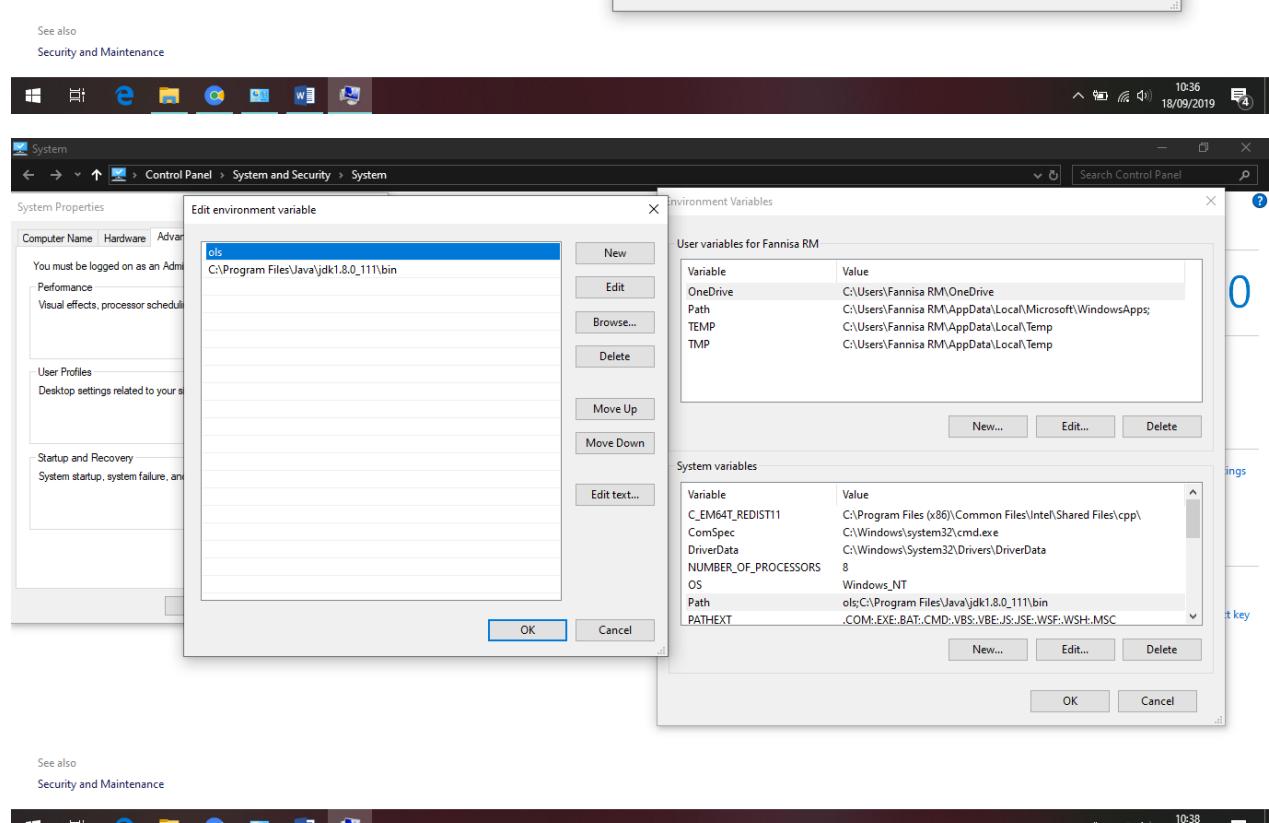
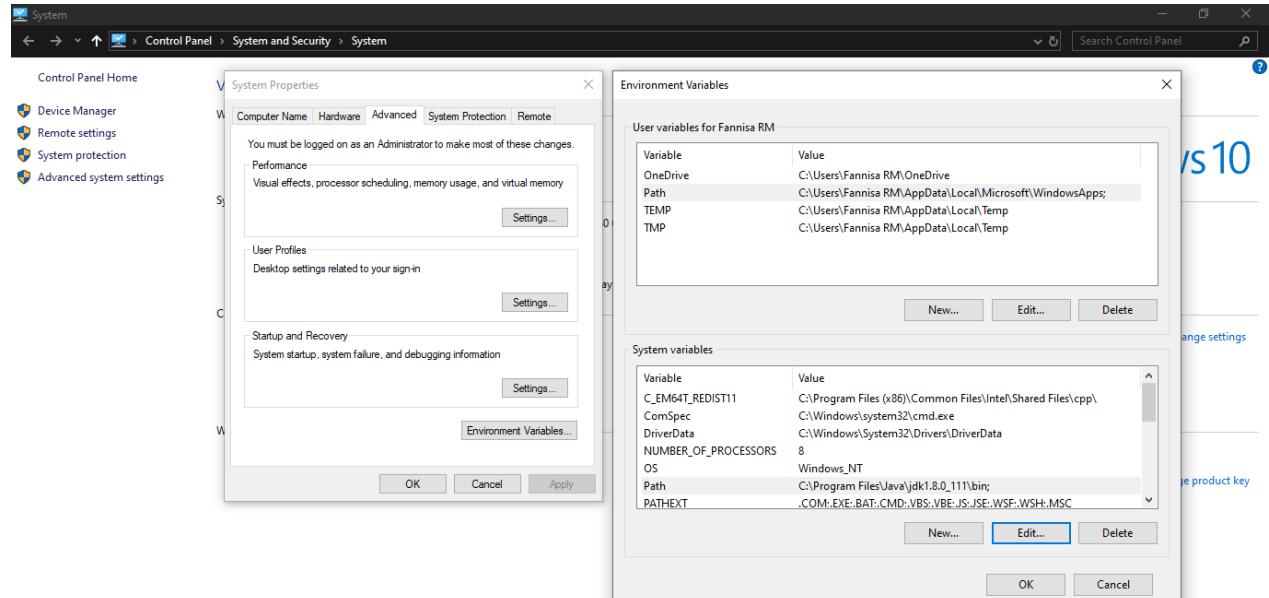


NIM : L200180048

# Modul1

## Pengenalan java

Cara menambahkan path



```
Program - Notepad
File Edit Format View Help
public class Program{
    public static void main(String[] args){
        System.out.println("Hello World");
    }
}
```

```
Command Prompt
Microsoft Windows [Version 10.0.18362.356]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Fannisa RM>java -version
java version "1.8.0_111"
Java(TM) SE Runtime Environment (build 1.8.0_111-b14)
Java HotSpot(TM) 64-Bit Server VM (build 25.111-b14, mixed mode)

C:\Users\Fannisa RM>java
Usage: java [-options] class [args...]
           (to execute a class)
      or  java [-options] -jar jarfile [args...]
           (to execute a jar file)
where options include:
  -d32      use a 32-bit data model if available
  -d64      use a 64-bit data model if available
  -server    to select the "server" VM
             The default VM is server.

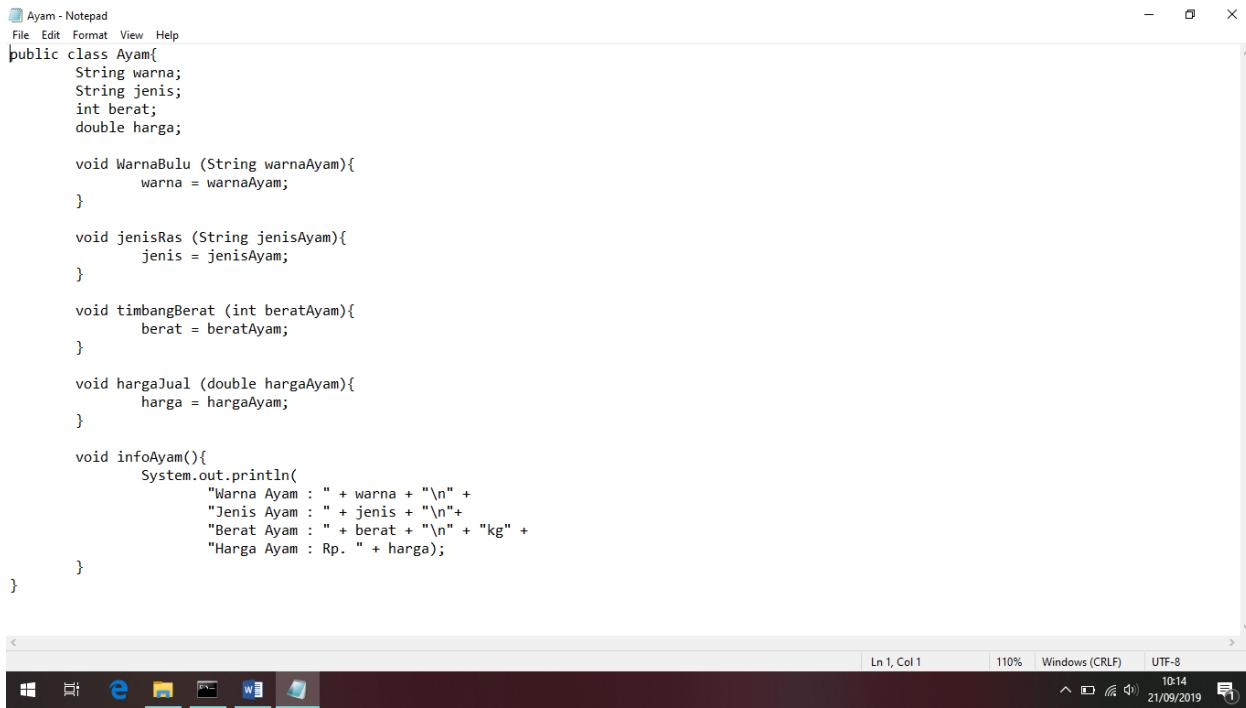
  -cp <class search path of directories and zip/jar files>
  -classpath <class search path of directories and zip/jar files>
             A ; separated list of directories, JAR archives,
             and ZIP archives to search for class files.

  -D<name>=<value>
             set a system property
  -verbose:[class|gc|jni]
             enable verbose output
  -version   print product version and exit
  -version:<value>
             Warning: this feature is deprecated and will be removed
             in a future release.
             require the specified version to run
  -showversion print product version and continue
  -jre-restrict-search | -no-jre-restrict-search
             Warning: this feature is deprecated and will be removed
             in a future release.
             include/exclude user private JREs in the version search
  -? -help   print this help message
  -X       print help on non-standard options
  -ea[:<packagename>...|:<classname>]
  -enableassertions[(:<packagename>...|:<classname>]
             enable assertions with specified granularity
  -da[:<packagename>...|:<classname>]
  -disableassertions[(:<packagename>...|:<classname>]
```

```
Command Prompt  
C:\Users\Fannisa RM>cd..  
C:\Users>cd..  
C:\>D:  
D:\>dir  
Volume in drive D is DATA  
Volume Serial Number is 4078-13F3  
Directory of D:\  
18/09/2019 10:39 <DIR> Documents  
16/09/2019 20:46 <DIR> Downloads  
08/07/2019 16:17 18.695.882.752 DriverPack_17.10.11-19043.iso  
11/09/2019 20:11 341.868.448 jdk-8u111-nb-8_2-windows-x64.exe  
12/09/2019 16:17 <DIR> Music  
16/09/2019 21:58 <DIR> Pictures  
17/09/2019 10:14 1.354.278 PPT SO.pptx  
16/09/2019 21:50 419 Program.class  
16/09/2019 21:52 108 Program.java  
16/09/2019 23:06 1.127 Rot1.class  
16/09/2019 22:45 531 Rot1.java  
16/09/2019 22:36 224 Rotidemo.java  
12/09/2019 16:17 <DIR> Videos  
15/09/2019 11:21 2.344.222.720 Zorin-OS-15-Core-64-bit-r1.iso  
9 File(s) 21.383.330.607 bytes  
5 Dir(s) 334.246.473.728 bytes free  
D:\>javac Program.java  
D:\>java Program  
Hello World  
D:\>
```

# Modul2

## Class dan object



```
Ayam - Notepad
File Edit Format View Help
public class Ayam{
    String warna;
    String jenis;
    int berat;
    double harga;

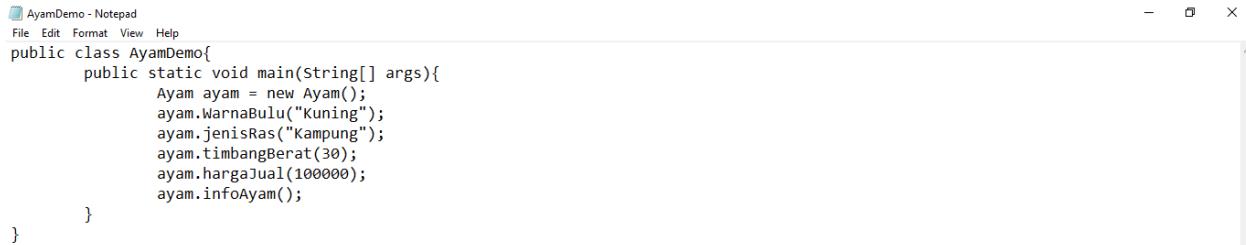
    void WarnaBulu (String warnaAyam){
        warna = warnaAyam;
    }

    void jenisRas (String jenisAyam){
        jenis = jenisAyam;
    }

    void timbangBerat (int beratAyam){
        berat = beratAyam;
    }

    void hargaJual (double hargaAyam){
        harga = hargaAyam;
    }

    void infoAyam(){
        System.out.println(
            "Warna Ayam : " + warna + "\n" +
            "Jenis Ayam : " + jenis + "\n" +
            "Berat Ayam : " + berat + "\n" + "kg" +
            "Harga Ayam : Rp. " + harga);
    }
}
```



```
AyamDemo - Notepad
File Edit Format View Help
public class AyamDemo{
    public static void main(String[] args){
        Ayam ayam = new Ayam();
        ayam.WarnaBulu("Kuning");
        ayam.jenisRas("Kampung");
        ayam.timbangBerat(30);
        ayam.hargaJual(100000);
        ayam.infoAyam();
    }
}
```



```
Ln 10, Col 2           120%   Windows (CRLF)   UTF-8
^  ↻  ⌂  10:15  21/09/2019  ⏺
```

```
Command Prompt
Microsoft Windows [Version 10.0.18362.356]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Fannisa RM>java -version
java version "1.8.0_111"
Java(TM) SE Runtime Environment (build 1.8.0_111-b14)
Java HotSpot(TM) 64-Bit Server VM (build 25.111-b14, mixed mode)

C:\Users\Fannisa RM>java
Usage: java [-options] class [args...]
            (to execute a class)
        or  java [-options] -jar jarfile [args...]
            (to execute a jar file)
where options include:
    -d32      use a 32-bit data model if available
    -d64      use a 64-bit data model if available
    -server   to select the "server" VM
              The default VM is server.

    -cp <class search path of directories and zip/jar files>
    -classpath <class search path of directories and zip/jar files>
               A ; separated list of directories, JAR archives,
               and ZIP archives to search for class files.

    -D<name>=<value>
              set a system property
    -verbose:[class|gc|mni]
              enable verbose output
    -version   print product version and exit
    -version:<value>
              Warning: this feature is deprecated and will be removed
              in a future release.
              require the specified version to run
    -showversion   print product version and continue
    -jre-restrict-search | -no-jre-restrict-search
              Warning: this feature is deprecated and will be removed
              in a future release.
              include/exclude user private JREs in the version search
    -? -help   print this help message
    -X       print help on non-standard options
    -ea[:<packagename...|:<classname>]
    -enableassertions[:<packagename...|:<classname>]
              enable assertions with specified granularity
    -da[:<packagename...|:<classname>]
    -disableassertions[:<packagename...|:<classname>]

Windows PowerShell
```

```
Command Prompt
C:\Users\Fannisa RM>cd..
C:\Users>cd..
C:\>G:
G:\>dir
Volume in drive G is FASHEILARAP
Volume Serial Number is 61FC-27A9

Directory of G:\

10/03/2016  20:15    <DIR>          DATA
18/11/2018  08:11    <DIR>          SKINNYFABS
20/09/2019  15:35           229 AyamDemo.java
20/09/2019  15:51           1.132 Ayam.class
30/03/2016  07:59    <DIR>          Smad-Lock (Brankas Smadav) Δ
20/09/2019  15:52           520 AyamDemo.class
20/09/2019  15:56           315 CarDemo.java
20/09/2019  15:53           211.039 Document1.docx
20/09/2019  16:08           428 Car.java
10/09/2019  14:41           100.887.420 OS.rar
04/08/2015  22:09           116.511.944 VirtualBox-5.0.0-101573-Win.exe
15/09/2019  20:20    <DIR>          Zorin
16/09/2019  09:55           40 RECYCLER
09/09/2019  21:57           79.607.256 jre-8u221-windows-x64.exe
11/09/2019  20:11           341.868.448 jdk-8u111-nb-8.2-windows-x64.exe
04/09/2019  01:27           183.295.608 Apache-NetBeans-11.1-bin-windows-x64.exe
04/09/2019  02:22           54.474.736 eclipse-inst-wind64.exe
03/09/2019  14:58           230.883.184 netbeans-8.2-windows.exe
16/09/2019  18:41           1.352.860 PPT S0.pptx
03/09/2015  13:42    <DIR>          OS
13/09/2019  15:36           1.130 Roti.class
13/09/2019  15:35           530 Roti.java
13/09/2019  15:37           518 Rotidemo.class
13/09/2019  15:36           225 Rotidemo.java
20/09/2019  15:13           540 Ayam.java
                           20 File(s)  1.109.098.102 bytes
                           5 Dir(s)   631.590.912 bytes free

G:\>javac Ayam.java
G:\>javac AyamDemo.java

Windows PowerShell
```

```
 Command Prompt
03/09/2019 14:58      230.883.184 netbeans-8.2-windows.exe
16/09/2019 18:41      1.352.860 PPT S0.pptx
03/09/2015 13:42    <DIR> OS
13/09/2019 15:36          1.130 Roti.class
13/09/2019 15:35          530 Roti.java
13/09/2019 15:37          518 Rotidemo.class
13/09/2019 15:36          225 Rotidemo.java
20/09/2019 15:13          540 Ayam.java
                           20 File(s)  1.109.098.102 bytes free
                           5 Dir(s)   631.590.912 bytes free

G:\>javac Ayam.java
G:\>javac AyamDemo.java

G:\>java AyamDemo
Warna Ayam : Kuning
Denis Ayam : Kampung
Berat Ayam : 30
kgHarga Ayam : Rp. 100000.0

G:\>
```

# Modul3

## Class member: variable dan method

### Latihan 1

The screenshot shows the NetBeans IDE 8.2 interface. The project 'Modul3' is open, containing a source package 'modul3' with files 'Modul3.java' and 'instance.java'. The 'Modul3.java' file contains the following code:

```
4  * and open the template in the editor.
5  *
6  * package modul3;
7  *
8  * /**
9  * *
10 * * @author Fannisa RM
11 */
12 public class Modul3 {
13     public void hitungUsia() {
14         int usia = 0;
15         int tahunSekarang = 2019;
16         int tahunLahir = 1993;
17
18         usia = tahunSekarang - tahunLahir;
19         System.out.println("Usia saya :" + usia);
20     }
21
22     public void beratBadan() {
23         int beratbadan = 0;
24         int beratlahir = 10;
25         int umur = 26;
26
27         beratbadan = beratlahir + umur/2;
28         System.out.println("Beratbadan saya :" + beratbadan);
29     }
30
31     public static void main(String[] args) {
32         Modul3 umur = new Modul3();
33         umur.hitungUsia();
34         umur.beratBadan();
35     }
36 }
```

The 'Output' window shows the results of running the code:

```
run:
Usia saya :26
Beratbadan saya :23
BUILD SUCCESSFUL (total time: 0 seconds)
```

The screenshot shows the NetBeans IDE 8.2 interface. The project 'Modul3' is open, containing a source package 'modul3' with files 'Modul3.java' and 'instance.java'. The 'Modul3.java' file contains the following code:

```
21  public void beratBadan() {
22      int beratbadan = 0;
23      int beratlahir = 10;
24      int umur = 26;
25
26      beratbadan = beratlahir + umur/2;
27      System.out.println("Beratbadan saya :" + beratbadan);
28  }
29
30  public static void main(String[] args) {
31      Modul3 umur = new Modul3();
32      umur.hitungUsia();
33      umur.beratBadan();
34  }
35
36 }
```

The 'Output' window shows the results of running the code:

```
run:
Usia saya :26
Beratbadan saya :23
BUILD SUCCESSFUL (total time: 0 seconds)
```

### Latihan 2

Modul3 - NetBeans IDE 8.2

```

public class instance {
    float usia = 0;

    public void hitungusia(){
        int usia = 0;
        int tahunSekarang = 2019;
        int tahunLahir = 1993;

        usia = tahunSekarang - tahunLahir;
        System.out.println("Usia saya :" +usia);
    }

    public void beratBadan(){
        int beratbadan = 0;
        int beratlahir = 10;
        int umur = 26;

        beratbadan = beratlahir + umur/2;
        System.out.println("Beratbadan saya :" + beratbadan);
    }
}

```

Output - Modul3 (run) x

```

run:
Usia saya :26
Beratbadan saya :23
BUILD SUCCESSFUL (total time: 0 seconds)

```

### Latihan 3

Modul3 - NetBeans IDE 8.2

```

public class pegawai {
    String nama;
    int nip;
    double gaji;

    void berinama (String nama){
        this.nama = nama;
    }

    void berinip (int nip_peg){
        nip = nip_peg;
    }

    void jumlahgaji (double gaji_peg){
        gaji = gaji_peg;
    }

    void infopegawai(){
        System.out.println(
            "Nama Pegawai : " + nama+ "\n" +
            "NIP Pegawai : " + nip + "\n" +
            "Gaji Pegawai : Rp. " + gaji + "\n");
    }
}

```

Output x

```

>> Debugger Console x Modul3 (run) x

```

Modul3 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services <default config>

Start Page pegawai.java pegawaiDemo.java Ayam.java AyamDemo.java

Source History

pegawaiDemo.java

```
9  * @author Fannisa RM
10
11 public class pegawaiDemo {
12     public static void main(String[] args){
13         pegawai pegawai= new pegawai();
14         pegawai.berinama("Sonny");
15         pegawai.berinip(199952000);
16         pegawai.jumlahgaji(3000000);
17         pegawai.infopegawai();
18
19         pegawai pegawai2= new pegawai();
20         pegawai2.berinama("Raya");
21         pegawai2.berinip(199002000);
22         pegawai2.jumlahgaji(4000000);
23         pegawai2.infopegawai();
24
25         pegawai pegawai3= new pegawai();
26         pegawai3.berinama("Donal");
27         pegawai3.berinip(199952011);
28         pegawai3.jumlahgaji(5000000);
29         pegawai3.infopegawai();
30
31         pegawai pegawai4= new pegawai();
32         pegawai4.berinama("Dono");
33         pegawai4.berinip(199952012);
34         pegawai4.jumlahgaji(6000000);
35         pegawai4.infopegawai();
36
37         pegawai pegawai5= new pegawai();
38         pegawai5.berinama("Joni");
39         pegawai5.berinip(199952013);
40         pegawai5.jumlahgaji(7000000);
41         pegawai5.infopegawai();
42     }
43 }
```

main - Navigator

Members: PegawaiDemo, main(String[] args)

Output > Debugger Console Modul3 (run) >

Windows Taskbar: 18:39 03/10/2019

Modul3 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services <default config>

Start Page pegawai.java pegawaiDemo.java Ayam.java AyamDemo.java

Source History

pegawaiDemo.java

```
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43 }
```

main - Navigator

Members: pegawaiDemo, main(String[] args)

Output > Debugger Console Modul3 (run) >

Windows Taskbar: 18:40 03/10/2019

Modul3 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

Start Page X pegawai.java X pegawaiDemo.java X Ayam.java X AyamDemo.java X

Source History

Output X

Debugger Console X Modul3 (run) X

run:

Nama Pegawai : Sonny  
NIP Pegawai : 159952000  
Gaji Pegawai : Rp. 3000000.0

Nama Pegawai : Raya  
NIP Pegawai : 159002000  
Gaji Pegawai : Rp. 4000000.0

Nama Pegawai : Donal  
NIP Pegawai : 159952011  
Gaji Pegawai : Rp. 5000000.0

Nama Pegawai : Jensi  
NIP Pegawai : 159952013  
Gaji Pegawai : Rp. 7000000.0

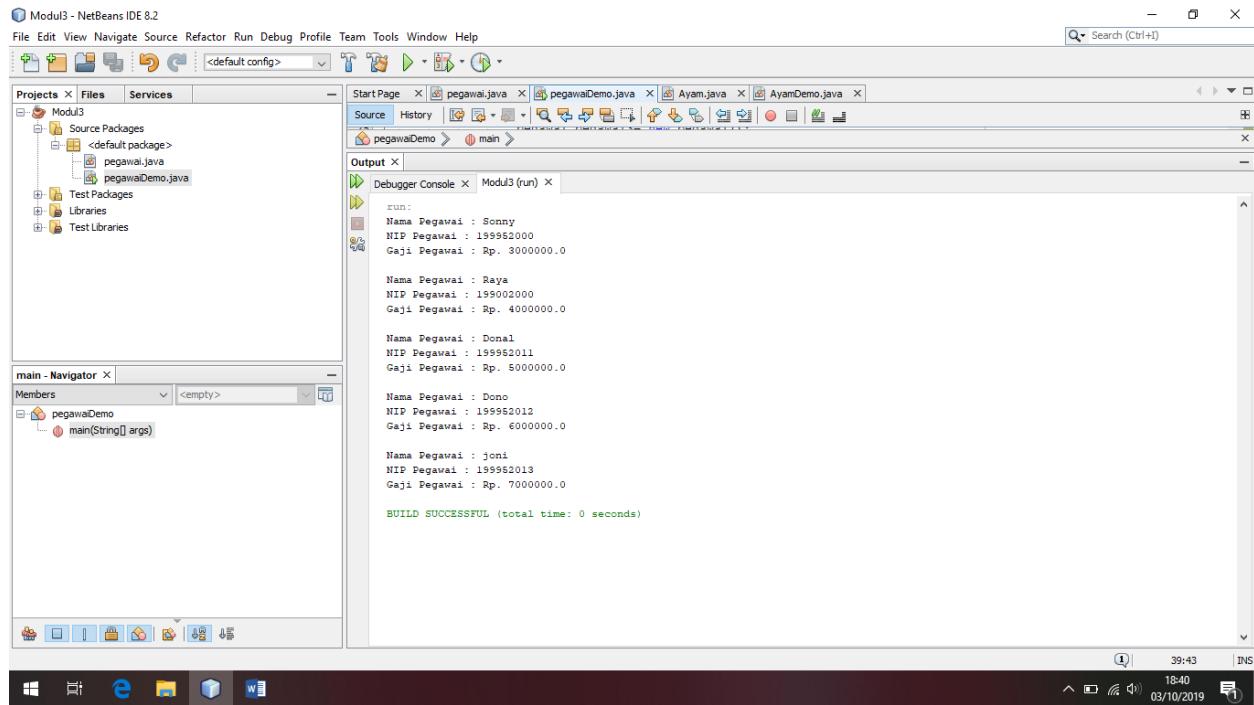
BUILD SUCCESSFUL (total time: 0 seconds)

main - Navigator X

Members <empty>

pegawaiDemo  
main(String[] args)

