

LAPORAN PRAKTIKUM PEMROGRAMAN BERORIENTASI OBJEK

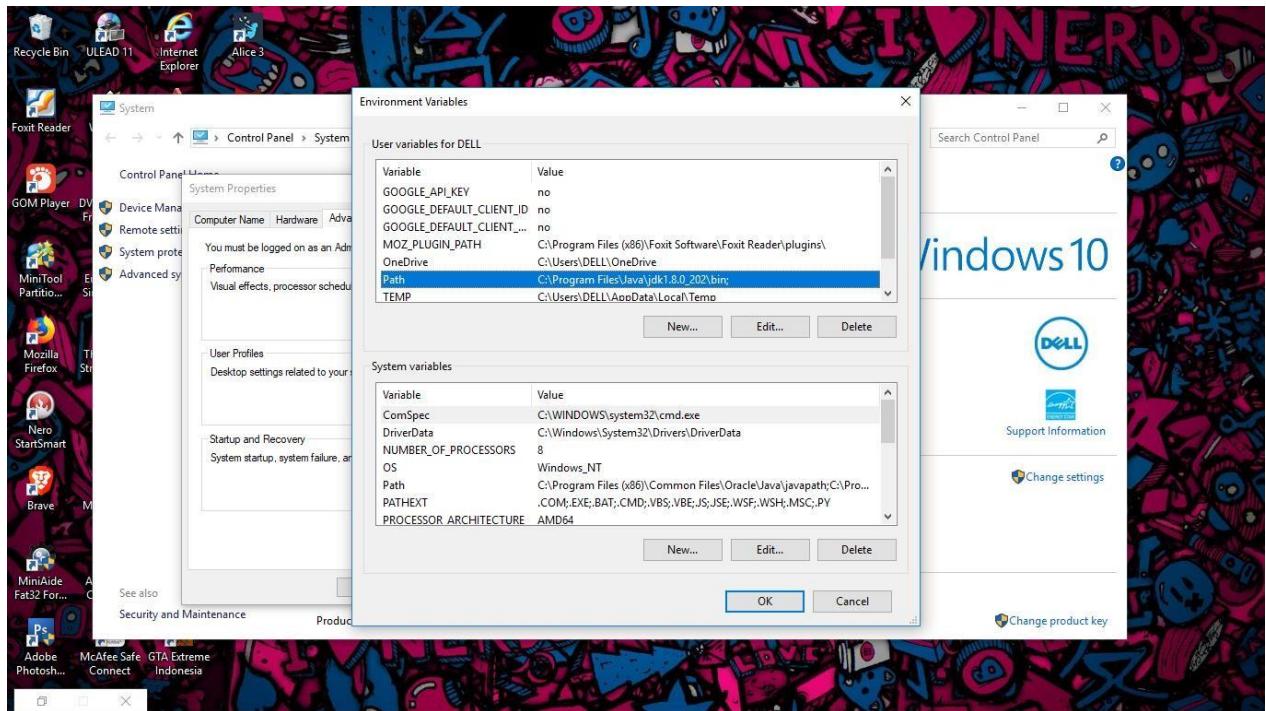
MODUL 1 - 12

Nama : Afiq Tri Nugraha

NIM : L200180080

Kelas : B

MODUL 1



```
C:\Windows\System32\cmd.exe
13/02/2019 10:58      24,927,557 All_Slides.zip
15/06/2019 16:24      107,736,474 Dami Kowe - Nella Kharisma LAGISTA Full Album.mp4
01/06/2019 19:53      <DIR> Games
30/03/2019 07:14      <DIR> hp_lawas
11/12/2018 09:37      16,881 JADWAL PIKET KOS NURIS ( kamar atas ).docx
11/12/2018 09:39      16,888 JADWAL PIKET KOS NURIS ( kamar bawah ).docx
14/04/2019 12:25      23,442 Jurnal ke 5.docx
08/12/2018 14:25      34,384 kelompok_illuminati_dan_orde_dunia_baru_(teori_terbesar).jpg
14/06/2019 19:02      96,464,800 LAGU LEBARAN IOUN FITRI 2019 KOMPILASI LAGU PALING HITS .mp4
15/06/2019 16:51      202,553,992 Lagu Nella Kharisma Terbaru 2019 [ Full Album ] Dangdut Koplo Terpopuler 2019 New Palapa.mp4
15/06/2019 16:52      183,298,542 Lagu VIA VALLEN Terbaru 2019 Dangdut Koplo Terpopuler 2019 [ Full Album ] New Palapa Slow .mp4
02/12/2018 17:50      35,129 Logo-UMS.png
02/12/2018 19:02      26,000 logo.png
16/12/2018 17:10      <DIR> Musker
14/06/2019 18:39      130,372,356 Nissa sabyan full album terbaru 2019.mp4
26/02/2019 15:03      69,885 Paus.a3p
08/12/2018 14:17      34,026 pembunuhan_john_f_kennedy_(tepri_terbesar).jpg
08/12/2018 13:58      190,483 Pengertian-Konspirasi.png
07/05/2019 05:55      <DIR> praktikum 7
06/05/2019 13:34      1,389 Praktikum 7.pdsprj
06/05/2019 13:34      15,375 Praktikum 7.zip
06/08/2018 19:17      <DIR> Program Files
19/09/2018 20:16      113 Program.java
26/02/2019 15:03      <DIR> projek 1.bak
05/03/2019 14:31      <DIR> Proteus.Professional.v8.0 +Crack
08/11/2018 00:04      16,334,848 python-2.7.2.amd64.msi
18/10/2018 06:24      25,506,832 python-3.7.0.exe
20/07/2018 14:29      <DIR> RT_1_TITIP
14/06/2019 17:01      214,335,238 SABYAN TOP 20 HITS FULL HD - nissa sabyan (1).mp4
14/06/2019 18:17      91,346,029 Sholawat terbaru 2019 paling syahdu sangat menyentuh hati.mp4
02/12/2018 20:01      99,458 teknik-informatika-min.jpg
12/03/2019 15:02      84,225 Wanita.a3p
28/03/2019 08:55      <DIR> Wanita.bak
08/12/2018 13:06      71,821 Web-Service.jpg
30/07/2019 16:50      <DIR> YouTube Video Downloader - 16.2.1
        41 File(s)  1,244,360,572 bytes
       12 Dir(s)  131,284,811,776 bytes free

D:\>javac Program.java
D:\>java Program
HELLO WORLD!!
```

MODUL 2

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.17134.1006]
(c) 2018 Microsoft Corporation. All rights reserved.

D:\>javac Roti.java
D:\>javac RotiDemo.java
D:\>java RotiDemo
Warna Roti : Hijau
Rasa Roti : Pandan
Berat Roti : 30gr
Harga Roti : Rp. 6000.0
D:\>
```

```
Roti.java - Notepad
File Edit Format View Help
public class Roti {
    String warna;
    String rasa;
    int berat;
    double harga;

    void beriWarna(String warnaRoti) {
        warna = warnaRoti;
    }

    void berirasa(String rasaRoti) {
        rasa = rasaRoti;
    }

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

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

    void infoRoti() {
        System.out.println(
            "Warna Roti : " + warna +
            "Rasa Roti : " + rasa +
            "Berat Roti : " + berat +
            "Harga Roti : Rp. " + harga
        );
    }
}
```

```
RotiDemo.java - Notepad
File Edit Format View Help
public class RotiDemo{
    public static void main(String[] args) {
        Roti roti = new Roti();
        roti.beriWarna("Hijau");
        roti.berirasa("Pandan");
        roti.timbangBerat(30);
        roti.hargaJual(6000);
        roti.infoRoti();
    }
}
```

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.17134.1006]
(c) 2018 Microsoft Corporation. All rights reserved.

D:\>javac Hewan.java
D:\>javac HewanDemo.java
D:\>java HewanDemo
Jumlah Kaki : 2
Warna Hewan : Hitam Putih
Golongan : Liar
Berat Hewan : 2
D:\>
```

```
Hewan.java - Notepad
File Edit Format View Help
public class Hewan {
    void jumlahKaki(String kakiHewan) {
        kaki = kakiHewan;
    }

    void beriWarna(String warnaHewan) {
        warna = warnaHewan;
    }

    void golonganHewan(String sifatHewan) {
        golongan = sifatHewan;
    }

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

    void infoHewan() {
        System.out.println(
            "Jumlah Kaki : " + kaki + "\n" +
            "Warna Hewan : " + warna + "\n" +
            "Golongan : " + golongan + "\n" +
            "Berat Hewan : " + berat);
    }
}
```

```
HewanDemo.java - Notepad
File Edit Format View Help
public class HewanDemo{
    public static void main(String[] args) {
        Hewan hewan = new Hewan();
        hewan.jumlahKaki("2");
        hewan.beriWarna("Hitam Putih");
        hewan.golonganHewan("Liar");
        hewan.timbangBerat(2);
        hewan.infoHewan();
    }
}
```

The screenshot shows a Windows desktop environment with the following elements:

- Command Prompt Window:** Located at the top left, titled "cmd.exe". It displays the Windows version (10.0.17134.1006), copyright information, and the output of running "javac Car.java" and "java CarDemo".
- Notepad Window (Car.java):** Contains the Java code for the Car class, which includes methods for changing cadence, speed, and gear, and a printInfo() method.
- Notepad Window (CarDemo.java):** Contains the Java code for the CarDemo class, which creates two Car objects and calls their methods.
- Taskbar:** At the bottom of the screen, showing icons for File Explorer, Edge browser, and other system icons.

MODUL 3

JavaApplication1 - NetBeans IDE 8.0.2

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

Projects x Files Services

JavaApplication1

modul3

- LocalVariable.java
- MethodParameter.java
- Nilai.java
- NonVoidMethod.java
- NonVoidMethodAccess.java
- Pegawai.java
- StaticVariable.java
- StaticVariableAccess.java
- VoidMethod.java

Libraries

main - Navigator x

Members

- LocalVariable
- beratBadan()
- hitungUsia()
- main(String[] args)
- usia : int

Source History

```
13 int usia;
14 public void hitungUsia() {
15     //int usia = 0; // local variable
16     int tahunSekarang = 2019;
17     int tahunLahir = 1999;
18
19     usia = tahunSekarang - tahunLahir;
20
21     System.out.println("Usia saya : " + usia);
22 }
23 public void beratBadan(){
24     int beratLahir = 15;
25     int beratBadan = beratLahir + (usia/2);
26     System.out.println("berat badan :" + beratBadan);
27 }
28
29 public static void main (String[] args){
30     LocalVariable usia = new LocalVariable();
31     usia.hitungUsia();
32     usia.beratBadan();
33 }
34
35 }
```

Output - JavaApplication1 (run) x

```
run:
Usia saya : 20
berat badan :25
BUILD SUCCESSFUL (total time: 0 seconds)
```

32:23 INS

JavaApplication1 - NetBeans IDE 8.0.2

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

Projects x Files Services

JavaApplication1

modul3

- LocalVariable.java
- MethodParameter.java
- Nilai.java
- NonVoidMethod.java
- NonVoidMethodAccess.java
- Pegawai.java
- StaticVariable.java
- StaticVariableAccess.java
- VoidMethod.java

Libraries

Navigator x

Members

- Pegawai
- info()
- main(String[] args)
- setGaji(double gaji) : double
- setNama(String nama) : String
- setNip(int nip) : int
- gaji : double
- nama : String
- nip : int

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 modul3;
7 public class Pegawai {
8     String nama;
9     int nip;
10    double gaji;
11    public String setNama (String nama) {
12        return this.nama = nama;
13    }
14    public int setNip (int nip) {
15        return this.nip = nip;
16    }
17    public double setGaji (double gaji) {
18        return this.gaji = gaji;
19    }
20    public void info(){
21        System.out.println("Nama :" + nama + "\n" + "NIP :" + nip + '\n' + "Gaji :" + gaji + "\n");
22    }
23 }
```

Output - JavaApplication1 (run) x

```
run:
Nama :Afiq
NIP :12345
Gaji :1000000.0
Nama :Tri
NIP :45636
Gaji :2000000.0
52:19 INS
```

JavaApplication1 - NetBeans IDE 8.0.2

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

Projects Files Services

JavaApplication1

Source Packages

modul3

- LocalVariable.java
- MethodParameter.java
- Nilai.java
- NonVoidMethod.java
- NonVoidMethodAccess.java
- Pegawai.java
- StaticVariable.java
- StaticVariableAccess.java
- VoidMethod.java

Libraries

main - Navigator

Members

Nilai

- info()
- main(String[] args)
- setNilai(double nilaiUTS, double nilaiUAS, double nilaiTugas)
- totalNilai(): double
- nilaiTotal : double
- nilaiTugas : double
- nilaiUAS : double
- nilaiUTS : double

Output - JavaApplication1 (run) x

```

run:
Nilai UTS :90.0
Nilai UAS :97.0
Nilai Tugas :89.0
Total Nilai :92.0
BUILD SUCCESSFUL (total time: 0 seconds)

```

Finished building JavaApplication1 (run).

JavaApplication1 - NetBeans IDE 8.0.2

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

Projects Files Services

JavaApplication1

Source Packages

modul3

- LocalVariable.java
- MethodParameter.java
- Nilai.java
- NonVoidMethod.java
- NonVoidMethodAccess.java
- Pegawai.java
- StaticVariable.java
- StaticVariableAccess.java
- VoidMethod.java

Libraries

main - Navigator

Members

MethodParameter

- main(String[] args)
- setNama(String name): String
- name : String

Output - JavaApplication1 (run) x

```

run:
Afiq
BUILD SUCCESSFUL (total time: 0 seconds)

```

20:38 INS

JavaApplication1 - NetBeans IDE 8.0.2

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

Projects Files Services

JavaApplication1

Source Packages

modul3

- LocalVariable.java
- MethodParameter.java
- Nilai.java
- NonvoidMethod.java
- NonvoidMethodAccess.java
- Pegawai.java
- StaticVariable.java
- StaticVariableAccess.java
- VoidMethod.java

Libraries

NonVoidMethodAccess - Navigator

Members

- NonVoidMethodAccess
- main(String[] args)

LocalVariable.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 modul3;  
7  
8 /**  
9  *  
10 * @author asus  
11 */  
12 public class NonVoidMethodAccess {  
13     public static void main(String[] args) {  
14         NonvoidMethod a = new NonvoidMethod();  
15         System.out.println("Nama :" + a.getNama() + "\n" + "NIM :" + a.getNIM());  
16     }  
17 }  
18
```

modul3.NonVoidMethodAccess >

Output - JavaApplication1 (run) x

run:
Nama :Afiq Tri Nugraha
NIM :L200180080
BUILD SUCCESSFUL (total time: 0 seconds)

Finished building JavaApplication1 (run).

