

Tugas Pendahuluan Modul 1
STRUKTUR DATA - Ganjil 2024/2025
"Pengenalan C++: Subprogram & Array"

A. Ketentuan Tugas Pendahuluan

1. Tugas Pendahuluan dikerjakan secara **Individu**.
2. TP ini bersifat **WAJIB**, tidak mengerjakan = **PENGURANGAN POIN JURNAL / TES ASESMEN**.
3. Hanya **MENGUMPULKAN** tetapi **TIDAK MENGERJAKAN** = **PENGURANGAN POIN JURNAL / TES ASESMEN**.
4. Deadline pengumpulan TP Modul 2 adalah Senin, 30 September 2024 pukul 07.30 WIB.
5. **TIDAK ADA TOLERANSI KETERLAMBATAN, TERLAMBAT ATAU TIDAK MENGUMPULKAN TP MAKA DIANGGAP TIDAK MENGERJAKAN**.
6. **DILARANG PLAGIAT (PLAGIAT = E)**.
7. Kerjakan TP dengan jelas agar dapat dimengerti.
8. Codingan diupload di Github dan upload Laporan di Lab menggunakan format **PDF** dengan ketentuan:
TP_MOD_[XX]_NIM_NAMA.pdf

CP (WA):

- Andini (082243700965)
- Aldi (081223968645)

SELAMAT MENGERJAKAN^^

B. Soal Tugas Pendahuluan

1. (Input/Output) Tuliskan kode berikut dan jalankan. a) Masukkan nama lengkap anda dan nim anda. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban. b) Masukkan nama pertama anda dan nim anda. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

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

Jawaban:

```
1  // 2211104051 Ade fatkhul anam
2
3  #include <iostream>
4
5  using namespace std;
6
7  int main() {
8      string namaLengkap, nim;
9      cout << "Siapa nama anda? ";
10     getline(cin, namaLengkap); // Menggunakan getline untuk
11     cout << "Berapa nim anda? ";
12     cin >> nim;
13     cout << "Nama saya: " << namaLengkap << endl;
14     cout << "NIM saya: " << nim << endl;
15     return 0;
16 }
17
18
```

```
"D:\PRAKTIKUM DATA STRUC" x + v
Siapa nama anda? Ade Fatkhul Anam
Berapa nim anda? 2211104051
Nama saya: Ade Fatkhul Anam
NIM saya: 2211104051

Process returned 0 (0x0)   execution time : 23.587 s
Press any key to continue.
```

2. (Operasi aritmatika) Tuliskan kode berikut dan jalankan. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

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

Jawaban:

```
main.cpp x
1  // 2211104051 Ade fakhrul amam
2
3  #include <iostream>
4
5  using namespace std;
6
7  int main() {
8      int bil1 = 3, bil2 = 4, hasil1;
9      float bil3 = 3.0, bil4 = 4.0, hasil2;
10
11     hasil1 = bil1 + bil2;
12     cout << hasil1 << endl;
13
14     hasil1 = bil1 - bil2;
15     cout << hasil1 << endl;
16
17     hasil1 = bil1 * bil2;
18     cout << hasil1 << endl;
19
20     hasil1 = bil1 / bil2; // integer division
21     cout << hasil1 << endl;
22
23     hasil1 = bil2 / bil1; // integer division
24     cout << hasil1 << endl;
25
26     hasil1 = bil1 % bil2; // modulo
27     cout << hasil1 << endl;
28
29     hasil1 = bil2 % bil1; // modulo
30     cout << hasil1 << endl;
31
32     hasil2 = bil3 / bil4;
33     cout << hasil2 << endl;
34
35     return 0;
36
37 }
38
```

```
"D:\PRAKTIKUM DATA STRUC" x + - □ x
7
-1
12
0
1
3
1
0.75

Process returned 0 (0x0)   execution time : 0.050 s
Press any key to continue.
```

