

**PEMPROGRAMAN BERORIENTASI OBJEK**  
**LAPORAN TUGAS PRAKTIKUM KE-1**



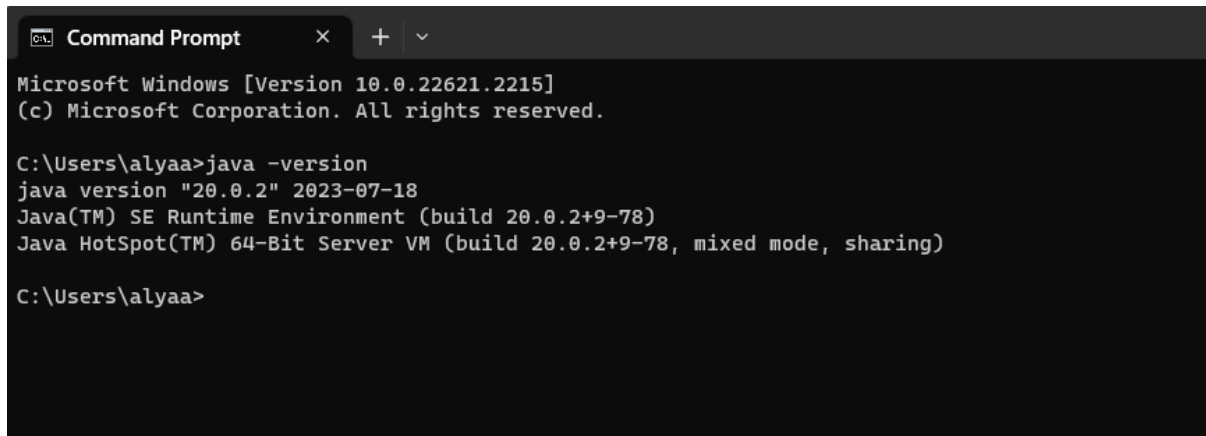
**Disusun Oleh:**  
**Alya Angraini (221511042)**

**KELAS 2B**

**JURUSAN TEKNIK KOMPUTER DAN INFORMATIKA PROGRAM**  
**STUDI DIPLOMA III TEKNIK INFORMATIKA POLITEKNIK NEGERI**  
**BANDUNG**  
**2023**

## Persoalan 1.Setup Software Environment:

- Install Jawa Development Kit (JDK11)
- Setting JDK (ikuti petunjuk pada 2.1.2 setting up JDK)
- Test pada command prompt Jawa -version



```
Microsoft Windows [Version 10.0.22621.2215]
(c) Microsoft Corporation. All rights reserved.

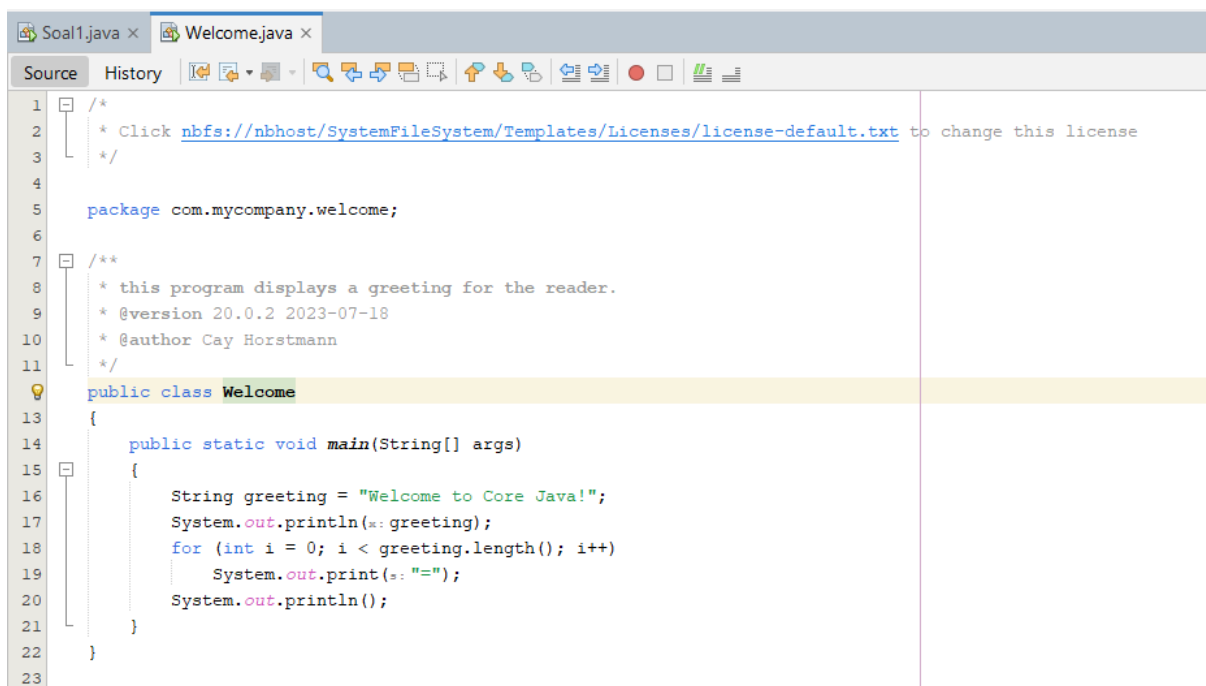
C:\Users\alyaa>java -version
java version "20.0.2" 2023-07-18
Java(TM) SE Runtime Environment (build 20.0.2+9-78)
Java HotSpot(TM) 64-Bit Server VM (build 20.0.2+9-78, mixed mode, sharing)

C:\Users\alyaa>
```