17:2 INS

JavaApplication1 - NetBeans IDE 8.0.2

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

Projects Files Services

JavaApplication1

Source Packages

modul3

- LocalVariable.java
- MethodParameter.java
- Nilai.java
- NonvoidMethod.java
- NonvoidMethodAccess.java
- Pegawai.java
- StaticVariable.java
- StaticVariableAccess.java
- VoidMethod.java

Libraries

main - Navigator

Members

- StaticVariableAccess
- main(String[] args)

LocalVariable.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 modul3;  
7  
8 /**  
9  *  
10 * @author asus  
11 */  
12 public class StaticVariableAccess {  
13     public static void main(String[] args) {  
14         StaticVariable.akreditasi = 'B';  
15         StaticVariable sv = new StaticVariable();  
16         sv.firstMethod();  
17         sv.secondMethod();  
18     }  
19 }  
20
```

modul3.StaticVariableAccess > main >

Output - JavaApplication1 (run) x

run:
Informatika
Akreditasi : B
BUILD SUCCESSFUL (total time: 0 seconds)

17:27 INS

JavaApplication1 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects x Files Services

JavaApplication1

Source Packages

modul3

- LocalVariable.java
- MethodParameter.java
- Nilai.java
- NonVoidMethod.java
- NonVoidMethodAccess.java
- Pegawai.java
- StaticVariable.java
- StaticVariableAccess.java
- VoidMethod.java

Libraries

main - Navigator x

Members <empty>

VoidMethod

- duration(int hour, int minute, int second)
- info()
- main(String[] args)
- hour : int
- minute : int
- second : int

Source History

```
14 }
15 }
16 public void info() {
17     System.out.println("Total Waktu \n" +
18         " jam " + minute +
19         " menit " + second + " detik");
20 }
21
22 public static void main (String[] args) {
23     VoidMethod vm = new VoidMethod();
24     vm.duration(1, 30, 15);
25     vm.info();
26 }
27 }
```

modul3.VoidMethod > main >

Output - JavaApplication1 (run) x

run:

```
Total Waktu
1 jam 30 menit 15 detik
BUILD SUCCESSFUL (total time: 0 seconds)
```

Finished building JavaApplication1 (run).

MODUL 4

Private Modifier

PrivateModifier - NetBeans IDE 8.2

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

Projects Services Files <default config>

Source Packages

- DF
- LathanDuaa.java
- LathanEmpat.java

privatemodifier

- DefaultModifier.java
- Lathan1.java
- Lathan2.java
- Lathan3.java
- Lathan4.java
- PrivateModifier.java
- ProtectedModifier.java
- PublicModifier.java

Test Packages Libraries Test Libraries

Source History

```
7 /**
8 * @author LABRPL-19
9 */
10 public class PrivateModifier {
11     private String name;
12     private int umur;
13
14     private void printInfo() {
15         System.out.println("private modifier");
16     }
17 }
18
19
20
```

privatemodifier.PrivateModifier > printinfo >

Output - PrivateModifier (run) >

```
run:
Exception in thread "main" java.lang.RuntimeException: Uncompilable source code - printInfo() has private access in privatemodifier.Lathan1
        at privatemodifier.Lathan1.main(Lathan1.java:16)
C:\Users\LABRPL-19\AppData\Local\NetBeans\Cache\8.2\executor-snippets\run.xml:53: Java returned: 1
BUILD FAILED (total time: 1 second)
```

Build of PrivateModifier (run) failed.

16:13 4:00 PM 10/4/2019

PrivateModifier - NetBeans IDE 8.2

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

Projects Services Files <default config>

Source Packages

- DF
- LathanDuaa.java
- LathanEmpat.java

privatemodifier

- DefaultModifier.java
- Lathan1.java
- Lathan2.java
- Lathan3.java
- Lathan4.java
- PrivateModifier.java
- ProtectedModifier.java
- PublicModifier.java

Test Packages Libraries Test Libraries

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 privatemodifier;
7
8 /**
9  * @author LABRPL-19
10 */
11 public class Lathan1 {
12
13     public static void main(String[] args) {
14         PrivateModifier pm = new PrivateModifier();
15         pm.printInfo();
16     }
17 }
18
19
20
```

privatemodifier.Lathan1 > main >

Output - PrivateModifier (run) >

```
run:
Exception in thread "main" java.lang.RuntimeException: Uncompilable source code - printInfo() has private access in privatemodifier.Lathan1
        at privatemodifier.Lathan1.main(Lathan1.java:16)
C:\Users\LABRPL-19\AppData\Local\NetBeans\Cache\8.2\executor-snippets\run.xml:53: Java returned: 1
BUILD FAILED (total time: 1 second)
```

16:24 4:01 PM 10/4/2019

PrivateModifier - NetBeans IDE 8.2

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

Projects Services Files <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 DF;
7
8
9
10
11 public class LatihanDuaa {
12     public static void main(String[] args) {
13         DefaultModifier df = new DefaultModifier();
14         df.jumlah();
15     }
16 }
17
```

Output - PrivateModifier (run)

```
run:
Exception in thread "main" java.lang.RuntimeException: Uncompilable source code - cannot find symbol
  symbol:   class DefaultModifier
  location: class DF.LatihanDuaa
    at DF.LatihanDuaa.main(LatihanDuaa.java:13)
C:\Users\LABRPL-19\AppData\Local\NetBeans\Cache\8.2\executor-snippets\run.xml:53: Java returned: 1
BUILD FAILED (total time: 0 seconds)
```

Build of PrivateModifier (run) failed.

14:21 4:02 PM 10/4/2019

Default Modifier

PrivateModifier - NetBeans IDE 8.2

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

Projects Services Files <default config>

Source History

```
6 package privatemodifier;
7
8 /**
9  * @author LABRPL-19
10 */
11 class DefaultModifier {
12     int a = 1;
13     int b = 2;
14     int c;
15
16     void jumlah() {
17         c = a + b;
18         System.out.println(c);
19     }
20 }
```

Output - PrivateModifier (run)

```
run:
3
BUILD SUCCESSFUL (total time: 1 second)
```

21:2 3:56 PM 10/4/2019

PrivateModifier - NetBeans IDE 8.2

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

Source Services Files <default config>

Projects PrivateModifier

- Source Packages
 - LathanDuaa.java
 - LathanEmpati.java
- privatemodifier
 - DefaultModifier.java
 - Lathan1.java
 - Lathan2.java
 - Lathan3.java
 - Lathan4.java
 - PrivateModifier.java
 - ProtectedModifier.java
 - PublicModifier.java
- Test Packages
- Libraries
- Test Libraries

Source History Search Lathan2.java

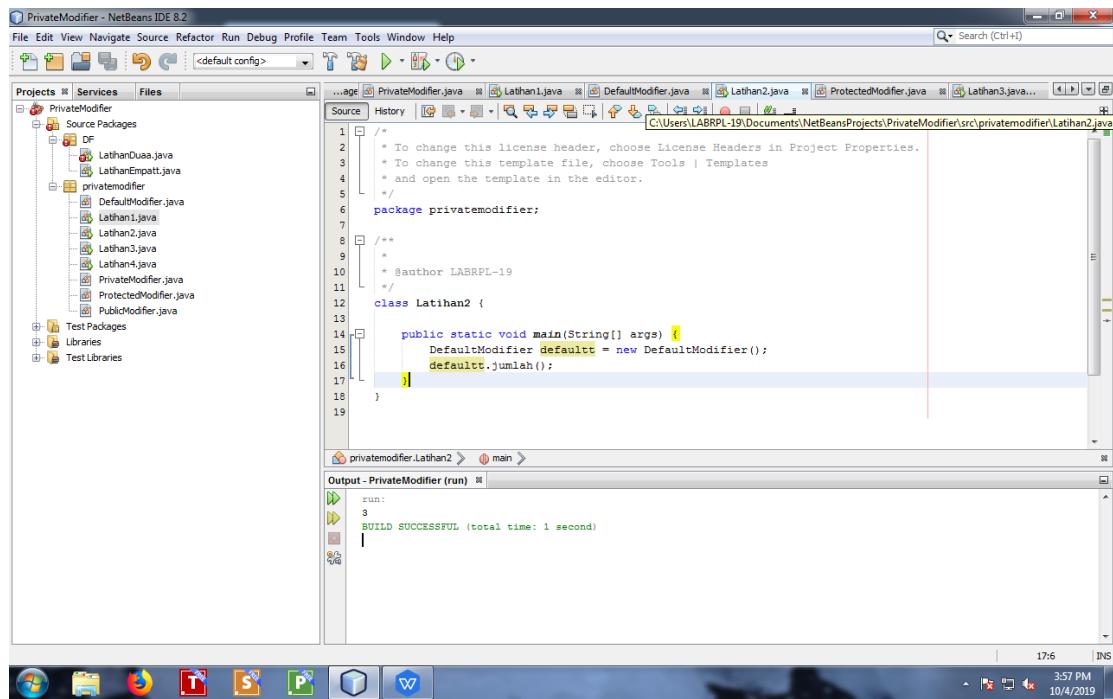
```
1  /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6 package privatemodifier;
7
8 /**
9 *
10 * @author LABRPL-19
11 */
12 class Lathan2 {
13
14     public static void main(String[] args) {
15         DefaultModifier defaultt = new DefaultModifier();
16         defaultt.jumlah();
17     }
18 }
19
```

privatemodifier.Lathan2 > main

Output - PrivateModifier (run)