- (Operasi perbandingan) Tuliskan kode berikut dan jalankan. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

```

1  #include <iostream>
2
3  using namespace std;
4
5  int main(){
6      int bil1 = 2, bil2 = 3, hasil;
7      hasil = bil1 > bil2;
8      cout << hasil << endl;
9      hasil = bil1 >= bil2;
10     cout << hasil << endl;
11     hasil = bil1 < bil2;
12     cout << hasil << endl;
13     hasil = bil1 <= bil2;
14     cout << hasil << endl;
15     hasil = bil1 == bil2;
16     cout << hasil << endl;
17     hasil = bil1 != bil2;
18     cout << hasil << endl;
19     return 0;
20 }

```

Jawaban:

The image shows a C++ program in a code editor and its execution output in a terminal window. The code defines two integers, bil1 (2) and bil2 (3), and performs various logical comparisons, storing the results in a variable named hasil. The comparisons are: bil1 > bil2, bil1 >= bil2, bil1 < bil2, bil1 <= bil2, bil1 == bil2, and bil1 != bil2. The output shows the results of these comparisons as 0 or 1, followed by the message 'Process returned 0 (0x0) execution time : 0.050 s Press any key to continue.'

```

main.cpp x
1  // 2211104051 Ade fatkhul anam
2
3  #include <iostream>
4
5  using namespace std;
6
7  int main() {
8      int bil1 = 2, bil2 = 3, hasili;
9
10     hasili = bil1 > bil2;
11     cout << hasili << endl;
12
13     hasili = bil1 >= bil2;
14     cout << hasili << endl;
15
16     hasili = bil1 < bil2;
17     cout << hasili << endl;
18
19     hasili = bil1 <= bil2;
20     cout << hasili << endl;
21
22     hasili = bil1 == bil2;
23     cout << hasili << endl;
24
25     hasili = bil1 != bil2;
26     cout << hasili << endl;
27
28     return 0;
29 }
30
31

```

```

D:\PRAKTIKUM DATA ST x
0
0
1
1
0
1

Process returned 0 (0x0)   execution ti
me : 0.050 s
Press any key to continue.

```

- (Operasi logika) Tuliskan kode berikut dan jalankan. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

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

Jawaban:

```
main.cpp x
1 // 2211104051 Ade fakhul anam
2
3 #include <iostream>
4
5 using namespace std;
6
7
8 int main() {
9     int bil1 = 2, bil2 = 3, hasil;
10
11     hasil = bil1 <= bil2 and bil1 < bil2;
12     cout << hasil << endl;
13
14     hasil = bil1 >= bil2 or bil1 < bil2;
15     cout << hasil << endl;
16
17     hasil = not(bil1 >= bil2) or bil1 < bil2;
18     cout << hasil << endl;
19
20     return 0;
21 }
22
```

```
"D:\PRAKTIKUM DATA STRUC" x + -
1
1
1
Process returned 0 (0x0)   execution time : 0.054 s
Press any key to continue.
```

Penggunaan struktur kontrol

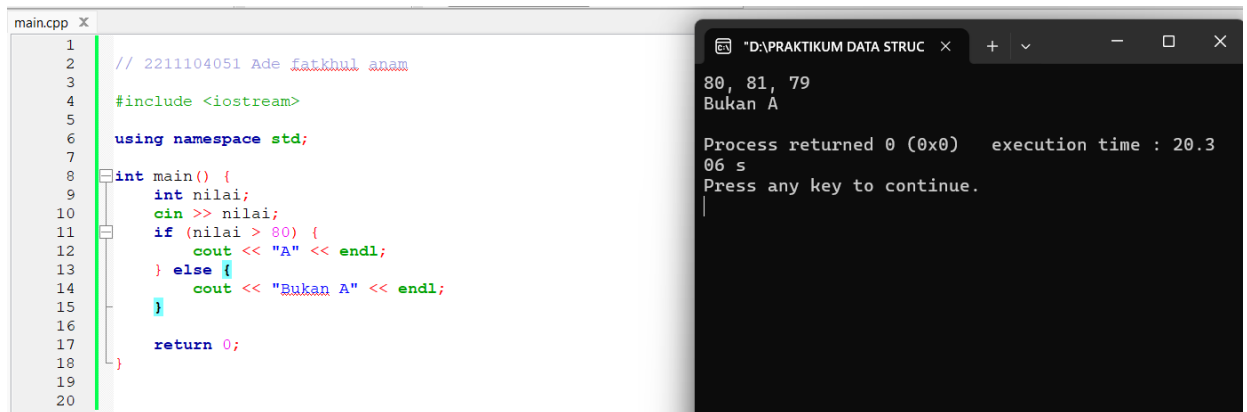
5. (Percabangan if-else) Tuliskan kode berikut dan jalankan. Masukkan input 80, 81, dan 79. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

```

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

