

MODUL 7

ENCAPSULATION

PRAKTIKUM PEMROGRAMAN BERORIENTASI OBJEK

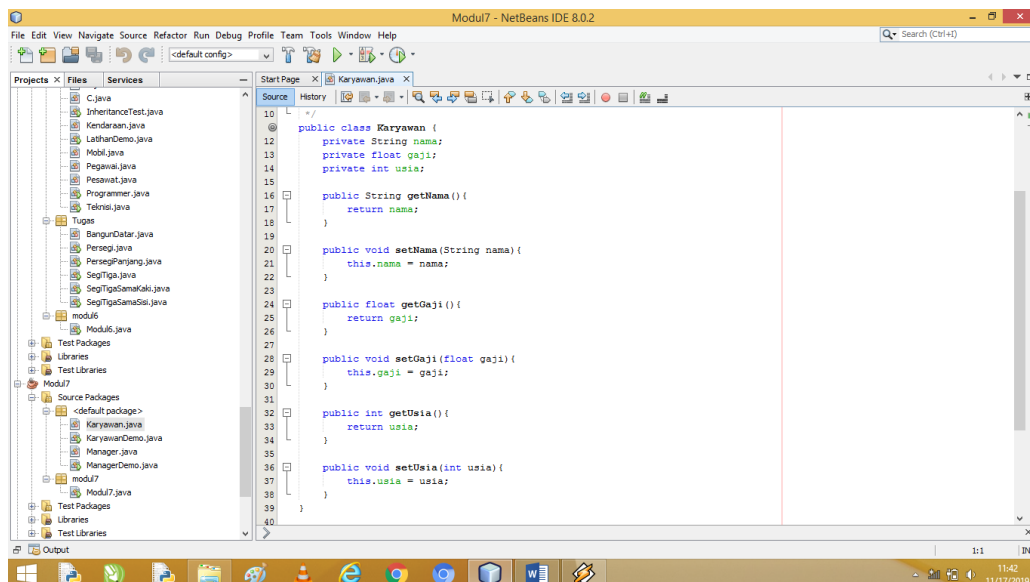
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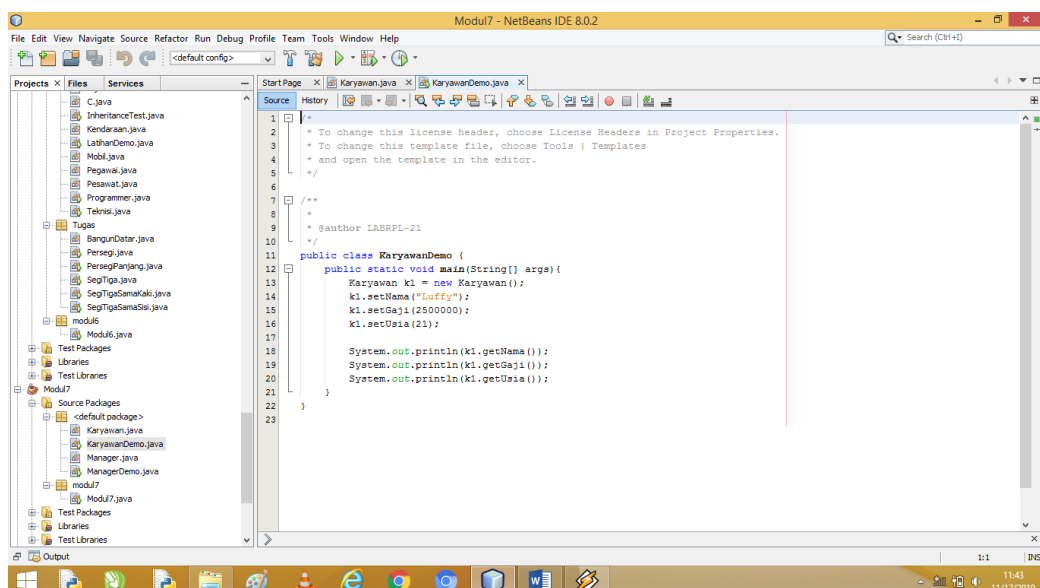
Kelas : B