```
run:
3
BUILD SUCCESSFUL (total time: 1 second)
```

17:5 3:57 PM 10/4/2019



Protected Modifier

PrivateModifier - NetBeans IDE 8.2

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

Source Services Files <default config>

Projects PrivateModifier

- Source Packages
 - LathanDuaa.java
 - LathanEmpati.java
- privatemodifier
 - DefaultModifier.java
 - Lathan1.java
 - Lathan2.java
 - Lathan3.java
 - Lathan4.java
 - PrivateModifier.java
 - ProtectedModifier.java
 - PublicModifier.java
- Test Packages
- Libraries
- Test Libraries

Source History Search Lathan2.java

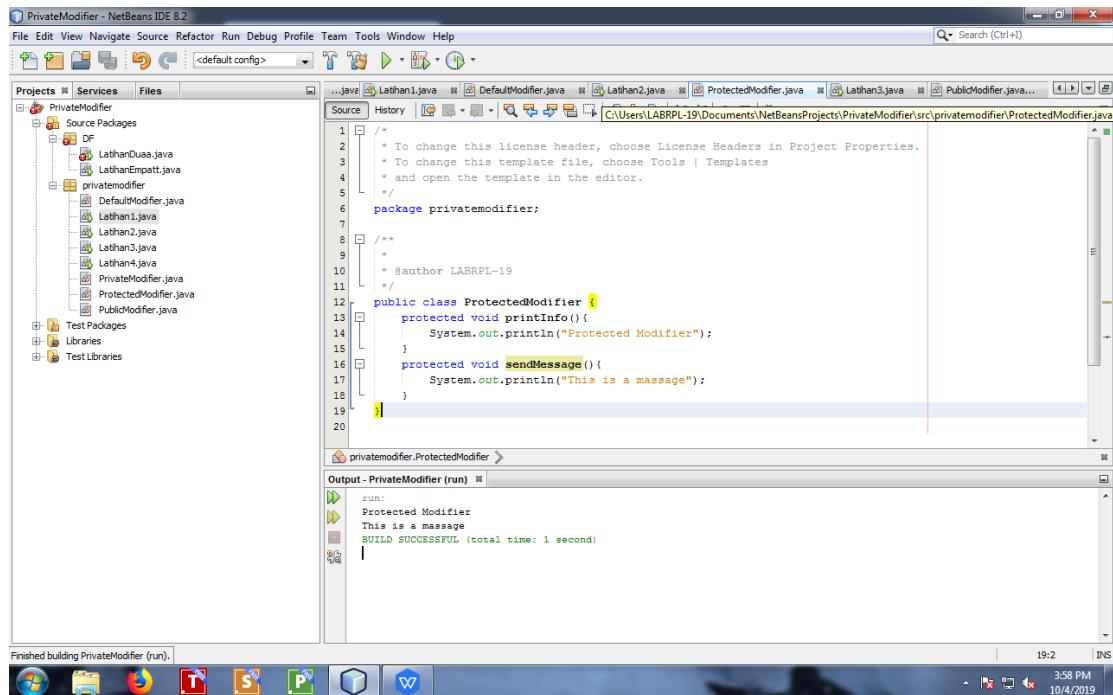
```
1  /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6 package privatemodifier;
7
8 /**
9 *
10 * @author LABRPL-19
11 */
12 public class ProtectedModifier {
13     protected void printInfo(){
14         System.out.println("Protected Modifier");
15     }
16     protected void sendMessage(){
17         System.out.println("This is a massage");
18     }
19 }
```

privatemodifier.ProtectedModifier >

Output - PrivateModifier (run)

```
run:
Protected Modifier
This is a massage
BUILD SUCCESSFUL (total time: 1 second)
```

19:2 3:58 PM 10/4/2019



PrivateModifier - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Services Files <default config>

Source History

private D F Lathan1.java DefaultModifier.java Lathan2.java ProtectedModifier.java Lathan3.java PublicModifier.java

Source Packages

privateDF LathanDuaa.java LathanEmpat.java privatemodifier DefaultModifier.java Lathan1.java Lathan2.java Lathan3.java Lathan4.java PrivateModifier.java ProtectedModifier.java PublicModifier.java

Test Packages

Libraries Test Libraries

privatemodifier.Lathan3 > main >

Output - PrivateModifier (run) >

```
run:
Protected Modifier
This is a message
BUILD SUCCESSFUL (total time: 1 second)
```

18:26 3:58 PM 10/4/2019

Public Modifier

PrivateModifier - NetBeans IDE 8.2

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

Source History | C:\Users\LABRPL-19\Documents\NetBeansProjects\PrivateModifier\src\privatemodifier\PublicModifier.java

Projects Services Files

Source Packages

- PrivateModifier
- Source Packages
 - DF
 - LathanDua.java
 - LathanEmpat.java
 - privatemodifier
 - DefaultModifier.java
 - Lathan1.java
 - Lathan2.java
 - Lathan3.java
 - Lathan4.java
 - PrivateModifier.java
 - ProtectedModifier.java
 - PublicModifier.java
- Test Packages
- Libraries
- Test Libraries

Source History | C:\Users\LABRPL-19\Documents\NetBeansProjects\PrivateModifier\src\privatemodifier\PublicModifier.java

```
16 public void kali(){
17     int d = a*b*c;
18     System.out.println("Hasil kali = "+d);
19 }
20 public void tambah(){
21     int d = a+b+c;
22     System.out.println("Hasil tambah = "+d);
23 }
24 public void kurang(){
25     int d = a-b-c;
26     System.out.println("Hasil kurang = "+d);
27 }
28 public void bagi(){
29     int d = a/b/c;
30     System.out.println("Hasil bagi = "+d);
31 }
32 public void rata(){
33     int d = (a+b+c)/3;
34     System.out.println("Hasil rata-rata = "+d);
35 }
36 }
```

privatemodifier.PublicModifier >

Output - PrivateModifier (run) ::

```
run:
Hasil tambah = 16
Hasil kurang = -12
Hasil kali = 90
Hasil bagi = 0
Hasil rata-rata = 5
BUILD SUCCESSFUL (total time: 1 second)
```

35:2 3:58 PM 10/4/2019

PrivateModifier - NetBeans IDE 8.2

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

Source History

Projects Services Files <default config>

Source Packages

DF

LathanDuaa.java LathanEmpatt.java

privatemodifier

DefaultModifier.java Lathan1.java Lathan2.java Lathan3.java Lathan4.java PrivateModifier.java ProtectedModifier.java PublicModifier.java

Test Packages Libraries Test Libraries

...java Lathan2.java ProtectedModifier.java Lathan3.java PublicModifier.java Lathan4.java LathanDuaa.java

Source History

7
8 /**
9 * @author LABRPL-19
10 */
11
12 public class Latihan4 {
13 public static void main(String[] args) {
14 PublicModifier tmhb = new PublicModifier();
15 tmhb.tambah();
16 PublicModifier krng = new PublicModifier();
17 krng.kurang();
18 PublicModifier kal = new PublicModifier();
19 kal.kali();
20 PublicModifier bag = new PublicModifier();
21 bag.bagi();
22 PublicModifier rt = new PublicModifier();
23 rt.rata();
24 }
25 }
26

privatemodifier.Lathan4 > main

Output - PrivateModifier (run) :

```
run:  
Hasil tambah = 16  
Hasil kurang = -12  
Hasil kali = 90  
Hasil bagi = 0  
Hasil rata-rata = 5  
BUILD SUCCESSFUL (total time: 1 second)
```

23:19 | INS

3:58 PM 10/4/2019

PrivateModifier - NetBeans IDE 8.2

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

Source History

Projects Services Files <default config>

Source Packages

DF

LathanDuaa.java LathanEmpatt.java

privatemodifier

DefaultModifier.java Lathan1.java Lathan2.java Lathan3.java Lathan4.java PrivateModifier.java ProtectedModifier.java PublicModifier.java

Test Packages Libraries Test Libraries

...java Lathan3.java PublicModifier.java Lathan4.java LathanDuaa.java LathanEmpatt.java

Source History

10 /**
11 * @author LABRPL-19
12 */
13
14 public class LatihanEmpatt {
15 public static void main(String[] args) {
16 PublicModifier tmhb = new PublicModifier();
17 tmhb.tambah();
18 PublicModifier krng = new PublicModifier();
19 krng.kurang();
20 PublicModifier kal = new PublicModifier();
21 kal.kali();
22 PublicModifier bag = new PublicModifier();
23 bag.bagi();
24 PublicModifier rt = new PublicModifier();
25 rt.rata();
26 }
27 }
28

DF.LathanEmpatt >

Output - PrivateModifier (run) :

```
run:  
Hasil tambah = 16  
Hasil kurang = -12  
Hasil kali = 90  
Hasil bagi = 0  
Hasil rata-rata = 5  
BUILD SUCCESSFUL (total time: 1 second)
```

27:2 | INS

3:59 PM 10/4/2019

MODUL 5

Modul5 - NetBeans IDE 8.0.2

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

Projects Services Files <default config>

Source History DefaultConstructor.java ParameterAcess.java ParameterConstructor.java Tugas.java TugasAcess.java

DefaultAcess.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.
 */
package modul5;

public class DefaultConstructor {
    String nama = "Afiq Tri Nugraha";
    String nim = "L200180080";
    String alamat = "Kudus";

    public DefaultConstructor(){
        System.out.println(
            "Nama : " + nama + "\n" +
            "NIM : " + nim + "\n" +
            "Alamat : " + alamat + "\n");
    }
}
```

Navigator Members DefaultConstructor

- DefaultConstructor
- alamat : String
- nama : String
- nim : String

Output - Modul5 (run) x

```
run:
Nama : Afiq Tri Nugraha
NIM : L200180080
Alamat : Kudus

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

21:1 | INS

Modul5 - NetBeans IDE 8.0.2

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

Projects Services Files <default config>

Source History DefaultConstructor.java ParameterAcess.java ParameterConstructor.java Tugas.java TugasAcess.java

DefaultAcess.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.
 */
package modul5;

public class DefaultAcess {
    public static void main(String[] args){
        DefaultConstructor cons = new DefaultConstructor();
    }
}
```

DefaultAcess - Navigator Members

- DefaultAcess
- main(String[] args)

modul5.DefaultAcess >

Output - Modul5 (run) x

```
run:
Nama : Afiq Tri Nugraha
NIM : L200180080
Alamat : Kudus

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

13:2 | INS

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

- Top Bar:** Modul5 - NetBeans IDE 8.0.2, File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Toolbar:** Standard NetBeans icons for file operations.
- Projects Tab:** JavaApplication1, modul5 (selected), Libraries.
- Navigator Tab:** Members (empty). Below it, the class hierarchy for ParameterConstructor is shown:
 - ParameterConstructor
 - ParameterConstructor(String judulBuku, String namaPengarang)
 - ParameterConstructor(int tahunTerbit, int cetakanKe)
 - ParameterConstructor(double hargaJual)
- Code Editor:** ParameterAccess.java (selected). The code contains three methods: infoBuku(), infoBukn1(), and infoBukn2().

```
29     }
30
31     public void infoBuku(){
32         System.out.println(
33             "Judul Buku : " + judulBuku +"\n"+
34             "Nama Pengarang : " + namaPengarang
35         );
36     }
37
38     public void infoBukn1(){
39         System.out.println(
40             "Tahun Terbit : " + tahunTerbit + "\n" +
41             "Cetakan ke : " + cetakanKe
42         );
43     }
44
45     public void infoBukn2(){
46         System.out.println(
47             "Harga : " + hargaJual +"\n"
48         );
49     }

```
- Output Tab:** Output - Modul5 (run) x. It displays the execution results:

Cetakan ke :	6
Harga :	33000.0
Judul Buku :	Kamu
Nama Pengarang :	April
Tahun Terbit :	2017
Cetakan ke :	11
Harga :	45000.0

BUILD SUCCESSFUL (total time: 0 seconds)
- Bottom Bar:** Standard NetBeans icons for file operations.

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

- Project Explorer (Left):** Shows a Java application named "JavaApplication1" with modules "modulis" containing source packages "modulis". The package contains classes: DefaultAcess.java, DefaultConstructor.java, ParameterAcess.java, ParameterConstructor.java, Tugas.java, and TugasAcess.java.
- Code Editor (Top Right):** Displays the content of the ParameterAcess.java file. The code creates three instances of ParameterConstructor (a2, b, c) and prints their details using infoBuku() and infoBuku2() methods.
- Output Window (Bottom):** Shows the console output for the run "modulis.ParameterAcess > main". The output is:

Cetakan ke : 6
Harga : 33000.0
Judul Buku : Kamu
Nama Pengarang : April
Tahun Terbit : 2017
Cetakan ke : 11
Harga : 45000.0

BUILD SUCCESSFUL (total time: 0 seconds)
- Toolbar (Bottom Left):** Includes icons for file operations like Open, Save, and Build.
- Status Bar (Bottom):** Shows the message "Finished building Modul5 (run)".

Modul5 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Services Files

TugasAcess.java x Tugas.java x

Source History |

```
22     this.Semester = Semester;
23     this.angkatan = angkatan;
24   }
25
26   public void infoMhs() {
27     System.out.println(
28       "Nama      : " + nama + "\n" +
29       "NIM       : " + nim + "\n" +
30       "Semester  : " + Semester + "\n" +
31       "Angkatan  : " + angkatan
32     );
33   }
34 }
```

modul5.Tugas > infoMhs >

Output - Modul5 (run) x

```
run:
Selamat datang Mahasiswa UNS
Nama      : Afiq Tri Nugraha
NIM       : L200180080
Semester  : 3
Angkatan  : 2018
BUILD SUCCESSFUL (total time: 0 seconds)
```

Finished building Modul5 (run).

33:6 INS

Modul5 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Services Files

TugasAcess.java x Tugas.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 modul5;
7
8 public class TugasAcess {
9     public static void main(String[] args) {
10         Tugas d = new Tugas();
11         Tugas dl = new Tugas("Afiq Tri Nugraha", "L200180080", 3, 2018);
12         dl.infoMhs();
13     }
14 }
```

modul5.TugasAcess > main >

Output - Modul5 (run) x

```
run:
Selamat datang Mahasiswa UNS
Nama      : Afiq Tri Nugraha
NIM       : L200180080
Semester  : 3
Angkatan  : 2018
BUILD SUCCESSFUL (total time: 0 seconds)
```