Windows Taskbar: 18:40 03/10/2019



## Pekerjaan Rumah

Modul3 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Services X

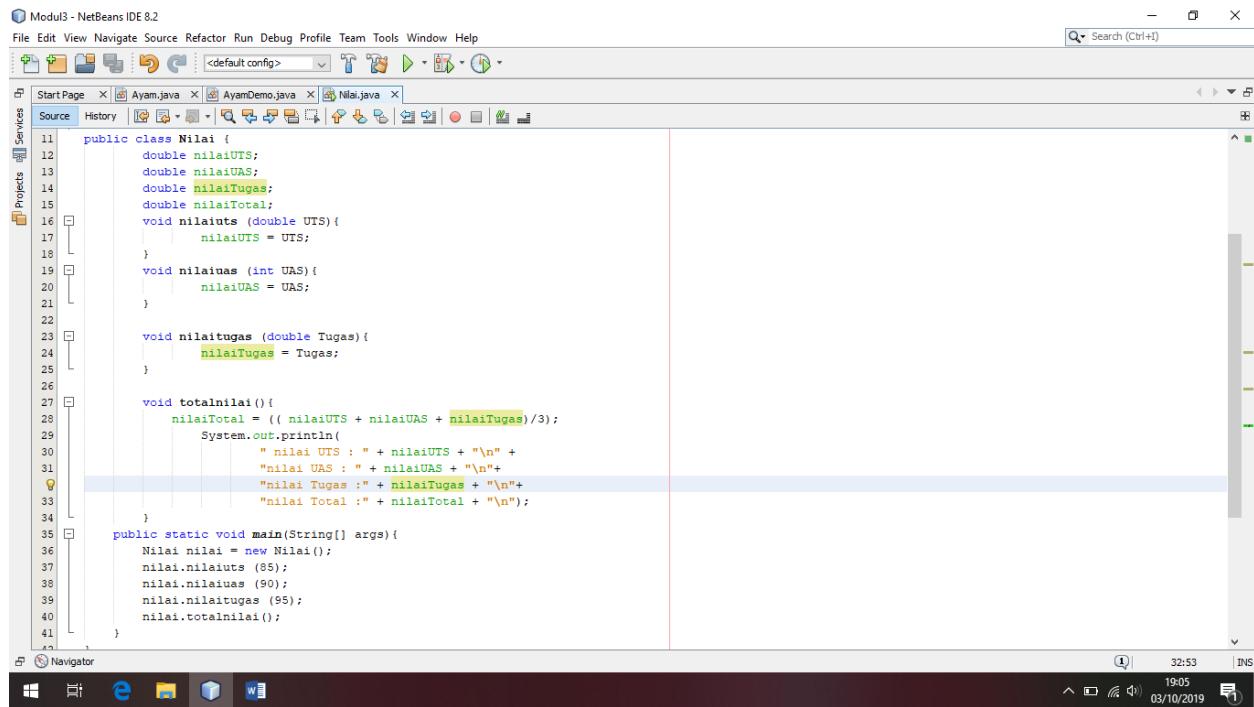
Source History

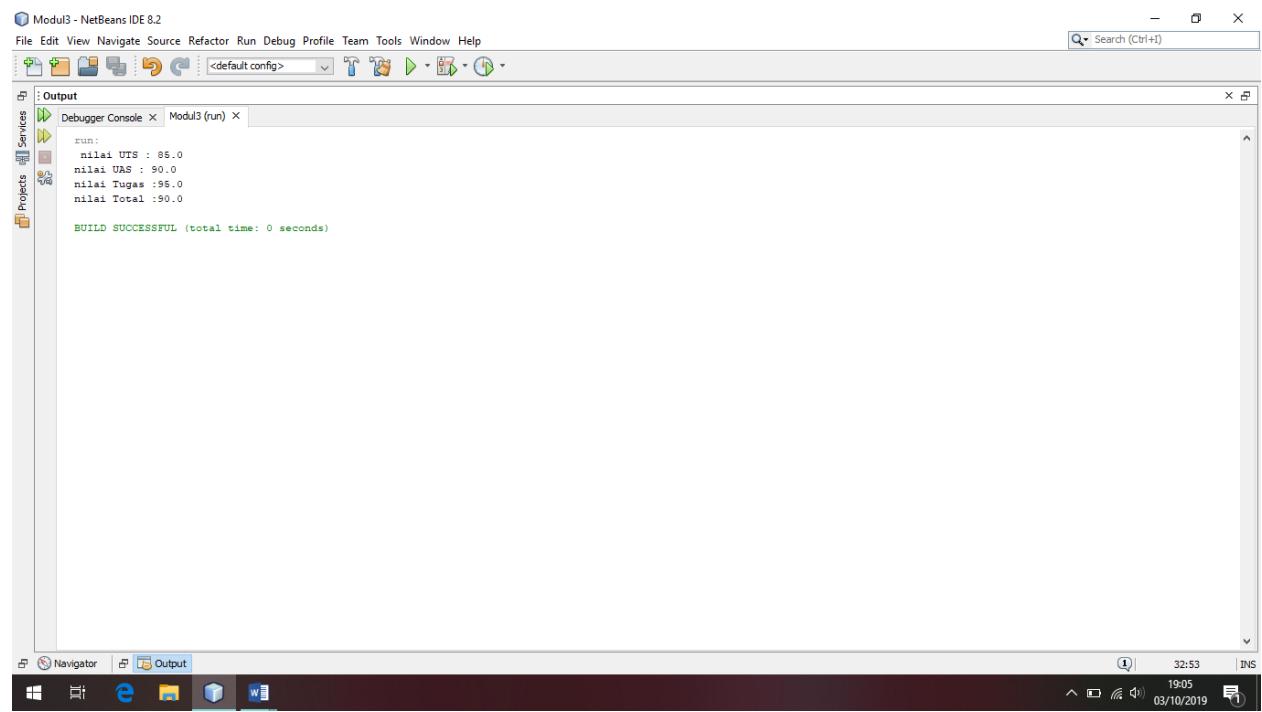
Projects X Start Page X Ayam.java X AyamDemo.java X Nilai.java X

```
11 public class Nilai {
12     double nilaiUTS;
13     double nilaiUAS;
14     double nilaiTugas;
15     double nilaiTotal;
16     void nilaiuts (double UTS){
17         nilaiUTS = UTS;
18     }
19     void nilaiuas (int UAS){
20         nilaiUAS = UAS;
21     }
22
23     void nilaitugas (double Tugas){
24         nilaiTugas = Tugas;
25     }
26
27     void totalnilai(){
28         nilaiTotal = (( nilaiUTS + nilaiUAS + nilaiTugas)/3);
29         System.out.println(
30             " nilai UTS : " + nilaiUTS + "\n" +
31             " nilai UAS : " + nilaiUAS + "\n" +
32             " nilai Tugas :" + nilaiTugas + "\n" +
33             " nilai Total :" + nilaiTotal + "\n");
34     }
35     public static void main(String[] args){
36         Nilai nilai = new Nilai();
37         nilai=nilaiuts (85);
38         nilai=nilaiuas (90);
39         nilai=nilaitugas (95);
40         nilai.totalnilai();
41     }
}
```

Navigat

Windows Taskbar: 19:05 03/10/2019

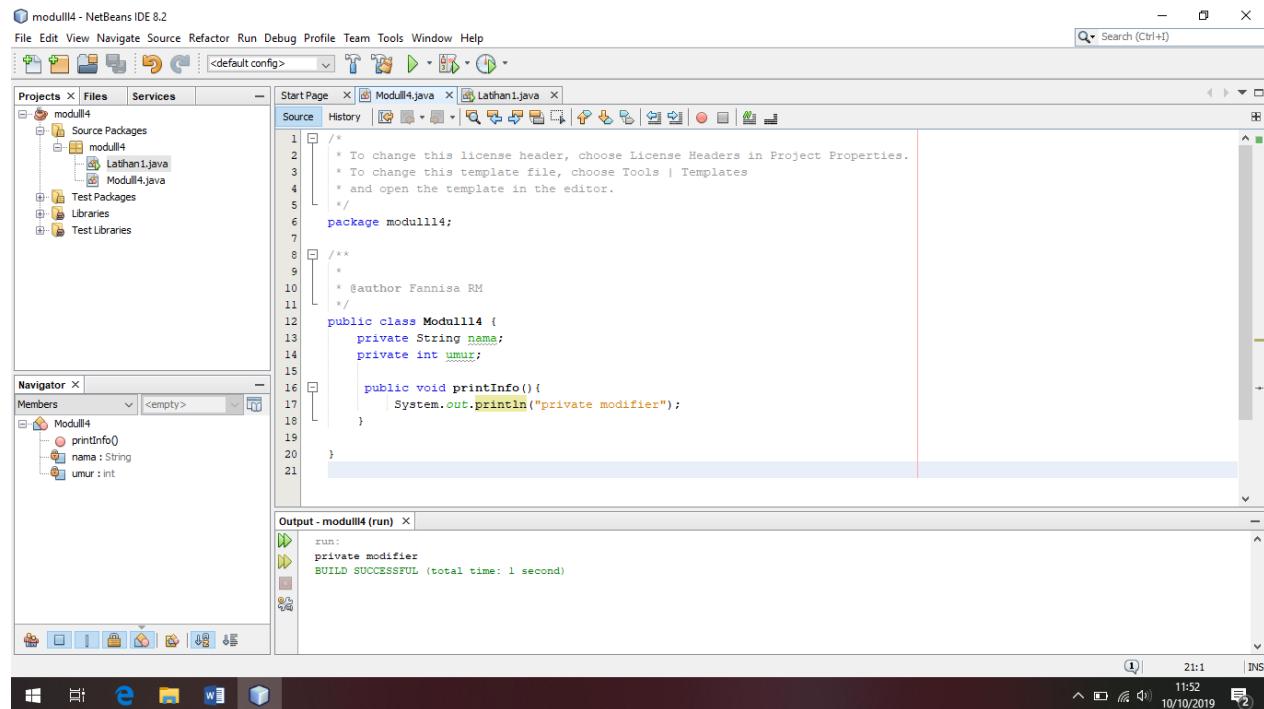




# Modul4

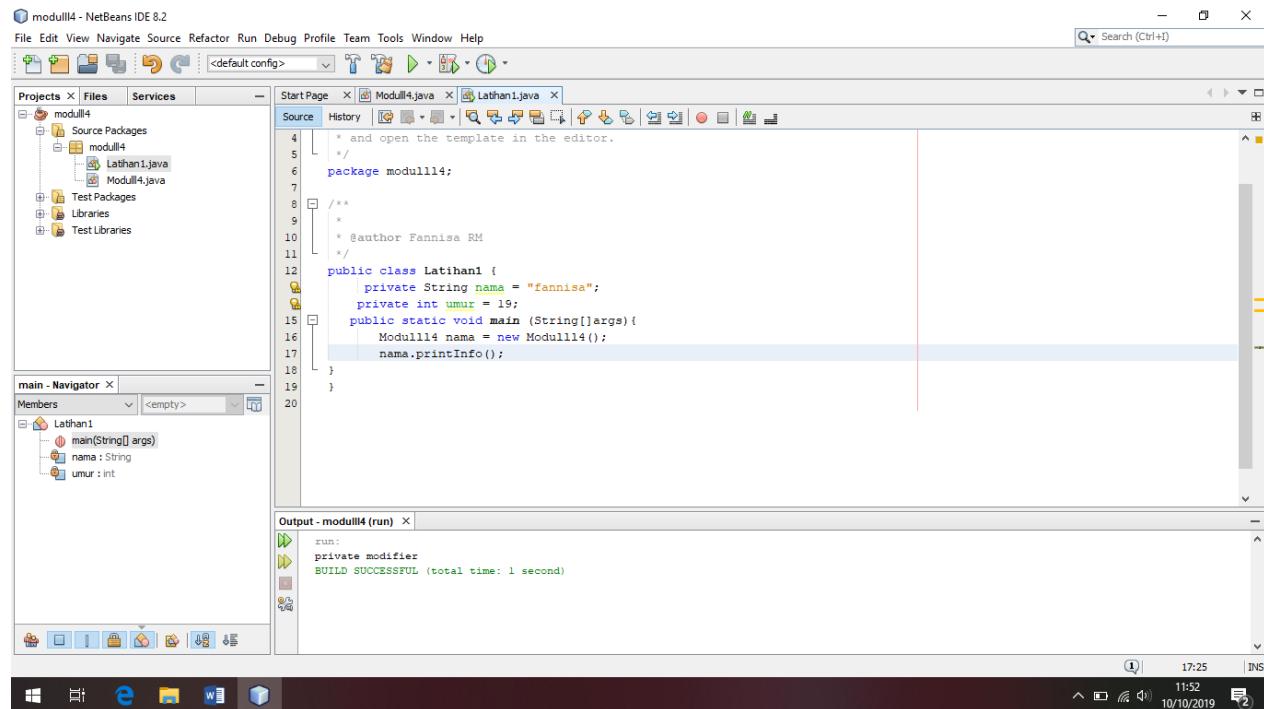
## Access modifier

### Private Modifier



```
modull4 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Files Services StartPage Modull4.java Lathan1.java
modull4
  Source Packages
    modull4
      Lathan1.java
      Modull4.java
  Test Packages
  Libraries
  Test Libraries
Search (Ctrl+F)
Projects X Files X Services X StartPage X Modull4.java X Lathan1.java X
Source History | 
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 package modull4;
7
8 /**
9  *
10 * @author Fannisa RM
11 */
12 public class Modull4 {
13     private String nama;
14     private int umur;
15
16     public void printInfo() {
17         System.out.println("private modifier");
18     }
19
20 }
21
Output - modull4 (run) X
run:
private modifier
BUILD SUCCESSFUL (total time: 1 second)
11:52 10/10/2019

```

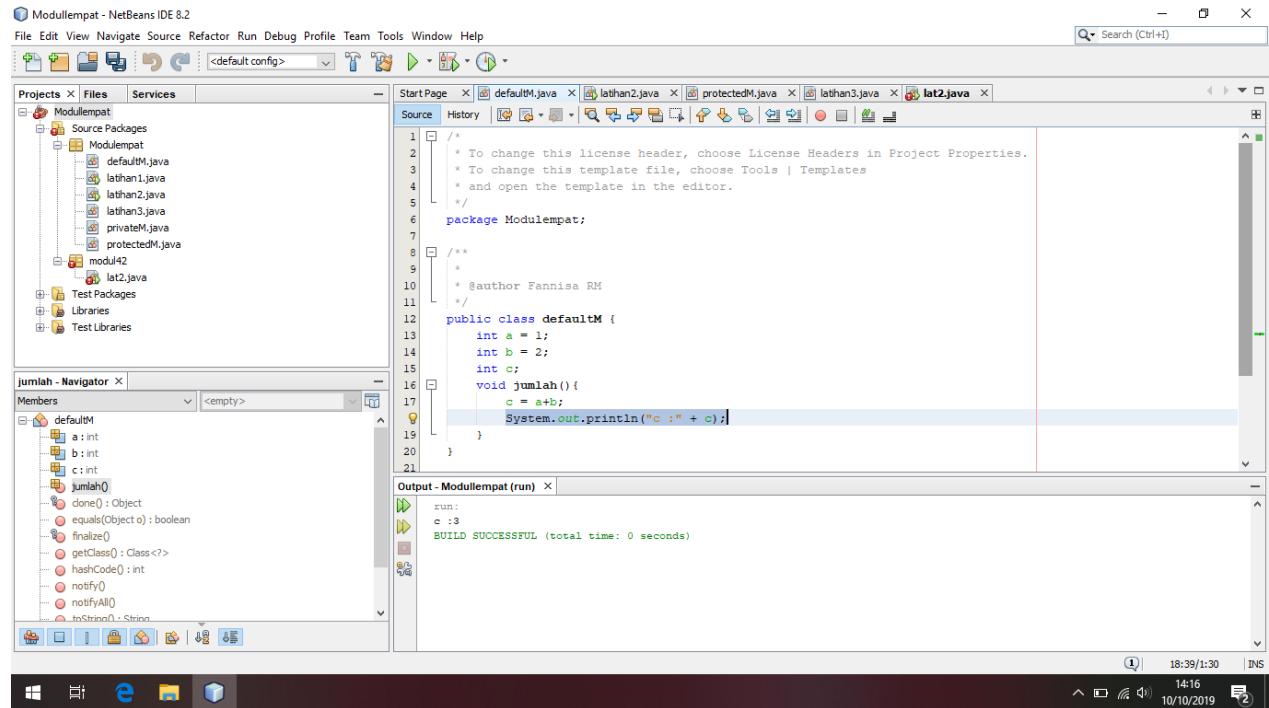


```
modull4 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Files Services StartPage Modull4.java Lathan1.java
modull4
  Source Packages
    modull4
      Lathan1.java
      Modull4.java
  Test Packages
  Libraries
  Test Libraries
Search (Ctrl+F)
Projects X Files X Services X StartPage X Modull4.java X Lathan1.java X
Source History | 
4
5 /**
6  * and open the template in the editor.
7 */
8 package modull4;
9
10 /**
11  *
12  * @author Fannisa RM
13 */
14
15 public class Lathan1 {
16     private String nama = "fannisa";
17     private int umur = 19;
18     public static void main (String[] args){
19         Modull4 nama = new Modull4();
20         nama.printInfo();
21     }
22 }
23
Output - modull4 (run) X
run:
private modifier
BUILD SUCCESSFUL (total time: 1 second)
17:25 10/10/2019

```

Tipe akses private tidak dapat mengakses variabel dan method dari class atau package lain, untuk dapat mengaksesnya harus menggunakan tipe akses publik

## Default Modifier

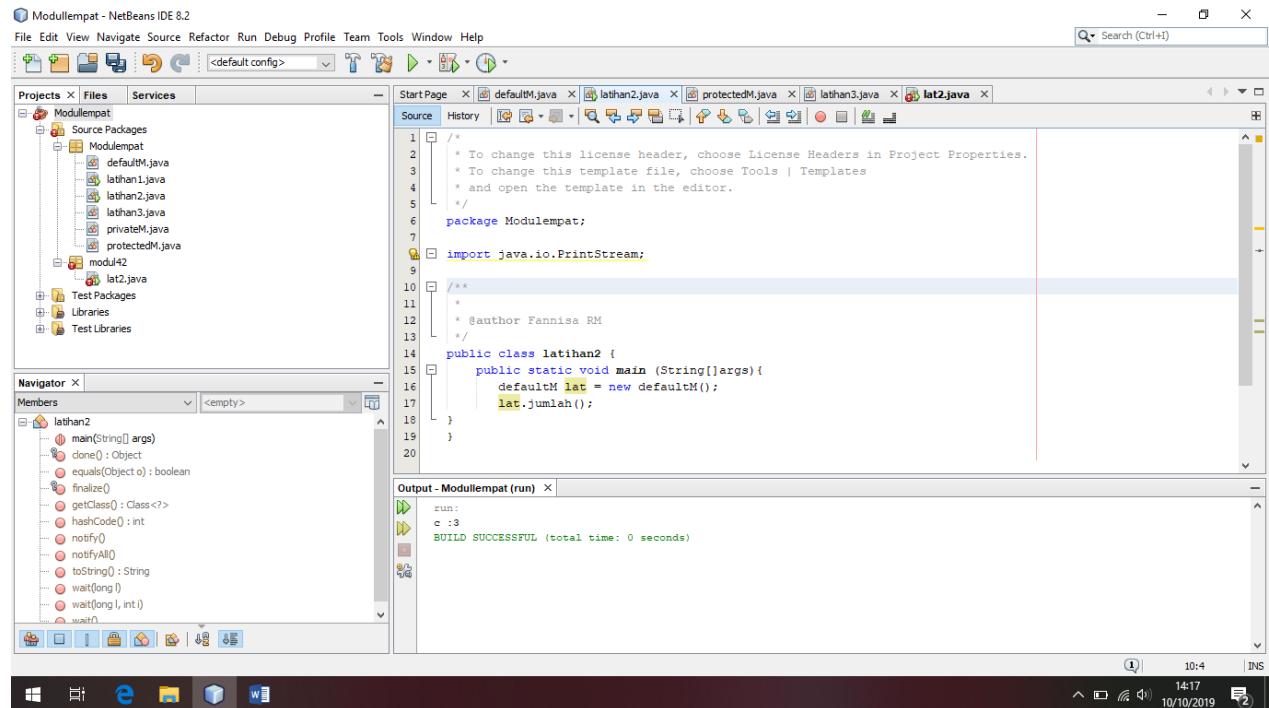


The screenshot shows the NetBeans IDE interface with the following details:

- Project:** Modulempat
- Source Packages:** Modulempat (containing defaultM.java, latihan1.java, latihan2.java, latihan3.java, privateM.java, protectedM.java) and modul42 (containing lat2.java).
- Code Editor:** The file defaultM.java is open, showing the following code:

```
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 package Modulempat;
7
8 /**
9  *
10 * @author Fannisa RM
11 */
12 public class defaultM {
13     int a = 1;
14     int b = 2;
15     int c;
16     void jumlah(){
17         c = a+b;
18         System.out.println("c :" + c);
19     }
20 }
```
- Output:** The output window shows "BUILD SUCCESSFUL (total time: 0 seconds)".
- Navigator:** The Navigator pane shows members of the defaultM class: a: int, b: int, c: int, and jumlah().
- System Bar:** The taskbar at the bottom shows the Windows Start button, task icons, and system status.

## Class sama

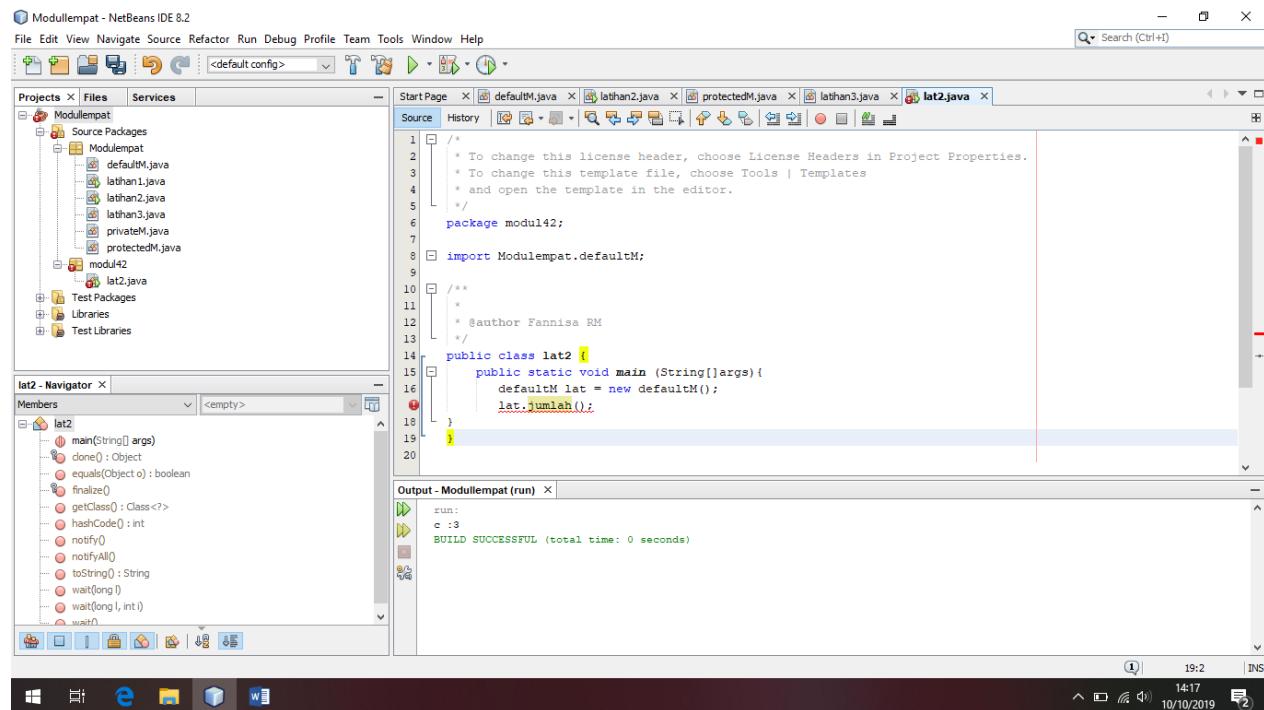


The screenshot shows the NetBeans IDE interface with the following details:

- Project:** Modulempat
- Source Packages:** Modulempat (containing defaultM.java, latihan1.java, latihan2.java, latihan3.java, privateM.java, protectedM.java) and modul42 (containing lat2.java).
- Code Editor:** The file latihan2.java is open, showing the following code:

```
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 package Modulempat;
7
8 import java.io.PrintStream;
9
10 /**
11  *
12  * @author Fannisa RM
13  */
14 public class latihan2 {
15     public static void main (String[] args){
16         defaultM lat = new defaultM();
17         lat.jumlah();
18     }
19 }
```
- Output:** The output window shows "BUILD SUCCESSFUL (total time: 0 seconds)".
- Navigator:** The Navigator pane shows members of the latihan2 class: main(String[] args), clone(), equals(Object o), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), and wait0().
- System Bar:** The taskbar at the bottom shows the Windows Start button, task icons, and system status.

## Package berbeda



The screenshot shows the NetBeans IDE interface with the following details:

- Project Explorer:** Shows a project named "Modulempat" with several source packages: "Modulempat" containing files defaultM.java, lathan1.java, lathan2.java, lathan3.java, privateM.java, and protectedM.java; and "modul42" containing file lat2.java.
- Code Editor:** Displays the content of the file "lat2.java". The code includes a package declaration for "modul42", imports from "Modulempat.defaultM", and defines a class "lat2" with a main method that creates an instance of "defaultM" and calls its "jumlah" method.
- Navigator:** Shows the members of the "lat2" class, including the main method and various Java object methods like equals, getClass, hashCode, notify, notifyAll, toString, wait, and finalize.
- Output:** Shows the build log: "run: c :3 BUILD SUCCESSFUL (total time: 0 seconds)".

Default modifier dapat diakses di class dalam package yang sama dan tidak dapat diakses dalam package berbeda

## Protected Modifier

Modulempat - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

protectedM.java - Navigator X

protectedM.java

Source History

```
5 package Modulempat;
6
7 /**
8 * 
9 * @author Fannisa RM
10 */
11 public class protectedM {
12     protected void printInfo() {
13         System.out.println("Protected Modifier");
14     }
15     protected void sendMessage() {
16         System.out.println("This is a message");
17     }
18 }
```

Output - Modulempat (run) X

```
run:
Protected Modifier
This is a message
BUILD SUCCESSFUL (total time: 0 seconds)
```

Windows Taskbar:

- Start button
- File Explorer icon
- Edge browser icon
- File icon
- Java icon
- NetBeans icon
- Task View icon

System tray:

- Signal strength icon
- Wi-Fi icon
- Battery icon
- Volume icon
- 14:34
- 10/10/2019
- INS

Modulempat - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

latihan3.java - Navigator X

latihan3.java

Source History

```
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 package Modulempat;
7
8 /**
9 * 
10 * @author Fannisa RM
11 */
12 public class latihan3 {
13     public static void main(String[] args) {
14         protectedM lat = new protectedM();
15         lat.printInfo();
16         lat.sendMessage();
17     }
18 }
```

Output - Modulempat (run) X

```
run:
Protected Modifier
This is a message
BUILD SUCCESSFUL (total time: 0 seconds)
```

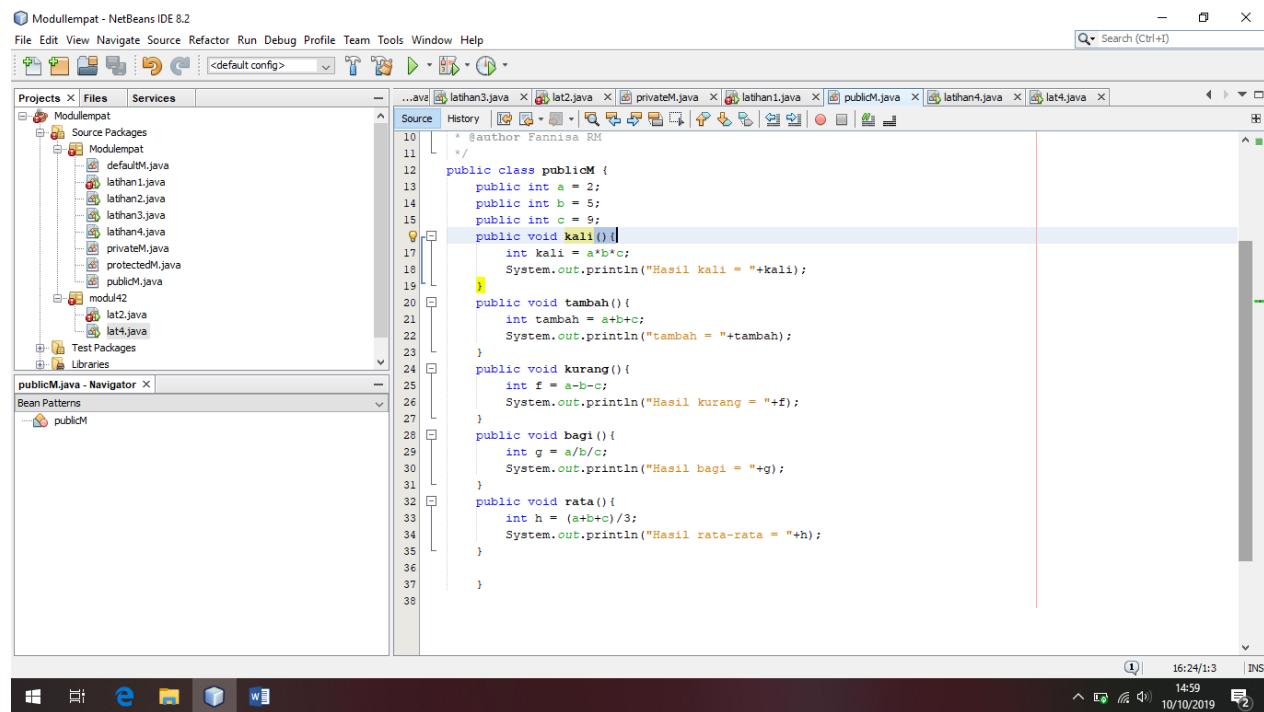
Windows Taskbar:

- Start button
- File Explorer icon
- Edge browser icon
- File icon
- Java icon
- NetBeans icon
- Task View icon

System tray:

- Signal strength icon
- Wi-Fi icon
- Battery icon
- Volume icon
- 14:34
- 10/10/2019
- INS

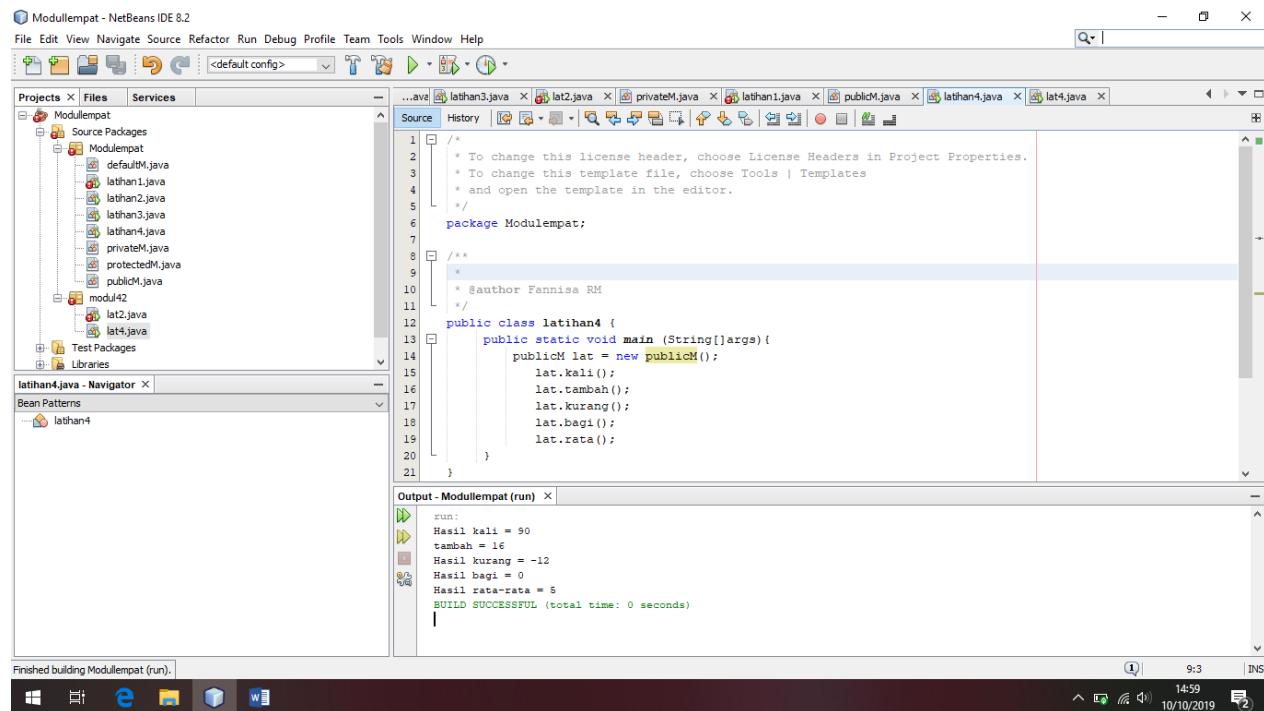
## Public Modifier



The screenshot shows the NetBeans IDE 8.2 interface with the following details:

- Title Bar:** Modulempat - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Project Explorer:** Shows the project "Modulempat" with packages "Modulempat" and "modul42".
- Source Editor:** Displays the content of `publicM.java`. The code defines a class `publicM` with methods `kali()`, `tambah()`, `kurang()`, `bagi()`, and `rata()`. It includes variable declarations `a=2`, `b=5`, and `c=9`.
- Output Bar:** Shows the output of the run command, indicating successful execution.
- System Tray:** Shows the date and time as 10/10/2019 14:59.

