilangan++) {
13        cout << "Bilangan " << bilangan << endl;
14    }
15    return 0;
16 }
17
```

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:

```
CodeBlocks File Edit View Search Project Build Debug wxSmith Tools Tools+ Plugins DoxyBlocks Settings Valgrind Help Fri 20.47
main.cpp
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int bilangan, asli, jumlah;
8
9     cout << "Masukkan bilangan asli: ";
10    cin >> asli;
11
12    bilangan = 1;
13    jumlah = 0;
14    while (bilangan <= asli) {
15        if (bilangan % 2 == 0) {
16            jumlah += bilangan;
17        }
18        bilangan++;
19    }
20    cout << "Jumlah bilangan genap: " << jumlah << endl;
21    return 0;
22 }
23
```

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:

```
CodeBlocks File Edit View Search Project Build Debug wxSmith Tools Tools+ Plugins DoxyBlocks Settings Valgrind Help Fri 20.56
main.cpp
1 #include <iostream>
2
3 using namespace std;
4
5 int kendaraan_1301223338(int kapasitas_kendaraan, int jumlah_penumpang) {
6     int jumlah;
7     jumlah = jumlah_penumpang / kapasitas_kendaraan;
8     if (jumlah_penumpang % kapasitas_kendaraan > 0) {
9         jumlah++;
10    }
11    return jumlah;
12 }
13
14 int main()
15 {
16     int kap_kendaraan, jum_penumpang, banyak_kendaraan;
17     cout << "Masukkan kapasitas kendaraan: ";
18     cin >> kap_kendaraan;
19     cout << "Masukkan jumlah penumpang: ";
20     cin >> jum_penumpang;
21     banyak_kendaraan = kendaraan_1301223338(kap_kendaraan, jum_penumpang);
22     cout << "Banyak kendaraan yang disewa " << banyak_kendaraan << endl;
23     return 0;
24 }
25
```

Hasil:

```

Last login: Fri Sep 22 20:47:54 on ttys001
/Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Praktikum/TP\ M
ODUL\ 2/fungsi ; exit;
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/fungsi ; exit;
Masukkan kapasitas kendaraan: 45
Masukkan jumlah penumpang: 40
Banyak kendaraan yang disewa 1

[Process completed]

```

```

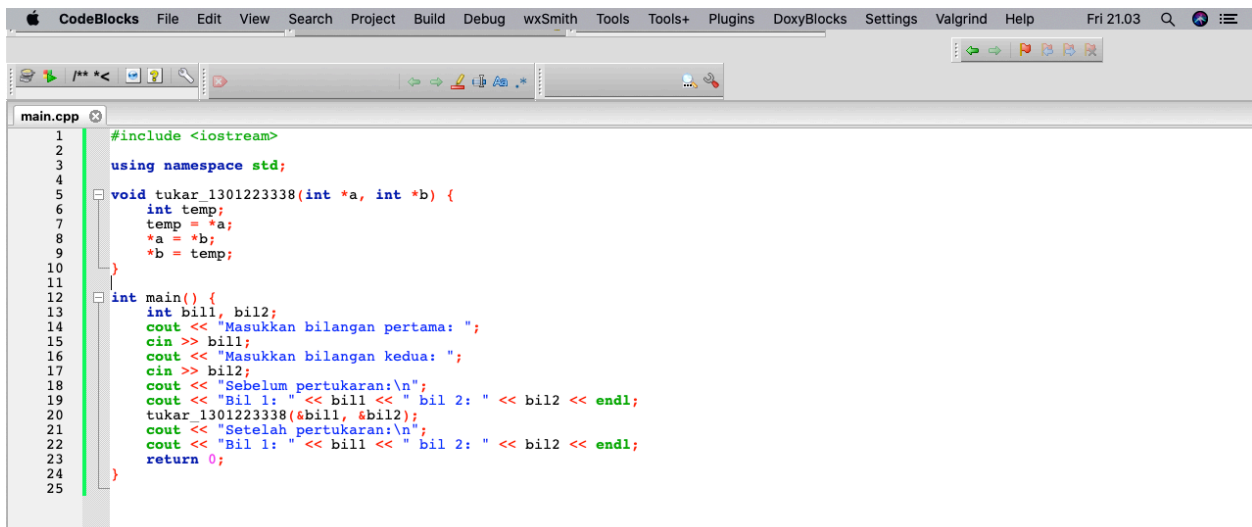
Last login: Fri Sep 22 20:55:55 on ttys001
/Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Praktikum/TP\ M
ODUL\ 2/fungsi ; exit;
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/fungsi ; exit;
Masukkan kapasitas kendaraan: 45
Masukkan jumlah penumpang: 50
Banyak kendaraan yang disewa 2