13:6 INS

MODUL 6

Single Inheritance

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

- Title Bar:** Modul6 - NetBeans IDE 8.0.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar icons.
- Projects Tab:** Shows the project structure under "Modul6".
- Source Editor:** Displays the `Programmer.java` file content:

```
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-2
10 */
11 public class Programmer extends Pegawai{
12     public static void main(String[] args){
13         double lemburPerjam = 50000;
14         double gajiPerBulan;
15         Pegawai pegawai = new Pegawai();
16         gajiPerBulan = pegawai.gajiPokok + lemburPerjam;
17         System.out.println(gajiPerBulan);
18     }
19 }
20
```
- Output Window:** Shows the run output:

```
run:
1.006E7
BUILD SUCCESSFUL (total time: 0 seconds)
```
- Bottom Status Bar:** 18:6 INS

Hierarchical Inheritance

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

- Title Bar:** Modul6 - NetBeans IDE 8.0.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar icons.
- Projects Tab:** Shows the project structure under "Modul6".
- Source Editor:** Displays the `Teknisi.java` file content:

```
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-2
10 */
11 public class Teknisi extends Pegawai{
12     public static void main(String[] args){
13         double lemburPerjam = 40000;
14         double gajiPerBulan;
15         Pegawai pegawai = new Pegawai();
16         gajiPerBulan = pegawai.gajiPokok + lemburPerjam;
17         System.out.println(gajiPerBulan);
18     }
19 }
20
```
- Output Window:** Shows the run output:

```
run:
1.004E7
BUILD SUCCESSFUL (total time: 0 seconds)
```
- Bottom Status Bar:** Finished building Modul6 (run). 18:6 INS

Multilevel Inheritance

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

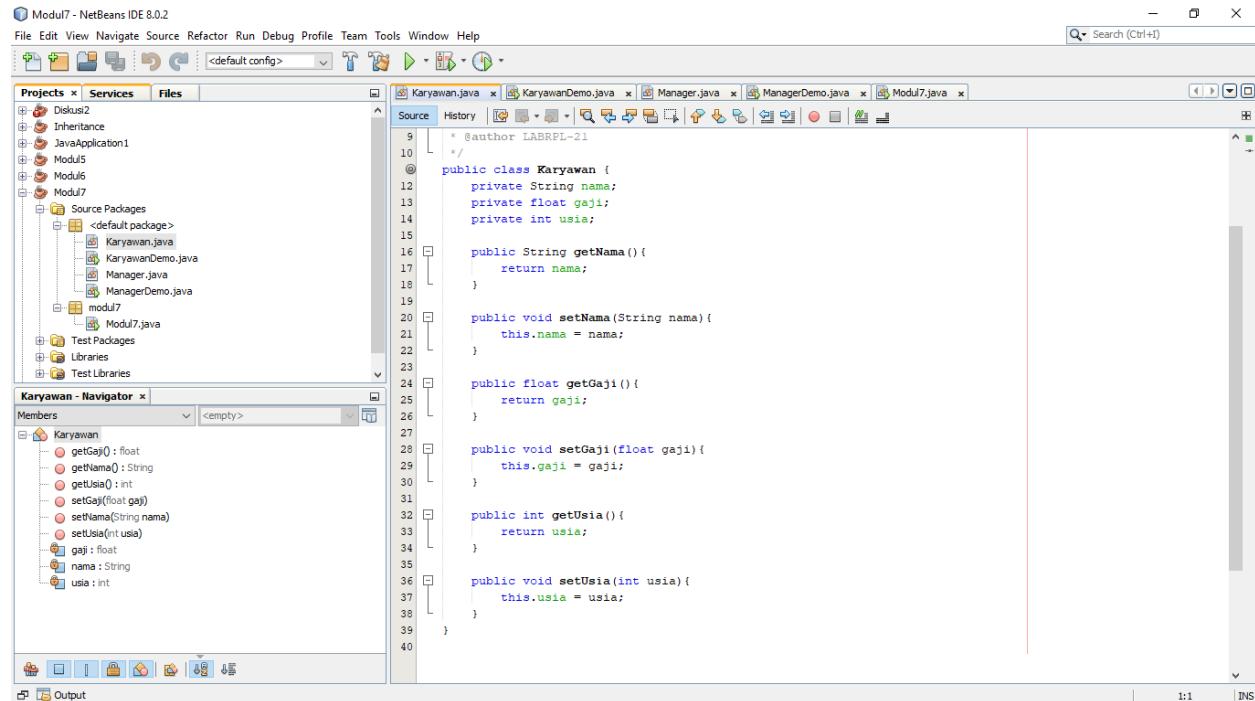
- Menu Bar:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Toolbar:** Standard NetBeans toolbar icons.
- Project Explorer (Projects tab):** Shows the project "Modul6" with source packages "Modul6" and "Tugas". Inside "Modul6" are files A.java, B.java, C.java, InheritanceTest.java, Kendaraan.java, LatihanDemo.java, Mobil.java, Pegawai.java, Pesawat.java, Programmer.java, and Teknis.java. Inside "Tugas" are files BangunDatar.java and Persegi.java.
- Code Editor (InheritanceTest.java):** Displays the following Java code:

```
4  * and open the template in the editor.
5  */
6
7  /**
8  *
9  * @author LABREL-2
10 */
11 public class InheritanceTest {
12     public static void main(String[] args) {
13         A a = new A();
14         B b = new B();
15         C c = new C();
16
17         a.MessageA();
18         b.MessageB();
19         b.MessageA();
20         c.MessageC();
21         c.MessageB();
22         c.MessageA();
23     }
24 }
```
- Navigator (main - Navigator tab):** Shows the members of the InheritanceTest class, specifically the main method.
- Output Window (Output - Module (run) tab):** Displays the run log:

```
run:
Info dari Class A
Info dari Class B
Info dari Class A
Info dari Class C
Info dari Class B
Info dari Class A
BUILD SUCCESSFUL (total time: 0 seconds)
```
- Bottom Status Bar:** Shows "Finished building Modul6 (run).", the current time (23:6), and the INS indicator.

MODUL 7

Akses Modifier Private pada Encapsulation



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

- Title Bar:** Modul7 - NetBeans IDE 8.0.2
- 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 structure with packages like Diskus2, Inheritance, JavaApplication1, Modul5, Modul6, and Modul7. Under Modul7, there are Source Packages (containing Karyawan.java, KaryawanDemo.java, Manager.java, ManagerDemo.java) and modul7 (containing Modul7.java). Test Packages, Libraries, and Test Libraries are also listed.
- Navigator:** Shows the members of the Karyawan class, including private fields nama, gaji, and usia, and their corresponding public getters and setters.
- Code Editor:** Displays the Karyawan.java code with annotations for the license header and template information.
- Output:** Shows the build status as "BUILD SUCCESSFUL (total time: 0 seconds)".

```
* @author LABRPL-21
*/
public class Karyawan {
    private String nama;
    private float gaji;
    private int usia;

    public String getNama() {
        return nama;
    }

    public void setNama(String nama) {
        this.nama = nama;
    }

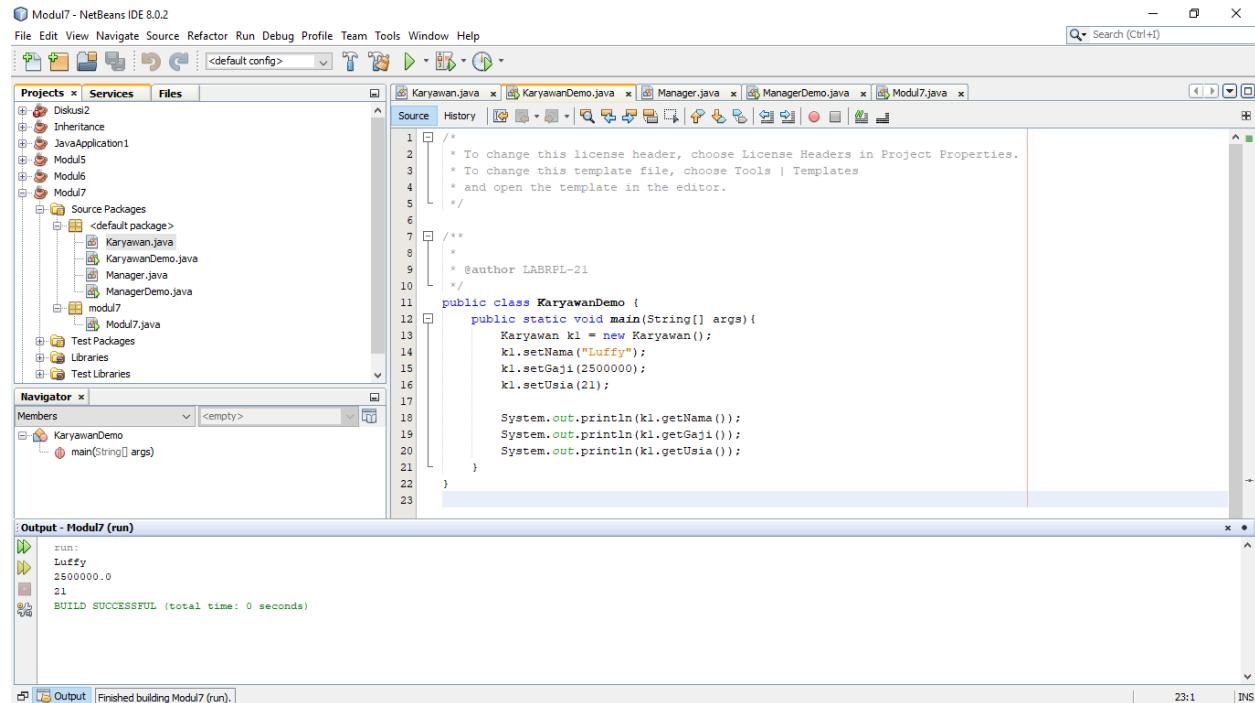
    public float getGaji() {
        return gaji;
    }

    public void setGaji(float gaji) {
        this.gaji = gaji;
    }

    public int getUsia() {
        return usia;
    }

    public void setUsia(int usia) {
        this.usia = usia;
    }
}
```

Pemanfaatan Getter dan Setter



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

- Title Bar:** Modul7 - NetBeans IDE 8.0.2
- 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 same project structure as the previous screenshot.
- Code Editor:** Displays the KaryawanDemo.java code, which creates a Karyawan object named kl, sets its name to "Luffy", and prints its name, salary, and age.
- Output:** Shows the run results with the output "run: Luffy 250000.0 21 BUILD SUCCESSFUL (total time: 0 seconds)".

```
/*
 * 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 LABRPL-21
 */
public class KaryawanDemo {
    public static void main(String[] args) {
        Karyawan kl = new Karyawan();
        kl.setNama("Luffy");
        kl.setGaji(250000);
        kl.setUsia(21);

        System.out.println(kl.getNama());
        System.out.println(kl.getGaji());
        System.out.println(kl.getUsia());
    }
}
```

Single Inheritance

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

- Title Bar:** Modul7 - NetBeans IDE 8.0.2
- 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 projects like Diskus2, Inheritance, JavaApplication1, Modul5, Modul6, and Modul7. Modul7 contains Source Packages (default package) with Karyawan.java, KaryawanDemo.java, Manager.java, and ManagerDemo.java, and modul7.java.
- Code Editor:** The Manager.java file is open, showing the following code:

```
/*
 * 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 LABRPL-21
 */
public class Manager extends Karyawan {
    private float jamKerja = 7.5f;

    public float jamKerja(){
        return jamKerja;
    }

    public float getGajiManager(){
        return getGaji() * 2;
    }
}
```

- Navigator:** Shows members of the Manager class: getGajiManager(): float, jamKerja(): float, and jamKerja: float.
- Status Bar:** Shows the time as 12:35 and mode as INS.

Latihan

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

- Title Bar:** Modul7 - NetBeans IDE 8.0.2
- 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 projects like Diskus2, Inheritance, JavaApplication1, Modul5, Modul6, and Modul7. Modul7 contains Source Packages (default package) with Karyawan.java, KaryawanDemo.java, Manager.java, ManagerDemo.java, and modul7.java, and modul7.java.
- Code Editor:** The ManagerDemo.java file is open, showing the following code:

```
/*
 *
 * @author LABRPL-21
 */
public class ManagerDemo {
    public static void main(String[] args){
        Manager m1 = new Manager();
        Manager m2 = new Manager();
        Manager m3 = new Manager();
        Manager m4 = new Manager();
        Manager m5 = new Manager();

        m1.setGaji(500000);
        m1.setNama("Manager 1");
        m1.setUsia(30);

        m2.setGaji(100000);
        m2.setNama("Manager 2");
        m2.setUsia(25);

        m3.setGaji(200000);
        m3.setNama("Manager 3");
        m3.setUsia(26);

        m4.setGaji(300000);
        m4.setNama("Manager 4");
        m4.setUsia(27);

        m5.setGaji(400000);
        m5.setNama("Manager 5");
        m5.setUsia(28);
    }
}
```

- Navigator:** Shows the main() method of ManagerDemo with the argument main(String[] args).
- Status Bar:** Shows the time as 37:24 and mode as INS.