## Class sama



The screenshot shows the NetBeans IDE 8.2 interface with the following details:

- Title Bar:** Modulempat - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Project Explorer:** Shows the project "Modulempat" with packages "Modulempat" and "modul42".
- Source Editor:** Displays the content of `latihan4.java`. The code defines a class `latihan4` with a static main method that creates an instance of `publicM` and calls its methods `kali()`, `tambah()`, `kurang()`, `bagi()`, and `rata()`.
- Output Bar:** Shows the output of the run command, displaying the results of the calculations.
- System Tray:** Shows the date and time as 10/10/2019 14:59.

The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** Modullempat - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Project Explorer:** Shows a project named "Modullempat" with several source packages:
  - Source Packages: defaultM, lathan1, lathan2, lathan3, lathan4, privateM, protectedM, publicM.
  - modul42: lat2.java, lat4.java.
  - Test Packages: lat4.
- Code Editor:** The "lat4.java" file is open, displaying the following Java code:

```
4  * and open the template in the editor.
5  *
6  * package modul42;
7  *
8  * import Modullempat.publicM;
9  *
10 * /**
11 *  *
12 *  * @author Fannisa RM
13 */
14 public class lat4 {
15     public static void main (String[]args){
16         publicM lat = new publicM();
17         lat.kali ();
18         lat.tambah ();
19         lat.kurang ();
20         lat.bagi ();
21         lat.rata ();
22     }
23 }
```
- Output Window:** Shows the build output for "Modullempat (run)".

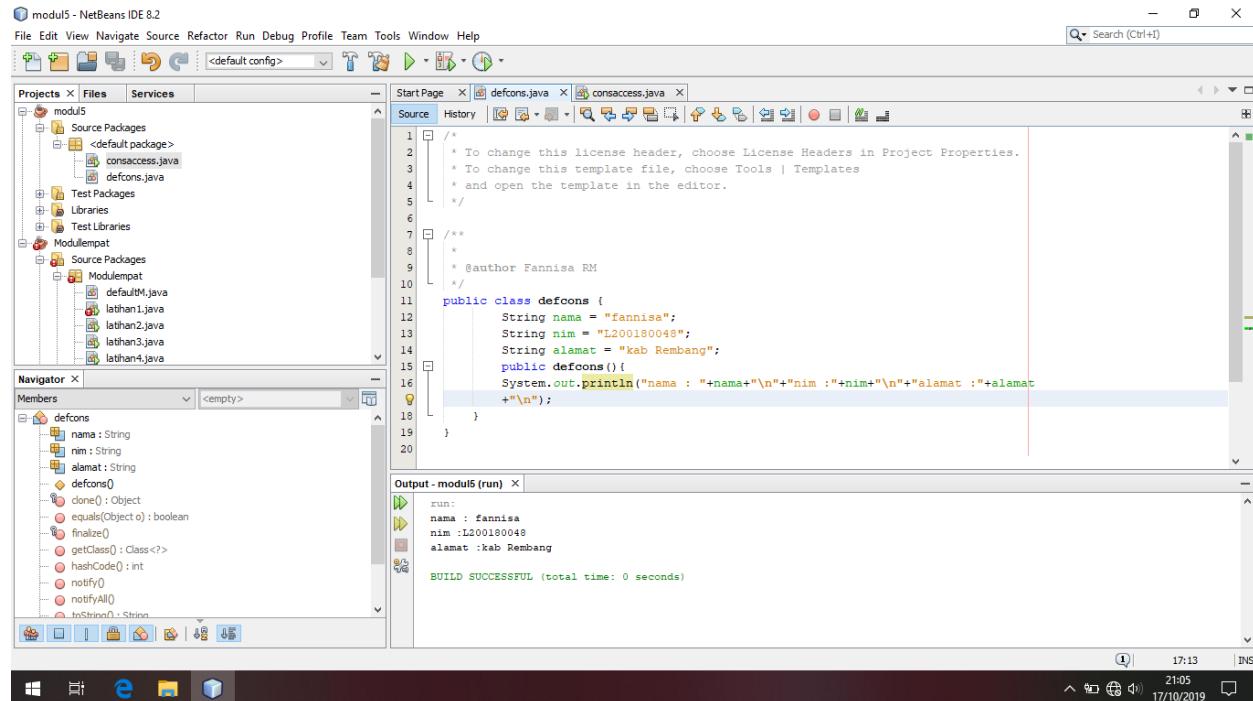
```
run:
Hasil kali = 90
tambah = 16
Hasil kurang = -12
Hasil bagi = 0
Hasil rata-rata = 5
BUILD SUCCESSFUL (total time: 0 seconds)
```
- System Tray:** Shows the date (10/10/2019), time (22:59), and battery level (INS).

Dapat diakses diclass yang packagenya sama dan package berbeda

# Modul5

## Constructor

### Default constructor



modul5 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects modul5

Source Packages <default package> consaccess.java defcons.java

Test Packages

Libraries

Test Libraries

Modulempat

Source Packages Modulempat defcons.java latihan1.java latihan2.java latihan3.java latihan4.java

Navigator Members

defcons nama : String nim : String alamat : String

defcons() clone() equals(Object o) getClass() hashCode() notify() notifyAll() toString()

Start Page | History | Search (Ctrl+F)

Source | History | Search (Ctrl+F)

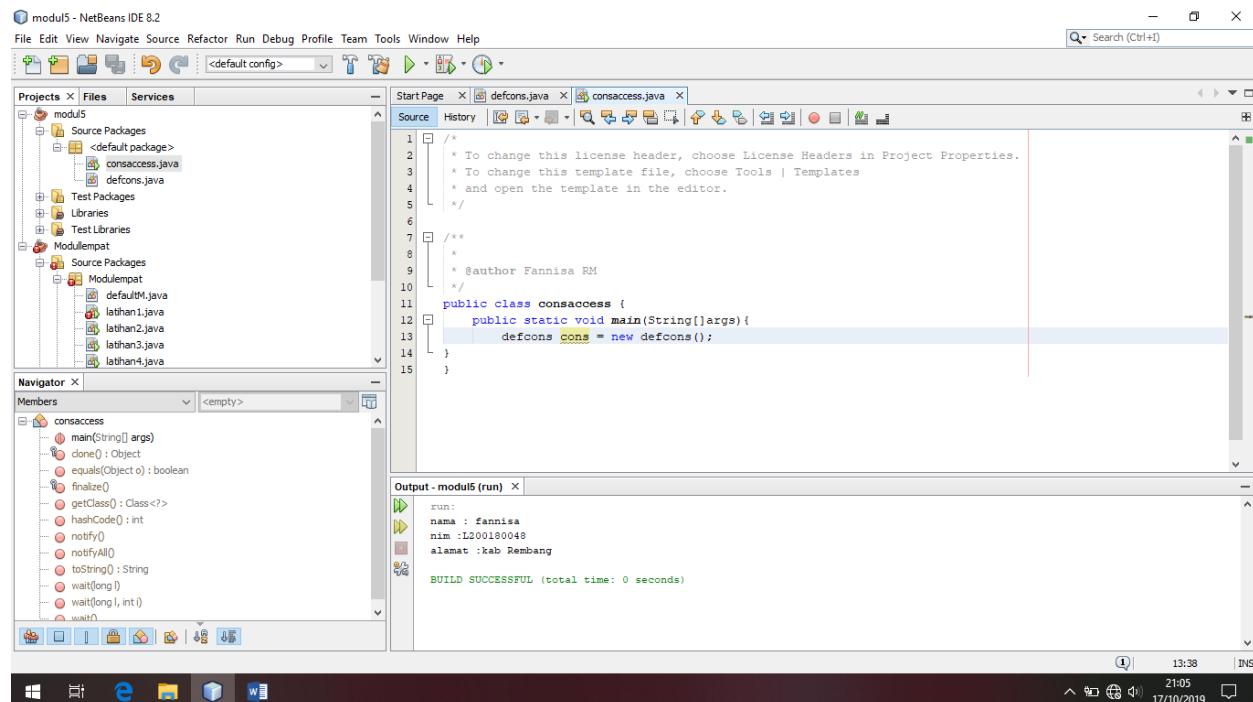
1 /\*  
2 \* To change this license header, choose License Headers in Project Properties.  
3 \* To change this template file, choose Tools | Templates  
4 \* and open the template in the editor.  
5 \*/  
6  
7 /\*\*  
8 \*  
9 \* @author Fannisa RM  
10 \*/  
11 public class defcons {  
12 String nama = "fannisa";  
13 String nim = "L200180048";  
14 String alamat = "kab Rembang";  
15 public defcons(){  
16 System.out.println("nama : "+nama+"\n"+nim+"\n"+alamat : "+alamat  
17 +"\n");  
18 }  
19 }  
20

Output - modul5 (run) x

run:  
nama : fannisa  
nim : L200180048  
alamat : kab Rembang

BUILD SUCCESSFUL (total time: 0 seconds)

17:13 17/10/2019



modul5 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects modul5

Source Packages <default package> consaccess.java defcons.java

Test Packages

Libraries

Test Libraries

Modulempat

Source Packages Modulempat defcons.java latihan1.java latihan2.java latihan3.java latihan4.java

Navigator Members

consaccess main(String[] args) clone() equals(Object o) finalize() getClass() hashCode() notify() notifyAll() toString() wait() wait(long l) wait(long l, int i) wait()

Start Page | History | Search (Ctrl+F)

Source | History | Search (Ctrl+F)

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 Fannisa RM  
10 \*/  
11 public class consaccess {  
12 public static void main(String[] args){  
13 defcons cons = new defcons();  
14 }  
15 }

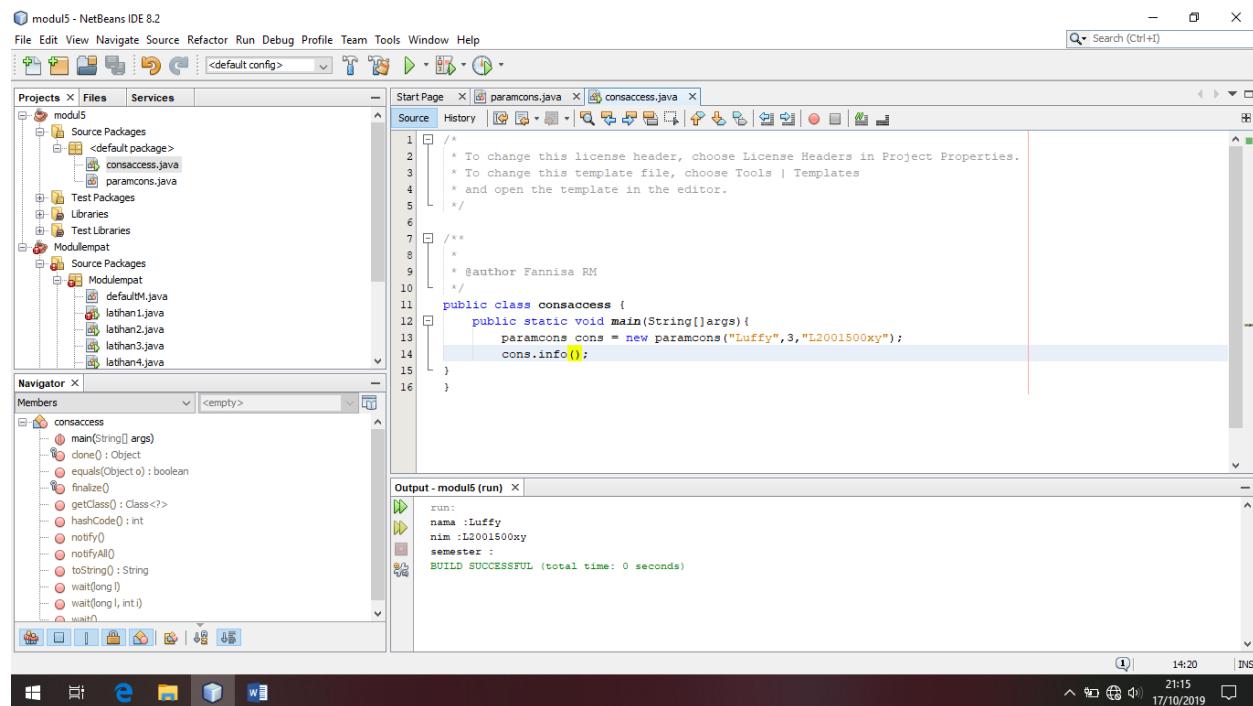
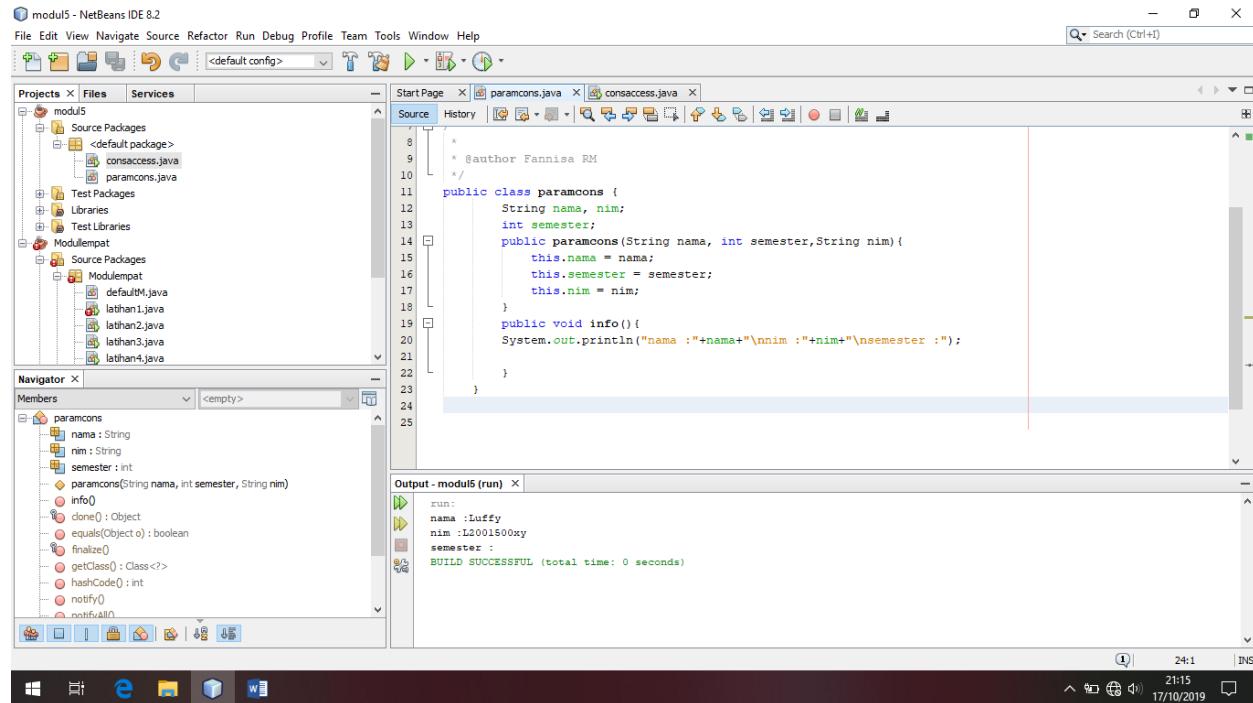
Output - modul5 (run) x

run:  
nama : fannisa  
nim : L200180048  
alamat : kab Rembang

BUILD SUCCESSFUL (total time: 0 seconds)

13:38 17/10/2019

## Parameterized constructor



## Latihan

modul5 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Tools Window Help

Projects x Files Services

Start Page x paramcons.java x consaccess.java x

Source History |

paramcons.java

```
9  * @author Fannisa RM
10 *
11  public class paramcons {
12      String namapengarang, judulbuku;
13      int tahunterbit, cetakanke;
14      double hargajual;
15      public paramcons(String namapengarang, String judulbuku,
16          int tahunterbit, int cetakanke, double hargajual){
17          this.namapengarang = namapengarang;
18          this.judulbuku = judulbuku;
19          this.tahunterbit = tahunterbit;
20          this.cetakanke = cetakanke;
21          this.hargajual = hargajual;
22      }
23      public void info(){
24          System.out.println("namapengarang :" +namapengarang+"\njudulbuku :" +judulbuku+
25              "\ntahunterbit :" +tahunterbit+"\ncetakanke :" +cetakanke+"\nhargajual :" +hargajual);
26      }
27  }
```

Output - modul5 (run) x

```
namapengarang :xxxxx
judulbuku :VVV
tahunterbit :2015
cetakanke :1
hargajual :100.0
namapengarang :xxxxx
judulbuku :VVV
tahunterbit :2014
```

21:38 17/10/2019

modul5 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Tools Window Help

Projects x Files Services

Start Page x paramcons.java x consaccess.java x

Source History |

consaccess.java

```
11  public class consaccess {
12      public static void main(String[] args){
13          paramcons cons1 = new paramcons("xxx", "yyy", 2015, 1, 100.000);
14          paramcons cons2 = new paramcons("xxx", "yyy", 2016, 2, 100.000);
15          paramcons cons3 = new paramcons("xxx", "yyy", 2017, 3, 50.000);
16          paramcons cons4 = new paramcons("xxx", "yyy", 2015, 1, 200.000);
17          paramcons cons5 = new paramcons("xxxxx", "yyy", 2015, 1, 100.000);
18          paramcons cons6 = new paramcons("xxxx", "yyyy", 2014, 1, 90.000);
19          paramcons cons7 = new paramcons("xxx", "yyy", 2018, 3, 120.000);
20          paramcons cons8 = new paramcons("xxx", "yyy", 2017, 1, 50.000);
21          paramcons cons9 = new paramcons("xxx", "yyy", 2018, 1, 150.000);
22          paramcons cons10 = new paramcons("xxx", "yyy", 2015, 2, 100.000);
23          cons1.info();
24          cons2.info();
25          cons3.info();
26          cons4.info();
27          cons5.info();
28          cons6.info();
29          cons7.info();
23          cons8.info();
23          cons9.info();
23          cons10.info();
33  }
```

Output - modul5 (run) x

```
namapengarang :xxxxx
judulbuku :VVV
tahunterbit :2015
cetakanke :1
hargajual :100.0
namapengarang :xxxxx
judulbuku :VVV
tahunterbit :2014
```

22:25 17/10/2019

modul5 - NetBeans IDE 8.2

```

public class consaccess {
    public static void main(String[] args) {
        lathan.lathan1();
        lathan.lathan2();
        lathan.lathan3();
        lathan.lathan4();
    }
}

```

```

run:
namapengarang :xxx
judulbuku :yyy
tahunterbit :2015
cetakane :1
hargajual :100.0
namapengarang :xxx
judulbuku :yyy
tahunterbit :2016
cetakane :2
hargajual :100.0
namapengarang :xxx
judulbuku :yyy
tahunterbit :2017
cetakane :3
hargajual :50.0
namapengarang :xxx
judulbuku :yyy
tahunterbit :2015
cetakane :1
hargajual :200.0
namapengarang :xxxx
judulbuku :yyy
tahunterbit :2015
cetakane :1
hargajual :100.0
namapengarang :xxxx
judulbuku :yyyy
tahunterbit :2014
cetakane :1
hargajual :90.0
namapengarang :xxx

```

## Tugas

modul5 - NetBeans IDE 8.2

```

/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
/**
 *
 * @author Fannisa RM
 */
public class tugas {
    String nama = "fannisa";
    String alamat = "kab rembang";
    String nim, jurusan;
    int semester;
    public tugas() {
        System.out.println("nama :" + nama + "\nalamat :" + alamat);
    }
    public tugas(String nim, String jurusan, int semester) {
        this.nim = nim;
        this.jurusan = jurusan;
        this.semester = semester;
    }
    public void info() {
        System.out.println("nim :" + nim + "\njurusan :" + jurusan + "\nsemester :"
+ semester);
    }
}

```

modul5 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects X Files Services

Start Page X tugas.java X tugasaccess.java X defaultM.java X <default config>

Source History |

1 /\* To change this license header, choose License Headers in Project Properties.

2 \* To change this template file, choose Tools | Templates

3 \* and open the template in the editor.

4 \*/

5

6

7 /\*\*

8 \*

9 \* @author Fannisa RM

10 \*/

11 public class tugasaccess {

12 public static void main(String[] args){

13 tugas tu = new tugas();

14 tugas tl = new tugas ("L200180048","informatika",3);

15 tl.info();

16 }

17 }

Navigator X

Members tugasaccess

- main(String[] args)
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String
- wait(long)
- wait(long, int)
- wait()

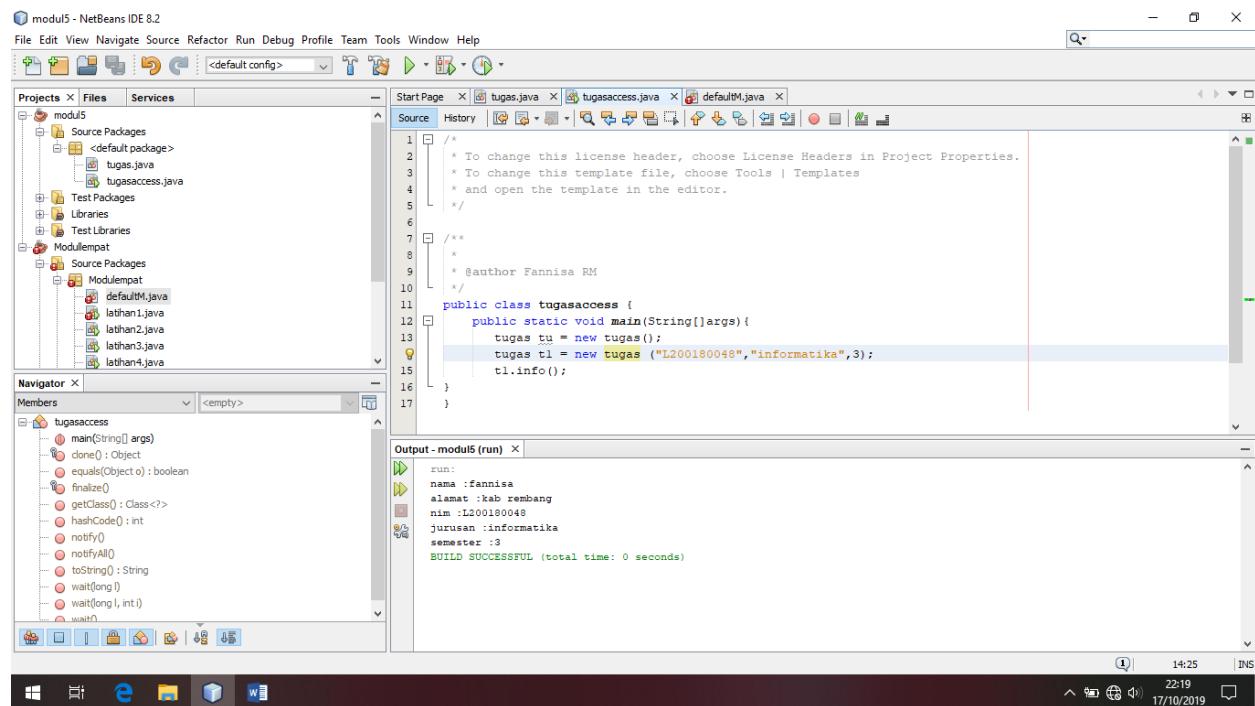
Output - modul5 (run) X

run:

nama :fannisa  
alamat :kab rembang  
nim :L200180048  
jurusan :informatika  
semester :3

BUILD SUCCESSFUL (total time: 0 seconds)

14:25 | 17/10/2019 22:19



# Modul6

## Inheritance

### latihan

JavaApplication10 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page JavaApplication10.java kendaraan.java mobil.java pesawat.java demo.java

Source History

```
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 package javaapplication10;
7
8 /**
9 *
10 * @author Fannisa RM
11 */
12 public class kendaraan {
13     int jmlkursi = 6;
14     String warna = "putih";
15     int roda = 4;
16 }
17
18 
```

Output - JavaApplication10 (run) :

```
jmlpenumpang :0
jmlkursi :6
warna :putih
Pesawat
jmlroda :4
jml penumpang :50
jmlkursi :60
warna :putih
BUILD SUCCESSFUL (total time: 0 seconds)
```

rod - Navigator

Members

kendaraan

- jmlkursi : int
- warna : String
- roda : int

clone() : Object

equals(Object o) : boolean

finalize()

getClass() : Class<?>

hashCode() : int

notify()

notifyAll()

toString() : String

wait() : void

Windows Taskbar

JavaApplication10 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page JavaApplication10.java kendaraan.java mobil.java pesawat.java demo.java

Source History

```
6 package javaapplication10;
7
8 /**
9 *
10 * @author Fannisa RM
11 */
12 public class mobil extends kendaraan{
13
14     int jmlpenumpang = 5;
15     int jmlkursi = 6;
16
17     public void mobil(){
18         System.out.println ("Mobil\n"+ "jmlroda :" + roda + "\njml penumpang :" + jmlpenumpang +"\njmlkursi :" + jmlkursi + "\nwarna :" + warna);
19     }
20
21 }
22 
```

mobil - Navigator

Members

mobil :: kendaraan

- jmlpenumpang : int
- jmlkursi : int
- mobil()

clone() : Object

equals(Object o) : boolean

finalize()

getClass() : Class<?>

hashCode() : int

notify()

notifyAll()

toString() : String

wait() : void

Windows Taskbar

JavaApplication10 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page JavaApplication10.java kendaraan.java mobil.java pesawat.java demo.java

Source History

```

3 * To change this template file, choose Tools | Templates
4 * and open the template in the editor.
5 */
6 package javaapplication10;
7
8 /**
9 *
10 * @author Fannisa RM
11 */
12 public class pesawat extends kendaraan{
13
14     int jmlpenumpang = 50;
15     int jmlkursi = 60;
16
17     public void pesawat(){
18         System.out.println ("Pesawat\n"+jmlroda :" + roda + "\n"+jml penumpang :"
19                         + jmlpenumpang +"\n"+jmlkursi :" + jmlkursi
20                         + "\nwarna :" + warna);
21     }
22 }

```

Output : JavaApplication10 (run) :

```

jmlpenumpang :50
jmlkursi :6
warna :putih
Pesawat
jmlroda :4
jml penumpang :50
jmlkursi :60
warna :putih
BUILD SUCCESSFUL (total time: 0 seconds)

```

pesawat - Navigator

Members

- pesawat** :: kendaraan
  - jmlpenumpang : int
  - jmlkursi : int
  - pesanat**
  - clone() : Object
  - equals(Object o) : boolean
  - finalize()
  - getClass() : Class<?>
  - hashCode() : int
  - notify()
  - notifyAll()
  - toString() : String
  - wait()

Output : JavaApplication10 (run) :

```

jmlpenumpang :50
jmlkursi :6
warna :putih
Pesawat
jmlroda :4
jml penumpang :50
jmlkursi :60
warna :putih
BUILD SUCCESSFUL (total time: 0 seconds)

```

JavaApplication10 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page JavaApplication10.java kendaraan.java mobil.java pesawat.java demo.java

Source History

```

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 package javaapplication10;
7
8 /**
9 *
10 * @author Fannisa RM
11 */
12 public class demo {
13     public static void main (String[]args){
14         kendaraan a = new kendaraan();
15         mobil b = new mobil();
16         pesawat c = new pesawat();
17
18         b.mobil();
19         c.pesawat();
20     }
21 }

```

Output : JavaApplication10 (run) :

```

jmlkursi :6
warna :putih
Pesawat
jmlroda :4
jml penumpang :50
jmlkursi :60
warna :putih
BUILD SUCCESSFUL (total time: 0 seconds)

```

JavaApplication10 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page JavaApplication10.java kendaraan.java mobil.java pesawat.java demo.java

Source History

```

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 package javaapplication10;
7
8 /**
9 *
10 * @author Fannisa RM
11 */
12 public class demo {
13     public static void main (String[]args){
14         kendaraan a = new kendaraan();
15         mobil b = new mobil();
16         pesawat c = new pesawat();
17
18         b.mobil();
19         c.pesawat();
20     }
21 }

```

Output : JavaApplication10 (run) :

```

jmlkursi :6
warna :putih
Pesawat
jmlroda :4
jml penumpang :50
jmlkursi :60
warna :putih
BUILD SUCCESSFUL (total time: 0 seconds)

```

main - Navigator

Members

- demo**
  - main(String[] args)
  - clone() : Object
  - equals(Object o) : boolean
  - finalize()
  - getClass() : Class<?>
  - hashCode() : int
  - notify()
  - notifyAll()
  - toString() : String
  - wait(long l)
  - wait(long l, int i)
  - wait()

Output : JavaApplication10 (run) :

```

jmlkursi :6
warna :putih
Pesawat
jmlroda :4
jml penumpang :50
jmlkursi :60
warna :putih
BUILD SUCCESSFUL (total time: 0 seconds)

```

JavaApplication10 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

Source Packages <default package>

- Login.java
- login.java

aplikasi

- Aplikasi.java

Test Packages

Libraries

Test Libraries

JavaApplication10

- Source Packages
- javaapplication10

  - JavaApplication10.java
  - demo.java
  - kendaran.java
  - mobil.java

main - Navigator

Members

demo

- main(String[] args)
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String
- wait(long)
- wait(long, int)
- wait()

Output - JavaApplication10 (run) ×

```
run:
Mobil
jmlroda : 4
jml penumpang : 5
jmlkursi : 6
warna :putih
Pesawat
jmlroda : 4
jml penumpang : 50
jmlkursi : 60
warna :putih
BUILD SUCCESSFUL (total time: 0 seconds)
```

19:19 11/11/2019 21:21 11/11/2019

## Tugas

JavaApplication11 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

...ave bangundatar.java persegipanjang.java persegi.java segitiga.java segitigasamakaki.java segitigasamasisi.java d...