Tidak ada permasalahan yang dihadapi saat melakukan setting.

## Persoalan 2.Using Notepad dan Command Line Tools:

- Listing 2.1 Welcome .java



```
1  /*
2   * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
3   */
4
5   package com.mycompany.welcome;
6
7   /**
8    * this program displays a greeting for the reader.
9    * @version 20.0.2 2023-07-18
10   * @author Cay Horstmann
11   */
12   public class Welcome
13   {
14       public static void main(String[] args)
15       {
16           String greeting = "Welcome to Core Java!";
17           System.out.println(⌘: greeting);
18           for (int i = 0; i < greeting.length(); i++)
19               System.out.print(s: "=");
20           System.out.println();
21       }
22   }
23
```

## Persoalan 3.Using an Integrate Development Environment:

- Menggunakan Netbeans
- Hasil Run dari Welcome.java

```
Notifications | Output - Run (Welcome) x
Scanning for projects...

-----< com.mycompany:Welcome >-----
Building Welcome 1.0-SNAPSHOT
from pom.xml
-----[ jar ]-----

--- resources:3.3.0:resources (default-resources) @ Welcome ---
skip non existing resourceDirectory D:\Kampus\Semester 3\Pemrograman Berorientasi Objek\Pertemuan 1\Praktikum 1\Welcome\src\main\resources

--- compiler:3.10.1:compile (default-compile) @ Welcome ---
Changes detected - recompiling the module!
Compiling 1 source file to D:\Kampus\Semester 3\Pemrograman Berorientasi Objek\Pertemuan 1\Praktikum 1\Welcome\target\classes

--- exec:3.1.0:exec (default-cli) @ Welcome ---
Welcome to Core Java!
=====

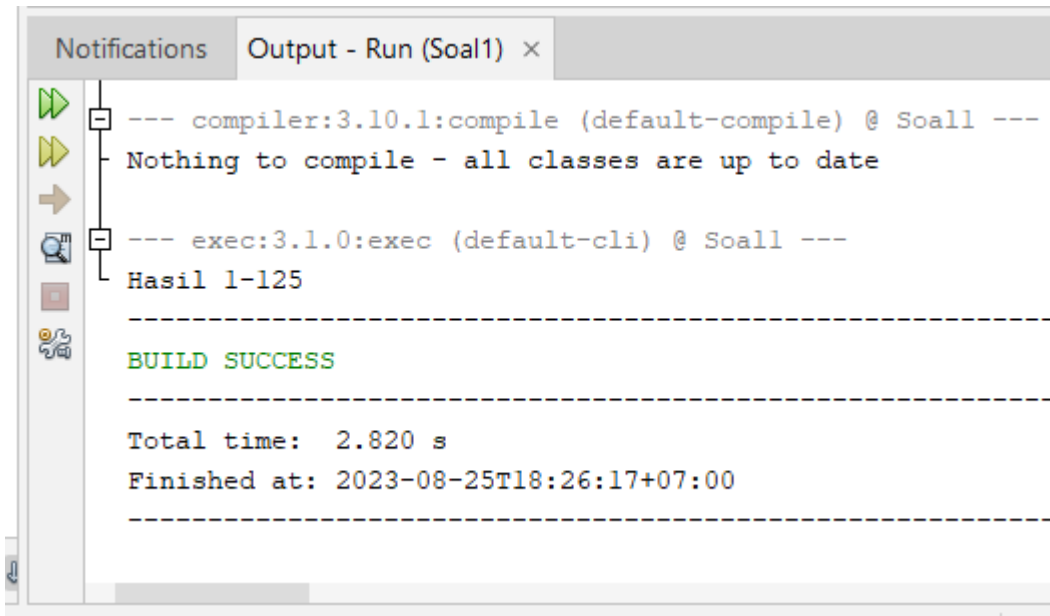
BUILD SUCCESS

Total time: 4.787 s
Finished at: 2023-08-25T18:21:34+07:00
```