Modul7 - NetBeans IDE 8.0.2

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services Files
Source History <default config> Search (Ctrl+I)
Projects x Services x Files x Karyawan.java x KaryawanDemo.java x Manager.java x ManagerDemo.java x Modul7.java x
39 System.out.println("Nama 1 : " + m1.getNama());
40 System.out.println("Gaji Manager 1 : " + m1.getGajiManager());
41 System.out.println("Usia Manager 1 : " + m1.getUsia() + "\n");
42
43 System.out.println("Nama 2 : " + m2.getNama());
44 System.out.println("Gaji Manager 2 : " + m2.getGajiManager());
45 System.out.println("Usia Manager 2 : " + m2.getUsia() + "\n");
46
47 System.out.println("Nama 3 : " + m3.getNama());
48 System.out.println("Gaji Manager 3 : " + m3.getGajiManager());
49 System.out.println("Usia Manager 3 : " + m3.getUsia() + "\n");
50
51 System.out.println("Nama 4 : " + m4.getNama());
52 System.out.println("Gaji Manager 4 : " + m4.getGajiManager());
53 System.out.println("Usia Manager 4 : " + m4.getUsia() + "\n");
54
55 System.out.println("Nama 5 : " + m5.getNama());
56 System.out.println("Gaji Manager 5 : " + m5.getGajiManager());
57 System.out.println("Usia Manager 5 : " + m5.getUsia() + "\n");
58
59

```

main - Navigator x

Members <empty>

ManagerDemo

main(String[] args)

Output - Modul7 (run) x

```

Nama 4 : Manager 4
Gaji Manager 4 : 600000.0
Usia Manager 4 : 27

Nama 5 : Manager 5
Gaji Manager 5 : 800000.0
Usia Manager 5 : 28

BUILD SUCCESSFUL (total time: 0 seconds)

```

Menambahkan Setter pada class Manager

Modul7 - NetBeans IDE 8.0.2

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services Files
Source History <default config> Search (Ctrl+I)
Projects x Services x Files x Karyawan.java x KaryawanDemo.java x Manager.java x ManagerDemo.java x Modul7.java 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
7 /**
8 *
9 * @author LABRPL-21
10 */
11 public class Manager extends Karyawan {
12     private float jamKerja = 7.5f;
13
14     public void setJamKerja(float jamKerja){
15         this.jamKerja = jamKerja;
16     }
17
18     public float jamKerja(){
19         return jamKerja;
20     }
21
22     public float getGajiManager(){
23         return getGaji() * 2;
24     }
25 }
26

```

jamKerja - Navigator x

Members <empty>

Manager :: Karyawan

getGajiManager() : float

jamKerja() : float

setJamKerja(float jamKerja)

jamKerja : float

Output

Modul7 - NetBeans IDE 8.0.2

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

Projects Services Files

Karyawan.java KaryawanDemo.java Manager.java ManagerDemo.java Modul7.java

```

11  public class ManagerDemo {
12      public static void main(String[] args) {
13          Manager m1 = new Manager();
14          Manager m2 = new Manager();
15          Manager m3 = new Manager();
16          Manager m4 = new Manager();
17          Manager m5 = new Manager();
18
19          m1.setGaji(500000);
20          m1.setNama("Manager 1");
21          m1.setUsia(30);
22          m1.setJamKerja(8.5f);
23
24          m2.setGaji(100000);
25          m2.setNama("Manager 2");
26          m2.setUsia(25);
27          m2.setJamKerja(8.5f);
28
29          m3.setGaji(200000);
30          m3.setNama("Manager 3");
31          m3.setUsia(26);
32          m3.setJamKerja(8.5f);
33
34          m4.setGaji(300000);
35          m4.setNama("Manager 4");
36          m4.setUsia(27);
37          m4.setJamKerja(8.5f);
38
39          m5.setGaji(400000);
40          m5.setNama("Manager 5");
41          m5.setUsia(28);
42          m5.setJamKerja(8.5f);
43
44      }
45  }

```

main - Navigator

Members ManagerDemo main(String[] args)

Output

Modul7 - NetBeans IDE 8.0.2

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

Projects Services Files

Karyawan.java KaryawanDemo.java Manager.java ManagerDemo.java Modul7.java

```

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

```

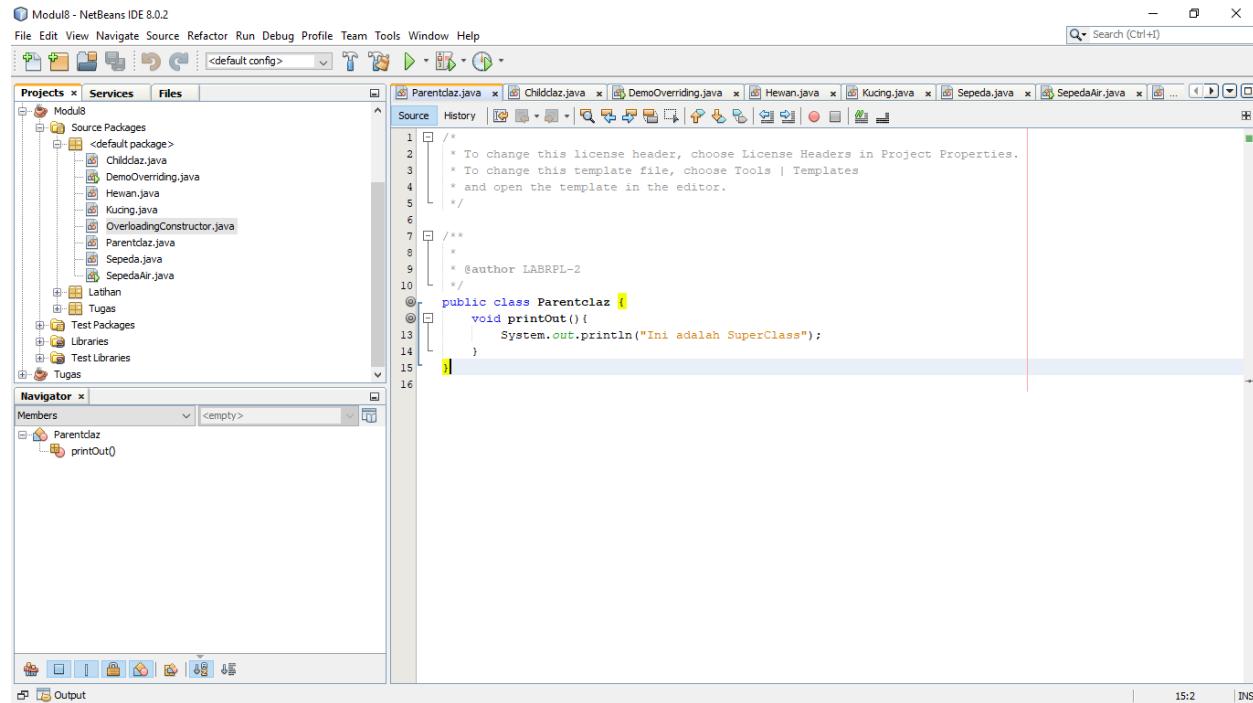
Output - Modul7 (run)

Ustia Manager 4 : 27
 Nama 5 : Manager 5
 Jam kerja Manager 5 : 8.5
 Gaji Manager 5 : 800000.0
 Usia Manager 5 : 28
 Jam kerja baru : 8.5
 BUILD SUCCESSFUL (total time: 0 seconds)

Output

MODUL 8

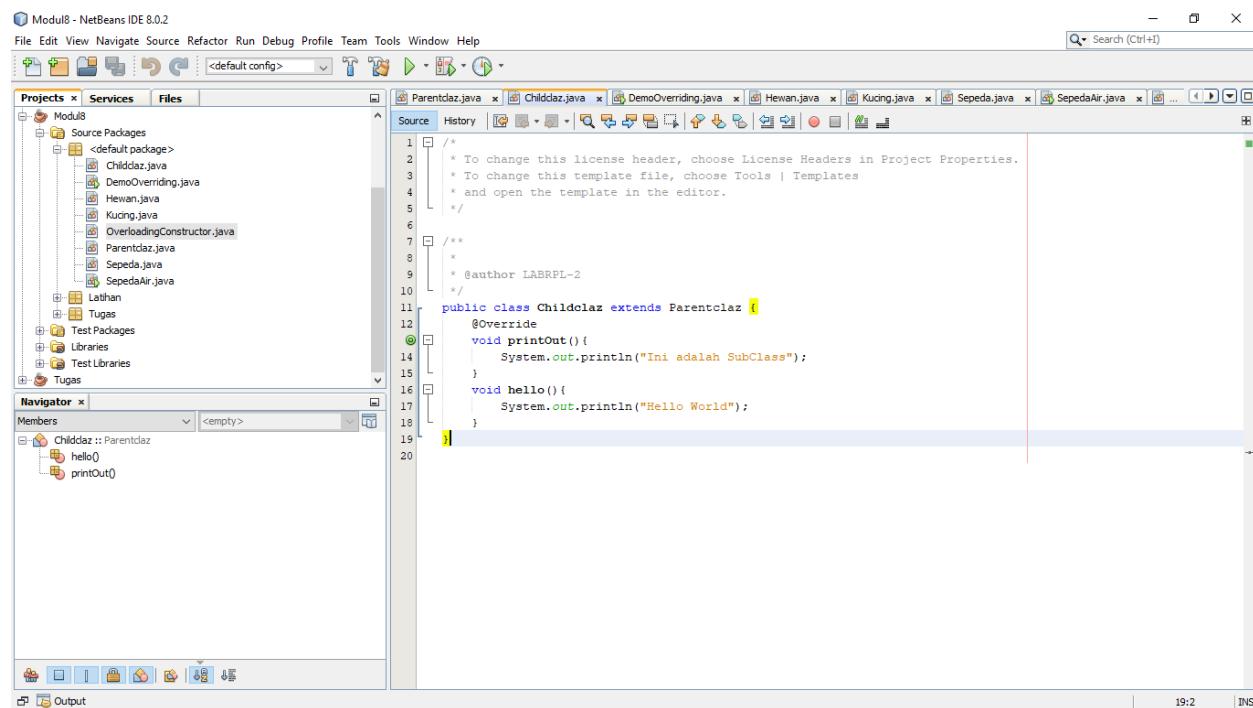
Overriding



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

- Title Bar:** Modul8 - NetBeans IDE 8.0.2
- 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 "Modul8" with a "Source Packages" node expanded, containing files like Childclaz.java, DemoOverriding.java, Hewan.java, Kucing.java, OverloadingConstructor.java, Parentclaz.java, Sepeda.java, and SepedaAir.java.
- Navigator:** Shows the members of Parentclaz.java, specifically printOut().
- Code Editor:** Displays the Parentclaz.java 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
7  /**
8  *
9  * @author LABRPL-2
10 */
11 public class Parentclaz {
12     void printOut(){
13         System.out.println("Ini adalah SuperClass");
14     }
15 }
```
- Output:** Standard NetBeans output panel.



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

- Title Bar:** Modul8 - NetBeans IDE 8.0.2
- 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 "Modul8" with a "Source Packages" node expanded, containing files like Childclaz.java, DemoOverriding.java, Hewan.java, Kucing.java, OverloadingConstructor.java, Parentclaz.java, Sepeda.java, and SepedaAir.java.
- Navigator:** Shows the members of Childclaz.java, specifically hello() and printOut().
- Code Editor:** Displays the Childclaz.java 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
7  /**
8  *
9  * @author LABRPL-2
10 */
11 public class Childclaz extends Parentclaz {
12     @Override
13     void printOut(){
14         System.out.println("Ini adalah SubClass");
15     }
16     void hello(){
17         System.out.println("Hello World");
18     }
19 }
```
- Output:** Standard NetBeans output panel.