Source Packages <default config>

Mobil.java Pesawat.java

Test Packages

Libraries

Test Libraries

JavaApplication11

- Source Packages
- javaapplication11

  - JavaApplication11.java
  - bangundatar.java
  - demo.java
  - persegi.java
  - persegipanjang.java
  - segitiga.java
  - segitigasamakaki.java
  - segitigasamasisi.java
  - segitigasamaunesi.java

hitungkelling - Navigator

Members

bangundatar

- luas : double
- keliling : double
- hitungluas()
- hitungkelling()
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String

Source History

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package javaapplication11;

/*
 * @author Fannisa RM
 */

public class bangundatar {
    double luas;
    double keliling;

    void hitungluas(){
        System.out.println(" Luas : "+luas);
    }
    void hitungkelling(){
        System.out.println("keliling : "+keliling+"\n");
    }
}
```

20:54 11/11/2019 22:41 11/11/2019

JavaApplication11 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

...ave bangundatar.java persegipanjang.java persegi.java segitiga.java segitigasamakai.java segitigasamasisi.java d...

Source History

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 package javaapplication11;  
7  
8 /\*\*  
9 \*  
10 \* @author Fannisa RM  
11 \*/  
12 public class persegi extends bangundatar{  
13 double sisi = 4;  
14  
15 void persegi(){  
16 luas = sisi\*sisi;  
17 System.out.print("persegi");  
18 keliling = 4\*sisi;  
19 System.out.println();  
20 }  
21 }

Members

persegi :: bangundatar  
    sisi : double  
    persegi()  
    done() : Object  
    equals(Object o) : boolean  
    finalize()  
    getClass() : Class<?>  
    hashCode() : int  
    hitungkeliling()  
    hitungluas()  
    notify()  
    notifyAll()  
    toString() : String

Navigator

19:29 11/11/2019

JavaApplication11 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

...ave bangundatar.java persegipanjang.java persegi.java segitiga.java segitigasamakai.java segitigasamasisi.java d...

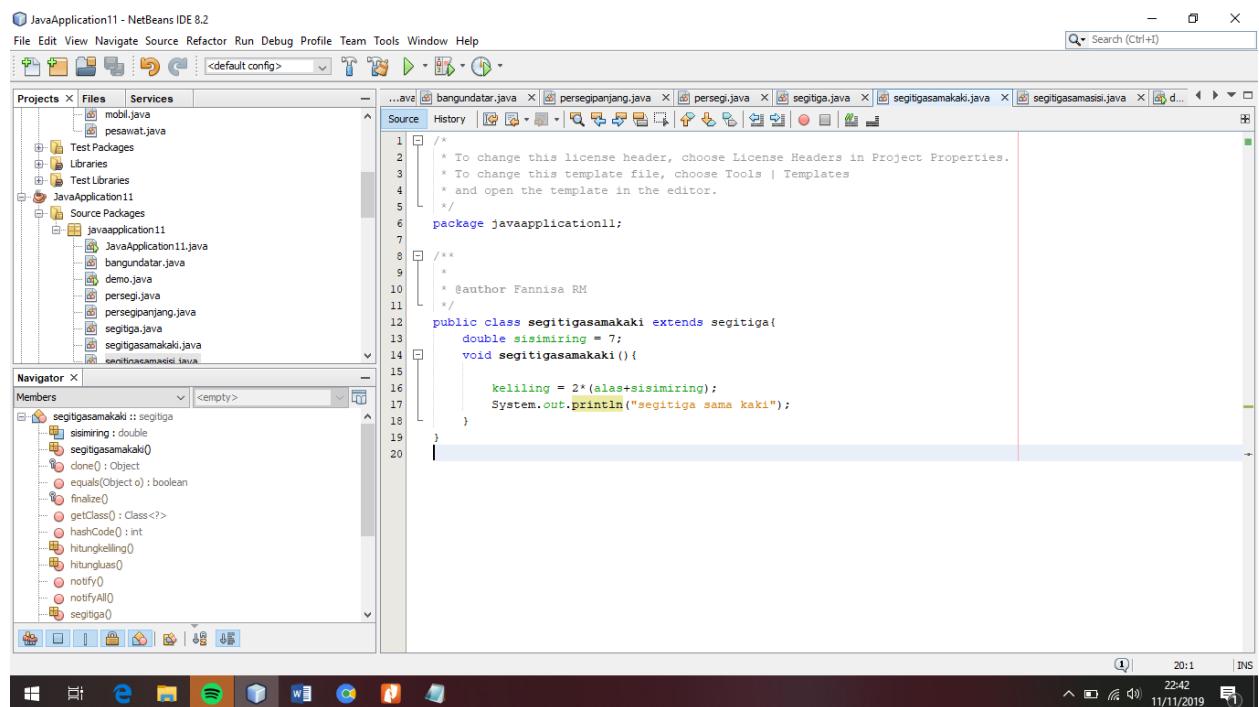
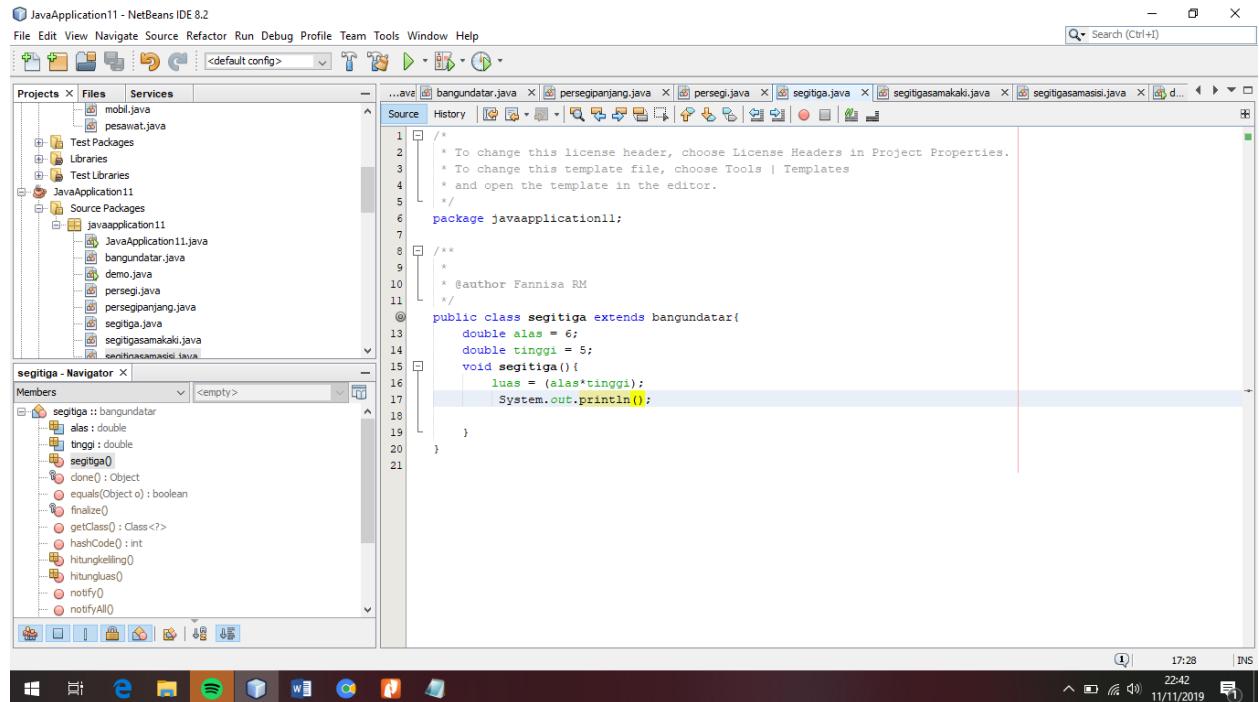
Source History

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 package javaapplication11;  
7  
8 /\*\*  
9 \*  
10 \* @author Fannisa RM  
11 \*/  
12 public class persegiapanjang extends bangundatar{  
13 int panjang = 6;  
14 double lebar = 8;  
15  
16 void persegiapanjang(){  
17 luas = panjang\*lebar;  
18 System.out.print("persegi panjang");  
19 keliling = 2\*(panjang+lebar);  
20 System.out.println();  
21 }  
22 }

Members

persegiapanjang :: bangundatar  
    panjang : int  
    lebar : double  
    persegiapanjang()  
    clone() : Object  
    equals(Object o) : boolean  
    finalize()  
    getClass() : Class<?>  
    hashCode() : int  
    hitungkeliling()  
    hitungluas()  
    notify()  
    notifyAll()

19:36 11/11/2019



JavaApplication11 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

...ave bangundatar.java persegi.java persegipanjang.java segitiga.java segitigasamakaki.java segitigasamasasi.java d...

Projects Files Services

mobil.java pesawat.java

Test Packages Libraries Test Libraries Java Application11 Source Packages javaapplication11 JavaApplication11.java bangundatar.java demo.java persegi.java persegipanjang.java segitiga.java segitigasamakaki.java constnacanmased.java

segitigasamasasi - Navigator

Members

segitigasamasasi :: segitiga  
    sisi : double  
    segitigasamasasi()  
    clone() : Object  
    equals(Object o) : boolean  
    finalize()  
    getClass() : Class<?>  
    hashCode() : int  
    hitungkeliling()  
    hitungluas()  
    notify()  
    notifyAll()  
    segitiga()

Source History

```
1  * To change this license header, choose License Headers in Project Properties.  
2  * To change this template file, choose Tools | Templates  
3  * and open the template in the editor.  
4  */  
5  package javaapplication11;  
6    
7  /**  
8   *  
9   * @author Fannisa RM  
10  */  
11 public class segitigasamasasi extends segitiga{  
12     double sisi = 5;  
13     void segitigasamasasi(){  
14         keliling = 3*sisi;  
15         System.out.println("segitiga sama sisi");  
16     }  
17 }  
18  
19  
20
```

16:47 22:43 11/11/2019

JavaApplication11 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

...ave persegi.java persegipanjang.java segitiga.java segitigasamakaki.java segitigasamasasi.java demo.java

Projects Files Services

mobil.java pesawat.java

Test Packages Libraries Test Libraries Java Application11 Source Packages javaapplication11 JavaApplication11.java bangundatar.java demo.java persegi.java persegipanjang.java segitiga.java segitigasamakaki.java constnacanmased.java

main - Navigator

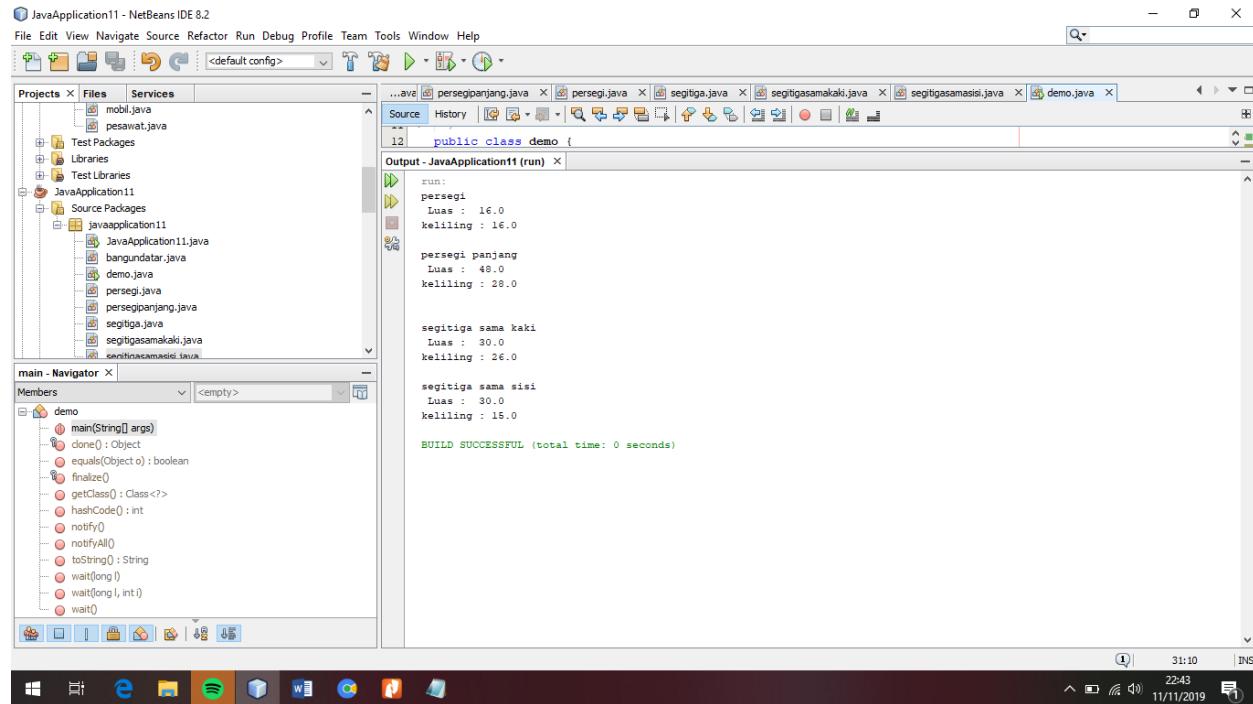
Members

demo ::  
    main(String[] args)  
    clone() : Object  
    equals(Object o) : boolean  
    finalize()  
    getClass() : Class<?>  
    hashCode() : int  
    notify()  
    notifyAll()  
    toString() : String  
    wait() : void  
    wait(long l, int i) : void  
    wait(l)

Source History

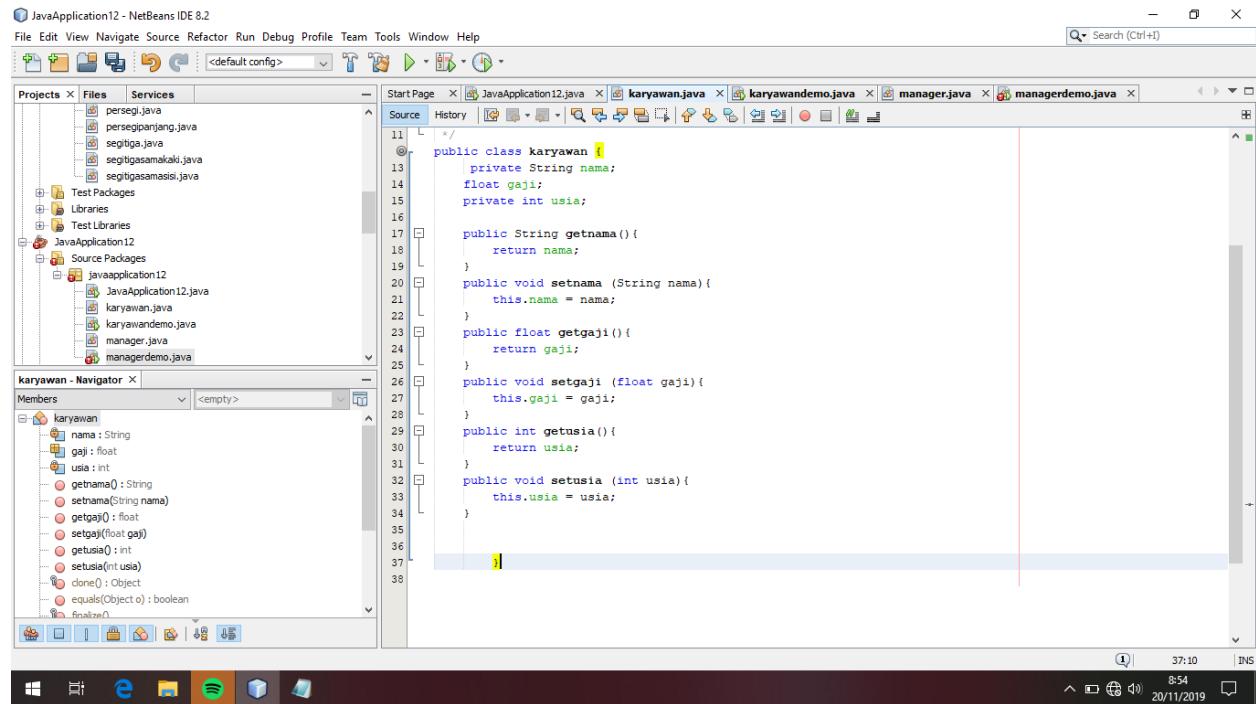
```
12 public class demo {  
13     public static void main (String[]args){  
14         persegi a = new persegi();  
15         persegipanjang b = new persegipanjang();  
16         segitiga c = new segitiga();  
17         segitigasamakaki d = new segitigasamakaki();  
18         segitigasamasasi e = new segitigasamasasi();  
19         a.persegi();  
20         a.hitungluas();  
21         a.hitungkeliling();  
22         b.persegipanjang();  
23         b.hitungluas();  
24         b.hitungkeliling();  
25         c.segitiga();  
26         c.hitungluas();  
27         c.hitungkeliling();  
28         d.hitungluas();  
29         d.hitungkeliling();  
30         e.segitigasamasasi();  
31         e.hitungluas();  
32         e.hitungkeliling();  
33     }  
34 }
```

31:10 22:43 11/11/2019



# Modul7

## Encapsulation



JavaApplication12 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page X JavaApplication12.java X karyawan.java X karyawandemo.java X manager.java X managerdemo.java X

Source History

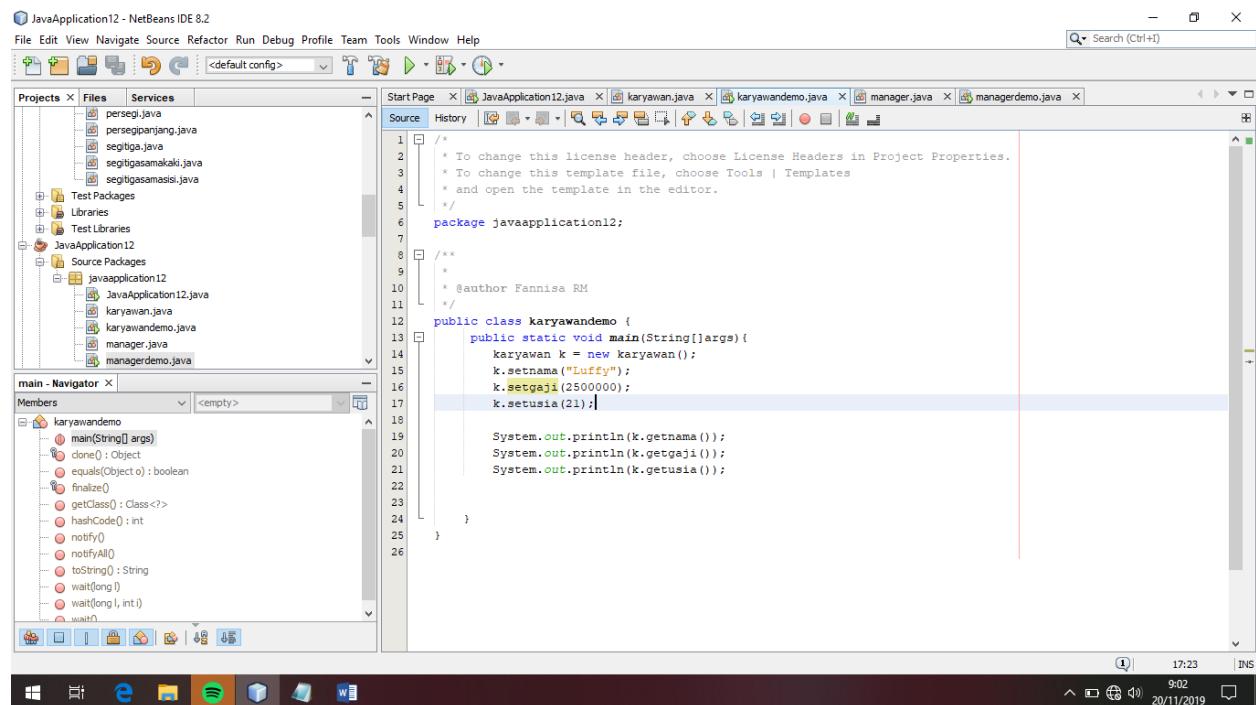
```
11  /*
12  * To change this license header, choose License Headers in Project Properties.
13  * To change this template file, choose Tools | Templates
14  * and open the template in the editor.
15  */
16 public class karyawan {
17     private String nama;
18     float gaji;
19     private int usia;
20
21     public String getnama() {
22         return nama;
23     }
24     public void setnama (String nama) {
25         this.nama = nama;
26     }
27     public float getgaji () {
28         return gaji;
29     }
30     public void setgaji (float gaji) {
31         this.gaji = gaji;
32     }
33     public int getusia () {
34         return usia;
35     }
36     public void setusia (int usia) {
37         this.usia = usia;
38     }
39 }
```

karyawan - Navigator

Members

- nama : String
- gaji : float
- usia : int
- getnama() : String
- setnama(String name)
- getgaji() : float
- setgaji(float gaji)
- getusia() : int
- setusia(int usia)
- clone() : Object
- equals(Object o) : boolean
- finalize()

37:10 8:54 20/11/2019



JavaApplication12 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page X JavaApplication12.java X karyawan.java X karyawandemo.java X manager.java X managerdemo.java X

Source History

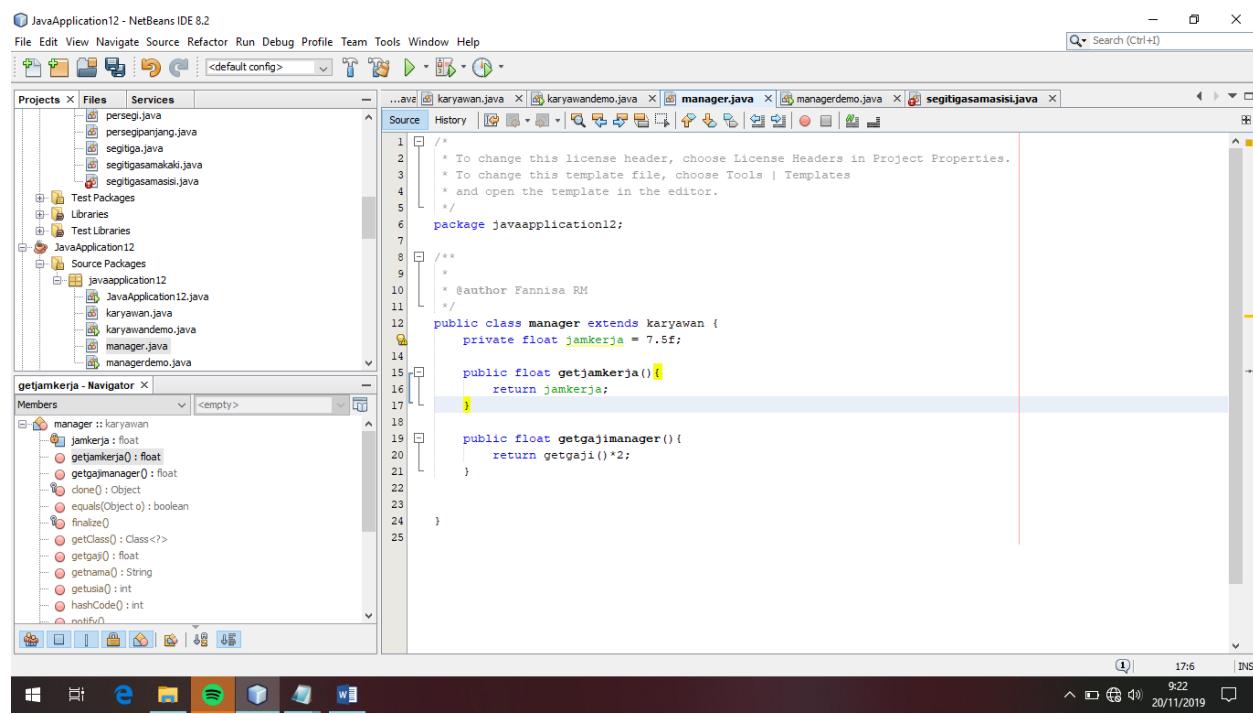
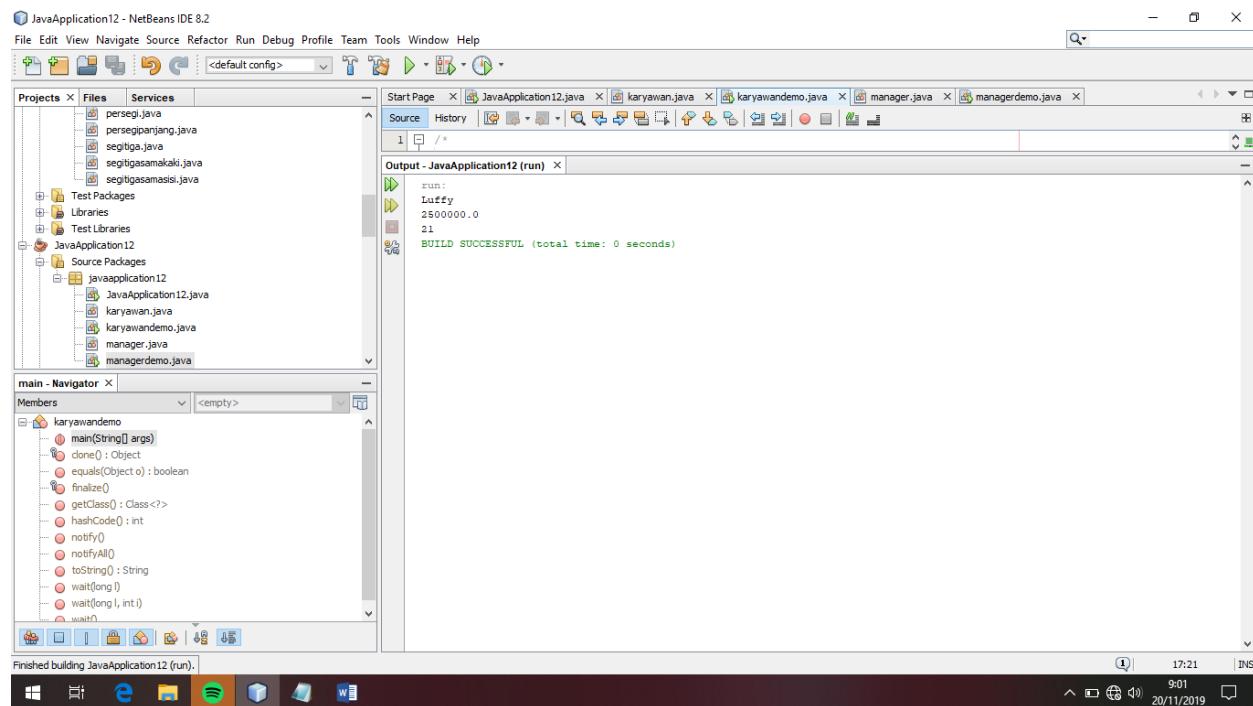
```
1  /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6 package javaapplication12;
7
8 /**
9  *
10 * @author Fannisa RM
11 */
12 public class karyawandemo {
13     public static void main(String[]args) {
14         karyawan k = new karyawan();
15         k.setnama("luffy");
16         k.setgaji(2500000);
17         k.setusia(21);
18
19         System.out.println(k.getnama());
20         System.out.println(k.getgaji());
21         System.out.println(k.getusia());
22     }
23 }
24
25 }
```

main - Navigator

Members

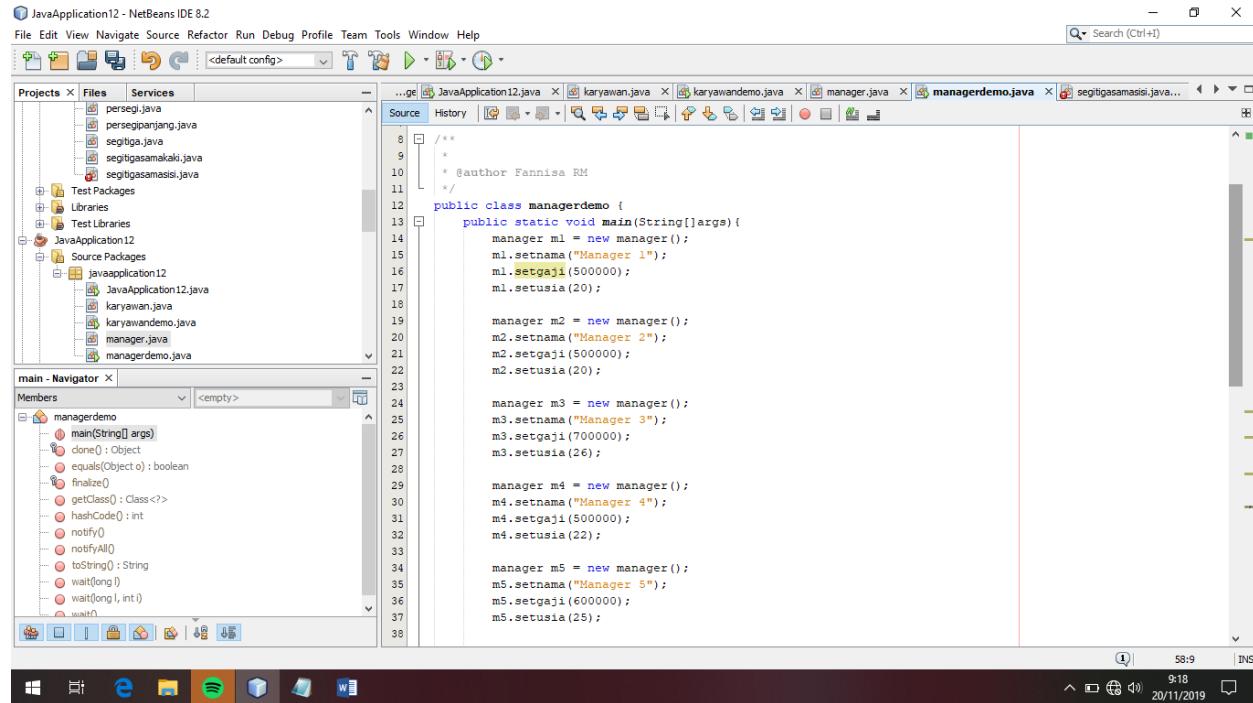
- main(String[] args)
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String
- wait(long l, int i)
- wait()

17:23 9:02 20/11/2019



## Latihan

Buatlah class dengan fungsi main() dan 5 objek berbeda yang dihasilkan dari class manager. Kemudian melalui objek tersebut tampilkan nilai private variable dari class manager dan class karyawan



JavaApplication12 - NetBeans IDE 8.2

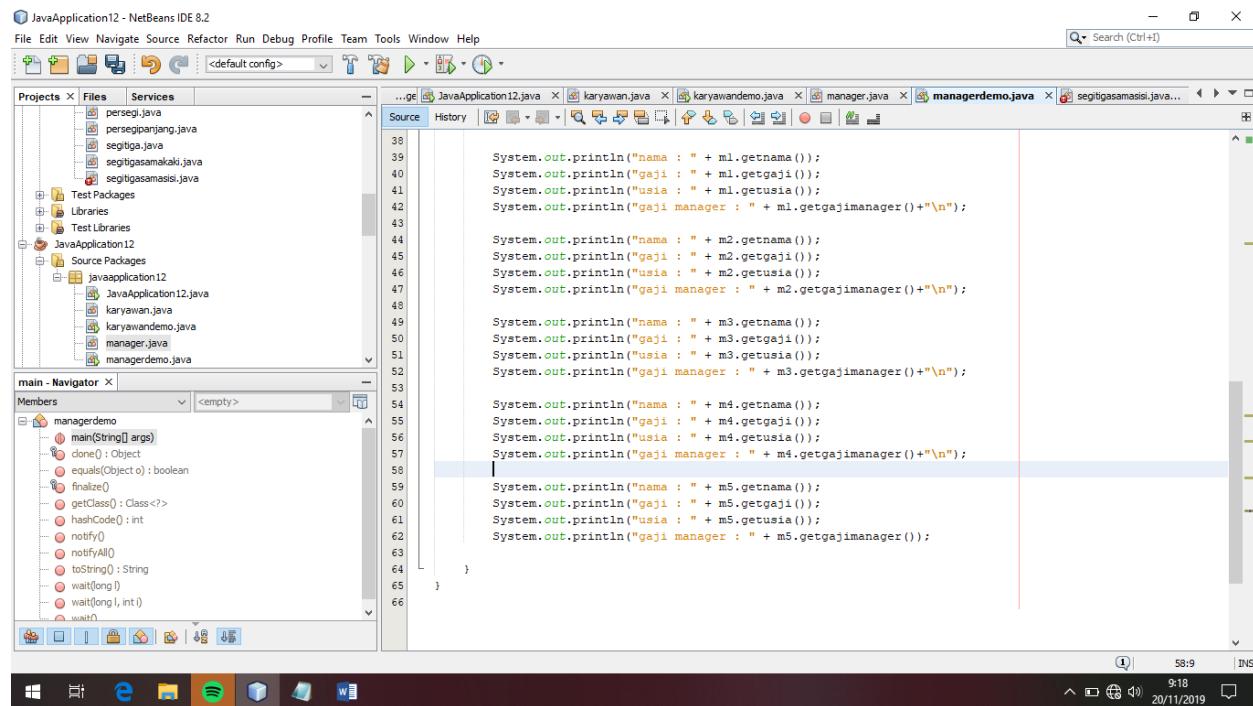
```
public class managerdemo {
    public static void main(String[] args) {
        manager m1 = new manager();
        m1.setnama("Manager 1");
        m1.setgaji(50000);
        m1.setusia(20);

        manager m2 = new manager();
        m2.setnama("Manager 2");
        m2.setgaji(50000);
        m2.setusia(20);

        manager m3 = new manager();
        m3.setnama("Manager 3");
        m3.setgaji(70000);
        m3.setusia(26);

        manager m4 = new manager();
        m4.setnama("Manager 4");
        m4.setgaji(50000);
        m4.setusia(22);

        manager m5 = new manager();
        m5.setnama("Manager 5");
        m5.setgaji(60000);
        m5.setusia(25);
    }
}
```



