LAPORAN PRAKTIKUM

Praktikum Pemrograman Berorientasi Objek Instalasi Java dan Tugas 1 Praktikum PBO
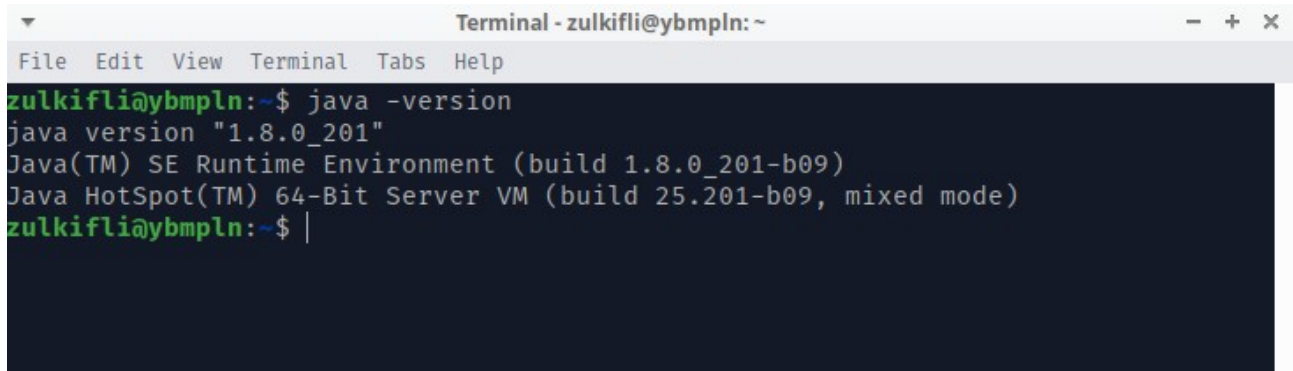
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SEKOLAH TINGGI TEKNOLOGI TERPADU NURUL FIKRI

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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):
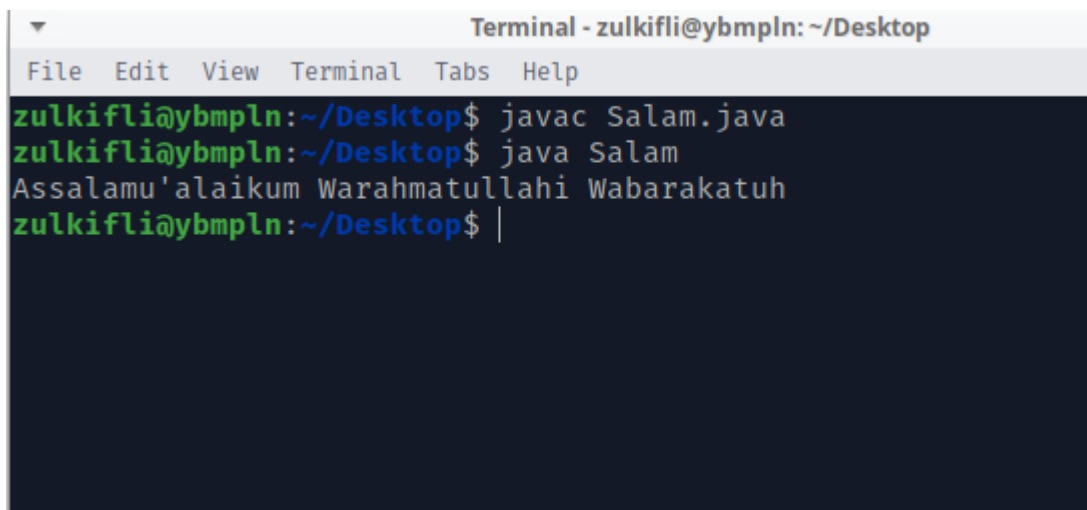

2. Tulislah kode program berikut ini kedalam file dengan nama **Salam.java**

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

3. Compile dan jalankan program tersebut

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

```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

```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 = " + (int)d);
```

DemoVariabel › main()

DemoVariabel ×

/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 * (phi * phi)) * (a * a * a)) / ((p * p) * (m1 + m2));

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

FV = PV * Math.pow((1 + (INT / 100)), YRS);

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

c = Math.sqrt((a * a) + (b * b) - (2 * a * b * Math.cos(y)));

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

```java
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
```