Modul8 - NetBeans IDE 8.0.2

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

Source Packages

Modul8

<default package>

- Childclaz.java
- DemoOverriding.java
- Hewan.java
- Kucing.java
- OverloadingConstructor.java
- Parentclaz.java
- Sepeda.java
- SepedaAir.java

Lathan

Tugas

Test Packages

Libraries

Test Libraries

Tugas

Navigator x

Members <empty>

DemoOverriding

main(String[] ov)

Output - Modul8 (run)

```
run:  
Ini adalah SuperClass  
Ini adalah SubClass  
BUILD SUCCESSFUL (total time: 0 seconds)
```

Output Finished building Modul8 (run). 18:2 INS

```
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-2  
9  */  
10 public class DemoOverriding {  
11     public static void main(String[] ovr){  
12         Parentclaz pc = new Parentclaz();  
13         Childclaz cc = new Childclaz();  
14         pc.printOut();  
15         cc.printOut();  
16     }  
17 }  
18  
19
```

Modul8 - NetBeans IDE 8.0.2

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

Source Packages

Modul8

<default package>

- Childclaz.java
- DemoOverriding.java
- Hewan.java
- Kucing.java
- OverloadingConstructor.java
- Parentclaz.java
- Sepeda.java
- SepedaAir.java

Lathan

Tugas

Test Packages

Libraries

Test Libraries

Tugas

Hewan - Navigator x

Members <empty>

Hewan

jalan()

Output

15:2 INS

```
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-2  
9  */  
10 @public class Hewan {  
11     public void jalan(){  
12         System.out.println("Hewan bisa berjalan");  
13     }  
14 }  
15  
16
```

Modul8 - NetBeans IDE 8.0.2

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

Projects Services Files

Source Packages

<default package>

- Childdaz.java
- DemoOverriding.java
- Hewan.java
- Kucing.java
- OverloadingConstructor.java
- Parentdaz.java
- Sepeda.java
- SepedaAir.java

Lathan

Tugas

Test Packages

Libraries

Test Libraries

Tugas

Navigator x

Members <empty>

Kucing :: Hewan

Kucing :> jalan()

Output

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 LABRPL-2
10 */
11 public class Kucing extends Hewan{
12     @Override
13     public void jalan(){
14         System.out.println("Kucing bisa berjalan dengan" + "dan berlari");
15     }
16 }
```

16:2 INS

Upcasting

Modul8 - NetBeans IDE 8.0.2

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

Projects Services Files

Source Packages

<default package>

- Childdaz.java
- DemoOverriding.java
- Hewan.java
- Kucing.java
- OverloadingConstructor.java
- Parentdaz.java
- Sepeda.java
- SepedaAir.java

Lathan

Tugas

Test Packages

Libraries

Test Libraries

Tugas

Navigator x

Members <empty>

Sepeda ::

Sepeda :> run()

Output

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 LABRPL-2
10 */
11 public class Sepeda {
12     void run(){
13         System.out.println("Bisa berjalan");
14     }
15 }
```

15:2 INS

Modul8 - NetBeans IDE 8.0.2

```

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 LABRPL-2
10 */
11 public class SepedaAir extends Sepeda{
12     @Override
13     void run(){
14         System.out.println("Hanya bisa berjalan di atas" + "Air");
15     }
16     public static void main(String[] args){
17         Sepeda s = new SepedaAir(); //upcasting
18         s.run();
19     }
20 }

```

Output - Modul8 (run)

```

run:
Hanya bisa berjalan di atasAir
BUILD SUCCESSFUL (total time: 0 seconds)

```

Overloading

Modul8 - NetBeans IDE 8.0.2

```

1 import java.util.Date;
2
3 /**
4  * To change this license header, choose License Headers in Project Properties.
5  * To change this template file, choose Tools | Templates
6  * and open the template in the editor.
7 */
8
9 /**
10 *
11 * @author LABRPL-2
12 */
13 public class OverloadingConstructor {
14     int idUser;
15     String userName;
16     int level;
17     Date lastLogin;
18     public OverloadingConstructor(){
19     }
20     public OverloadingConstructor(int idUser, String userName){
21         this.idUser = idUser;
22         this.userName = userName;
23     }
24 }

```

LATIHAN

Modul8 - NetBeans IDE 8.0.2

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

Projects Services Files <default config> Anjing.java Kucing.java Pet.java TestPolymorphism.java

Source History <empty> Search (Ctrl+I)

Projects Latihan Tugas

Anjing.java Kucing.java Pet.java TestPolymorphism.java

Source History <empty> Search (Ctrl+I)

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 Latihan;

6

7 /**

8 *

9 * @author LABRPL-2

10 */

11 public class Pet {

12 private String nama;

13

14 public void beriNama(String beriNama) {

15 this.nama = beriNama;

16 }

17

18 public String panggilNama() {

19 return this.nama;

20 }

21

22 public String perilaku() {

23 return "Hewan Penurut";

24 }

25 }

26

27

Output 1:1 INS

Navigator Members <empty>

Pet

- berNama(String beriNama)
- panggilNama(): String
- perilaku(): String
- nama : String

Modul8 - NetBeans IDE 8.0.2

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

Projects Services Files <default config> Anjing.java Kucing.java Pet.java TestPolymorphism.java

Source History <empty> Search (Ctrl+I)

Projects Latihan Tugas

Anjing.java Kucing.java Pet.java TestPolymorphism.java

Source History <empty> Search (Ctrl+I)

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 Latihan;

6

7 /**

8 *

9 * @author LABRPL-2

10 */

11 public class Kucing extends Pet {

12 @Override

13 public String perilaku() {

14 return "Menyukai Ikan";

15 }

16

17 public String suara() {

18 return "Meeooww... Meeooww";

19 }

20 }

21

22

Output 1:1 INS

Navigator Members <empty>

Kucing

- perilaku(): String
- suara(): String

Modul8 - NetBeans IDE 8.0.2

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

Projects Services Files

Anjing.java Kucing.java Pet.java TestPolymorphism.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-2
11 */
12 public class Anjing extends Pet{
13     @Override
14     public String perilaku(){
15         return "Menyukai Daging dan Tulang";
16     }
17
18     public String Suara(){
19         return "Guk.. Guk.. Guk..";
20     }
21 }

```

Navigator

Members

- Anjing :: Pet
- Suara : String
- perilaku() : String

Output

1:1 INS

Modul8 - NetBeans IDE 8.0.2

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

Projects Services Files

Anjing.java Kucing.java Pet.java TestPolymorphism.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-2
11 */
12 public class TestPolymorphism {
13     public static void main(String[] args){
14         Kucing k = new Kucing();
15         Anjing a = new Anjing();
16
17         k.beriNama("TOM");
18         a.beriNama("BULL");
19
20         System.out.println(k.panggilNama());
21         System.out.println(k.perilaku());
22         System.out.println(k.suara());
23         System.out.println(a.panggilNama());
24         System.out.println(a.perilaku());

```

TestPolymorphism - Navigator

Members

- TestPolymorphism
- main(String[] args)

Output - Modul8 (run)

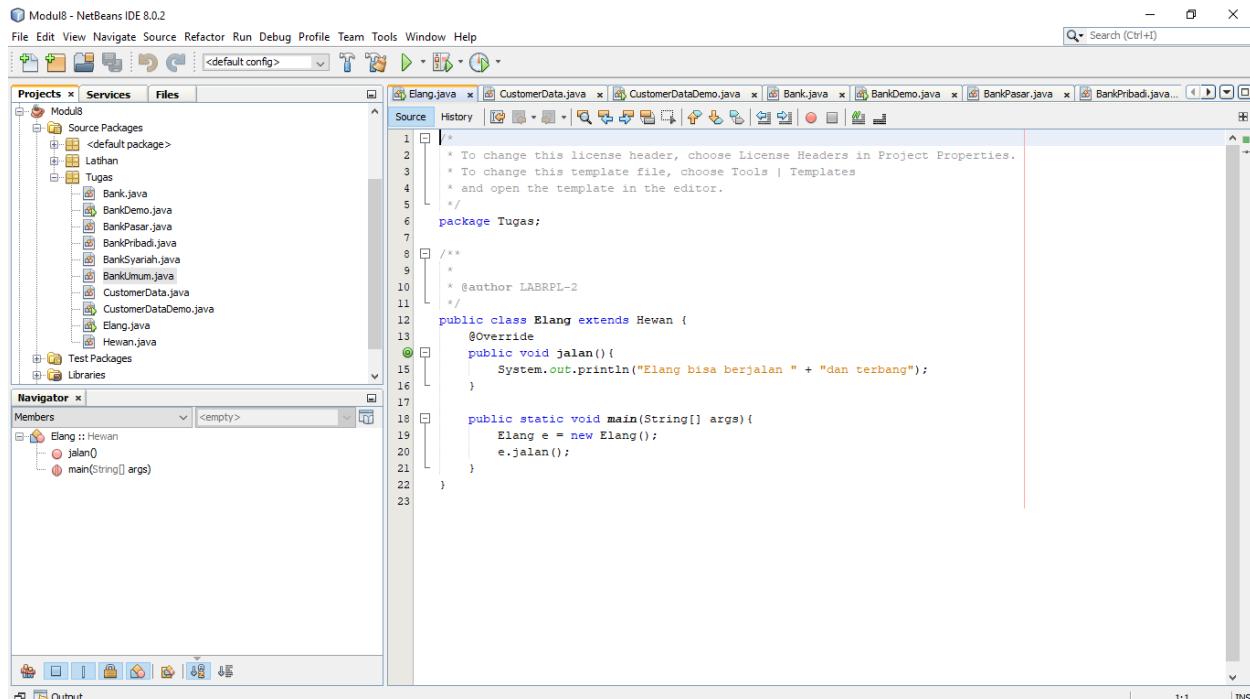
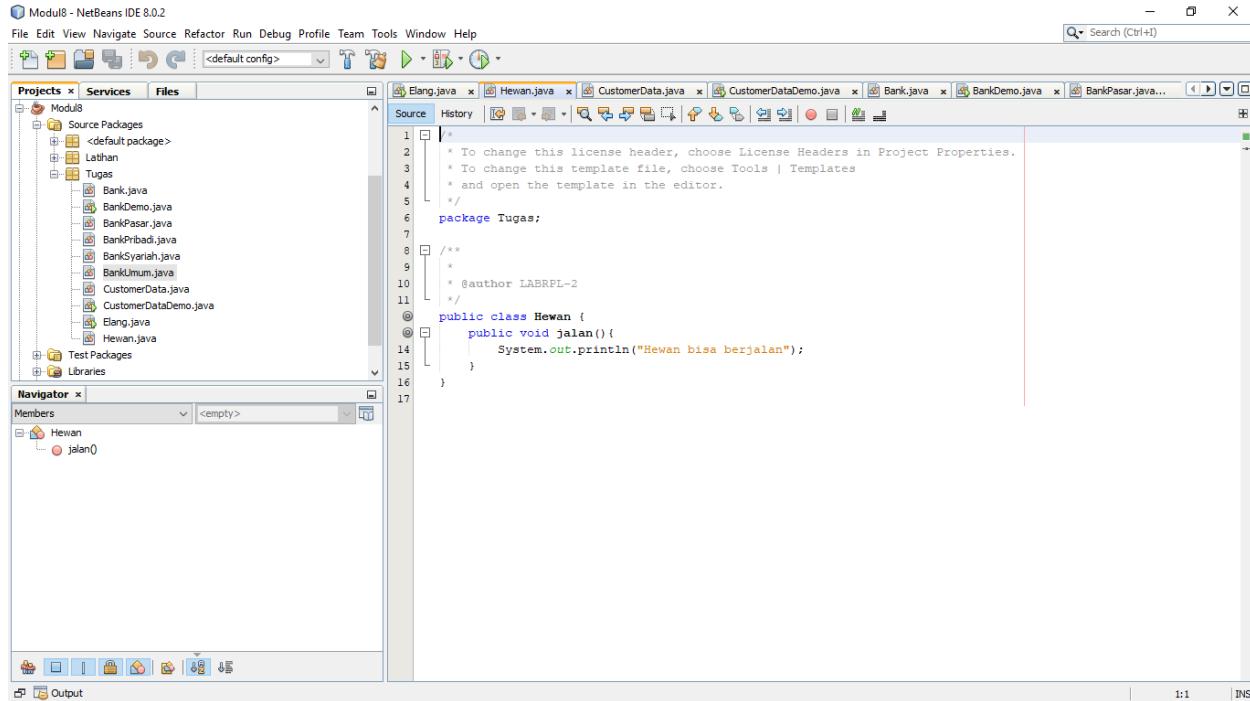
```

run:
TOM
Menyukai Ikan
Meeoow... Meeoow
BULL
Menyukai Daging dan Tulang
Guk.. Guk.. Guk..
BUILD SUCCESSFUL (total time: 0 seconds)

```

Output Finished building Modul8 (run). 27:2 INS

TUGAS



Modul8 - NetBeans IDE 8.0.2

```

CustomerData.java
1  /* To change this template file, choose Tools | Templates
2  * and open the template in the editor.
3  */
4  package Tugas;
5
6  /**
7  *
8  * @author LABRPL-2
9  */
10 public class CustomerData {
11     String nama;
12     String alamat;
13     String tanggalLahir;
14     String pekerjaan;
15     float gaji;
16
17     public CustomerData(){
18         System.out.println("Mohon melengkapi data");
19     }
20
21     public CustomerData(String nama, String alamat, String tanggalLahir, String pekerjaan, float gaji){
22         this.nama = nama;
23         this.alamat = alamat;
24         this.tanggalLahir = tanggalLahir;
25         this.pekerjaan = pekerjaan;
26         this.gaji = gaji;
27
28         System.out.println("Nama : " + nama);
29         System.out.println("Alamat : " + alamat);
30         System.out.println("Tanggal Lahir : " + tanggalLahir);
31         System.out.println("Pekerjaan : " + pekerjaan);
32         System.out.println("Gaji : " + gaji + "\n");
33     }
34
35 }
36