```
System.out.println("nama : " + m1.getnama());
System.out.println("gaji : " + m1.getgaji());
System.out.println("usia : " + m1.getusia());
System.out.println("gaji manager : " + m1.getgajimanager() + "\n");

System.out.println("nama : " + m2.getnama());
System.out.println("gaji : " + m2.getgaji());
System.out.println("usia : " + m2.getusia());
System.out.println("gaji manager : " + m2.getgajimanager() + "\n");

System.out.println("nama : " + m3.getnama());
System.out.println("gaji : " + m3.getgaji());
System.out.println("usia : " + m3.getusia());
System.out.println("gaji manager : " + m3.getgajimanager() + "\n");

System.out.println("nama : " + m4.getnama());
System.out.println("gaji : " + m4.getgaji());
System.out.println("usia : " + m4.getusia());
System.out.println("gaji manager : " + m4.getgajimanager() + "\n");

System.out.println("nama : " + m5.getnama());
System.out.println("gaji : " + m5.getgaji());
System.out.println("usia : " + m5.getusia());
System.out.println("gaji manager : " + m5.getgajimanager());
```

JavaApplication12 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects X Files Services

Output - JavaApplication12 (run) X

```

run:
nama : Manager 1
gaji : 500000.0
usia : 20
gaji manager : 1000000.0

nama : Manager 2
gaji : 500000.0
usia : 20
gaji manager : 1000000.0

nama : Manager 3
gaji : 700000.0
usia : 26
gaji manager : 1400000.0

nama : Manager 4
gaji : 500000.0
usia : 22
gaji manager : 1000000.0

nama : Manager 5
gaji : 600000.0
usia : 25
gaji manager : 1200000.0

BUILD SUCCESSFUL (total time: 0 seconds)

```

main - Navigator X

Members

managerdemo

- main(String[] args)
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String
- wait(long)
- wait(long, int)
- wait0()

Finished building JavaApplication12 (run).

Windows Taskbar: File Explorer, Edge, Spotify, FileZilla, File Manager, Task View, Start

System Tray: Volume, Network, Battery, Date/Time (9:18, 20/11/2019)

Tambahkan setter pada class manager untuk memodifikasi nilai baru jamkerja menjadi 8.5

JavaApplication12 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects X Files Services

Source History Search (Ctrl+I)

public class managerdemo {

```

10   * Gauthor Fahrihsa RM
11   */
12   public static void main(String[] args) {
13     manager m1 = new manager();
14     m1.setnama("Manager 1");
15     m1.setgaji(50000);
16     m1.setusia(20);
17     m1.setjamkerja (8.5f);
18     m1.setgaji(500000);

19     manager m2 = new manager();
20     m2.setnama("Manager 2");
21     m2.setgaji(50000);
22     m2.setusia(21);
23     m2.setjamkerja (8.5f);
24     m2.setgaji(500000);

25     manager m3 = new manager();
26     m3.setnama("Manager 3");
27     m3.setgaji(70000);
28     m3.setusia(26);
29     m3.setjamkerja (8.5f);
30     m3.setgaji(700000);

31     manager m4 = new manager();
32     m4.setnama("Manager 4");
33     m4.setgaji(500000);
34     m4.setusia(22);
35     m4.setjamkerja (8.5f);
36     m4.setgaji(500000);

```

main - Navigator X

Members

managerdemo

- main(String[] args)
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String
- wait(long)
- wait(long, int)
- wait0()

Windows Taskbar: File Explorer, Edge, Spotify, FileZilla, File Manager, Task View, Start

System Tray: Volume, Network, Battery, Date/Time (9:32, 20/11/2019)

JavaApplication12 - NetBeans IDE 8.2

```

42     manager m5 = new manager();
43     m5.setnama("Manager 5");
44     m5.setgaji(60000);
45     m5.setusia(25);
46     m5.setjamkerja(8.5f);
47     m5.setgaji(60000);

48     System.out.println("nama : " + m1.getnama());
49     System.out.println("gaji : " + m1.getgaji());
50     System.out.println("usia : " + m1.getusia());
51     System.out.println("jam kerja : " + m1.getjamkerja());
52     System.out.println("gaji manager : " + m1.getgajimanager() + "\n");

53     System.out.println("nama : " + m2.getnama());
54     System.out.println("gaji : " + m2.getgaji());
55     System.out.println("usia : " + m2.getusia());
56     System.out.println("jam kerja : " + m2.getjamkerja());
57     System.out.println("gaji manager : " + m2.getgajimanager() + "\n");

58     System.out.println("nama : " + m3.getnama());
59     System.out.println("gaji : " + m3.getgaji());
60     System.out.println("usia : " + m3.getusia());
61     System.out.println("jam kerja : " + m3.getjamkerja());
62     System.out.println("gaji manager : " + m3.getgajimanager() + "\n");

63     System.out.println("nama : " + m4.getnama());
64     System.out.println("gaji : " + m4.getgaji());
65     System.out.println("usia : " + m4.getusia());
66     System.out.println("jam kerja : " + m4.getjamkerja());
67     System.out.println("gaji manager : " + m4.getgajimanager() + "\n");

68     System.out.println("nama : " + m5.getnama());
69     System.out.println("gaji : " + m5.getgaji());
70     System.out.println("usia : " + m5.getusia());
71     System.out.println("jam kerja : " + m5.getjamkerja());
72     System.out.println("gaji manager : " + m5.getgajimanager() + "\n");

```

JavaApplication12 - NetBeans IDE 8.2

```

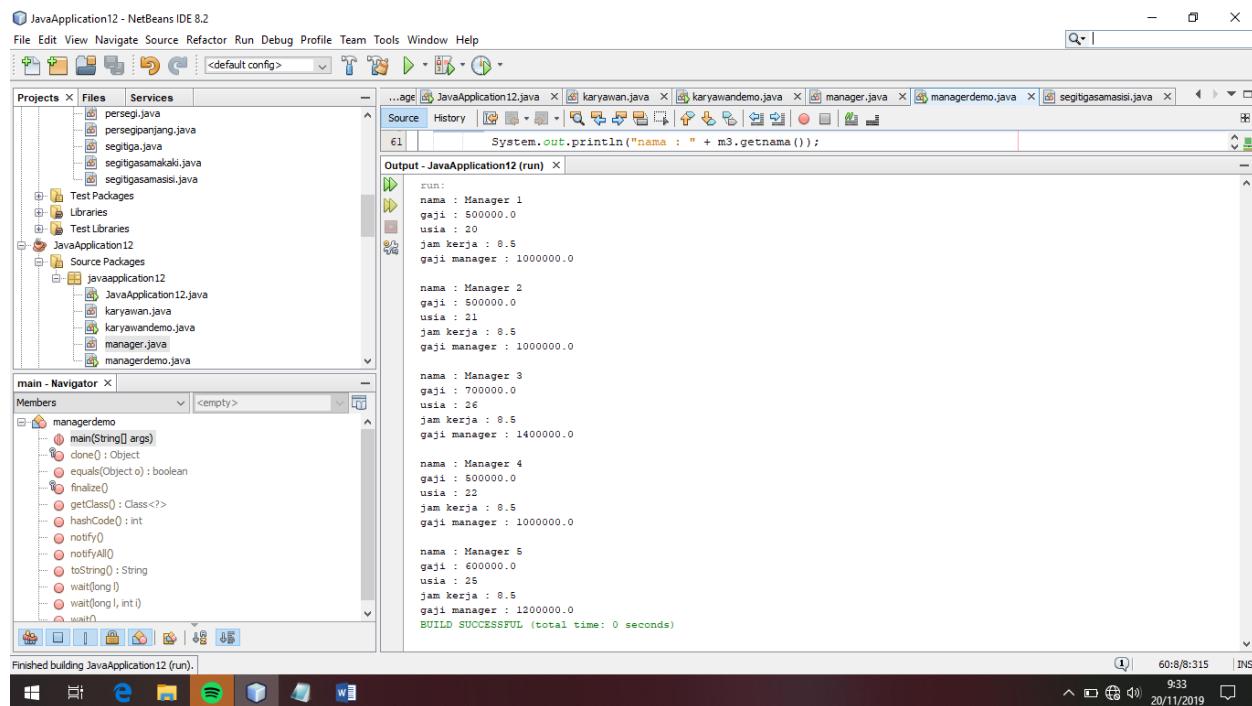
61     System.out.println("nama : " + m3.getnama());
62     System.out.println("gaji : " + m3.getgaji());
63     System.out.println("usia : " + m3.getusia());
64     System.out.println("jam kerja : " + m3.getjamkerja());
65     System.out.println("gaji manager : " + m3.getgajimanager() + "\n");

66     System.out.println("nama : " + m4.getnama());
67     System.out.println("gaji : " + m4.getgaji());
68     System.out.println("usia : " + m4.getusia());
69     System.out.println("jam kerja : " + m4.getjamkerja());
70     System.out.println("gaji manager : " + m4.getgajimanager() + "\n");

71     System.out.println("nama : " + m5.getnama());
72     System.out.println("gaji : " + m5.getgaji());
73     System.out.println("usia : " + m5.getusia());
74     System.out.println("jam kerja : " + m5.getjamkerja());
75     System.out.println("gaji manager : " + m5.getgajimanager());
76 }

77 }
78 }
79 }
80 }
81 }

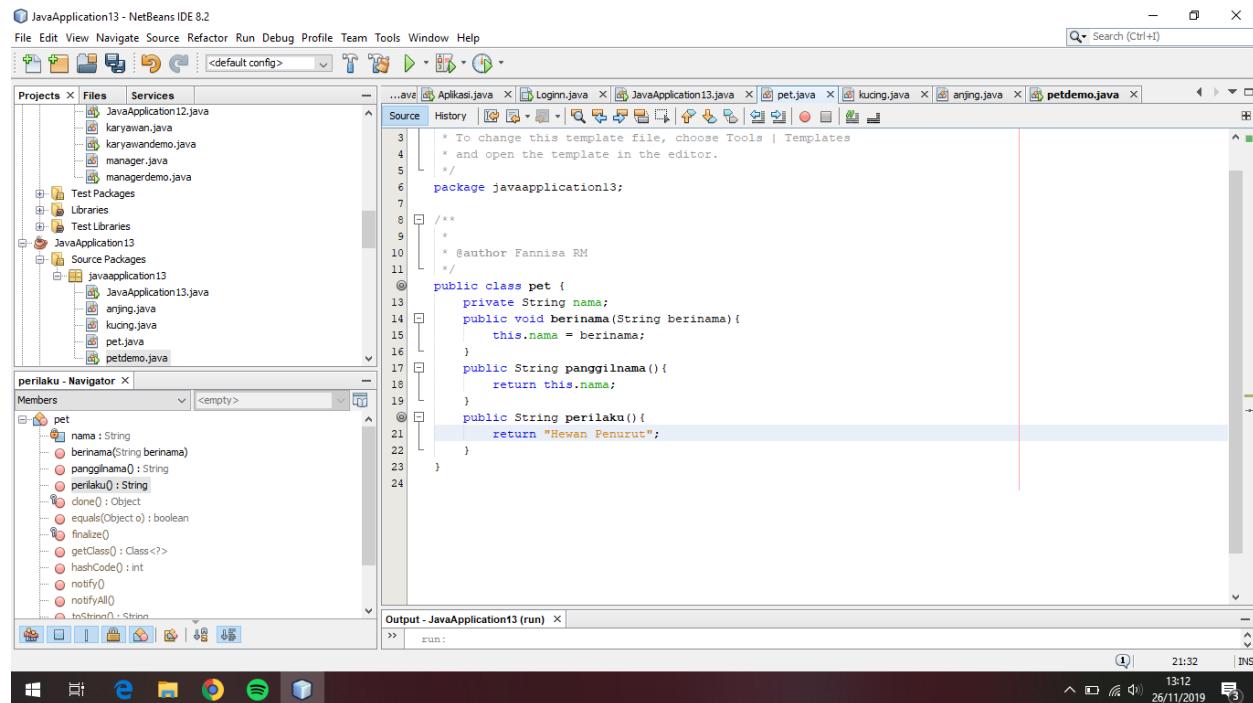
```



# Modul8

## polymorphism

### Latihan



JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

...ave Apikasi.java Login.java JavaApplication13.java pet.java kucing.java anjing.java petdemo.java

Source History

```
3 * To change this template file, choose Tools | Templates
4 * and open the template in the editor.
5 */
6 package javaapplication13;
7
8 /**
9 *
10 * @author Fannisa RM
11 */
12 public class pet {
13     private String nama;
14     public void berinama(String berinama) {
15         this.nama = berinama;
16     }
17     public String panggilnama() {
18         return this.nama;
19     }
20     public String perilaku() {
21         return "Hewan Penurut";
22     }
23 }
```

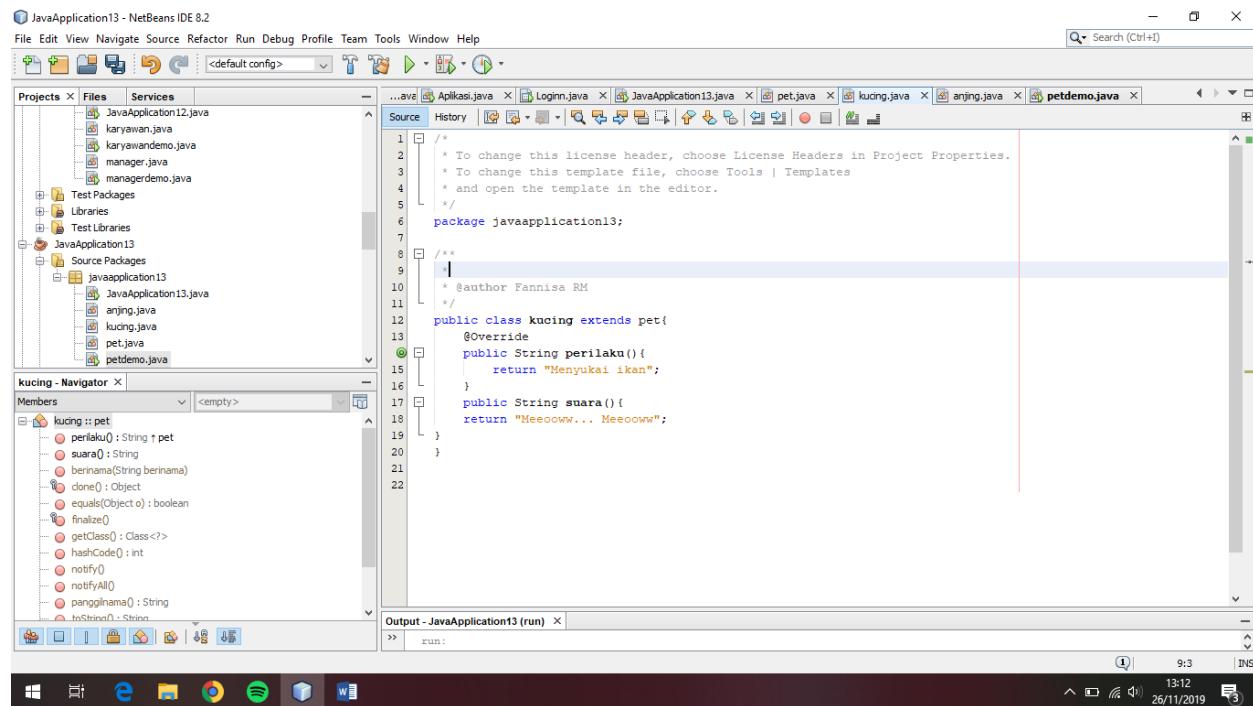
perilaku - Navigator

Members <empty>

- pet
  - nama : String
  - berinama(String berinama)
  - panggilnama() : String
  - perilaku() : String
  - clone() : Object
  - equals(Object o) : boolean
  - finalize()
  - getClass() : Class<?>
  - hashCode() : int
  - notify()
  - notifyAll()
  - toString() : String

Output - JavaApplication13 (run) >> run:

21:32 13:12 26/11/2019



JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

...ave Apikasi.java Login.java JavaApplication13.java pet.java kucing.java anjing.java petdemo.java

Source History

```
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 package javaapplication13;
7
8 /**
9 *
10 * @author Fannisa RM
11 */
12 public class kucing extends pet{
13     @Override
14     public String perilaku() {
15         return "Menyukai ikan";
16     }
17     public String suara() {
18         return "Meeooww... Meeooww";
19     }
20 }
21
22
```

kucing - Navigator

Members <empty>

- kucing :: pet
  - perilaku() : String
  - suara() : String
  - berinama(String berinama)
  - clone() : Object
  - equals(Object o) : boolean
  - finalize()
  - getClass() : Class<?>
  - hashCode() : int
  - notify()
  - notifyAll()
  - panggilnama() : String
  - toString() : String

Output - JavaApplication13 (run) >> run:

9:3 13:12 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Source History

Projects X Files Services

...ave Apikasi.java X Login.java X JavaApplication13.java X pet.java X kucing.java X anjing.java X petdemo.java X

Source History

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 package javaapplication13;  
7  
8 /\*\*  
9 \*  
10 \* @author Fannisa RM  
11 \*/  
12 public class anjing extends pet{  
13 public String perilaku(){  
14 return "Menyukai Daging dan Tulang";  
15 }  
16 public String suara(){  
17 return "Guk..Guk..Guk..";  
18 }  
19 }  
20

Navigator X

Members

anjing :: pet

- perilaku(): String
- suar(): String
- berinama(String berinama)
- clone(): Object
- equals(Object o): boolean
- finalize()
- getClass(): Class<?>
- hashCode(): int
- notify()
- notifyAll()
- panggilnama(): String
- toString(): String

Output - JavaApplication13 (run) X

>> run:

17:28 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Source History

Projects X Files Services

...ave Apikasi.java X Login.java X JavaApplication13.java X pet.java X kucing.java X anjing.java X petdemo.java X

Source History

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 package javaapplication13;  
7  
8 /\*\*  
9 \*  
10 \* @author Fannisa RM  
11 \*/  
12 public class petdemo {  
13 public static void main(String[] args){  
14 kucing k = new kucing();  
15 anjing a = new anjing();  
16 k.berinama("TOM");  
17 a.berinama("BULL");  
18 System.out.println(k.panggilnama()+"\n"+k.perilaku()+"\n"+k.suara()+"\n"+  
19 "+a.panggilnama()+"\n"+a.perilaku()+"\n"+a.suara()+"\n");  
20 }  
21 }  
22 }  
23 }  
24 }

Navigator X

Members

petdemo

- main(String[] args)
- clone(): Object
- equals(Object o): boolean
- finalize()
- getClass(): Class<?>
- hashCode(): int
- notify()
- notifyAll()
- toString(): String
- wait(): long
- wait(long l, int i)
- wait()

Output - JavaApplication13 (run) X

>> run:

23:1 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

Output - JavaApplication13 (run) X

```

run:
TOH
Menyukai ikan
Meowwww... Meowww
BULL
Menyukai Daging dan Tulang
Guk..Guk..Guk..
BUILD SUCCESSFUL (total time: 0 seconds)
  
```

Navigator X

Members

petdemo

- main(String[] args)
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String
- wait(long l)
- wait(long l, int i)
- wait()

Windows Taskbar: 13:15 26/11/2019

## Tugas

### 1.

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Tools Window Help

Search (Ctrl+F)

Projects X Files Services

Output - JavaApplication13 (run) X

```

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 package javaapplication13;
7
8 /**
9  * @author Fannisa RM
10 */
11 public class burung {
12     private String jenis;
13     public void namajenis(String namajenis){
14         this.jenis = namajenis;
15     }
16     public String beritahujenisnya(){
17         return this.jenis;
18     }
19     public String jalan(){
20         return "terbang dan berjalan";
21     }
22 }
23
24
  
```

namajenis - Navigator X

Members

burung

- jenis : String
- namajenis(String namajenis)
- beritahujenisnya() : String
- jalan() : String
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String

Windows Taskbar: 15:31 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

Source History

```

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 package javaapplication13;
7
8 /**
9  *
10 * @author Fannisa RM
11 */
12 public class elang extends burung{
13     @Override
14     public String jalan(){
15         return "burung elang bisa jalan dan terbang";
16     }
17 }

```

jalan - Navigator X

Members

- elang :: burung
  - jalan(): String + burung
  - beritahujenisnya(): String
  - clone(): Object
  - equals(Object o): boolean
  - finalize()
  - getClass(): Class<?>
  - hashCode(): int
  - namajenis(String namajenis)
  - notify()
  - notifyAll()
  - toString(): String
  - waitIfIdle()

Output - JavaApplication13 (run) X

```
>>> run:
```

16:7 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

Source History

```

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 package javaapplication13;
7
8 /**
9  *
10 * @author Fannisa RM
11 */
12 public class burungdemo {
13     public static void main(String[] args) {
14         elang e = new elang();
15         e.namajenis("elang darat");
16         System.out.println(e.peritahujenisnya()+"\n"+e.jalan());
17     }
18 }

```

main - Navigator X

Members

- burungdemo
  - main(String[] args)
  - clone(): Object
  - equals(Object o): boolean
  - finalize()
  - getClass(): Class<?>
  - hashCode(): int
  - notify()
  - notifyAll()
  - toString(): String
  - wait(long l)
  - wait(long l, int i)
  - wait()

Output - JavaApplication13 (run) X

```
>>> run:
elang darat
burung elang bisa jalan dan terbang
BUILD SUCCESSFUL (total time: 0 seconds)
```

16:62 26/11/2019

2.

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

Source History

```

12 public class customedata {
13     private String nama;
14     private String alamat;
15     private String tanggallahir;
16     private String pekerjaan;
17     int gaji;
18
19     public void nama(String nama){
20         this.nama = nama;
21     }
22     public void alamat (String alamat){
23         this.alamat = alamat;
24     }
25     public void tgllahir(String tanggallahir){
26         this.tanggallahir = tanggallahir;
27     }
28     public void pekerjaan(String pekerjaan){
29         this.pekerjaan = pekerjaan;
30     }
31     public void gaji (int gaji){
32         this.gaji = gaji;
33     }
34     public String nama(){
35         return this.nama;
36     }
37     public String alamat(){
38         return this.alamat;
39     }

```

Navigator X

Members

- customedata
  - nama : String
  - alamat : String
  - tanggallahir : String
  - pekerjaan : String
  - gaji : int
  - nama(String nama)
  - alamat(String alamat)
  - tgllahir(String tanggallahir)
  - pekerjaan(String pekerjaan)
  - gaji(int gaji)
  - nama() : String
  - alamat() : String

Output - JavaApplication13 (run) X

```

>> nama : putri

```

17:5 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

Source History

```

11
12     public class customerdatademo {
13         public static void main(String[]args){
14             customedata c1 = new customedata();
15             customedata c2 = new customedata();
16             customedata c3 = new customedata();
17             customedata c4 = new customedata();
18             customedata c5 = new customedata();
19             customedata c6 = new customedata();
20             customedata c7 = new customedata();
21             customedata c8 = new customedata();
22             customedata c9 = new customedata();
23             customedata c10 = new customedata();
24
25             c1.nama("tanti");
26             c1.alamat("jalan sudirman,Surabaya");
27             c1.tgllahir("12 Desember 1996");
28             c1.pekerjaan("manajer");
29             c1.gaji(5000000);
30
31             System.out.println("nama : " + c1.nama()+"\nalamat : "+c1.alamat()
32             +"\\ntanggal lahir : "+c1.tgllahir()+"\\npekerjaan : "+c1.pekerjaan()+"\\ngaji : "+c1.gaji+"\n");
33
34             c2.nama("putra");
35             c2.alamat("Surakarta");
36             c2.tgllahir("10 oktober 1977");
37             c2.pekerjaan("guru");
38             c2.gaji(4000000);

```

Navigator X

Members

- customerdatademo
  - main(String[] args)
  - done() : Object
  - equals(Object o) : boolean
  - finalize()
  - getClass() : Class<?>
  - hashCode() : int
  - notify()
  - notifyAll()
  - toString() : String
  - wait() : long
  - wait(long l, int i)
  - wait()

Output - JavaApplication13 (run) X

```

>> nama : putri

```

117:1 26/11/2019

The screenshot shows the NetBeans IDE interface with the title "JavaApplication13 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for New Project, Open Project, Save, Build, Run, Stop, and Exit. The Projects tab shows a hierarchy of Java files under "javaapplication12" and "javaapplication13". The Files tab shows "petdemo.java", "burung.java", "elang.java", "burundemo.java", "customerdatademo.java", and "customedata.java". The Services tab is empty. The Source tab is selected, displaying Java code for printing employee details. The code uses System.out.println statements to output names, addresses, birth dates, and job titles for various employees (c1 through c5). The Navigator tab shows the members of the "customerdatademo" class, including main, clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, and wait. The Output tab shows the run output: "nama : putri". The status bar at the bottom right shows the time as 11:17 and the date as 26/11/2019.

