

LAPORAN PRAKTIKUM
Praktikum Pemrograman Berorientasi Objek Instalasi
Java dan Tugas 1 Praktikum PBO

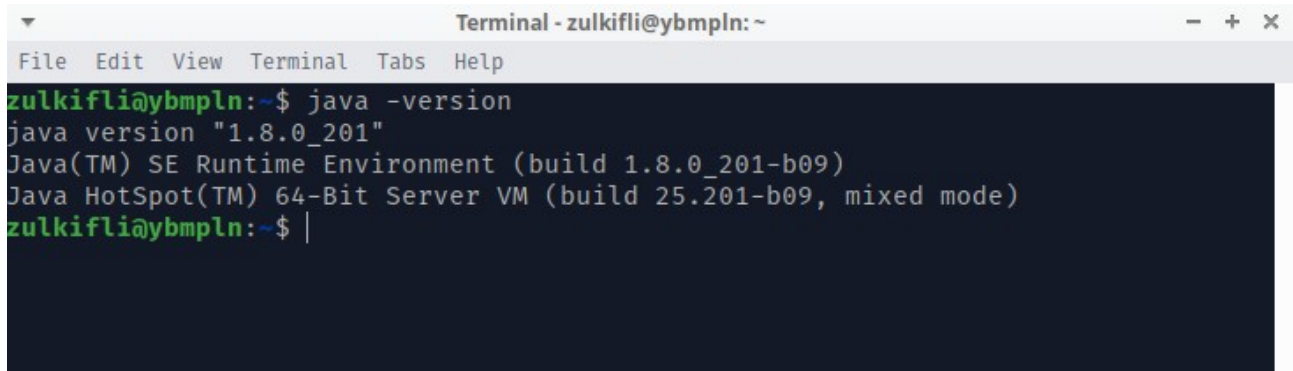


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Praktikum #1 Pemrograman Berorientasi Objek

1. Install JDK pada komputer masing-masing. Pastikan versi JDK dan JRE yang digunakan sama. Cek dengan menggunakan perintah berikut pada terminal (linux) atau cmd (windows):

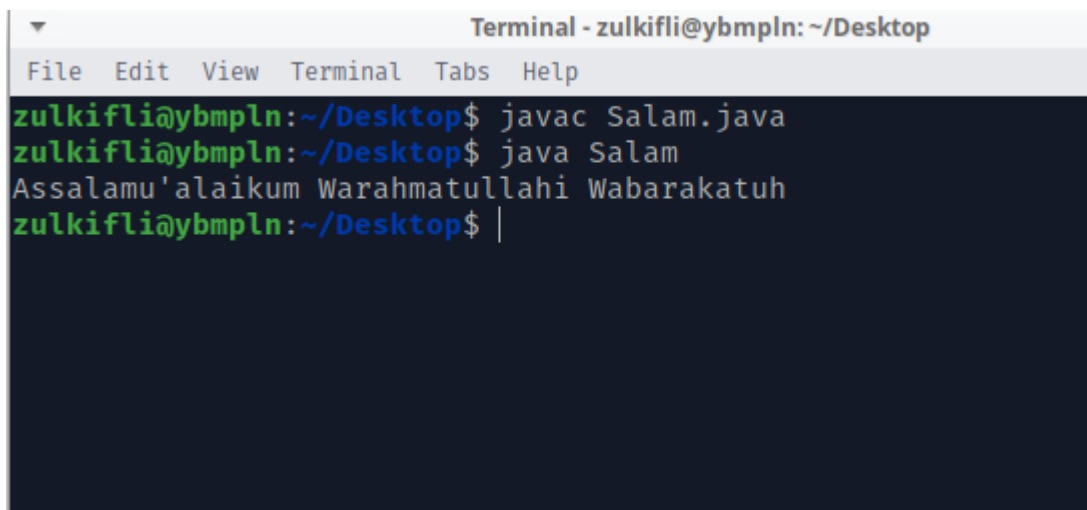
A terminal window titled "Terminal - zulkifli@ybmpln: ~" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The command "java -version" has been executed, resulting in the following output: "java version "1.8.0_201\"", "Java(TM) SE Runtime Environment (build 1.8.0_201-b09)", and "Java HotSpot(TM) 64-Bit Server VM (build 25.201-b09, mixed mode)". The prompt "zulkifli@ybmpln:~\$" is visible at the bottom.

```
Terminal - zulkifli@ybmpln: ~
File Edit View Terminal Tabs Help
zulkifli@ybmpln:~$ java -version
java version "1.8.0_201"
Java(TM) SE Runtime Environment (build 1.8.0_201-b09)
Java HotSpot(TM) 64-Bit Server VM (build 25.201-b09, mixed mode)
zulkifli@ybmpln:~$ |
```

2. Tulislah kode program berikut ini kedalam file dengan nama **Salam.java**

```
public class Salam {
    public static void main(String args[]) {
        System.out.println("Assalamu'alaikum        Warahmatullahi
Wabarakatuh");
    }
}
```