```

Modul8 - NetBeans IDE 8.0.2

```

CustomerDataDemo.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 Tugas;
7
8  /**
9  *
10 * @author LABRPL-2
11 */
12 public class CustomerDataDemo {
13     public static void main(String[] args){
14         CustomerData c1 = new CustomerData("A", "Solo", "1 Januari 1990", "guru", 5000000f);
15         CustomerData c2 = new CustomerData("B", "Jakarta", "2 Februari 1990", "dosen", 8000000f);
16         CustomerData c3 = new CustomerData("C", "Yogyakarta", "3 Maret 1990", "mahasiswa", 1000000f);
17         CustomerData c4 = new CustomerData("D", "Semarang", "4 April 1990", "perawat", 9000000f);
18         CustomerData c5 = new CustomerData("E", "Bandung", "5 Mei 1990", "teknisi", 7000000f);
19         CustomerData c6 = new CustomerData("F", "Malang", "6 Juni 1990", "Dokter", 9000000f);
20         CustomerData c7 = new CustomerData("G", "Madiun", "7 Juli 1990", "penulis", 2000000f);
21         CustomerData c8 = new CustomerData("H", "Surabaya", "8 Agustus 1990", "guru", 5000000f);
22         CustomerData c9 = new CustomerData("I", "Sragen", "9 September 1990", "dosen", 8000000f);
23         CustomerData c10 = new CustomerData("J", "Bogor", "10 Oktober 1990", "mahasiswa", 1000000f);
24     }
25 }

```

Output - Modul8 (run)

```

Gaji : 8000000.0
Nama : J
Alamat : Bogor
Tanggal Lahir : 10 Oktober 1990
Pekerjaan : mahasiswa
Gaji : 1000000.0

BUILD SUCCESSFUL (total time: 0 seconds)

```

Modul8 - NetBeans IDE 8.0.2

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

Bank.java x BankDemo.java x BankPasar.java x BankPribadi.java x BankSyariah.java x BankUmum.java x

Projects Services Files

Source Packages <default package>

Lathan

Tugas

Bank.java

BankDemo.java

BankPasar.java

BankPribadi.java

BankSyariah.java

BankUmum.java

CustomerData.java

CustomerDataDemo.java

Elang.java

Hewan.java

Test Packages

Libraries

Bank - Navigator

Members <empty>

Bank rasioBunga0 : int

Output

16:2 INS

```
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 Tugas;
7
8 /**
9  *
10 * @author Win8
11 */
12 public class Bank {
13     protected int rasioBunga() {
14         return 5;
15     }
16 }
17
```

Modul8 - NetBeans IDE 8.0.2

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

Bank.java x BankDemo.java x BankPasar.java x BankPribadi.java x BankSyariah.java x BankUmum.java x

Projects Services Files

Source Packages <default package>

Lathan

Tugas

Bank.java

BankDemo.java

BankPasar.java

BankPribadi.java

BankSyariah.java

BankUmum.java

CustomerData.java

CustomerDataDemo.java

Elang.java

Hewan.java

Test Packages

Libraries

Navigator

Members <empty>

BankPribadi :: Bank

ratioBunga0 : int

Output

18:1 INS

```
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 Tugas;
7
8 /**
9  *
10 * @author Win8
11 */
12 public class BankPribadi extends Bank {
13     @Override
14     protected int rasioBunga() {
15         return 7;
16     }
17 }
```

Modul8 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Services Files

Modul8

Source Packages

<default package>

Lathan

Tugas

Bank.java

BankDemo.java

BankPasar.java

BankPribadi.java

BankSyariah.java

BankUmum.java

CustomerData.java

CustomerDataDemo.java

Elang.java

Hewan.java

Test Packages

Libraries

Navigator

Members <empty>

BankUmum :: Bank

rasioBunga0 : int

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 Tugas;
7
8  /**
9   *
10  * @author Win8
11  */
12 public class BankUmum extends Bank{
13     @Override
14     protected int rasioBunga(){
15         return 9;
16     }
17
18 }
```

Output

18:1 INS

Modul8 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Services Files

Modul8

Source Packages

<default package>

Lathan

Tugas

Bank.java

BankDemo.java

BankPasar.java

BankPribadi.java

BankSyariah.java

BankUmum.java

CustomerData.java

CustomerDataDemo.java

Elang.java

Hewan.java

Test Packages

Libraries

BankPasar - Navigator

Members <empty>

BankPasar :: BankUmum

rasioBunga0 : int

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 Tugas;
7
8  /**
9   *
10  * @author Win8
11  */
12 public class BankPasar extends BankUmum {
13     @Override
14     protected int rasioBunga(){
15         return 3;
16     }
17
18 }
```

Output

17:2 INS

Modul8 - NetBeans IDE 8.0.2

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

Bank.java BankDemo.java BankPasar.java BankPribadi.java BankSyariah.java BankUmum.java

Projects Services Files

Modul8

Source Packages

<default package>

Lathan

Tugas

Bank.java

BankDemo.java

BankPasar.java

BankPribadi.java

BankSyariah.java

BankUmum.java

CustomerData.java

CustomerDataDemo.java

Elang.java

Hewan.java

Test Packages

Libraries

BankSyariah - Navigator

Members

BankSyariah :: BankUmum rasioBunga0 : int

Output

17:2 INS

```
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 Tugas;
7
8 /**
9 *
10 * @author Win8
11 */
12 public class BankSyariah extends BankUmum {
13     @Override
14     protected int rasioBunga() {
15         return 0;
16     }
17
18 }
```

Modul8 - NetBeans IDE 8.0.2

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

Bank.java BankDemo.java BankPasar.java BankPribadi.java BankSyariah.java BankUmum.java

Projects Services Files

Modul8

Source Packages

<default package>

Lathan

Tugas

Bank.java

BankDemo.java

BankPasar.java

BankPribadi.java

BankSyariah.java

BankUmum.java

CustomerData.java

CustomerDataDemo.java

Elang.java

Hewan.java

Test Packages

Libraries

main - Navigator

Members

BankDemo

main(String[] args)

Output - Modul8 (run)

run:

Rasio Bunga Bank Pribadi : 7

Rasio Bunga Bank Umum : 9

Rasio Bunga Bank Pasar : 3

Rasio Bunga Bank Syariah : 0

BUILD SUCCESSFUL (total time: 0 seconds)

Output

Finished building Modul8 (run).

24:6 INS

```
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 Tugas;
7
8 /**
9 *
10 * @author Win8
11 */
12 public class BankDemo {
13     public static void main(String[] args) {
14         BankPribadi bpr = new BankPribadi();
15         BankUmum bum = new BankUmum();
16         BankPasar bps = new BankPasar();
17         BankSyariah bsy = new BankSyariah();
18
19         System.out.println(
20             "Rasio Bunga Bank Pribadi : " + bpr.rasioBunga() + "\n" +
21             "Rasio Bunga Bank Umum : " + bum.rasioBunga() + "\n" +
22             "Rasio Bunga Bank Pasar : " + bps.rasioBunga() + "\n" +
23             "Rasio Bunga Bank Syariah : " + bsy.rasioBunga());
24     }
25 }
```

MODUL 9

Object Class Abstract

The screenshot shows the NetBeans IDE interface with two open files:

AbstrakClass.java (Top Window):

```
/*
 * 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 Win8
 */
abstract class AbstrakClass {
    int a;
    int b;
    int c;
    public AbstrakClass(int a, int b, int c){
        this.a = a;
        this.b = b;
        this.c = c;
    }
    public int kali(){
        return a*b*c;
    }
}
```

ObjekAbstrakClass.java (Bottom Window):

```
/*
 * 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 Win8
 */
public class ObjekAbstrakClass {
    public static void main(String [] args){
        TurunanAbstrakClass tac = new TurunanAbstrakClass(2,3,2);
        tac.printX();
        System.out.println(tac.kali());
    }
}
```

The Projects panel shows several source files including AbstrakClass.java, Balok.java, BangunRuang.java, BangunRuangDemo.java, Bola.java, JajarGenjang.java, Kerucut.java, Kubus.java, Lingkaran.java, MethodMain.java, ObjekAbstrakClass.java, Persegi.java, PersegiPanjang.java, PrismaSegitiga.java, Segitiga.java.

The Output panel shows the build log:

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

Modul9 - NetBeans IDE 8.0.2

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

Projects Services Files

Source Packages <default package>

- Balok.java
- BangunRuang.java
- BangunRuangDemo.java
- Bola.java
- JajarGengjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java

TurunanAbstrakClass - Navigator

Members

- TurunanAbstrakClass :: AbstrakClass
- printX()
- x: int

Output

Search (Ctrl+F)

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 Win8
10 */
11 public class TurunanAbstrakClass extends AbstrakClass {
12     int x;
13
14     public TurunanAbstrakClass (int a, int b, int c){
15         super(a,b,c);
16         x = a+b+c;
17     }
18     public void printX(){
19         System.out.println(x);
20     }
21 }
22
```

21:2 INS

Method Abstract

Modul9 - NetBeans IDE 8.0.2

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

Projects Services Files

Source Packages <default package>

- Bola.java
- JajarGengjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java
- TurunanAbstrakClass.java
- latihanDemo.java
- methodAbstract.java

methodAbstract - Navigator

Members

- methodAbstract
- getKel(): int
- getLuas(): int
- kelling(): int
- luas(): int

Output

Search (Ctrl+F)

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 Win8
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 getKell(){
19         return keliling();
20     }
21 }
22
```

21:2 INS

Modul9 - NetBeans IDE 8.0.2

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

MethodMain.java Persegி.java methodAbstract.java

Projects Services Files

Bola.java JajarGenjang.java Kerucut.java Kubus.java Lingkaran.java MethodMain.java ObjekAbstrak.java Persegi.java PersegiPanjang.java PrismaSegitiga.java Segitiga.java TurunanAbstrakClass.java latihanDemo.java methodAbstract.java

Libraries PBO Tugas

Persegி - Navigator

Members

Persegி :: methodAbstract

- kelling0 : int
- luas0 : int
- sisi : int

Output

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 Win8
10 */
11 public class Persegيء extends methodAbstract {
12     int sisi=5;
13
14     @Override
15     public int luas() {
16         return sisi*sisi;
17     }
18
19     @Override
20     public int keliling(){
21         return 4*sisi;
22     }
23
24 }
```

23:2 INS

Modul9 - NetBeans IDE 8.0.2

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

MethodMain.java Persegيء.java methodAbstract.java

Projects Services Files

Bola.java JajarGenjang.java Kerucut.java Kubus.java Lingkaran.java MethodMain.java ObjekAbstrak.java Persegi.java PersegiPanjang.java PrismaSegitiga.java Segitiga.java TurunanAbstrakClass.java latihanDemo.java methodAbstract.java

Libraries PBO Tugas

Navigator

Members

MethodMain

- main(String[] args)

Output - Modul9 (run)

run:
Keliling = 20
Luas = 25
BUILD SUCCESSFUL (total time: 0 seconds)

Output Finished building Modul9 (run).

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 Win8
10 */
11 public class MethodMain {
12     public static void main(String[] args){
13         Persegيء psg = new Persegيء();
14         System.out.println("Keliling = " + psg.getKell());
15         System.out.println("Luas = " + psg.getLuas());
16     }
17 }
```

18:1 INS

Latihan

Modul9 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Services Files

methodAbstract.java PersegiPanjang.java JajarGenjang.java Lingkaran.java Segitiga.java latihanDemo.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 Win8
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 getKell() {
19         return keliling();
20     }
21 }
```

Navigator

Members

- methodAbstract
 - getKell(): int
 - getLuas(): int
 - keliling(): int
 - luas(): int

Output

Modul9 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Services Files

methodAbstract.java PersegiPanjang.java JajarGenjang.java Lingkaran.java Segitiga.java latihanDemo.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 Win8
10 */
11 public class PersegiPanjang extends methodAbstract {
12     int panjang = 20;
13     int lebar = 15;
14
15     @Override
16     public int luas() {
17         return panjang*lebar;
18     }
19
20     @Override
21     public int keliling() {
22         return 2*(panjang + lebar);
23     }
24 }
```

Navigator

Members

- PersegiPanjang :: methodAbstract
 - keliling(): int
 - luas(): int
 - lebar: int
 - panjang: int

Output

Modul9 - NetBeans IDE 8.0.2

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

Projects Services Files

Source Packages <default package>

- AbstrakClass.java
- Balok.java
- BangunRuang.java
- BangunRuangDemo.java
- Bola.java
- JajarGenjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java