```
System.out.println("nama : "+c2.nama()+"\nalamat : "+c2.alamat())
+"\\ntanggal lahir : "+c2.tgllahir()+"\\npekerjaan : "+c2.pekerjaan()+"\\ngaji : "+c2.gaji+"\n");

c3.nama("edo");
c3.alamat("jakarta");
c3.tgllahir("5 oktober 1980");
c3.pekerjaan("sopir");
c3.gaji(2000000);

System.out.println("nama : "+c3.nama()+"\nalamat : "+c3.alamat())
+"\\ntanggal lahir : "+c3.tgllahir()+"\\npekerjaan : "+c3.pekerjaan()+"\\ngaji : "+c3.gaji+"\n");

c4.nama("tiaxa");
c4.alamat("surakarta");
c4.tgllahir("10 januari 1990");
c4.pekerjaan("perawat");
c4.gaji(4000000);

System.out.println("nama : "+c4.nama()+"\nalamat : "+c4.alamat())
+"\\ntanggal lahir : "+c4.tgllahir()+"\\npekerjaan : "+c4.pekerjaan()+"\\ngaji : "+c4.gaji+"\n");

c5.nama("dono");
c5.alamat("malang");
c5.tgllahir("5 agustus 1992");
c5.pekerjaan("pilot");
c5.gaji(9000000);

System.out.println("nama : "+c5.nama()+"\nalamat : "+c5.alamat())
+"\\ntanggal lahir : "+c5.tgllahir()+"\\npekerjaan : "+c5.pekerjaan()+"\\ngaji : "+c5.gaji+"\n");

Output - JavaApplication13 (run) >> nama : putri
```

## Diagram UML (bank)

The screenshot shows the NetBeans IDE interface with the title "JavaApplication13 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like New, Open, Save, Cut, Copy, Paste, Find, and others. The Projects tab shows a hierarchy of packages and files, including "karyawandemo.java", "manager.java", "managerdemo.java", "Test Packages", "Libraries", "Test Libraries", and the main project "JavaApplication13" which contains "javaapplication13.java", "anjing.java", "bank.java", "bankdemo.java", "bankpasar.java", and "bankpribadi.java". The Files tab shows a list of files: "...ave", "bank.java", "bankpribadi.java", "bankumum.java", "bankpasar.java", "banksyariah.java", and "bankdemo.java". The Services tab is empty. The Source tab displays the Java code for the "bank" class:

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package javaapplication13;

/**
 *
 * @author Fannisa RM
 */
public class bank {
    protected int rasiobunga(){
        return 7;
    }
}
```

The Navigator tab shows members of the "bank" class: "rasiobunga0 : int", "clone() : Object", "equals(Object) : boolean", "finalize()", "getClass() : Class<?>", "hashCode() : int", "notify()", "notifyAll()", "toString() : String", "wait(long) : void", "wait(long l, int i) : void", and "wait() : void". The Output tab shows the run command: "run: >>". The status bar at the bottom right shows the date and time: "15:26 26/11/2019".

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

...ave bank.java X bankpribadi.java X bankumum.java X bankpaser.java X banksyariah.java X bankdemo.java X

Source History

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 package javaapplication13;  
7  
8 /\*\*  
9 \*  
10 \* @author Fannisa RM  
11 \*/  
12 public class bankpribadi extends bank {  
13 protected int rasiobunga()  
14 return 8;  
15 }  
16  
17

Navigator X

Members

bankpribadi :: bank

- rasiobunga() : int ↑ bank
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String
- wait(long l) : void
- wait(long l, int i) : void
- wait() : void

Output - JavaApplication13 (run) X

>> run:

13:15 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

...ave bank.java X bankpribadi.java X bankumum.java X bankpaser.java X banksyariah.java X bankdemo.java X

Source History

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 package javaapplication13;  
7  
8 /\*\*  
9 \*  
10 \* @author Fannisa RM  
11 \*/  
12 public class bankumum extends bank {  
13 protected int rasiobunga()  
14 return 9;  
15 }  
16  
17

Navigator X

Members

bankumum :: bank

- rasiobunga() : int ↑ bank
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String
- wait(long l) : void
- wait(long l, int i) : void
- wait() : void

Output - JavaApplication13 (run) X

>> run:

13:15 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

...ave bank.java x bankpribadi.java x bankumum.java x bankpasar.java x banksyariah.java x bankdemo.java x

Source History

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 package javaapplication13;  
7  
8 /\*\*  
9 \*  
10 \* @author Fannisa RM  
11 \*/  
12 public class bankpasar extends bankumum {  
13 protected int rasiobunga()  
14 return 5;  
15 }  
16  
17

Navigator X

Members

bankpasar :: bankumum  
    rasiobunga() : int  
    clone() : Object  
    equals(Object o) : boolean  
    finalize()  
    getClass() : Class<?>  
    hashCode() : int  
    notify()  
    notifyAll()  
    toString() : String  
    wait(long l)  
    wait(long l, int i)  
    wait()

Output - JavaApplication13 (run) X

>> run:

13:15 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects X Files Services

...ave bank.java x bankpribadi.java x bankumum.java x bankpasar.java x banksyariah.java x bankdemo.java x

Source History

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 package javaapplication13;  
7  
8 /\*\*  
9 \*  
10 \* @author Fannisa RM  
11 \*/  
12 public class banksyariah extends bankumum{  
13 protected int rasiobunga()  
14 return 6;  
15 }  
16  
17

Navigator X

Members

banksyariah :: bankumum  
    rasiobunga() : int  
    clone() : Object  
    equals(Object o) : boolean  
    finalize()  
    getClass() : Class<?>  
    hashCode() : int  
    notify()  
    notifyAll()  
    toString() : String  
    wait(long l)  
    wait(long l, int i)  
    wait()

Output - JavaApplication13 (run) X

>> run:

13:15 26/11/2019

JavaApplication13 - NetBeans IDE 8.2

```

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 Fannisa RM
10  */
11
12 public class bankdemo {
13     public static void main(String[] args) {
14         bank pr = new bankpribadi();
15         bank u = new bankumum();
16         bank p = new bankpasar();
17         bank s = new banksyariah();
18
19         System.out.println("bank pribadi : "+pr.rasiobunga()+"\nbank umum : "+u.rasiobunga()
20         +"\nbankpasar : "+p.rasiobunga()+"\nbanksyariah : "+s.rasiobunga());
21     }
22 }
23
24
25

```

Output - JavaApplication13 (run) >> run:

21:08 26/11/2019

## Modul9

### Abstract class

#### Object class abstract

JavaApplication15 - NetBeans IDE 8.2

```

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 Fannisa RM
10  */
11
12 abstract class abstrakclass {
13     int a;
14     int b;
15     int c;
16
17     public abstrakclass(int a, int b, int c){
18         this.a = a;
19         this.b = b;
20         this.c = c;
21     }
22
23     public int kali(){
24         return a*b*c;
25     }
26 }

```

Output >>

21:22 07/12/2019

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

Start Page JavaApplication15.java abstrakclass.java objekabstrakclass.java turunanabstrakclass.java

```

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 Fannisa RM
10 */
11 public class objekabstrakclass {
12     public static void main(String[] args) {
13         abstrakclass s = new abstrakclass(2,3,4);
14     }
15 }

```

main - Navigator

Members

- objekabstrakclass
  - main(String[] args)
  - clone() : Object
  - equals(Object o) : boolean
  - finalize()
  - getClass() : Class<?>
  - hashCode() : int
  - notify()
  - notifyAll()
  - toString() : String
  - wait(long)
  - wait(long, int)
  - wait()

Output X

14:6 07/12/2019

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

Start Page JavaApplication15.java abstrakclass.java objekabstrakclass.java turunanabstrakclass.java

```

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 Fannisa RM
10 */
11 public class turunanabstrakclass extends abstrakclass {
12     int x;
13     public turunanabstrakclass(int a, int b, int c) {
14         super(a, b, c);
15         x = a+b+c;
16     }
17     public void printX() {
18         System.out.println(x);
19     }
20 }
21
22
23

```

printX - Navigator

Members

- turunanabstrakclass :: abstrakclass
  - x: int
  - printX()
  - clone() : Object
  - equals(Object o) : boolean
  - finalize()
  - getClass() : Class<?>
  - hashCode() : int
  - notify()
  - notifyAll()
  - toString() : String

Output X

18:29 07/12/2019

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page JavaApplication15.java abstrakclass.java objekabstrakclass.java turunanabstrakclass.java

```

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 Fannisa RM
10 */
11 public class objekabstrakclass {
12     public static void main(String[] args) {
13         turunanabstrakclass a = new turunanabstrakclass(2, 3, 2);
14         a.printX();
15         System.out.println(a.kali());
16     }
17 }

```

Output - JavaApplication15 (run) ×

```

run:
7
7
12
BUILD SUCCESSFUL (total time: 0 seconds)

```

Windows Taskbar: File Explorer, Edge, Google Chrome, Spotify, FileZilla, WinRAR

System Tray: 03:30 07/12/2019

## Metode abstract

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Start Page JavaApplication15.java abstrakclass.java objekabstrakclass.java turunanabstrakclass.java methodabstract.java

```

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 Fannisa RM
10 */
11 public abstract class methodabstract {
12     public abstract int luas();
13     public abstract int keliling();
14
15     public int getluas() {
16         return luas();
17     }
18     public int getkeliling() {
19         return keliling();
20     }
21 }

```

getkel - Navigator ×

Members

```

methodabstract
    luas(): int
    keliling(): int
    getluas(): int
    getkeliling(): int
    clone(): Object
    equals(Object o): boolean
    finalize()
    getClass(): Class<?>
    hashCode(): int
    notify()
    notifyAll()
    toString(): String
    wait(): long
    wait(long l, int i)
    waitUntil()

```

Output - JavaApplication15 (run) ×

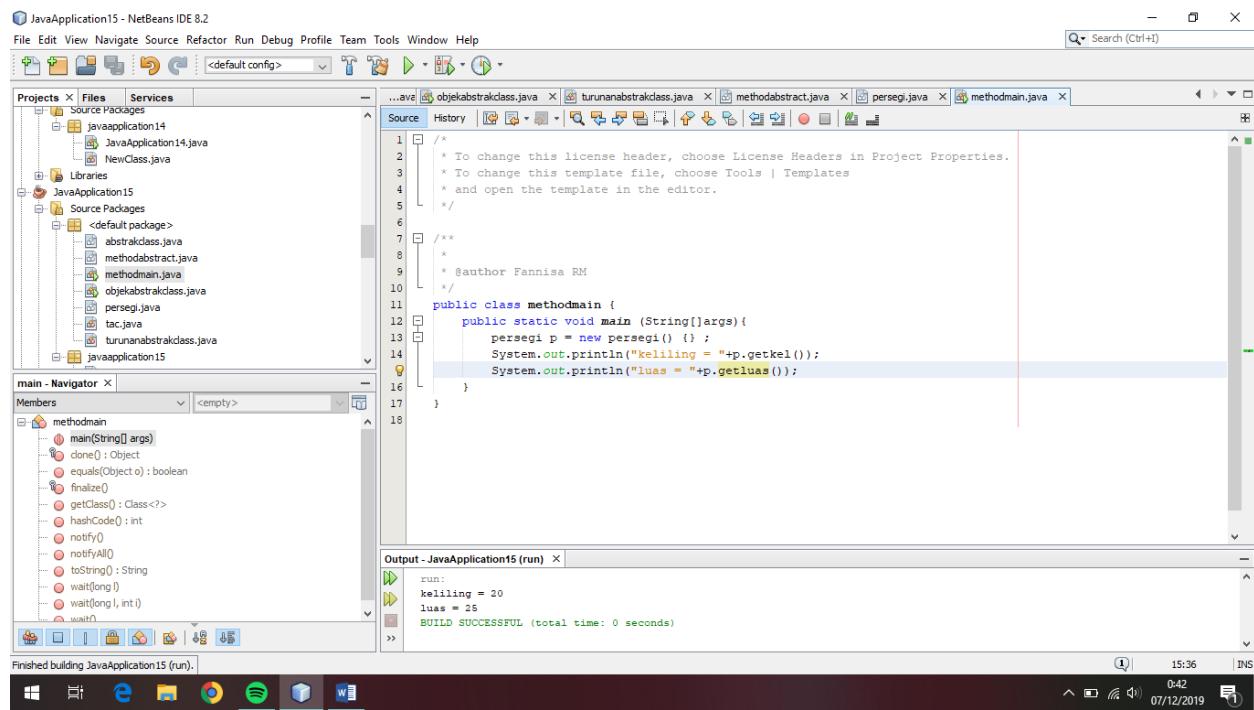
```

>> run:

```

Windows Taskbar: File Explorer, Edge, Google Chrome, Spotify, FileZilla, WinRAR

System Tray: 03:35 07/12/2019



## Latihan

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

...ave persegi.java methodmain.java persegiapanjang.java jajargenjang.java lingkaran.java segitiga.java

Source History

```

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 Fannisa RM
10 */
11 public class persegiapanjang extends methodabstract{
12     int panjang=6;
13     int lebar=4;
14     @Override
15     public int luas(){
16         return panjang*lebar;
17     }
18     @Override
19     public int keliling(){
20         return 2*(panjang+lebar);
21     }
22 }
```

Navigator

Members

persegiapanjang :: methodabstract

- panjang : int
- lebar : int
- luas() : int
- keliling() : int
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- getKel() : int
- getLuas() : int
- hashCode() : int
- notify()

Output - JavaApplication15 (run) >> run:

9:22 07/12/2019

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

...ave persegi.java methodmain.java persegiapanjang.java jajargenjang.java lingkaran.java segitiga.java

Source History

```

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 Fannisa RM
10 */
11 public class jajargenjang extends methodabstract{
12     int alas=5;
13     int tinggi=10;
14     int sisimiring=6;
15     @Override
16     public int luas(){
17         return alas*tinggi;
18     }
19     @Override
20     public int keliling(){
21         return 2*(alas+sisimiring);
22     }
23 }
```

Navigator

Members

jajargenjang :: methodabstract

- alas : int
- tinggi : int
- sisimiring : int
- luas() : int
- keliling() : int
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- getKel() : int
- getLuas() : int
- hashCode() : int

Output - JavaApplication15 (run) >> run:

19:49 07/12/2019

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

JavaApplication13 JavaApplication14 JavaApplication15

Source Packages

javaapplication14 JavaApplication14.java NewClass.java

Libraries

JavaApplication15

Source Packages

<default package>

abstrakclass.java jajargenjang.java lingkaran.java methodabstract.java methodmain.java objekabstrakclass.java

keiling - Navigator

Members

Ingkaran :: methodabstract

- r : int
- luas0 : int ↗ methodabstract
- kelling0 : int ↗ methodabstract
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- getKell0 : int
- getLuas0 : int
- hashCode() : int
- notify()
- notifyAll()

Output - JavaApplication15 (run) >> run:

19:49 07/12/2019

```

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 Fannisa RM
10 */
11 public class lingkaran extends methodabstract{
12     int pi=14;
13     @Override
14     public int luas(){
15         return (22*pi*r)/7;
16     }
17     @Override
18     public int keliling(){
19         return (22*2*pi)/7;
20     }
21 }
22

```

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

JavaApplication13 JavaApplication14 JavaApplication15

Source Packages

javaapplication14 JavaApplication14.java NewClass.java

Libraries

JavaApplication15

Source Packages

<default package>

abstrakclass.java jajargenjang.java lingkaran.java methodabstract.java methodmain.java objekabstrakclass.java

Navigator

Members

segitiga :: methodabstract

- alas : int
- tinggi : int
- sismiring : int
- luas0 : int ↗ methodabstract
- kelling0 : int ↗ methodabstract
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- getKell0 : int
- getLuas0 : int
- hashCode() : int

Output - JavaApplication15 (run) >> run:

19:49 07/12/2019

```

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 Fannisa RM
10 */
11 public class segitiga extends methodabstract {
12     int alas=6;
13     int tinggi=9;
14     int sismiring=10;
15     @Override
16     public int luas(){
17         return (alas*tinggi)/2;
18     }
19     @Override
20     public int keliling(){
21         return alas+tinggi+sismiring;
22     }
23 }
24

```

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Source History Search (Ctrl+I)

...ave persegi.java methodmain.java persegipanjang.java jajargenjang.java lingkaran.java segitiga.java

JavaApplication13 JavaApplication14 Source Packages JavaApplication14.java NewClass.java Libraries JavaApplication15 <default package> abstrakclass.java jajargenjang.java lingkaran.java methodabstract.java methodmain.java objekabstrakclass.java

main - Navigator Members

methodmain main(String[] args) clone() : Object equals(Object o) : boolean finalize() getClass() : Class<?> hashCode() int notify() notifyAll() toString() : String wait(long l) wait(long l, int i) wait()

Output - JavaApplication15 (run) >> run:

```
run:
persegi
keliling = 20
luas = 25

persegi panjang
keliling = 20
luas = 24

jajargenjang
keliling = 22
luas = 50

lingkaran
keliling = 60
luas = 616

segitiga
keliling = 28
luas = 27
```

JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Source History Search (Ctrl+I)

...ave persegi.java methodmain.java persegipanjang.java jajargenjang.java lingkaran.java segitiga.java

JavaApplication13 JavaApplication14 Source Packages JavaApplication14.java NewClass.java Libraries JavaApplication15 <default package> abstrakclass.java jajargenjang.java lingkaran.java methodabstract.java methodmain.java objekabstrakclass.java

main - Navigator Members

methodmain main(String[] args) clone() : Object equals(Object o) : boolean finalize() getClass() : Class<?> hashCode() int notify() notifyAll() toString() : String wait(long l) wait(long l, int i) wait()

Output - JavaApplication15 (run) >> run:

```
run:
persegi
keliling = 20
luas = 25

persegi panjang
keliling = 20
luas = 24

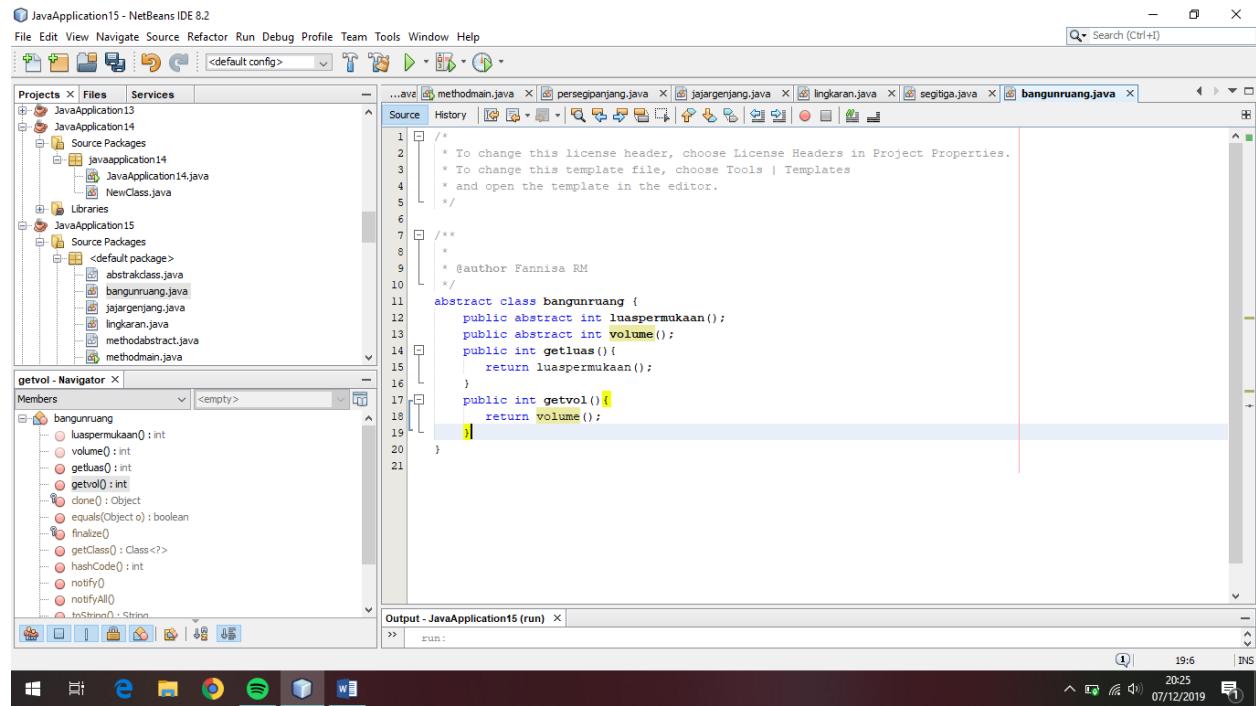
jajargenjang
keliling = 22
luas = 50

lingkaran
keliling = 60
luas = 616

segitiga
keliling = 28
luas = 27

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

## Tugas



JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

methodmain.java persegipanjang.java jajargenjang.java lingkaran.java segitiga.java bangunruang.java

Source History

```
1 /* To change this license header, choose License Headers in Project Properties.
2 * To change this template file, choose Tools | Templates
3 * and open the template in the editor.
4 */
5
6 /**
7 *
8 */
9 * @author Fannisa RM
10 */
11 abstract class bangunruang {
12     public abstract int luaspermukaan();
13     public abstract int volume();
14     public int getluas() {
15         return luaspermukaan();
16     }
17     public int getvol() {
18         return volume();
19     }
20 }
```

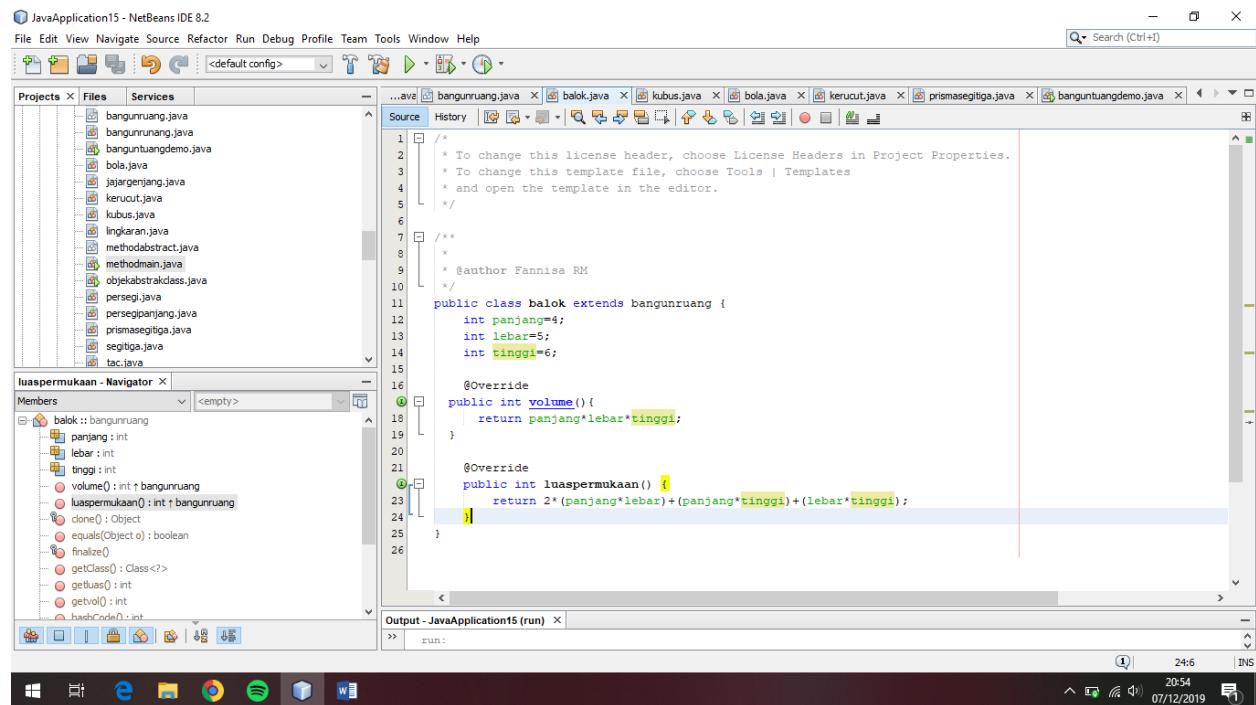
getvol - Navigator

Members

- bangunruang
  - luaspermukaan(): int
  - volume(): int
  - getluas(): int
  - getvol(): int
  - clone(): Object
  - equals(Object o): boolean
  - finalize()
  - getClass(): Class<?>
  - hashCode(): int
  - notify()
  - notifyAll()
  - toString(): String

Output - JavaApplication15 (run) >> run:

## Balok



JavaApplication15 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

bangunruang.java bangunruangdemo.java bola.java jajargenjang.java kerucut.java kubus.java lingkaran.java methodabstrak.java methodmain.java objekabstrak.java persegi.java persegiapanjang.java primasegitiga.java segitiga.java tac.java

Source History

```
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 Fannisa RM
10 */
11 public class balok extends bangunruang {
12     int panjang=4;
13     int lebar=5;
14     int tinggi=6;
15
16     @Override
17     public int volume(){
18         return panjang*lebar*tinggi;
19     }
20
21     @Override
22     public int luaspermukaan() {
23         return 2*(panjang*lebar)+(panjang*tinggi)+(lebar*tinggi);
24     }
25 }
```

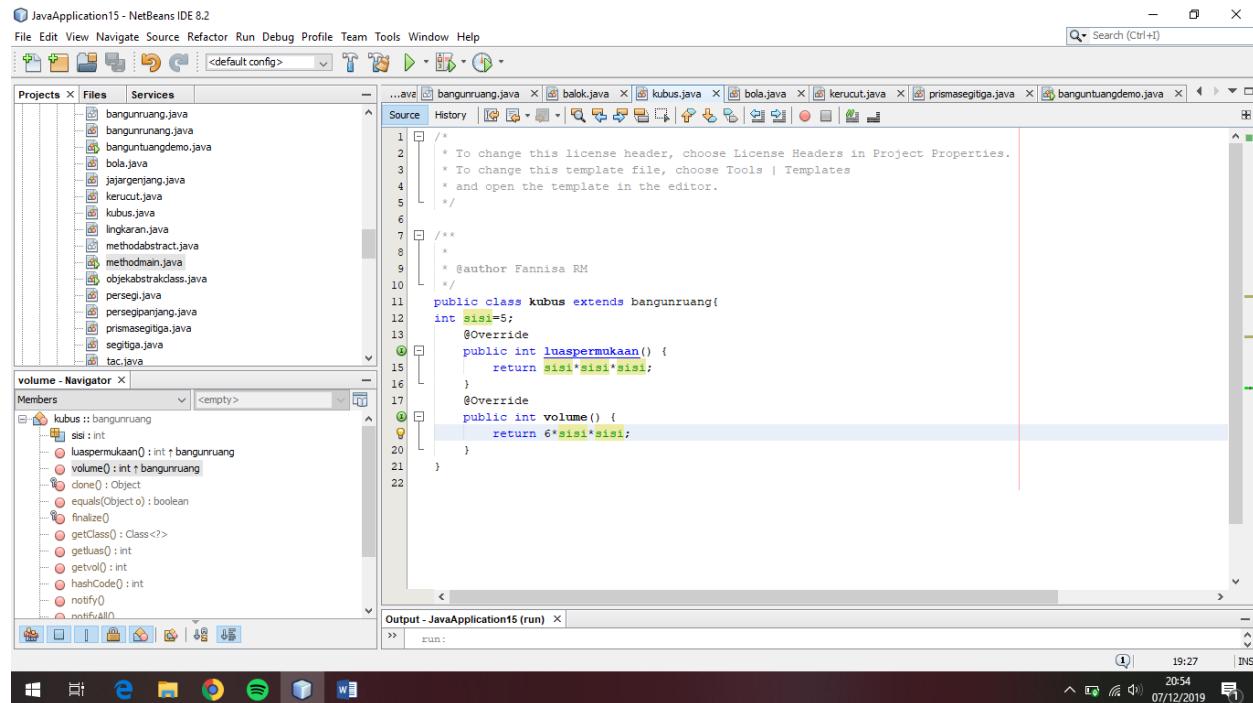
luaspermukaan - Navigator

Members

- balok :: bangunruang
  - panjang : int
  - lebar : int
  - tinggi : int
  - volume(): int ↑ bangunruang
  - luaspermukaan(): int ↑ bangunruang
  - clone(): Object
  - equals(Object o): boolean
  - finalize()
  - getClass(): Class<?>
  - getluas(): int
  - getvol(): int
  - hashCode(): int

Output - JavaApplication15 (run) >> run:

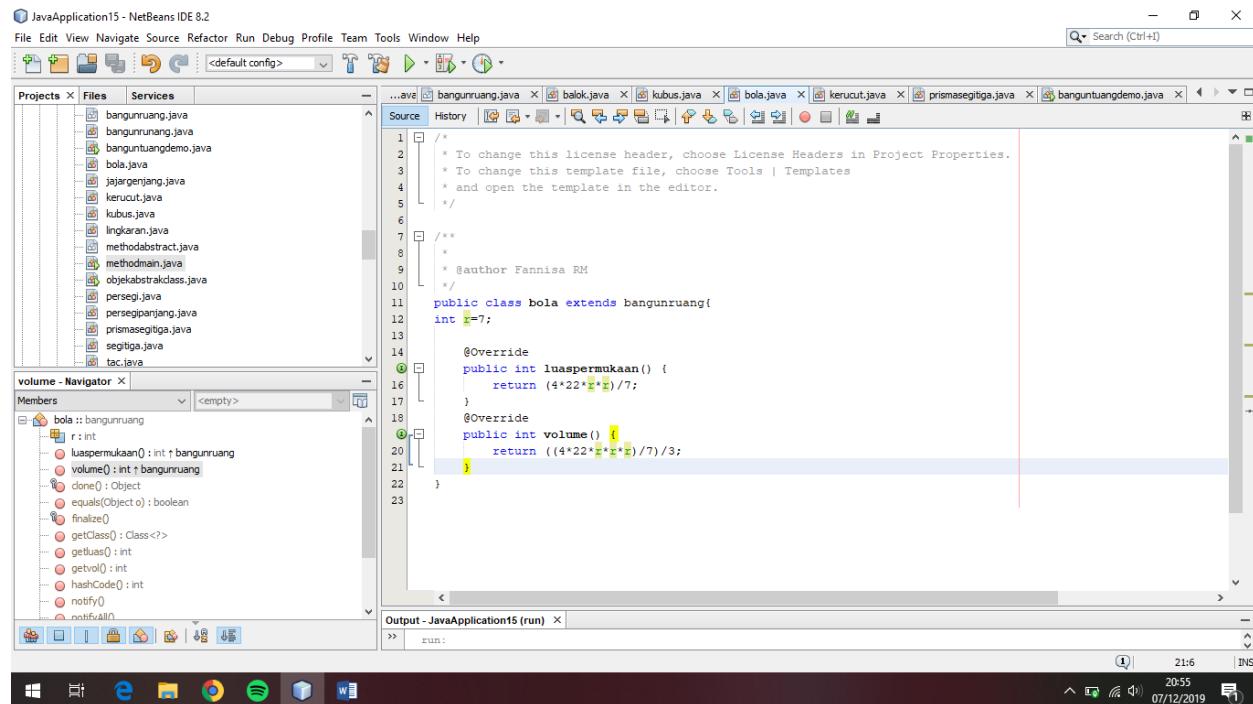
## Kubus



The screenshot shows the NetBeans IDE interface with the project "JavaApplication15" open. The code editor displays the Kubus.java file, which extends the BangunRuang class. The volume() method is overridden to return  $6 \times sisi^3$ . The Navigator pane shows the members of the Kubus class, including its constructor and volume-related methods.

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
public class kubus extends bangunruang{
    int sisi;
    @Override
    public int luaspermukaan() {
        return sisi*sisi*sisi;
    }
    @Override
    public int volume() {
        return 6*sisi*sisi*sisi;
    }
}
```

## Bola



The screenshot shows the NetBeans IDE interface with the project "JavaApplication15" open. The code editor displays the Bola.java file, which extends the BangunRuang class. The volume() method is overridden to return  $(4 \times 22 \times r^3) / 7$ . The Navigator pane shows the members of the Bola class, including its constructor and volume-related methods.