3. Compile dan jalankan program tersebut

A terminal window titled "Terminal - zulkifli@ybmpln: ~/Desktop" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The user has navigated to the Desktop directory. The command "javac Salam.java" is executed, followed by "java Salam". The output of the program is "Assalamu'alaikum Warahmatullahi Wabarakatuh". The prompt "zulkifli@ybmpln:~/Desktop\$" is visible at the bottom.

```
Terminal - zulkifli@ybmpln: ~/Desktop
File Edit View Terminal Tabs Help
zulkifli@ybmpln:~/Desktop$ javac Salam.java
zulkifli@ybmpln:~/Desktop$ java Salam
Assalamu'alaikum Warahmatullahi Wabarakatuh
zulkifli@ybmpln:~/Desktop$ |
```

4. Deklarasikanlah variable-variable berikut ini dalam program DemoVariable.java

```
package prak01;

public class DemoVariabel {
    public static void main(String[] args) {
        int a = 5;
        int b = 3;
        int c = a/b;
        float d = a/b;
        String e = "hello";
        char f = '1';

        System.out.println("Nilai a = " + a);
        System.out.println("Nilai b = " + b);
        System.out.println("Nilai c = " + c);
        System.out.println("Nilai d = " + d);
        System.out.println("Nilai e = " + e);
        System.out.println("Nilai f = " + f);
        System.out.println(a+b+e);
        System.out.println(e+a+b);
        System.out.println(a+b+f);
        System.out.println(f+a+b);
    }
}
```

5. Ubahlah kode pada DemoVariable.java agar nilai variable d menjadi benar

```
package prak01;

public class DemoVariabel {
    public static void main(String[] args) {
        int a = 5;
        int b = 3;
        int c = a/b;
        float d = a/b;
        String e = "hello";
        char f = '1';

        System.out.println("Nilai a = " + a);
        System.out.println("Nilai b = " + b);
        System.out.println("Nilai c = " + c);
        System.out.println("Nilai d = " + (int)d);
    }
}
```

DemoVariabel > main()

DemoVariabel x

/usr/lib/jvm/java-8-oracle/bin/java ...

Nilai a = 5

Nilai b = 3

Nilai c = 1

Nilai d = 1

6. Tulislah rumus berikut dalam bahasa java:

$$s = s_0 + v_0 t + \frac{1}{2} g t^2$$

$$s = s0 + (v0 * t) + (0.5 * g * (t * t));$$

$$G = 4\pi^2 \frac{a^3}{p^2(m_1 + m_2)}$$

$$G = ((4 * (\text{phi} * \text{phi})) * (a * a * a)) / ((p * p) * (m1 + m2));$$

$$FV = PV \cdot \left(1 + \frac{INT}{100}\right)^{YRS}$$

$$FV = PV * \text{Math.pow}((1 + (INT / 100)), YRS);$$

$$c = \sqrt{a^2 + b^2 - 2ab \cos \gamma}$$

$$c = \text{Math.sqrt}((a * a) + (b * b) - (2 * a * b * \text{Math.cos}(y)));$$

7. Buatlah sebuah program yang mencetak warna keramik (1 untuk hitam, 0 untuk putih) jika diberikan angka baris dan kolom!

```

package prak01;

import java.util.Scanner;

public class PapanCatur {
    public static void main(String[] args) {
        int baris, kolom;
        String posisi;
        int i, j, n;
        Scanner in = new Scanner(System.in);
        System.out.println("==== Papan Catur Bos qu ====");
        System.out.print("\n Masukkan jumlah baris dan kolom : ");
        n = in.nextInt();

        System.out.print(" ");

        for(i = 0; i < n; i++)
        {
            System.out.print(" " + (i + 1));
        }
        System.out.print(" --> Kolom\n");

        System.out.print(" ");
        for(i = 0; i < n; i++){
            System.out.print(" _");
        }
    }
}

```

```

System.out.println();
for(i = 0; i < n; i++)
{
    System.out.print(" " + (i + 1) + " | ");
    for(j = 0; j < n; j++)
    {
        if((i + j) % 2 == 0)
        {
            System.out.print("1 ");
        }
        else{
            System.out.print("0 ");
        }
    }
    System.out.println();
}
System.out.print(" |\n V\nBaris\n\n");
System.out.print("Masukkan posisi baris (B) : ");
baris = in.nextInt();
System.out.print("Masukkan posisi kolom (K) : ");
kolom = in.nextInt();

```

```

        if((baris + kolom) % 2 == 0)
        {
            posisi = "1 (Hitam)";
        }
        else{
            posisi = "0 (Putih)";
        }
        System.out.println("\nBaris ke " + baris + " kolom ke " + kolom + " : " + posisi);
    }
}

```

Hasil running:

```
/usr/lib/jvm/java-8-oracle/bin/java ...
```

```
===== Papan Catur Bos qu =====
```

```
Masukkan jumlah baris dan kolom : 6
```

```
1 2 3 4 5 6 --> Kolom
```

```
  - - - - -  
1 | 1 0 1 0 1 0  
2 | 0 1 0 1 0 1  
3 | 1 0 1 0 1 0  
4 | 0 1 0 1 0 1  
5 | 1 0 1 0 1 0  
6 | 0 1 0 1 0 1  
 |  
V
```

```
Baris
```

```
Masukkan posisi baris (B) : 2
```

```
Masukkan posisi kolom (K) : 4
```

```
Baris ke 2 kolom ke 4 : 1 (Hitam)
```

```
Process finished with exit code 0
```