```

Jawaban:



```

1  // 2211104051 Ade fatkhul anam
2  #include <iostream>
3
4  using namespace std;
5
6  int main() {
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
17
18
19
20

```

80, 81, 79
Bukan A

Process returned 0 (0x0) execution time : 20.306 s
Press any key to continue.

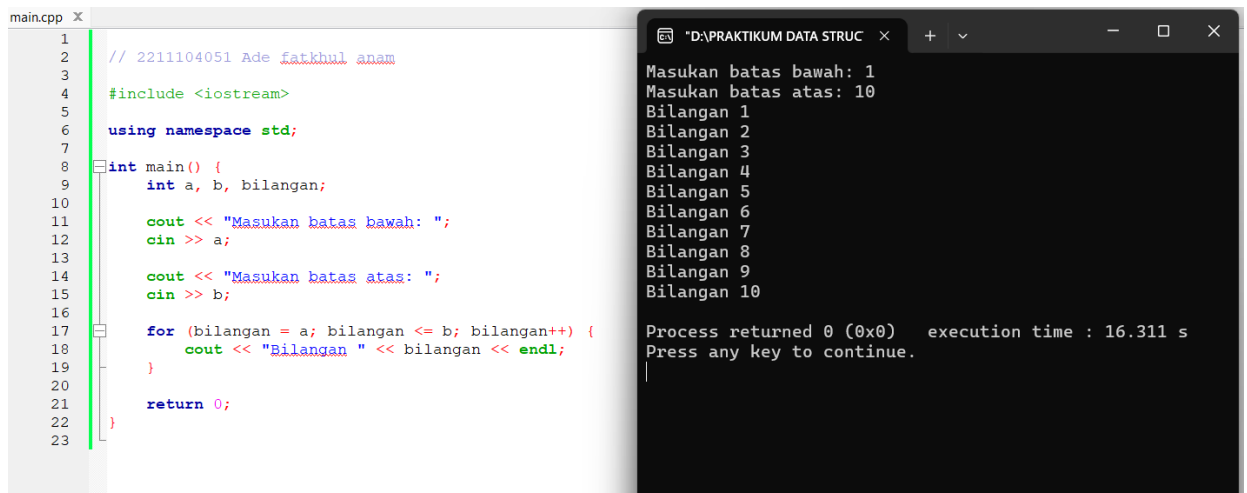
6. (Perulangan for-to-do) Tuliskan kode berikut dan jalankan. Masukkan 1 dan 10. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.

```

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

```

Jawaban:



The screenshot shows a C++ program in a text editor and its execution in a terminal. The code in `main.cpp` is as follows:

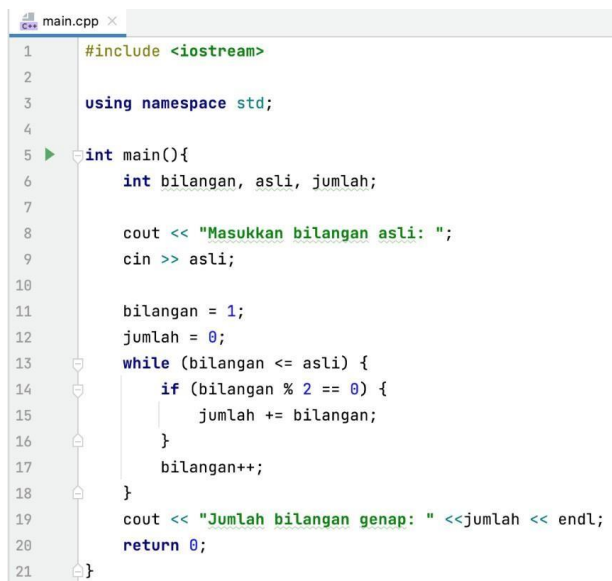
```
1 // 2211104051 Ade fatkhul anam
2
3 #include <iostream>
4
5 using namespace std;
6
7
8 int main() {
9     int a, b, bilangan;
10
11     cout << "Masukan batas bawah: ";
12     cin >> a;
13
14     cout << "Masukan batas atas: ";
15     cin >> b;
16
17     for (bilangan = a; bilangan <= b; bilangan++) {
18         cout << "Bilangan " << bilangan << endl;
19     }
20
21     return 0;
22 }
23
```