❖ 7.1 Gambaran Umum

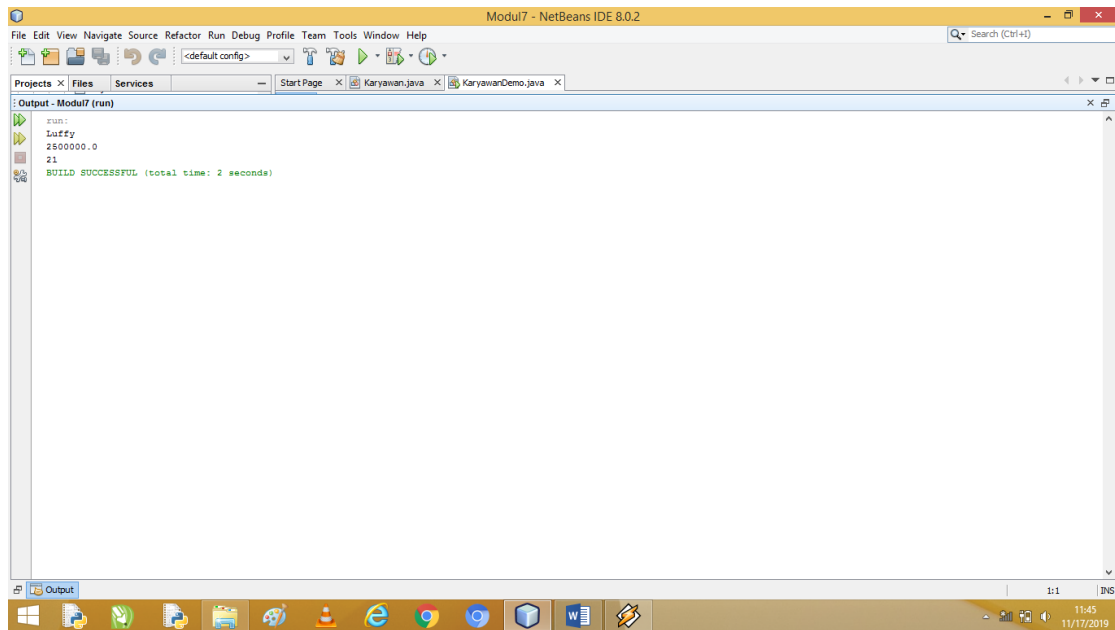
➤ Program 1. Akses Modifier Private pada Encapsulation



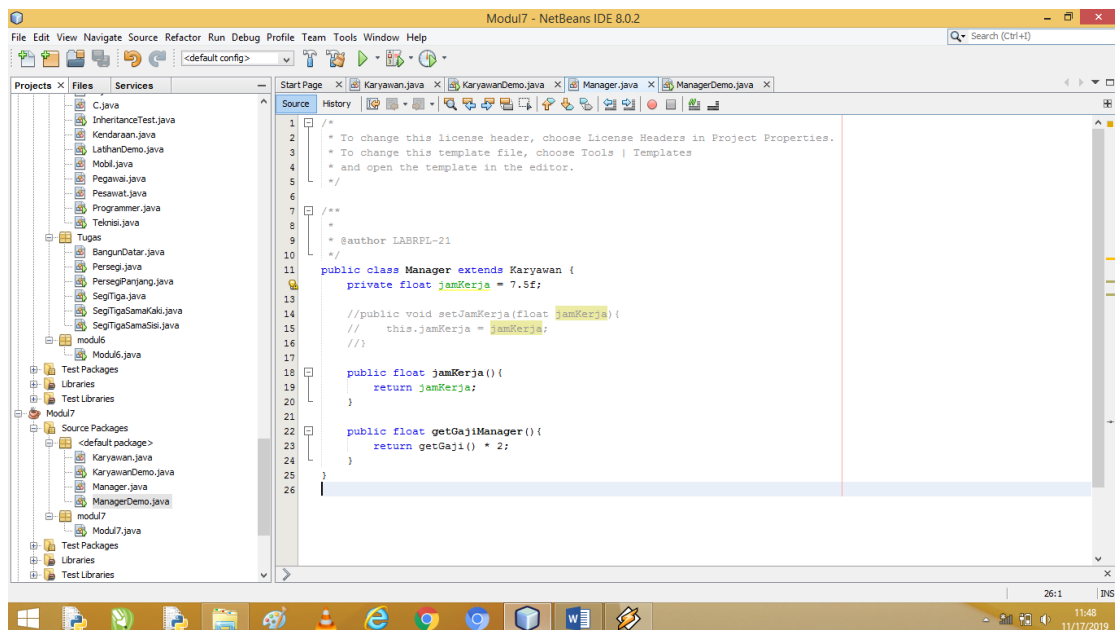
➤ Program 2. Pemanfaatan Getter dan Setter