[Process completed]

```

9. Prosedur

Kode:



```

main.cpp
1  #include <iostream>
2
3  using namespace std;
4
5  void tukar_1301223338(int *a, int *b) {
6      int temp;
7      temp = *a;
8      *a = *b;
9      *b = temp;
10 }
11
12 int main() {
13     int bil1, bil2;
14     cout << "Masukkan bilangan pertama: ";
15     cin >> bil1;
16     cout << "Masukkan bilangan kedua: ";
17     cin >> bil2;
18     cout << "Sebelum pertukaran:\n";
19     cout << "Bil 1: " << bil1 << " bil 2: " << bil2 << endl;
20     tukar_1301223338(&bil1, &bil2);
21     cout << "Setelah pertukaran:\n";
22     cout << "Bil 1: " << bil1 << " bil 2: " << bil2 << endl;
23     return 0;
24 }
25

```

Hasil:


```

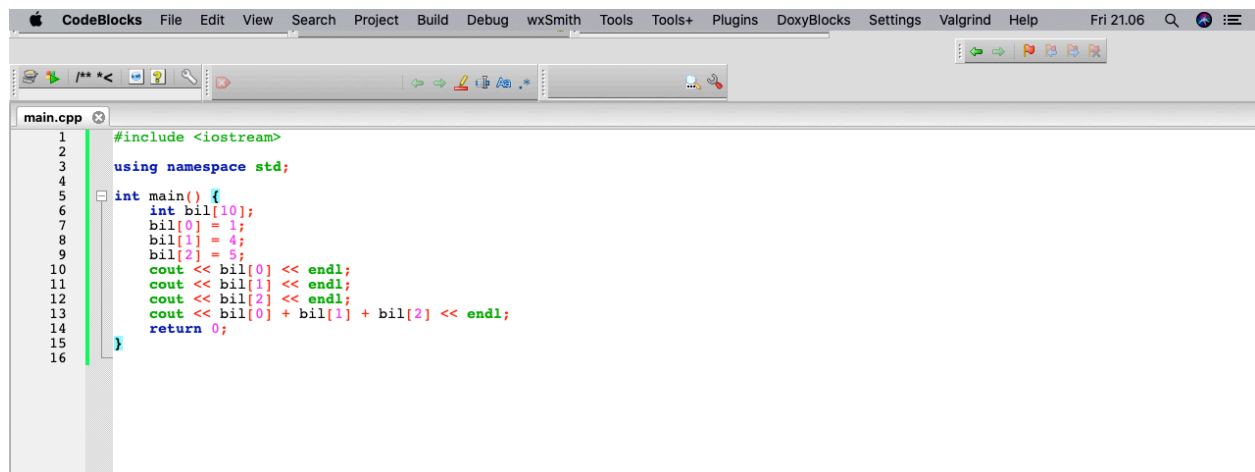
Last login: Fri Sep 22 20:56:53 on ttys001
mac@192 ~ % /Users/mac/Documents/COOLYEAH/KULIAH\ SEMESTER\ 3/Struktur\ Data/Pra
ktikum/TP\ MODUL\ 2/prosedur ; exit;
Masukkan bilangan pertama: 1
Masukkan bilangan kedua: 2
Sebelum pertukaran:
Bil 1: 1 bil 2: 2
Setelah pertukaran:
Bil 1: 2 bil 2: 1

[Process completed]

```

10. Array

Kode:



```

main.cpp
1  #include <iostream>
2
3  using namespace std;
4
5  int main() {
6      int bil[10];
7      bil[0] = 1;
8      bil[1] = 4;
9      bil[2] = 5;
10     cout << bil[0] << endl;
11     cout << bil[1] << endl;
12     cout << bil[2] << endl;
13     cout << bil[0] + bil[1] + bil[2] << endl;
14     return 0;
15 }
16

```

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]

```