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
public class bola extends bangunruang{
    int r;
    @Override
    public int luaspermukaan() {
        return (4*22*r*r*r)/7;
    }
    @Override
    public int volume() {
        return ((4*22*r*r*r)/7)/3;
    }
}
```

## Kerucut

The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** JavaApplication15 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Project Explorer:** Shows files under the "Projects" tab, including bangunruang.java, bangunruang.java, bangunruangdemo.java, bola.java, jaargenjang.java, kerucut.java, kerucut.java, kubus.java, bola.java, kerucut.java, prismasegitiga.java, banguntuangdemo.java, and tac.java.
- Code Editor:** Displays the code for the `kerucut` class, which extends `bangunruang`. The code includes fields `r`, `s`, and `tinggi`, and methods `luaspermukaan()` and `volume()`.
- Navigator:** Shows the members of the `kerucut` class, including `luaspermukaan()`, `volume()`, `clone()`, `equals()`, `finalize()`, `getClass()`, `getArea()`, `getVolume()`, and `hashCode()`.
- Output:** Shows the command `>> run:` and the timestamp `20:55 07/12/2019`.
- System Tray:** Shows icons for battery, signal, and date/time.

## Prismasegitiga

The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** JavaApplication15 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Project Explorer:** Shows files under the "Projects" tab, including bangunruang.java, bangunruang.java, bangunruangdemo.java, bola.java, jaargenjang.java, kerucut.java, kerucut.java, kubus.java, bola.java, kerucut.java, prismasegitiga.java, banguntuangdemo.java, and tac.java.
- Code Editor:** Displays the code for the `prismasegitiga` class, which extends `bangunruang`. The code includes fields `luasales`, `kelilingalas`, and `tinggi`, and methods `luaspermukaan()` and `volume()`.
- Navigator:** Shows the members of the `prismasegitiga` class, including `luasales`, `kelilingalas`, `tinggi`, `luaspermukaan()`, `volume()`, `clone()`, `equals()`, `finalize()`, `getClass()`, `getArea()`, `getVolume()`, and `hashCode()`.
- Output:** Shows the command `>> run:` and the timestamp `23:06 07/12/2019`.
- System Tray:** Shows icons for battery, signal, and date/time.

The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** JavaApplication15 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Includes icons for file operations like New, Open, Save, and Build.
- Project Explorer:** Shows a tree view of Java files under the "Projects" tab. Files listed include bangunruang.java, bangunrunang.java, banguntuangdemo.java, bola.java, jaragenjang.java, kerucut.java, kubus.java, lingkaran.java, methodabstract.java, methodmain.java, objekabstrakclass.java, persegi.java, persegipanjang.java, prismasegitiga.java, segitiga.java, and tac.java.
- Source Editor:** The main editor window displays Java code for a `banguntuangdemo` class. The code uses inheritance to calculate the volume and surface area of various 3D shapes (Balok, Kubus, Bola, Kerucut, SegitigaPrismas, SegitigaPrismasegitiga). It includes imports for `java.util.Scanner`, `java.lang.Math`, and `java.util.*`.
- Navigator:** The "main - Navigator" panel shows the members of the `banguntuangdemo` class, including its constructor, clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), and wait().
- Output:** The "Output - JavaApplication15 (run) x" tab shows the command "run:" followed by a blank line.
- Status Bar:** Displays the date and time as 07/12/2019 20:56, along with other system information.

# Modul10

## Interface

### Tugas

JavaApplication19 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

Source History

...java JavaApplication19.java namainterface.java activityanimal.java mamaia.java activitylampa.java lampu.java aplikasilampa.java

LAMPU\_REDUP - Navigator

Members <empty>

activitylampa :: none

- LAMPU\_HIDUP : int
- LAMPU\_MATI : int
- LAMPU\_REDUP : int
- matikanlampu()
- hidupkanlampu()
- redupkanlampu()
- equals(Object o) : boolean
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()
- toString() : String

Source History

...java JavaApplication19.java namainterface.java activityanimal.java mamaia.java activitylampa.java lampu.java aplikasilampa.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 */
public interface activitylampa {
    public static final int LAMPU_HIDUP=1;
    public static final int LAMPU_MATI=0;
    public static final int LAMPU_REDUP=2;
    public abstract void matikanlampu();
    public abstract void hidupkanlampu();
    public abstract void redupkanlampu();
}
```

JavaApplication19 (run) #3 running... (2 more...) 14:42 7:16 13/12/2019

JavaApplication19 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

Source History

...java JavaApplication19.java namainterface.java activityanimal.java mamaia.java activitylampa.java lampu.java aplikasilampa.java

redupkanlampu - Navigator

Members <empty>

lampu :: activitylampa

- statuslampu : int
- matikanlampu()
- hidupkanlampu()
- redupkanlampu()
- setsakar(int saku) : int
- clone() : Object
- equals(Object o) : boolean
- finalize()
- getClass() : Class<?>
- hashCode() : int
- notify()
- notifyAll()

Source History

...java JavaApplication19.java namainterface.java activityanimal.java mamaia.java activitylampa.java lampu.java aplikasilampa.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 */
public class lampu implements activitylampa{
    public int statuslampu;
    @Override
    public void matikanlampu() {
        if (statuslampu==0){
            System.out.println("Lampu sudah dalam kondisi mati");
        }
        else if (statuslampu==1);
        statuslampu=-1;
        System.out.println("Lampu sudah dimatikan");
    }

    @Override
    public void hidupkanlampu() {
        if (statuslampu==1){
            System.out.println("Lampu sudah dinyalakan\n");
        }
        else {
            statuslampu+=1;
            System.out.println("Lampu sudah dalam kondisi menyala");
        }
    }
}
```

JavaApplication19 (run) #3 running... (2 more...) 41:60 7:17 13/12/2019

JavaApplication19 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Source History

...java JavaApplication19.java namainterface.java activityanimal.java mamalia.java activitylampa.java lampu.java aplikasilampu.java

JavaApplication17

JavaApplication18

JavaApplication19

Members

redupkanlampa - Navigator

```
22
23     @Override
24     public void hidupkanlampa() {
25         if (statuslampa==1){
26             System.out.println("Lampu sudah dinyalakan\n");
27         }
28         else {
29             statuslampa+=1;
30             System.out.println("Lampu sudah dalam kondisi menyala");
31         }
32     }
33
34     @Override
35     public void redupkanlampa() {
36         if (statuslampa==2){
37             System.out.println("Lampu sudah direduakan\n");
38         }
39         else {
40             statuslampa-=2;
41             System.out.println("Lampu sudah dalam kondisi redup");
42         }
43     }
44     public int setsaklar(int saklar){
45         return statuslampa = saklar;
46     }
47 }
48 }
```

JavaApplication19 (run) #3 | running... | (2 more...) | 41:60 | 7:17 | 13/12/2019 | 2

JavaApplication19 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Source History

...java JavaApplication19.java namainterface.java activityanimal.java mamalia.java activitylampa.java lampu.java aplikasilampu.java

JavaApplication17

JavaApplication18

JavaApplication19

Members

main - Navigator

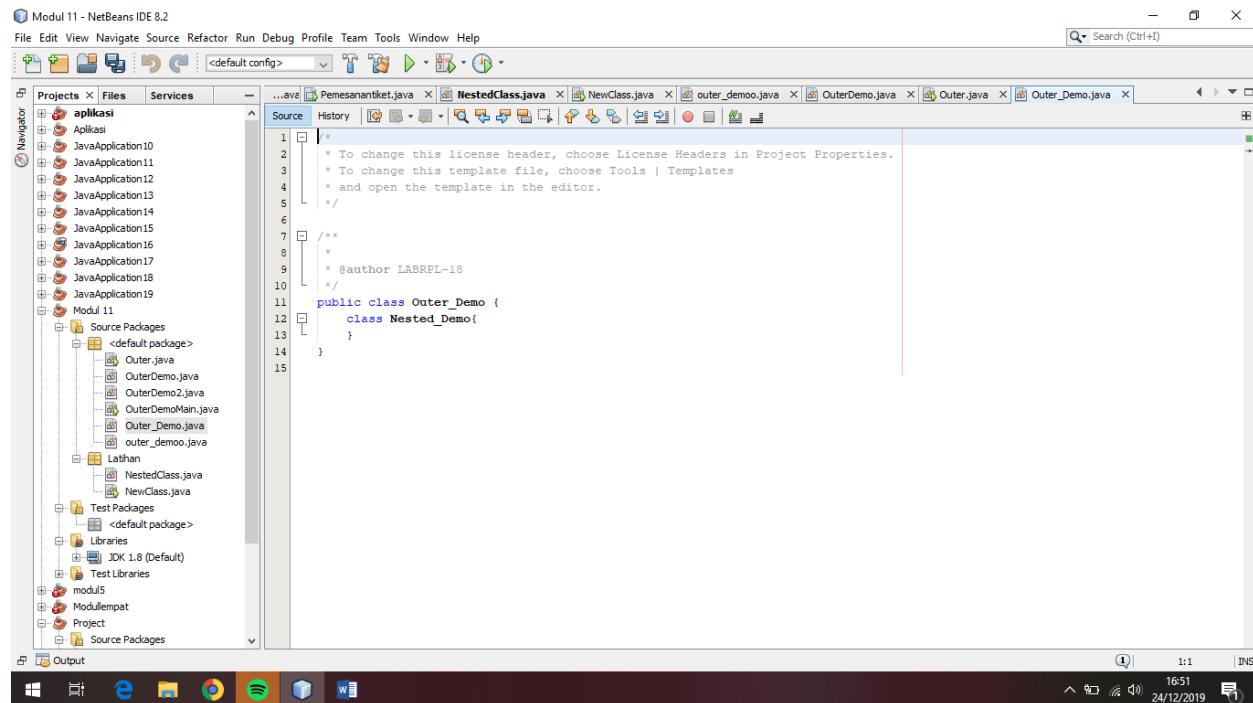
```
3
4     /*
5      * To change this license header, choose License Headers in Project Properties.
6      * To change this template file, choose Tools | Templates
7      * and open the template in the editor.
8     */
9
10    /**
11     *
12     * @author Fannisa RM
13     */
14
15    public class aplikasilampu {
16        public static void main (String[]args){
17            lampu l = new lampu();
18            Scanner s = new Scanner(System.in);
19            l.statuslampa = l.setsaklar(0);
20            System.out.println("Status Lampu = "+l.statuslampa+"\nketikkan");
21            System.out.println("1 untuk menyalaikan lampu\n0 untuk mematikan lampu\n2 untuk meredupkan lampu");
22            if(l.setsaklar(s.nextInt())!=0){
23                l.matiakanlampu();
24            }else if(l.setsaklar(s.nextByte())==1){
25                l.hidupkanlampa();
26            }else{
27                l.redupkanlampa();
28            }
29        }
30    }
```

JavaApplication19 (run) #3 | running... | (2 more...) | 20:82 | 7:17 | 13/12/2019 | 2

# Modul11

## Nested Class

### Inner class



Modul 11 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

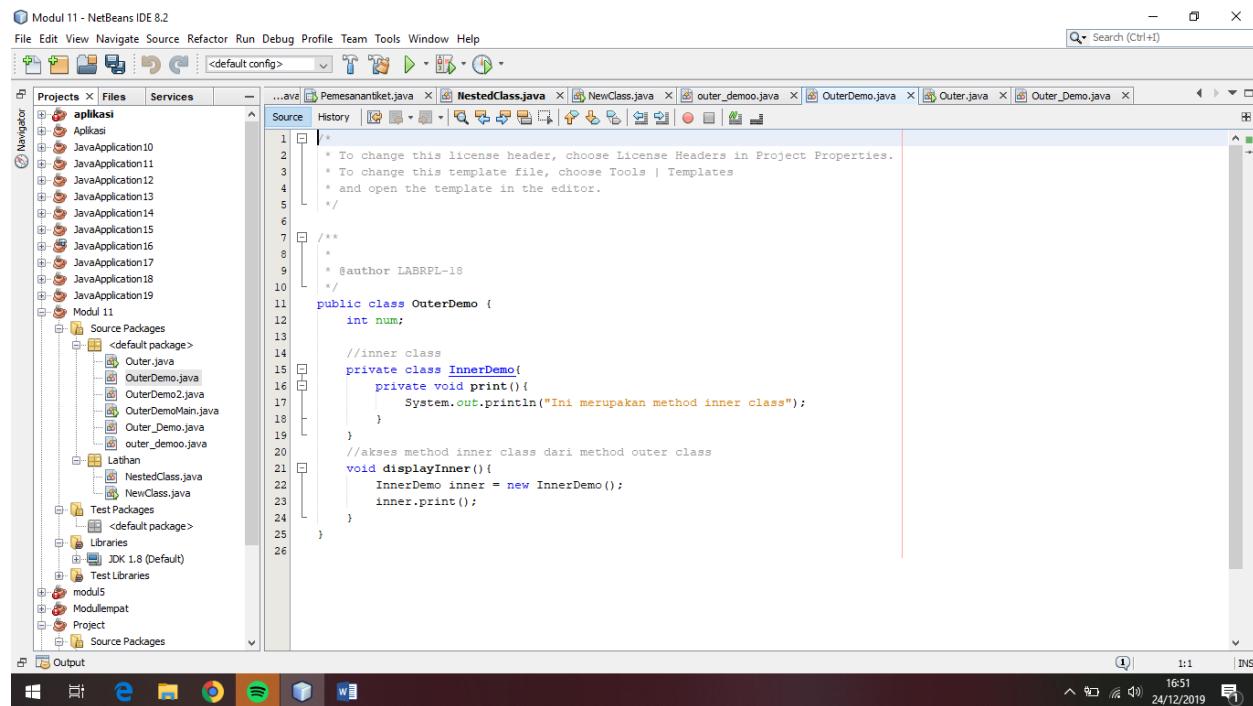
Source History

```
1 * To change this license header, choose License Headers in Project Properties.
2 * To change this template file, choose Tools | Templates
3 * and open the template in the editor.
4
5
6 /**
7 *
8 * @author LABRPL-18
9 */
10 public class Outer_Demo {
11     class Nested_Demo{
12     }
13 }
14
15
```

Output

16:51 24/12/2019

This screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, and Help. The toolbar has icons for New File, Open, Save, Cut, Copy, Paste, Find, Replace, and others. The Projects tab is selected, showing a tree view of Java applications and modules. The Modules section contains "Apikasi", "JavaApplication10" through "JavaApplication19", and "Modul 11". Under "Modul 11", there are Source Packages, Test Packages, and Libraries. The Source Packages contain files like Outer.java, OuterDemo.java, OuterDemo2.java, OuterDemoMain.java, Outer\_Demo.java, and outer\_demo.java. The Test Packages contain NestedClass.java and NewClass.java. The Libraries section includes JDK 1.8 (Default). The Source tab displays the code for NestedClass.java, which defines a public class Outer\_Demo with a nested class Nested\_Demo. The code is annotated with JavaDoc comments and author information. The status bar at the bottom shows the time as 16:51 and the date as 24/12/2019.



Modul 11 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services

Source History

```
1 * To change this license header, choose License Headers in Project Properties.
2 * To change this template file, choose Tools | Templates
3 * and open the template in the editor.
4
5
6 /**
7 *
8 * @author LABRPL-18
9 */
10 public class OuterDemo {
11     int num;
12
13     //inner class
14     private class InnerDemo{
15         private void print(){
16             System.out.println("Ini merupakan method inner class");
17         }
18     }
19
20     //akses method inner class dari method outer class
21     void displayInner(){
22         InnerDemo inner = new InnerDemo();
23         inner.print();
24     }
25 }
```

Output

16:51 24/12/2019

This screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The menu bar and toolbar are identical to the previous screenshot. The Projects tab is selected, showing the same module structure. The Source tab displays the code for OuterDemo.java. It defines a public class OuterDemo with an integer variable num. Inside the class, there is a private inner class named InnerDemo. The inner class contains a private method print() that outputs a message to the console. The outer class also contains a public method displayInner() that creates an instance of the inner class and calls its print() method. The code is annotated with JavaDoc comments and author information. The status bar at the bottom shows the time as 16:51 and the date as 24/12/2019.

The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** Modul 11 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Includes icons for file operations like Open, Save, Print, and Build.
- Project Navigator:** Shows the project structure under "aplikasi". The "Modul 11" node contains a "Source Packages" folder with files: Myclass.java, Outer.java, OuterDemo.java, OuterDemo2.java, OuterDemoMain.java, and Outer\_Demo.java.
- Code Editor:** Displays the content of Myclass.java. The code defines a public class Myclass with a main method that creates an OuterDemo object and calls its displayInner method.

```
1  /* To change this license header, choose License Headers in Project Properties.
2  * To change this template file, choose Tools | Templates
3  * and open the template in the editor.
4  */
5  /*
6  */
7  /**
8  *
9  * @author Fannisa RM
10 */
11 public class Myclass {
12     public static void main(String[] args){
13         OuterDemo o = new OuterDemo();
14         o.displayInner();
15     }
16 }
17
```

- Output Window:** Shows the build log for "Modul 11 (run)". It includes the command run:, the output "Ini merupakan method inner class", and the message BUILD SUCCESSFUL (total time: 0 seconds).
- System Tray:** Shows icons for Task View, Start, Internet Explorer, File Explorer, Spotify, and Word.
- System Status:** Shows the date (24/12/2019), time (14:25), battery level (1655), and signal strength.

Mengakses private member

The screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like New, Open, Save, Cut, Copy, Paste, Find, and Run. The Projects tab in the Navigator pane shows a project named "aplikasi" containing multiple Java files. The Files tab shows a tree view of source packages, including "Source Packages" which contains "OuterDemo2.java". The Services tab is also visible. The main editor window displays the Java code for "OuterDemo2.java". The code defines a public class OuterDemo2 with a private int num field set to 175. It contains a public inner class Inner\_Demo with a getNum() method that prints the value of num and returns it. A tooltip from the JavaDoc API browser is visible over the line "System.out.println("Ini adalah nilai dari variable private outerdemo");". The status bar at the bottom shows the date and time as 24/12/2019 and 15:56 respectively.

```
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-18
10 */
11 public class OuterDemo2 {
12     private int num = 175;
13     public class Inner_Demo{
14         public int getNum(){
15             System.out.println("Ini adalah nilai dari variable private outerdemo");
16             return num;
17         }
18     }
19 }
20
```

Modul 11 - NetBeans IDE 8.2

The screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for New File, Open, Save, Cut, Copy, Paste, Find, Replace, and others. The Projects tab is selected, showing a tree view of Java applications and source packages. The Source tab displays the code for "OuterDemoMain.java". The code defines a public static void main method that creates an OuterDemo object and prints its inner class's value. The Output tab shows the build log: "run: Ini adalah nilai dari variable private outerdemo 175 BUILD SUCCESSFUL (total time: 0 seconds)". The status bar at the bottom right shows the date and time: 24/12/2019 16:45.

```

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-18
10 */
11 public class OuterDemoMain {
12     public static void main(String[] args){
13         OuterDemo outer = new OuterDemo();
14         OuterDemo.Inner_Demo inner = outer.new Inner_Demo();
15         System.out.println(inner.getNum());
16     }
17 }

```

## Static Nested Class

Modul 11 - NetBeans IDE 8.2

The screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for New File, Open, Save, Cut, Copy, Paste, Find, Replace, and others. The Projects tab is selected, showing a tree view of Java applications and source packages. The Source tab displays the code for "Outer.java". The code defines a public class "Outer" with a static nested class "NestedDemo" that has a method "myMethod". The main method creates an instance of NestedDemo and calls its method. The Output tab shows the build log: "run: Ini adalah Method punya " + "static nested class" BUILD SUCCESSFUL (total time: 0 seconds)". The status bar at the bottom right shows the date and time: 24/12/2019 16:58.

```

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-18
10 */
11 public class Outer {
12     static class NestedDemo{
13         public void myMethod(){
14             System.out.println("Ini adalah Method punya " + "static nested class");
15         }
16     }
17
18     public static void main(String[] args){
19         Outer.NestedDemo nested = new Outer.NestedDemo();
20         nested.myMethod();
21     }
22 }

```

The screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like Open, Save, Find, and Build. The Projects tab in the left sidebar shows a tree view with "aplikasi" expanded, containing "Applikasi" and "JavaApplication10" through "JavaApplication19". The Modules tab shows "Modul 11" expanded, with "Source Packages" and files like "Myclass.java", "Outer.java", "OuterDemo.java", "OuterDemo2.java", "OuterDemoMain.java", and "Outer\_Demo.java". The Services tab is also visible. The main editor window displays Java code for nested classes:

```
1  /* To change this license header, choose License Headers in Project Properties.
2  * To change this template file, choose Tools | Templates
3  * and open the template in the editor.
4  */
5
6
7  /**
8  *
9  * @author LABRPL-18
10 */
11 public class Outer {
12     static class NestedDemo{
13         public void myMethod(){
14             System.out.println("Ini adalah Method " + "static nested class");
15         }
16     }
17
18     public static void main(String[] args){
19         Outer.NestedDemo nested = new Outer.NestedDemo();
20         nested.myMethod();
21     }
22 }
```

The Output window at the bottom shows the run results:

```
run:
Ini adalah Method static nested class
BUILD SUCCESSFUL (total time: 0 seconds)
```

## Latihan

The screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like New, Open, Save, Cut, Copy, Paste, Find, and Run. The Projects tab is selected, showing a tree view of projects: aplikasi, JavaApplication10, JavaApplication11, JavaApplication12, JavaApplication13, JavaApplication14, JavaApplication15, JavaApplication16, JavaApplication17, JavaApplication18, JavaApplication19, Modul 11, Test Packages, Libraries, and modul5. The Services tab is also visible. The Navigator panel on the left lists files: aplikasi, JavaApplication10, JavaApplication11, JavaApplication12, JavaApplication13, JavaApplication14, JavaApplication15, JavaApplication16, JavaApplication17, JavaApplication18, JavaApplication19, Modul 11, Source Packages, <default package>, Lathan, NestedClass.java, NewClass.java, Test Packages, <default package>, Libraries, JDK 1.8 (Default), Test Libraries, modul5, Modullemat, Project, Source Packages, Nila, halaman1.java, halaman2.java, Test Packages, Libraries, and Test Libraries. The main editor window displays the Java code for NestedClass.java:

```
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  package Latihan;
7
8  /**
9  *
10 * @author LABRPL-18
11 */
12 public class NestedClass {
13     String nama = "Fannisa Rif'ani M ";
14     String nim = "L200180048";
15
16     public void printNama() {
17         System.out.println(nama + " : " + nim);
18     }
19
20     static class StaticNestedClass{
21         static String jurusan = "Informatika";
22     }
23
24     class InnerClass{
25         void displayJurusan(){
26             StaticNestedClass tampilJurusan = new StaticNestedClass();
27             System.out.println("Jurusan = " + tampilJurusan.jurusan);
28         }
29     }
30 }
31
```

Modul 11 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

Projects Files Services

...avd subidentitas.java Menu.java CekNomor.java Information.java PemesananTicket.java NestedClass.java NewClass.java

Navigator

aplikasi

JavaApplication10

JavaApplication11

JavaApplication12

JavaApplication13

JavaApplication14

JavaApplication15

JavaApplication16

JavaApplication17

JavaApplication18

JavaApplication19

Modul 11

Source Packages

<default package>

Latihan

NestedClass.java

NewClass.java

Test Packages

<default package>

Libraries

JDK 1.8 (Default)

Test Libraries

modul5

Modulempat

Project

Source Packages

Nilai

halaman1.java

halaman2.java

Test Packages

Libraries

Test Libraries

Output

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package Latihan;

/**
 *
 * @author LABRPL-18
 */
public class NewClass {
    public static void main(String[] args) {
        NestedClass nested = new NestedClass();
        nested.printNama();
        NestedClass.InnerClass inner = nested.new InnerClass();
        inner.displayJurusan();
    }
}
```

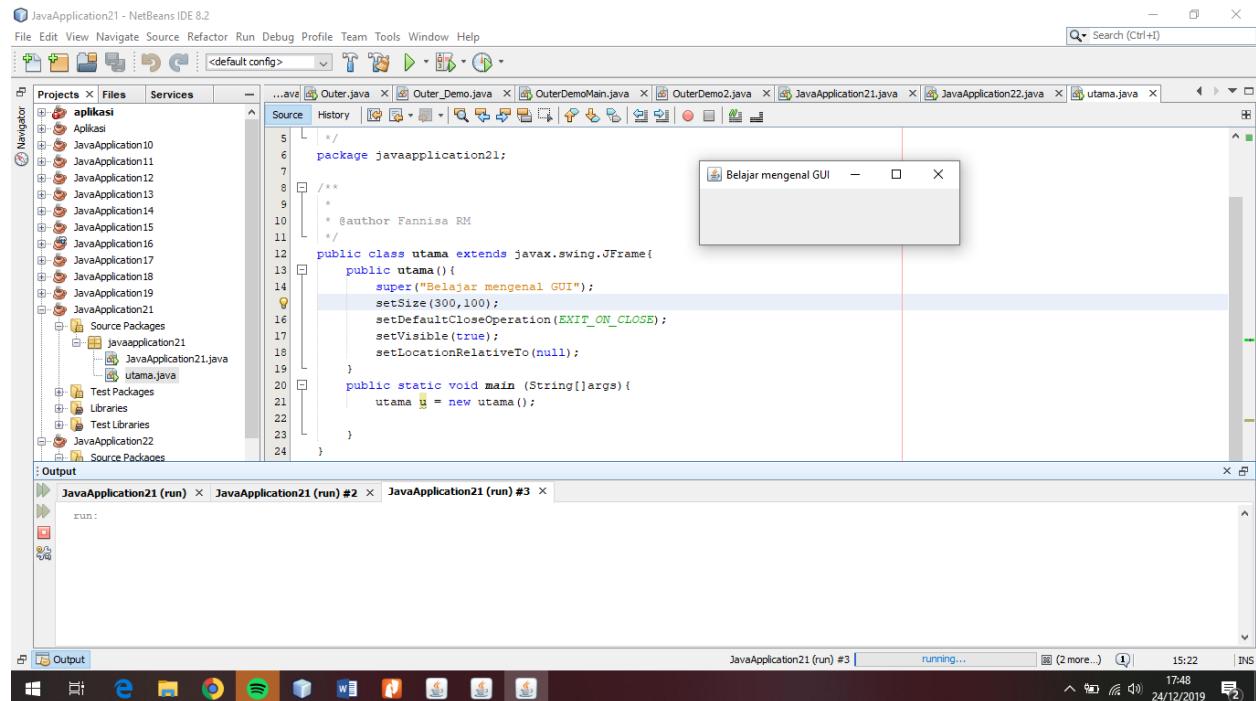
1649 24/12/2019

# Modul12

## GUI

### Latihan

#### Frame

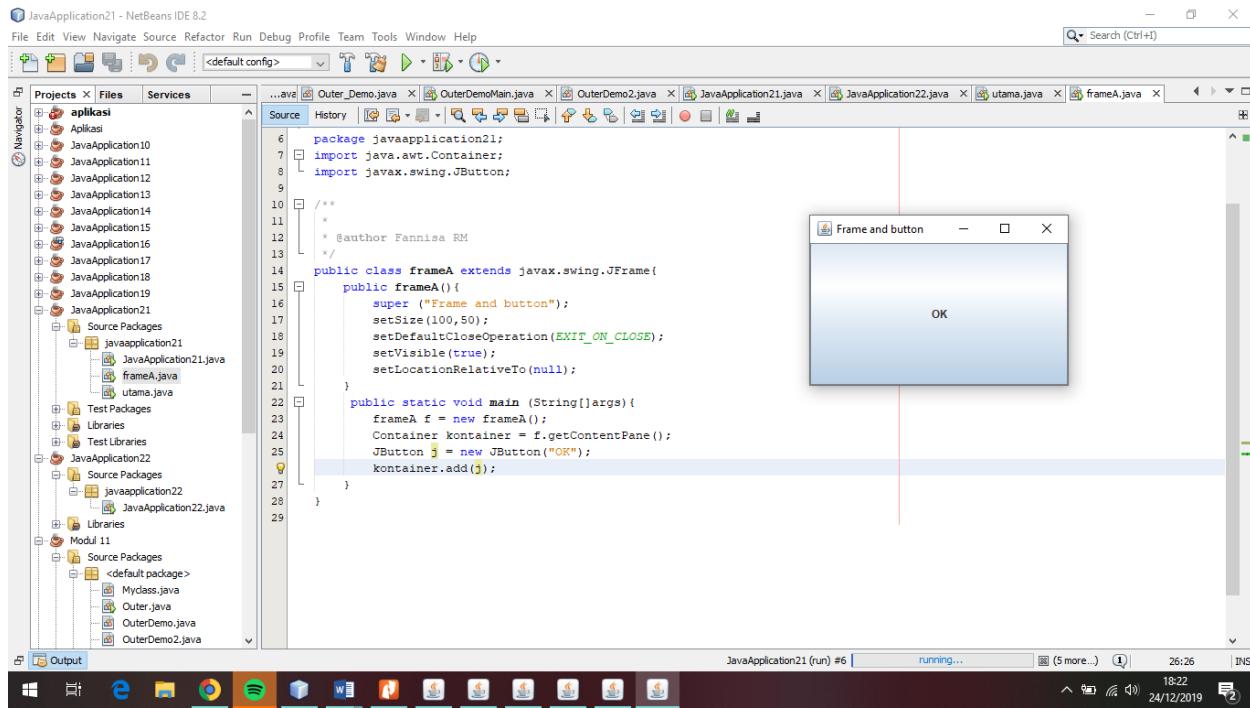


Konstruktor	Keterangan
<code>JFrame()</code>	<ul style="list-style-type: none"><li>Jendela utama yang digunakan untuk menampilkan komponen yang kita inginkan.</li><li>Membuat JFrame tanpa judul.</li></ul>
<code>JFrame(String Judul)</code>	<ul style="list-style-type: none"><li>Pemberian nama pada jendela utama yang ditampilkan.</li><li>Membuat JFrame dengan judul.</li></ul>

Metode	Keterangan
<code>void setSize(int lebar, int tinggi)</code>	Mengatur ukuran frame.