➤ Output ketika program 2 atau class KaryawanDemo dijalankan



➤ Program 3. Contoh Program Single Inheritance



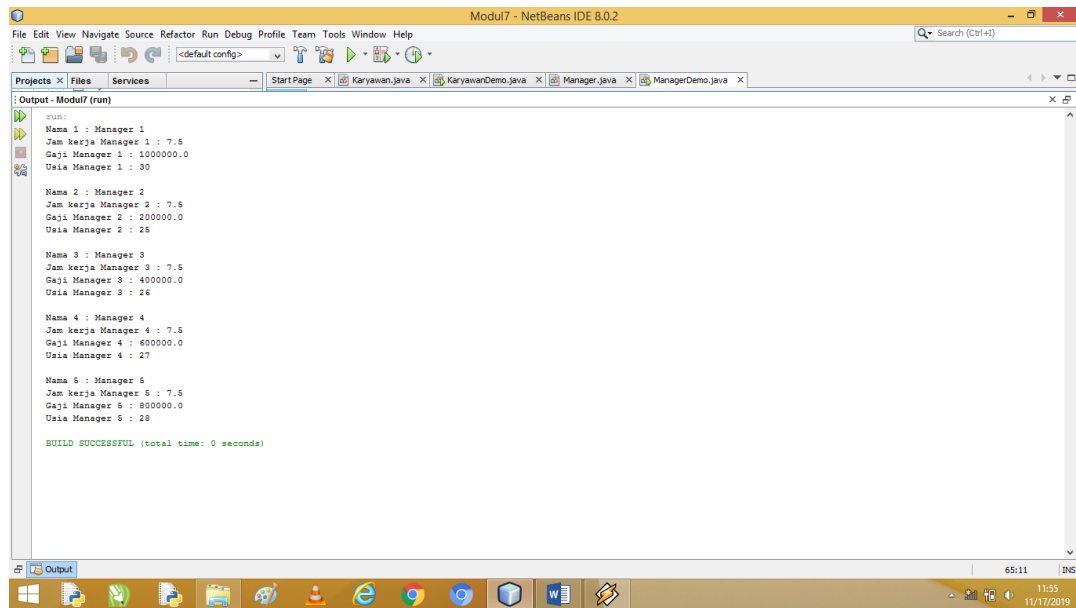
❖ 7.2 Latihan

1. Membuat class dengan fungsi main() dan 5 objek berbeda yang dihasilkan dari class Manager. Kemudian melalui objek tersebut, menampilkan nilai private variable dari class Manager dan class Karyawan.

```
10 public class ManagerDemo {
11     public static void main(String[] args) {
12         Manager m1 = new Manager();
13         Manager m2 = new Manager();
14         Manager m3 = new Manager();
15         Manager m4 = new Manager();
16         Manager m5 = new Manager();
17
18         m1.setGaji(500000);
19         m1.setNama("Manager 1");
20         m1.setUsia(30);
21         //m1.setJamKerja(8.5f);
22
23         m2.setGaji(100000);
24         m2.setNama("Manager 2");
25         m2.setUsia(25);
26
27         m3.setGaji(200000);
28         m3.setNama("Manager 3");
29         m3.setUsia(26);
30
31         m4.setGaji(300000);
32         m4.setNama("Manager 4");
33         m4.setUsia(27);
34
35         m5.setGaji(400000);
36         m5.setNama("Manager 5");
37         m5.setUsia(28);
38     }
39 }
```

```
38 m5.setUsia(28);
39
40 System.out.println("Nama 1 : " + m1.getNama());
41 System.out.println("Jam kerja Manager 1 : " + m1.jamKerja());
42 System.out.println("Gaji Manager 1 : " + m1.getGajiManager());
43 System.out.println("Usia Manager 1 : " + m1.getUsia() + "\n");
44
45 System.out.println("Nama 2 : " + m2.getNama());
46 System.out.println("Jam kerja Manager 2 : " + m2.jamKerja());
47 System.out.println("Gaji Manager 2 : " + m2.getGajiManager());
48 System.out.println("Usia Manager 2 : " + m2.getUsia() + "\n");
49
50 System.out.println("Nama 3 : " + m3.getNama());
51 System.out.println("Jam kerja Manager 3 : " + m3.jamKerja());
52 System.out.println("Gaji Manager 3 : " + m3.getGajiManager());
53 System.out.println("Usia Manager 3 : " + m3.getUsia() + "\n");
54
55 System.out.println("Nama 4 : " + m4.getNama());
56 System.out.println("Jam kerja Manager 4 : " + m4.jamKerja());
57 System.out.println("Gaji Manager 4 : " + m4.getGajiManager());
58 System.out.println("Usia Manager 4 : " + m4.getUsia() + "\n");
59
60 System.out.println("Nama 5 : " + m5.getNama());
61 System.out.println("Jam kerja Manager 5 : " + m5.jamKerja());
62 System.out.println("Gaji Manager 5 : " + m5.getGajiManager());
63 System.out.println("Usia Manager 5 : " + m5.getUsia() + "\n");
64 //System.out.println("Jam kerja baru : " + m1.jamKerja());
65 }
66
67 }
```