## Persoalan 4. Soal Analisis 1:

```
Soal1.java x
Source | History | [Icons]
1  /*
2  * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses
3  */
4
5  package com.mycompany.soal1;
6
7  /**
8   *
9   * @author alyaa
10  */
11  public class Soal1 {
12
13      /**
14       * @param args the command line arguments
15       */
16      public static void main(String[] args) {
17          // TODO code application logic here
18          byte angka1 = 125;
19          byte angka2 = 6;
20          byte hasil = (byte) (angka1+angka2);
21
22          System.out.println("Hasil 1"+hasil);
23      }
24  }
25
```

- Berapa output yang keluar? Tuliskan alasan dan referensinya



```

--- compiler:3.10.1:compile (default-compile) @ Soal1 ---
Nothing to compile - all classes are up to date

--- exec:3.1.0:exec (default-cli) @ Soal1 ---
Hasil 1-125

-----
BUILD SUCCESS
-----

Total time:  2.820 s
Finished at: 2023-08-25T18:26:17+07:00
-----

```

Outputnya adalah 'Hasil 1-125'

Type data byte memiliki range kecil (-128 - 127) dengan default 0 sehingga pada program yang hasil sebenarnya 131 menjadi -125 karena telah melewati rangenya dimana  $131 - 127 = 4$

Maka sisanya akan mengisi nilai minimum dari -128(128) -127(129) -126(130) dan -125(131)

Disini terjadilah overflow dan kembali ke nilai minimum dan setiap selisih akan ditambah ke nilai minimum.

Referensi pemahaman byte:

<https://anakuliahsite.wordpress.com/2017/11/02/definisi-dan-macam-macam-tipe-data-pada-java/>

[https://stackoverflow-com.translate.goog/questions/47533660/how-does-overflow-work-in-](https://stackoverflow-com.translate.goog/questions/47533660/how-does-overflow-work-in-java?_x_tr_sl=en&_x_tr_tl=id&_x_tr_hl=id&_x_tr_pto=tc)

[java?\\_x\\_tr\\_sl=en&\\_x\\_tr\\_tl=id&\\_x\\_tr\\_hl=id&\\_x\\_tr\\_pto=tc](https://stackoverflow-com.translate.goog/questions/47533660/how-does-overflow-work-in-java?_x_tr_sl=en&_x_tr_tl=id&_x_tr_hl=id&_x_tr_pto=tc)

## Persoalan 5.Soal Analisis 2:

```
1  /*
2   * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to open the file in the editor.
3   */
4
5  package com.mycompany.soal2;
6
7  /**
8   *
9   * @author alyaa
10  */
11  public class Soal2 {
12
13      public static void main(String[] args) {
14          int i = 42;
15          String s = (i<40)?"life":(i>50)?"universe":"everything";
16          System.out.println(s);
17      }
18  }
19
```

- Bagaimana output setelah dijalankan?

```

-----< com.mycompany:So
[-] Building Soal2 1.0-SNAPSHOT
    from pom.xml
-----[ jar ]---
[-] --- resources:3.3.0:resources (default-res
- skip non existing resourceDirectory D:\Kam
[-] --- compiler:3.10.1:compile (default-compi
- Changes detected - recompiling the module!
- Compiling 1 source file to D:\Kampus\Semes
[-] --- exec:3.1.0:exec (default-cli) @ Soal2
- everything
-----
BUILD SUCCESS
-----
Total time:  4.094 s
Finished at: 2023-08-25T18:30:55+07:00
-----

```

Outputnya berupa everything.

- Tuliskan Teknik yang digunakan

Teknik ini adalah Ternary Operator yang membuat persyaratan untuk barisan codenya dalam code diatas i adalah 42

Pada persyaratan pertama  $i < 40$  maka 'false', karena hasil pertama false dilakukanlah pada persyaratan berikutnya yaitu  $1 > 50$  namun hasilnya 'false' sehingga nilai akhir yang di berikan adalah 'everything' diassign sebagai true.

Referensi: <https://www.petanikode.com/java-operator/>