The terminal output shows the program running with input values 1 and 10, printing numbers from 1 to 10, and then displaying the execution time and a prompt to press any key to continue.

```
"D:\PRAKTIKUM DATA STRUC" x + -
Masukan batas bawah: 1
Masukan batas atas: 10
Bilangan 1
Bilangan 2
Bilangan 3
Bilangan 4
Bilangan 5
Bilangan 6
Bilangan 7
Bilangan 8
Bilangan 9
Bilangan 10

Process returned 0 (0x0)   execution time : 16.311 s
Press any key to continue.
```

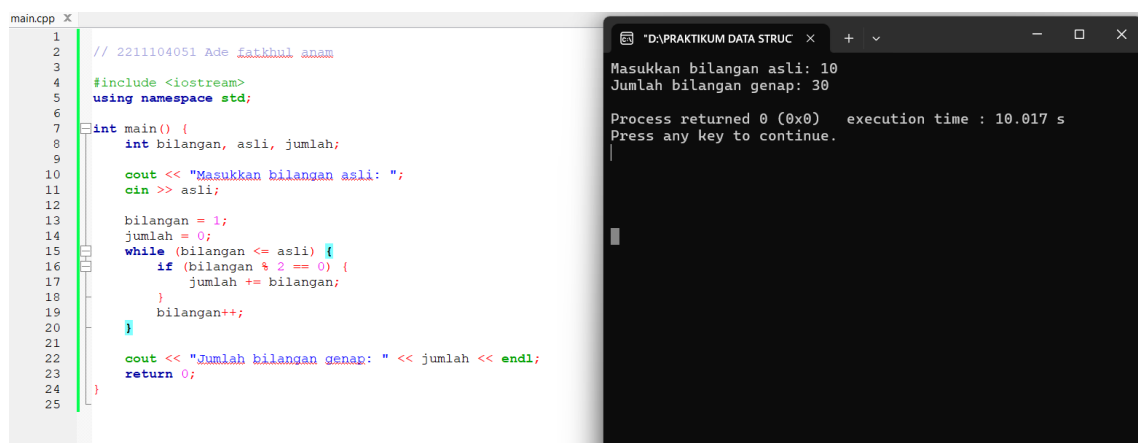
7. (Perulangan while-do) Tuliskan kode berikut dan jalankan. Masukkan pada input bilangan 10. Screenshot kode dan hasilnya, lalu tempelkan pada jawaban.



The screenshot shows a C++ program in a text editor. The code is as follows:

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main(){
6     int bilangan, asli, jumlah;
7
8     cout << "Masukkan bilangan asli: ";
9     cin >> asli;
10
11     bilangan = 1;
12     jumlah = 0;
13     while (bilangan <= asli) {
14         if (bilangan % 2 == 0) {
15             jumlah += bilangan;
16         }
17         bilangan++;
18     }
19     cout << "Jumlah bilangan genap: " << jumlah << endl;
20     return 0;
21 }
```

Jawaban:



The screenshot shows the same C++ program as above, but with the input value 10. The terminal output shows the program running with input value 10, calculating the sum of even numbers (10), and then displaying the execution time and a prompt to press any key to continue.

```
"D:\PRAKTIKUM DATA STRUC" x + -
Masukkan bilangan asli: 10
Jumlah bilangan genap: 30

Process returned 0 (0x0)   execution time : 10.017 s
Press any key to continue.
```

Semoga Selalu diberi kemudahan^^