➤ Output dari program diatas



```
run:
Nama 1 : Manager 1
Jam kerja Manager 1 : 7.5
Gaji Manager 1 : 1000000.0
Usia Manager 1 : 30

Nama 2 : Manager 2
Jam kerja Manager 2 : 7.5
Gaji Manager 2 : 200000.0
Usia Manager 2 : 25

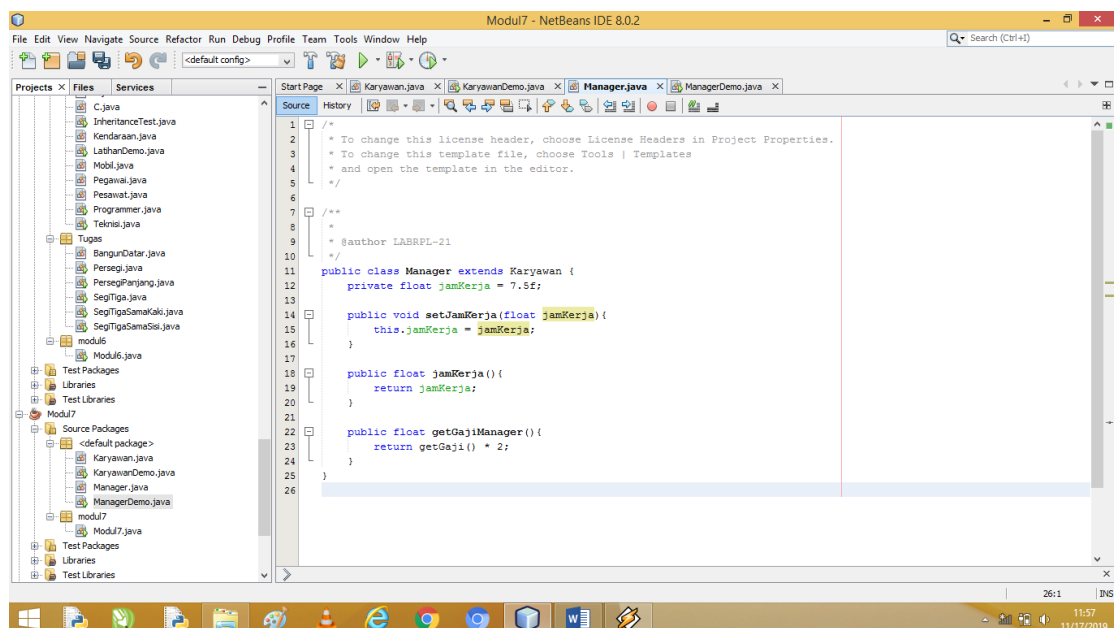
Nama 3 : Manager 3
Jam kerja Manager 3 : 7.5
Gaji Manager 3 : 400000.0
Usia Manager 3 : 26

Nama 4 : Manager 4
Jam kerja Manager 4 : 7.5
Gaji Manager 4 : 600000.0
Usia Manager 4 : 27

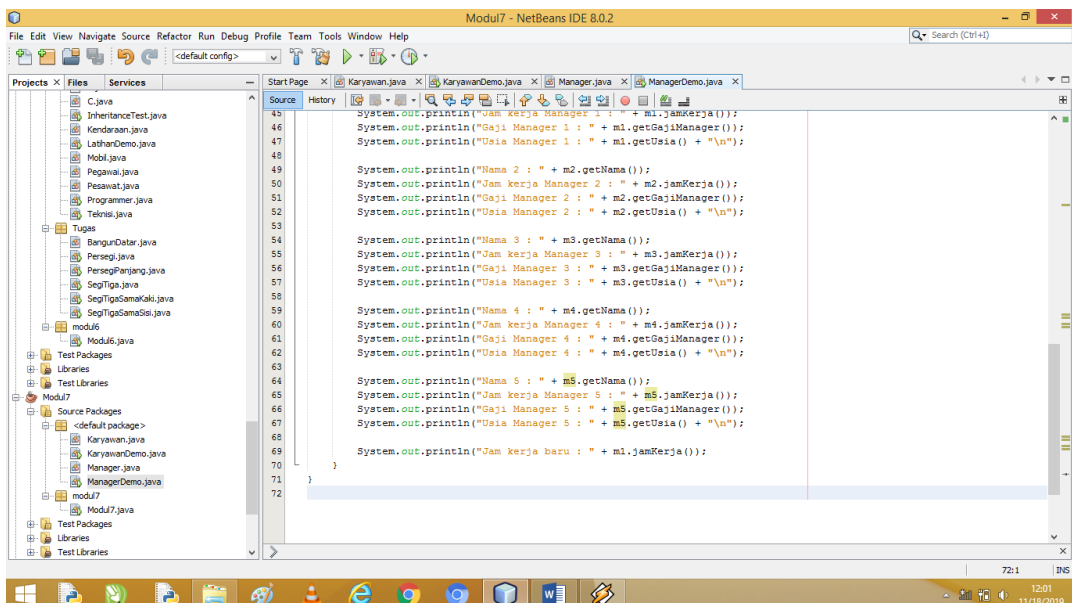