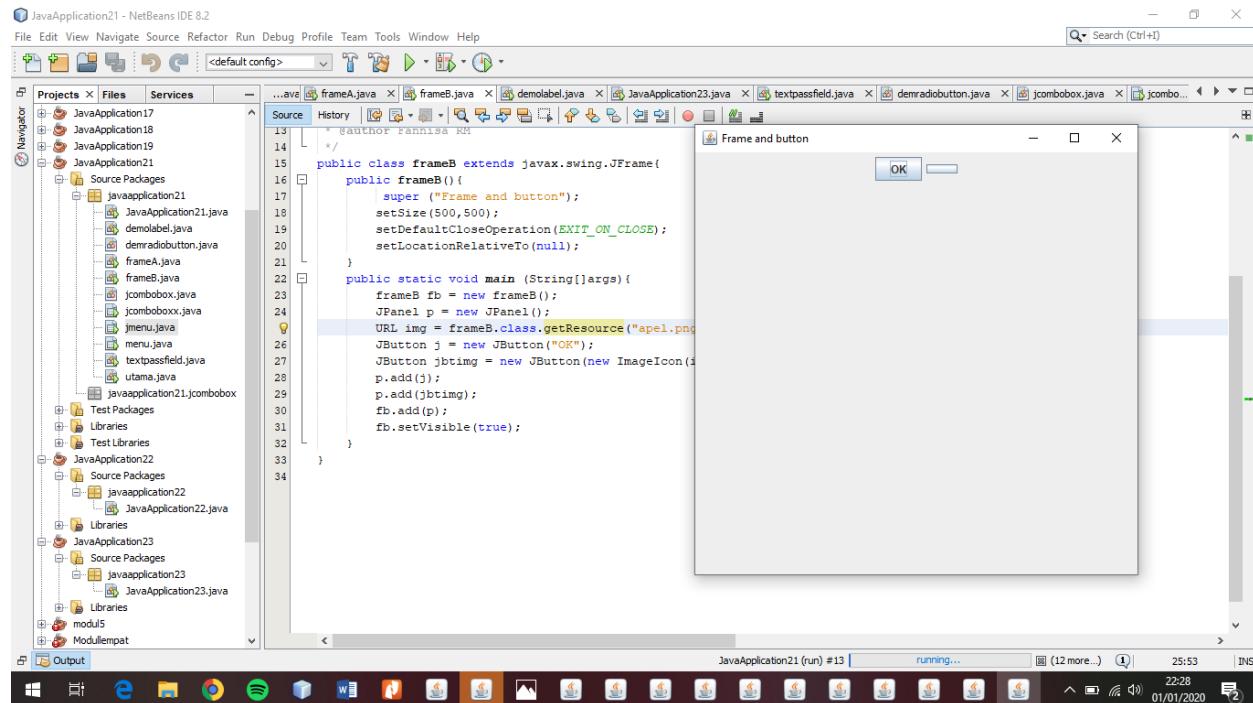
<code>void setLocation(int x, int y)</code>	Mengatur lokasi frame dihitung dari kiri atas.
<code>void setVisible(boolean)</code>	Menentukan JFrame ditampilkan atau tidak.
<code>void setLocationRelativeTo(Component)</code>	Menentukan letak JFrame relative dengan komponen lainnya. Jika diset null, maka JFrame akan ditampilkan di tengah.

## Button

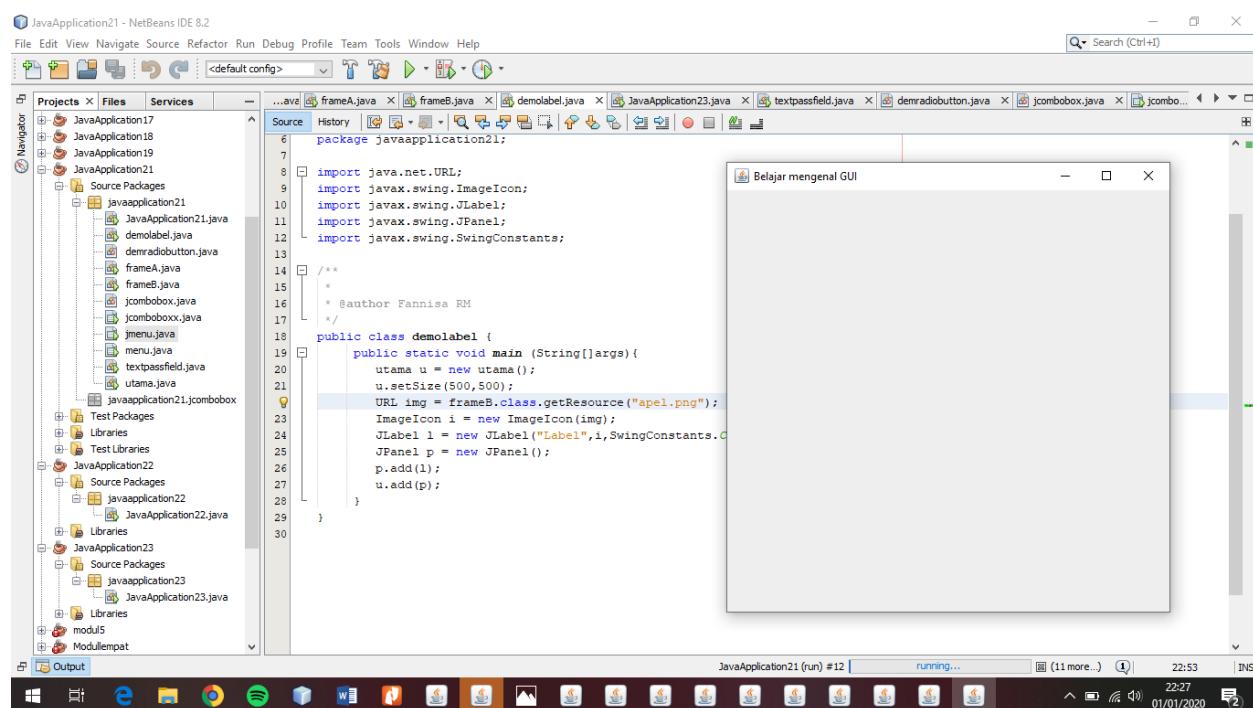


Konstruktor	Keterangan
<code>JButton()</code>	Membuat JButton tanpa teks maupun icon.
<code>JButton(String teks)</code>	Membuat JButton dengan teks.
<code>JButton(Icon icon)</code>	Membuat JButton dengan icon.
<code>JButton(String teks, Icon icon)</code>	Membuat JButton dengan teks dan icon.

## Container



## Label



<b>Konstruktor</b>	<b>Keterangan</b>
JLabel(String teks)	Label dengan teks.
JLabel(String teks, int i)	Label dengan teks dan alignment (perataan). Terdapat tiga jenis alignment, yaitu LEFT, CENTER, dan RIGHT.
JLabel(String teks, Icon ic, int i)	Label dengan teks, icon, dan alignment.

TextField dan Password Field

JavaApplication21 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services ...ave JavaApplication22.java utama.java frameA.java frameB.java demolabel.java JavaApplication23.java texttextfield.java <default config>

Source History

```
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 package javaapplication21;
7 import javax.swing.JLabel;
8 import javax.swing.JPanel;
9 import javax.swing.JPasswordField;
10 import javax.swing.JTextField;
11 /**
12 *
13 * @author Fannisa RM
14 */
15 public class texttextfield {
16     public static void main(String[]args) {
17         utama u = new utama();
18         JLabel nama = new JLabel("Nama : ");
19         JLabel pass = new JLabel("Password : ");
20         JTextField inputnama = new JTextField(15);
21         JPasswordField inputpsw = new JPasswordField(15);
22         JPanel p = new JPanel();
23         p.add(nama);
24         p.add(inputnama);
25         p.add(pass);
26         p.add(inputpsw);
27         u.add(p);
28     }
29 }
```

Output JavaApplication21 (run) #6 running... (5 more...) 18:42 01/01/2020 IN

JavaApplication21 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Projects Files Services ...ave JavaApplication22.java utama.java frameA.java frameB.java demolabel.java JavaApplication23.java texttextfield.java <default config>

Source History

```
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 package javaapplication21;
7 import javax.swing.JLabel;
8 import javax.swing.JPanel;
9 import javax.swing.JPasswordField;
10 import javax.swing.JTextField;
11 /**
12 *
13 * @author Fannisa RM
14 */
15 public class texttextfield {
16     public static void main(String[]args) {
17         utama u = new utama();
18         JLabel nama = new JLabel("Nama : ");
19         JLabel pass = new JLabel("Password : ");
20         JTextField inputnama = new JTextField(15);
21         JPasswordField inputpsw = new JPasswordField(15);
22         JPanel p = new JPanel();
23         p.add(nama);
24         p.add(inputnama);
25         p.add(pass);
26         p.add(inputpsw);
27         u.add(p);
28     }
29 }
```

Belajar mengenal ... Nama: Password:

Output JavaApplication21 (run) #7 running... (6 more...) 18:42 01/01/2020 IN

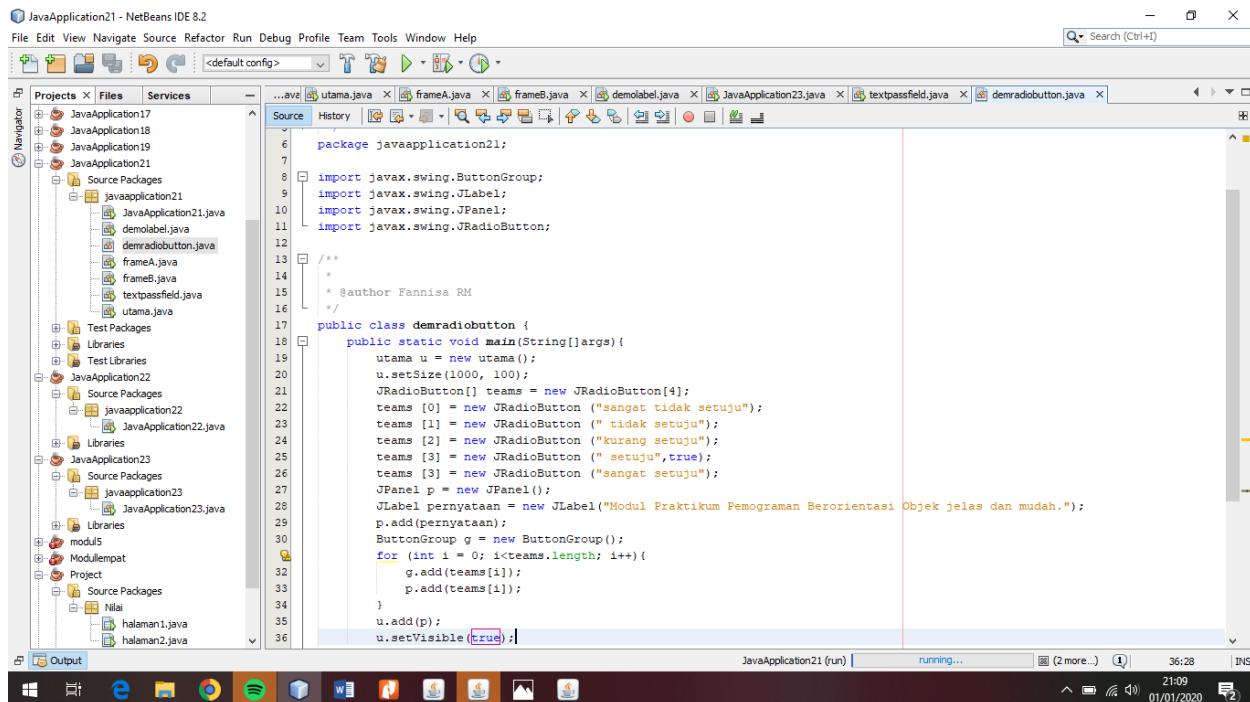
Konstruktor

Penjelasan

JTextField()	Text Field kosong tanpa tulisan.
JTextField(int i)	Text Field dengan panjang yang ditentukan.
JTextField(String i)	Teks Field dengan teks yang sudah ditentukan.
JTextField(String teks, int i)	Teks Field dengan teks dan panjang kolom yang sudah ditentukan

Parameter dalam class <b>JTextField</b>	Penjelasan
String Text	Teks dalam Text Field.
Boolean Editable	Menentukan bisa tidaknya teks dalam Text Field untuk diedit.
Int columns	Jumlah kolom pada Text Field.
Int horizontalAlignment	Perataan horizontal pada Text Field.

## Radio Button dan CheckBox



The screenshot shows the NetBeans IDE interface with the title "JavaApplication21 - NetBeans IDE 8.2". The code editor displays Java code for a RadioButton application. The code defines a class named "demradiobutton" with a main method that creates a window, adds a panel, and sets its size. It then creates four radio buttons and adds them to a button group. The code also includes a label and a panel for displaying a statement. The code is annotated with comments and imports for javax.swing components.

```

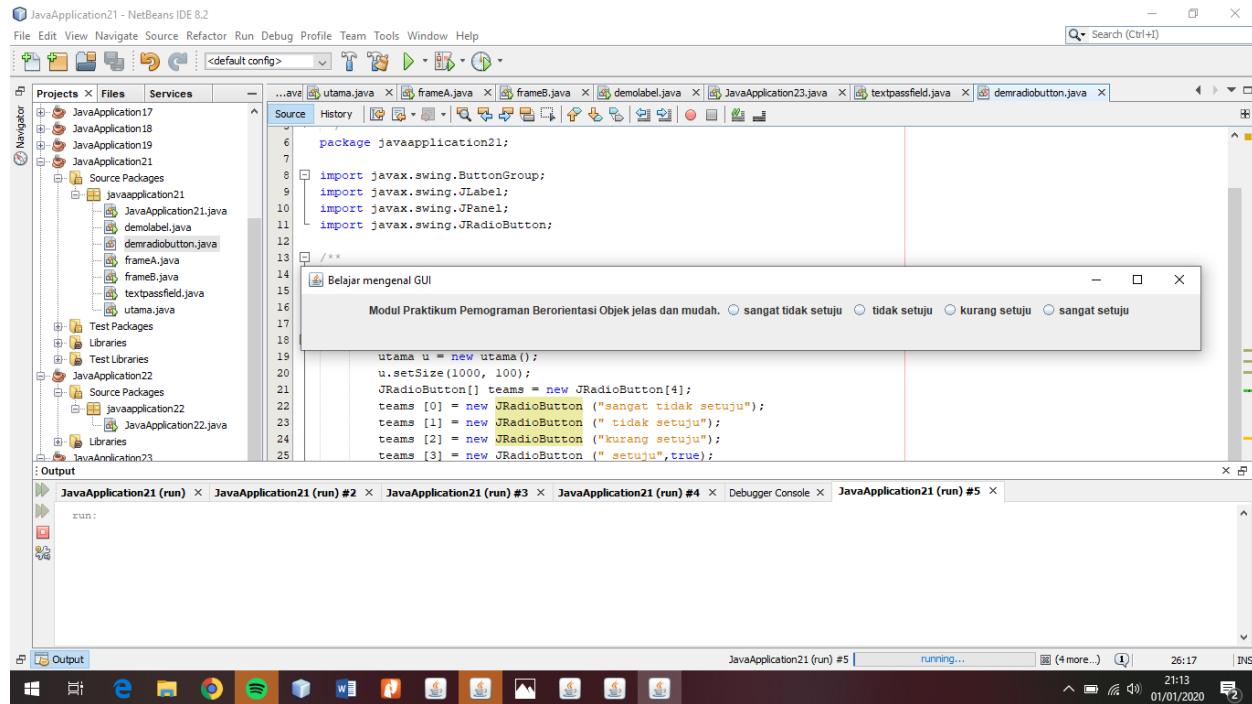
JavaApplication21 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Tools Window Help
...ave Utama.java frameA.java frameB.java demlabel.java JavaApplication23.java textpassfield.java demradiobutton.java
Projects Files Services
JavaApplication17 JavaApplication18 JavaApplication19 JavaApplication21
Source Packages javaapplication21
  JavaApplication21.java demlabel.java demradiobutton.java frameA.java frameB.java textpassfield.java utama.java
Test Packages Libraries
JavaApplication22
Source Packages javaapplication22
  JavaApplication22.java
Libraries
JavaApplication23
Source Packages javaapplication23
  JavaApplication23.java
Libraries
modul5
Modulemat Project
  Source Packages Nilai
    halaman1.java halaman2.java
Output
JavaApplication21 (run) running... (2 more...) 36:28 21:09 01/01/2020 2

```

```

6 package javaapplication21;
7
8 import javax.swing.JButtonGroup;
9 import javax.swing.JLabel;
10 import javax.swing.JPanel;
11 import javax.swing.JRadioButton;
12
13 /**
14 * @author Fannisa RM
15 */
16 public class demradiobutton {
17     public static void main(String[] args){
18         Utama u = new Utama();
19         u.setSize(1000, 100);
20         JRadioButton[] teams = new JRadioButton[4];
21         teams [0] = new JRadioButton ("sangat tidak setuju");
22         teams [1] = new JRadioButton ("tidak setuju");
23         teams [2] = new JRadioButton ("kurang setuju");
24         teams [3] = new JRadioButton ("setuju",true);
25         teams [3] = new JRadioButton ("sangat setuju");
26         JPanel p = new JPanel();
27         JLabel pernyataan = new JLabel("Modul Praktikum Pemrograman Berorientasi Objek jelas dan mudah.");
28         p.add(pernyataan);
29         JButtonGroup g = new JButtonGroup();
30         for (int i = 0; i<teams.length; i++){
31             g.add(teams[i]);
32             p.add(teams[i]);
33         }
34         u.add(p);
35         u.setVisible(true);
36     }
}

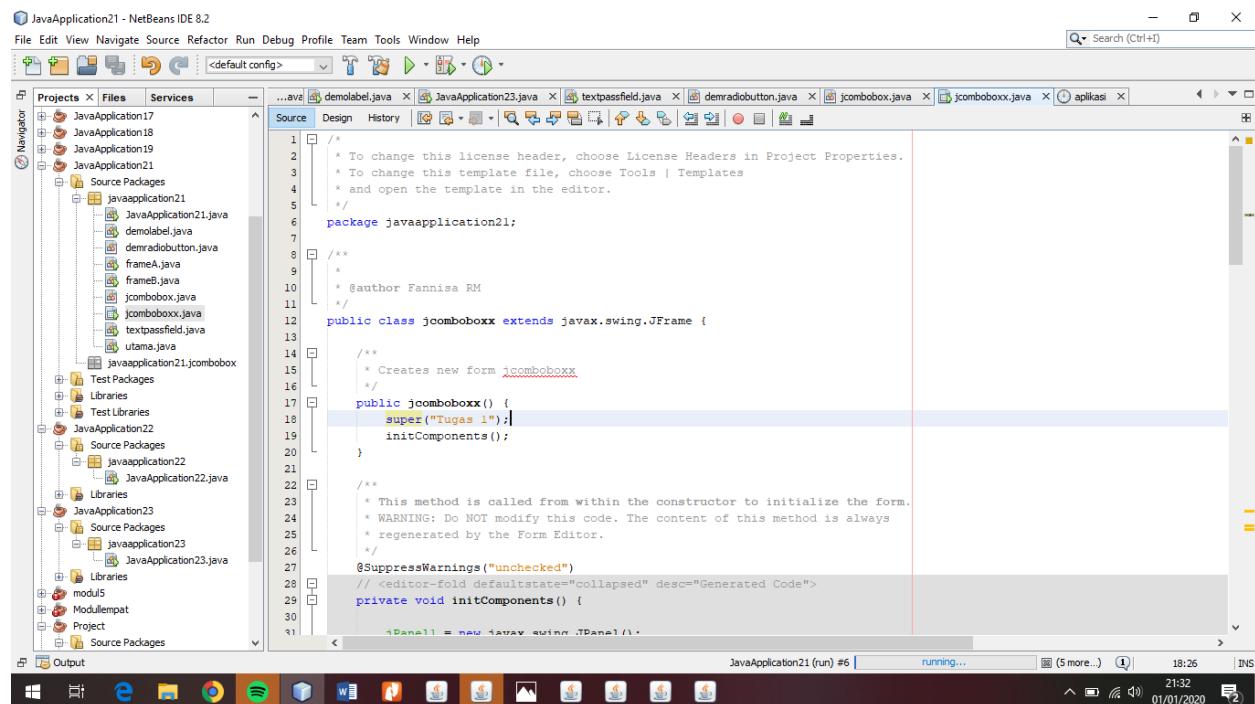
```



Konstruktor	Penjelasan
<code>JCheckBox(String Teks)</code>	Check box dengan teks yang ditentukan.
<code>JCheckBox(String, Boolean)</code>	Check box dengan teks yang ditentukan, jika kondisi pada parameter kedua true, maka Check box ini akan dipilih.
<code>JCheckBox(icon)</code>	Check box dengan gambar icon.
<code>JCheckBox(icon, Boolean)</code>	Check box dengan gambar icon dan terpilih jika true.
<code>JCheckBox(String, Icon)</code>	Check box dengan tulisan dan gambar icon.
<code>JCheckBox(String, Icon, Boolean)</code>	Check box dengan tulisan dan gambar icon, akan dipilih secara default jika kondisi true.

## Tugas

### Gunakan JComboBox



The screenshot shows the NetBeans IDE interface with the following details:

- MenuBar:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Toolbar:** Standard NetBeans toolbar with icons for file operations, search, and project navigation.
- Project Explorer (Projects tab):** Shows multiple Java projects: JavaApplication17, JavaApplication18, JavaApplication19, JavaApplication21, JavaApplication22, JavaApplication23, and a modul5 module.
- Navigator:** Shows the structure of the JavaApplication21 project, including source packages like javaapplication21 containing files such as demolabel.java, demradiobutton.java, frameA.java, frameB.java, jcheckbox.java, jcheckboxx.java, textpassfield.java, and utama.java.
- Code Editor:** Displays the Java code for the jcheckboxx class. The constructor is partially completed with the line `super("Tugas 1");`. The code includes comments about license headers and regenerate methods.
- Output Tab:** Shows the output of the JavaApplication21 run, indicating it is running.
- System Tray:** Shows system icons for battery, signal, and date/time (01/01/2020, 18:26).

JavaApplication21 - NetBeans IDE 8.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Source Design History

Projects Files Services

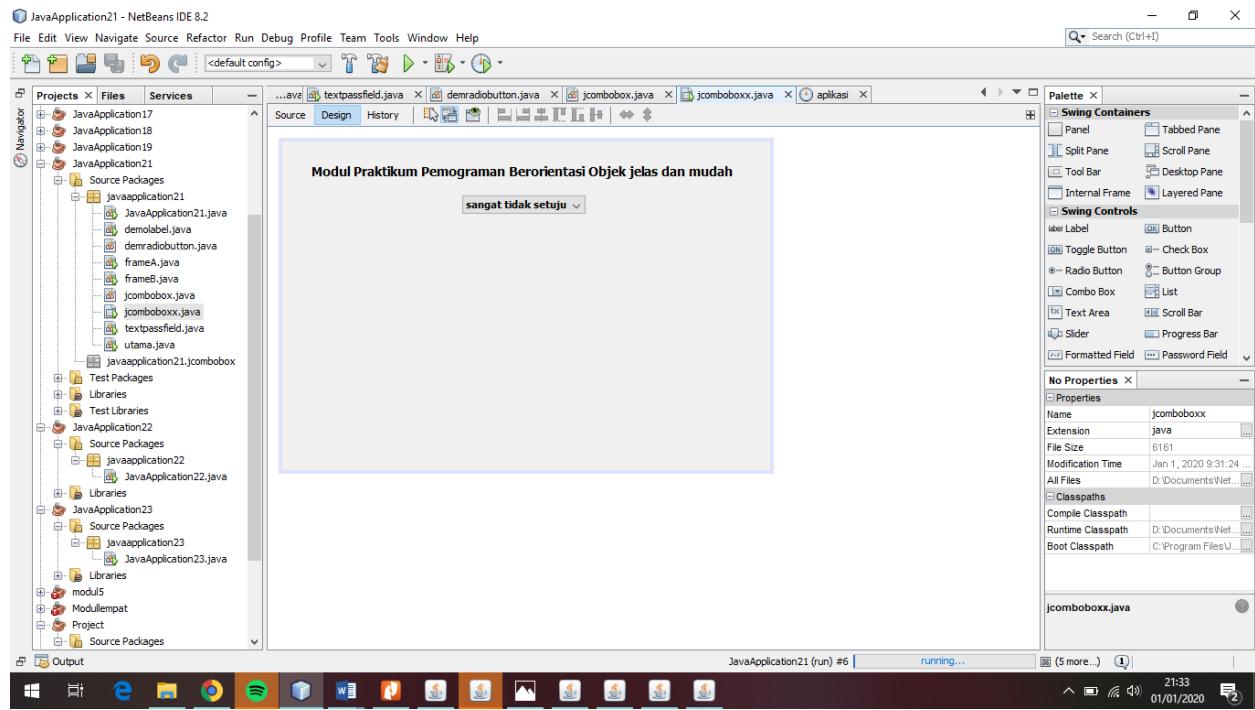
...ave demolabel.java JavaApplication23.java textpassfield.java demradiobutton.java jcombobox.java jcomboboxx.java aplikasi

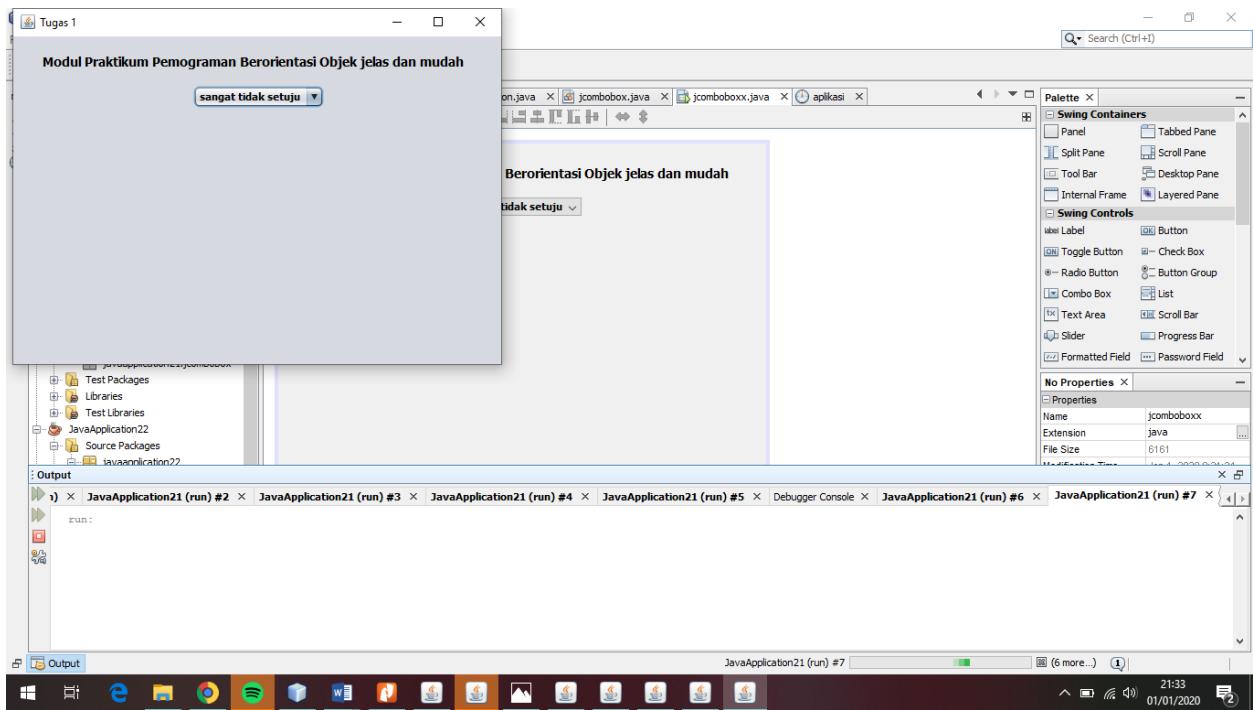
Source

```
82     pack();
83 } // </editor-fold>
84
85 private void jComboBox1ActionPerformed(java.awt.event.ActionEvent evt) {
86     // TODO add your handling code here:
87 }
88
89 /**
90 * @param args the command line arguments
91 */
92 public static void main(String args[]) {
93     /* Set the Nimbus look and feel */
94     // Look and feel setting code (optional)
95
96     /* Create and display the form */
97     java.awt.EventQueue.invokeLater(new Runnable() {
98         public void run() {
99             new jcomboboxx().setVisible(true);
100        }
101    });
102
103 }
104
105 // Variables declaration - do not modify
106 private javax.swing.JComboBox<String> jComboBox1;
107 private javax.swing.JLabel jLabel1;
108 private javax.swing.JPanel jPanel1;
109 // End of variables declaration
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131 }
```

Output

JavaApplication21 (run) #7 running... (6 more...) 1 18:26 21:36 01/01/2020 2





## Menambahkan menu