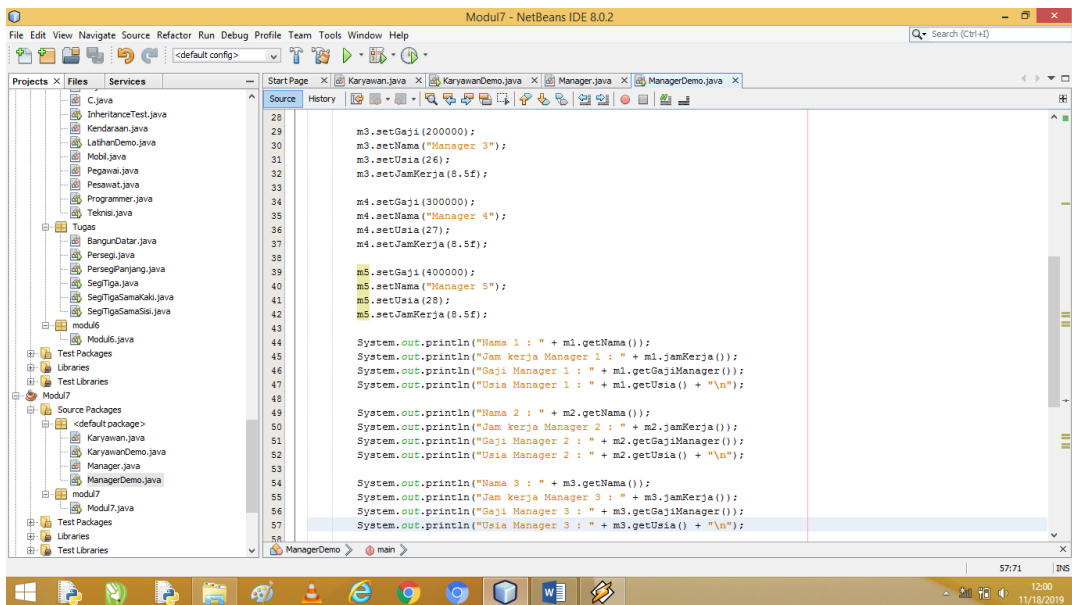
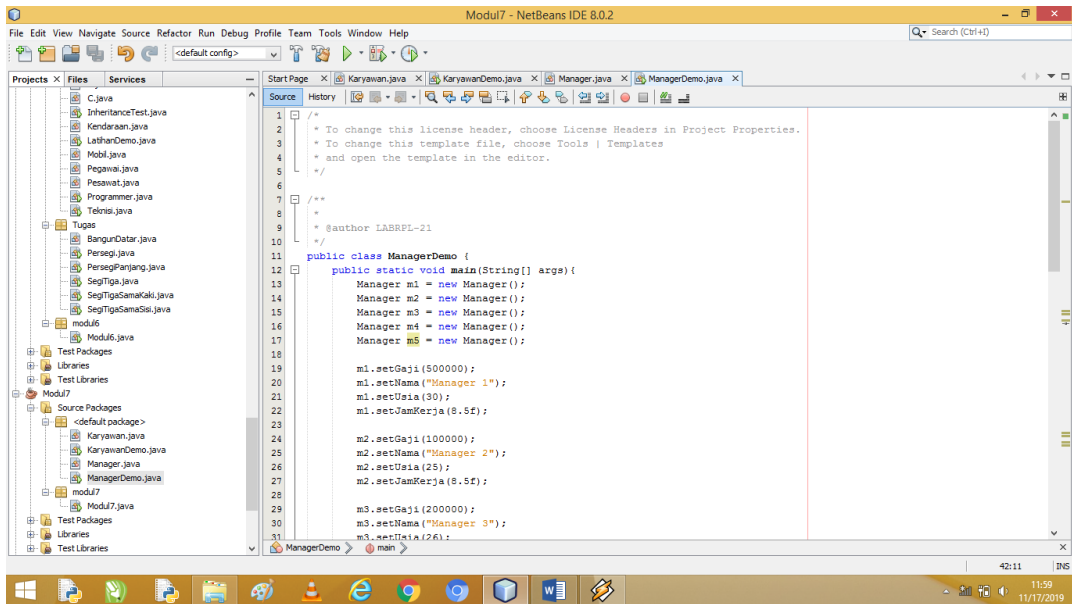
Nama 5 : Manager 5
Jam kerja Manager 5 : 7.5
Gaji Manager 5 : 800000.0
Usia Manager 5 : 28

BUILD SUCCESSFUL (total time: 0 seconds)
```

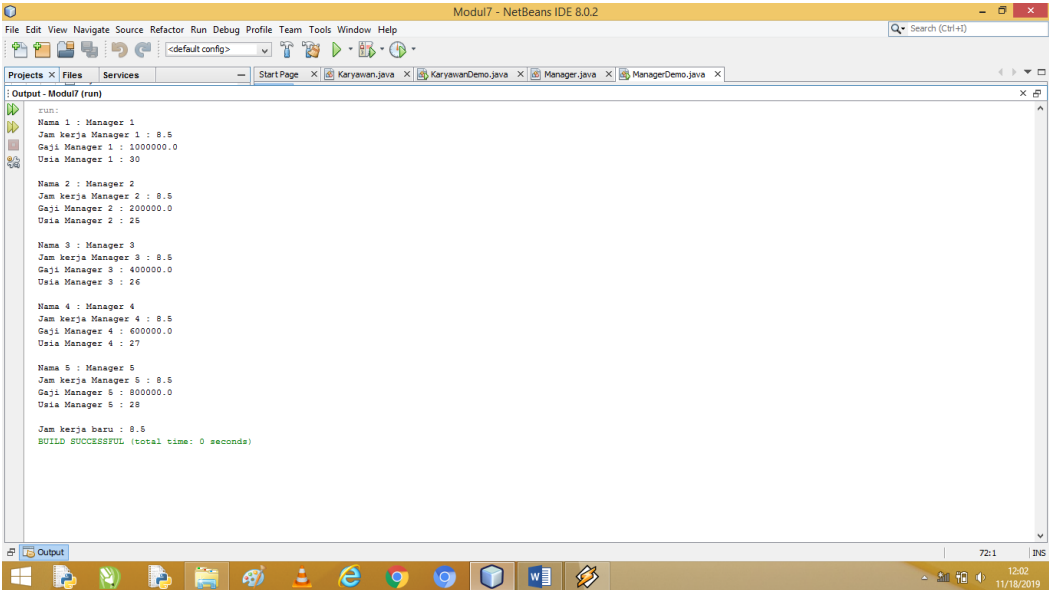
2. Menambahkan setter pada class Manager untuk memodifikasi nilai baru jamKerja menjadi 8.5



```
1  /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6
7  /**
8   *
9   * @author LABRPL-21
10  */
11 public class Manager extends Karyawan {
12     private float jamKerja = 7.5f;
13
14     public void setJamKerja(float jamKerja){
15         this.jamKerja = jamKerja;
16     }
17
18     public float jamKerja(){
19         return jamKerja;
20     }
21
22     public float getGajiManager(){
23         return getGaji() * 2;
24     }
25 }
26
```



➤ Output dari program diatas:



```
Modul7 - NetBeans IDE 8.0.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+F)
Projects Files Services
Start Page Karyawan.java KaryawanDemo.java Manager.java ManagerDemo.java
Output - Modul7 (run)
RUN
Nama 1 : Manager 1
Jam kerja Manager 1 : 8.5
Gaji Manager 1 : 1000000.0
Usia Manager 1 : 30

Nama 2 : Manager 2
Jam kerja Manager 2 : 8.5
Gaji Manager 2 : 200000.0
Usia Manager 2 : 25

Nama 3 : Manager 3
Jam kerja Manager 3 : 8.5
Gaji Manager 3 : 400000.0
Usia Manager 3 : 26

Nama 4 : Manager 4
Jam kerja Manager 4 : 8.5
Gaji Manager 4 : 600000.0
Usia Manager 4 : 27

Nama 5 : Manager 5
Jam kerja Manager 5 : 8.5
Gaji Manager 5 : 800000.0
Usia Manager 5 : 28

Jam kerja baru : 8.5
BUILD SUCCESSFUL (total time: 0 seconds)
```