Navigator

Members JajarGenjang :: methodAbstract

- kelling0 : int
- luas0 : int
- alas : int
- sisi_miring : int
- tinggi : int

methodAbstract.java PersegiPanjang.java JajarGenjang.java Lingkaran.java Segitiga.java lathanDemo.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 Win8
10 */
11 public class JajarGenjang extends methodAbstract {
12     int alas =10;
13     int tinggi = 4;
14     int sisi_miring = 5;
15
16     @Override
17     public int luas() {
18         return alas*tinggi;
19     }
20
21     @Override
22     public int keliling(){
23         return (2*alas) + (2*sisi_miring);
24     }
25 }
26
```

Output

25:2 INS

Modul9 - NetBeans IDE 8.0.2

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

Projects Services Files

Source Packages <default package>

- AbstrakClass.java
- Balok.java
- BangunRuang.java
- BangunRuangDemo.java
- Bola.java
- JajarGenjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java

Lingkaran - Navigator

Members Lingkaran :: methodAbstract

- kelling0 : int
- luas0 : int
- r : int

methodAbstract.java PersegiPanjang.java JajarGenjang.java Lingkaran.java Segitiga.java lathanDemo.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 Win8
10 */
11 public class Lingkaran extends methodAbstract {
12     int r = 7;
13
14     @Override
15     public int luas() {
16         return ((22*r*r)/7);
17     }
18
19     @Override
20     public int keliling(){
21         return (2*22*r)/7;
22     }
23 }
24
```

Output

23:2 INS

Modul9 - NetBeans IDE 8.0.2

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

Projects Services Files

Source Packages <default package>

- AbstrakClass.java
- Balok.java
- BangunRuang.java
- BangunRuangDemo.java
- Bola.java
- JajarGenjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java

Navigator x

Members Segitiga :: methodAbstract

- kelling0 : int
- luas0 : int
- alas : int
- sisiMiring : int
- tinggi : int

```

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 Win8
10 */
11 public class Segitiga extends methodAbstract {
12     int alas = 6;
13     int tinggi = 8;
14     int sisiMiring = 10;
15
16     @Override
17     public int luas() {
18         return (alas*tinggi)/2;
19     }
20
21     @Override
22     public int keliling(){
23         return alas + tinggi + sisiMiring;
24     }
25 }

```

Output

25:2 INS

Modul9 - NetBeans IDE 8.0.2

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

Projects Services Files

Source Packages <default package>

- AbstrakClass.java
- Balok.java
- BangunRuang.java
- BangunRuangDemo.java
- Bola.java
- JajarGenjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java

Navigator x

Members latihanDemo

- main(String[] args)

```

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 Win8
10 */
11 public class latihanDemo {
12     public static void main(String[] args){
13         PersegiPanjang pp = new PersegiPanjang();
14         System.out.println("Keliling Persegi Panjang = " + pp.getKell());
15         System.out.println("Luas Persegi Panjang = " + pp.getLuas())+ "\n";
16
17         JajarGenjang jg = new JajarGenjang();
18         System.out.println("Keliling Jajar Genjang = " + jg.getKell());
19         System.out.println("Luas Jajar Genjang = " + jg.getLuas())+ "\n";
20
21         Segitiga sg = new Segitiga();
22         System.out.println("Keliling Segitiga = " + sg.getKell());
23         System.out.println("Luas Segitiga = " + sg.getLuas())+ "\n";
24     }
25 }

```

Output - Modul9 (run)

- Keliling Jajar Genjang = 30
- Luas Jajar Genjang = 40
- Keliling Segitiga = 24
- Luas Segitiga = 24
- Keliling Lingkaran = 44
- Luas Lingkaran = 164
- BUILD SUCCESSFUL (total time: 0 seconds)

Output Finished building Modul9 (run).

29:2 INS

Tugas

Modul9 - NetBeans IDE 8.0.2

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

Projects Services Files

BangunRuang.java Balok.java Kubus.java Bola.java Kerucut.java PrismaSegitiga.java BangunRuangDemo.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 Win8
10 */
11 abstract class BangunRuang {
12     public abstract int volume();
13     public abstract int luasPermukaan();
14
15     public int getVolume() {
16         return volume();
17     }
18
19     public int getLuasPermukaan() {
20         return luasPermukaan();
21     }
22 }
23
```

BangunRuang - Navigator

Members

- BangunRuang
 - getLuasPermukaan(): int
 - getVolume(): int
 - luasPermukaan(): int
 - volume(): int

Output

Modul9 - NetBeans IDE 8.0.2

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

Projects Services Files

BangunRuang.java Balok.java Kubus.java Bola.java Kerucut.java PrismaSegitiga.java BangunRuangDemo.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 Win8
10 */
11 public class Balok extends BangunRuang {
12     int panjang = 20;
13     int lebar = 10;
14     int tinggi = 15;
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 }
26
```

BangunRuang - Navigator

Members

- Balok :: BangunRuang
 - luasPermukaan(): int
 - volume(): int
 - lebar : int
 - panjang : int
 - tinggi : int

Output

Modul9 - NetBeans IDE 8.0.2

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

Source Packages

- <default package>
 - AbstrakClass.java
 - Balok.java
 - BangunRuang.java
 - BangunRuangDemo.java
 - Bola.java
 - JajarGenjang.java
 - Kerucut.java
 - Kubus.java
 - Lingkaran.java
 - MethodMain.java
 - ObjekAbstrakClass.java
 - Persegi.java
 - PersegiPanjang.java
 - PrismaSegitiga.java
 - Segitiga.java

Navigator x

Members

- Kubus :: BangunRuang
 - luasPermukaan(): int
 - volume(): int
 - sisi: int

Output

23:2 | INS

```
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 Win8
10 */
11 public class Kubus extends BangunRuang {
12     int sisi = 10;
13
14     @Override
15     public int volume() {
16         return sisi*sisi*sisi;
17     }
18
19     @Override
20     public int luasPermukaan() {
21         return 6*(sisi*sisi);
22     }
23
24 }
```

Modul9 - NetBeans IDE 8.0.2

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

Source Packages

- <default package>
 - AbstrakClass.java
 - Balok.java
 - BangunRuang.java
 - BangunRuangDemo.java
 - Bola.java
 - JajarGenjang.java
 - Kerucut.java
 - Kubus.java
 - Lingkaran.java
 - MethodMain.java
 - ObjekAbstrakClass.java
 - Persegi.java
 - PersegiPanjang.java
 - PrismaSegitiga.java
 - Segitiga.java

Navigator x

Members

- Bola :: BangunRuang
 - luasPermukaan(): int
 - volume(): int
 - r: int

Output

23:2 | INS

```
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 Win8
10 */
11 public class Bola extends BangunRuang {
12     int r = 21;
13
14     @Override
15     public int volume() {
16         return ((4*22*r*r*r)/7)/3;
17     }
18
19     @Override
20     public int luasPermukaan() {
21         return (4*22*r*r)/7;
22     }
23
24 }
```

Modul9 - NetBeans IDE 8.0.2

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

Source Packages

BangunRuang.java Balok.java Kubus.java Bola.java Kerucut.java PrismaSegitiga.java BangunRuangDemo.java

Projects Services Files

Source History Search (Ctrl+I)

Projects x Services x Files x

Source Packages

<default package>

- AbstrakClass.java
- Balok.java
- BangunRuang.java
- BangunRuangDemo.java
- Bola.java
- JajarGenjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java

Navigator x

Members

Kerucut :: BangunRuang

- luasPermukaan() : int
- volume() : int
- r : int
- s : int
- t : int

Output

25:2 | INS

```
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 Win8
10 */
11 public class Kerucut extends BangunRuang {
12     int r = 21;
13     int t = 50;
14     int s = 30;
15
16     @Override
17     public int volume(){
18         return ((22*r*r*t)/7)/3;
19     }
20
21     @Override
22     public int luasPermukaan(){
23         return ((22*r*t)/7)*(r+s);
24     }
25 }
```

Modul9 - NetBeans IDE 8.0.2

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

Source Packages

BangunRuang.java Balok.java Kubus.java Bola.java Kerucut.java PrismaSegitiga.java BangunRuangDemo.java

Projects Services Files

Source History Search (Ctrl+I)

Projects x Services x Files x

Source Packages

<default package>

- AbstrakClass.java
- Balok.java
- BangunRuang.java
- BangunRuangDemo.java
- Bola.java
- JajarGenjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java

Navigator x

Members

PrismaSegitiga :: BangunRuang

- luasPermukaan() : int
- volume() : int
- kellingAlas : int
- luasAlas : int
- tinggi : int

Output

25:2 | INS

```
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 Win8
10 */
11 public class PrismaSegitiga extends BangunRuang {
12     int luasAlas = 96;
13     int kelilingAlas = 32;
14     int tinggi = 30;
15
16     @Override
17     public int volume(){
18         return luasAlas*tinggi;
19     }
20
21     @Override
22     public int luasPermukaan(){
23         return (2*luasAlas)+(kelilingAlas*tinggi);
24     }
25 }
```

Modul9 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Services Files

Source Packages <default package>

- AbstrakClass.java
- Balok.java
- BangunRuang.java
- BangunRuangDemo.java
- Bola.java
- JajarGengjang.java
- Kerucut.java
- Kubus.java
- Lingkaran.java
- MethodMain.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPantjang.java
- PrismaSegitiga.java
- Segitiga.java

BangunRuangDemo - Navigator

Members

- BangunRuangDemo
- main(String[] args)

Output - Modul9 (run)

```
Volume Bola = 38808
Luas Permukaan Bola = 5544

Volume Kerucut = 23100
Luas Permukaan Kerucut = 3366

Volume Prisma Segitiga = 2880
Luas Permukaan Prisma Segitiga = 1152
BUILD SUCCESSFUL (total time: 0 seconds)
```

Output Finished building Modul9 (run). 33:2 INS

MODUL 10

The screenshot displays two instances of the NetBeans IDE 8.0.2 interface, each showing a Java code editor and a project browser.

Top Window (ActivityAnimal.java):

- Project Browser:** Shows the project structure with modules Diskus2, Inheritance, JavaApplication1, Modul10, Modul5, Modul6, and Modul7. Under Modul10, there are Source Packages, Test Packages, Libraries, and Test Libraries. The Source Packages contain files ActivityAnimal.java, ActivityLampu.java, ApikasiLampu.java, Lampu.java, and Mamalia.java.
- Code Editor:** Displays the code for the `ActivityAnimal` interface:

```
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 Win 8.1
10 */
11 public interface ActivityAnimal {
12     public void eat();
13     public void travel();
14 }
15 
```
- Navigator:** Shows the members of the `ActivityAnimal` interface: `eat()` and `travel()`.

Bottom Window (ActivityLampu.java):

- Project Browser:** Shows the same project structure as the top window.
- Code Editor:** Displays the code for the `ActivityLampu` interface:

```
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 Win 8.1
10 */
11 public interface ActivityLampu {
12     public static final int LAMPU_HIDUP=1;
13     public static final int LAMPU_MATI=0;
14     public abstract void matikanLampu();
15     public abstract void hidupkanLampu();
16     public abstract void redupkanLampu();
17 }
18
19 
```
- Navigator:** Shows the members of the `ActivityLampu` interface: `hidupkanLampu()`, `matikanLampu()`, `redupkanLampu()`, and constants `LAMPU_HIDUP`, `LAMPU_MATI`, and `LAMPU_REDUP`.

Modul10 - NetBeans IDE 8.0.2

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

ActivityAnimal.java ActivityLampu.java ApikasiLampu.java Lampu.java Mamalia.java

Projects Services Files

Modul10

Source Packages <default package>

- ActivityAnimal.java
- ActivityLampu.java
- ApikasiLampu.java
- Lampu.java
- Mamalia.java

Test Packages Libraries Test Libraries

Modul5 Modul6 Modul7

Lampu - Navigator x

Members

- Lampu :: ActivityLampu
- hidupkanLampu()
- matikanLampu()
- redupkanLampu()
- setSaklar(int saklar) : int
- statusLampu : int

Output

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 Win 8.1

10 */

11 public class Lampu implements ActivityLampu{

12 public int statusLampu;

13

14 @Override

15 public void matikanLampu(){

16 if(statusLampu == 0){

17 System.out.println("Lampu sudah dalam kondisi mati");

18 }else if(statusLampu == 1){

19 statusLampu = 0;

20 System.out.println("Lampu sudah dimatikan");

21 }

22 }

23

24 @Override

25 public void hidupkanLampu(){

26 if(statusLampu == 1){

27 System.out.println("Lampu sudah dinyalakan\n***");

28 }else{

29 statusLampu += 1;

30 System.out.println("Lampu sudah dalam kondisi menyala");

31 }

32 }

33

34 public int setSaklar(int saklar){

35 return statusLampu = saklar;

36 }

37

38 @Override

39 public void redupkanLampu(){

40 if(statusLampu == 2){

41 System.out.println("Lampu telah diredukan");

42 }else{

43 statusLampu +=1;

44 System.out.println("Keredupan Lampu telah ditambah");

45 }

46 }

47 }

48 }

49 }

Modul10 - NetBeans IDE 8.0.2

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

ActivityAnimal.java ActivityLampu.java ApikasiLampu.java Lampu.java Mamalia.java

Projects Services Files

Modul10

Source Packages <default package>

- ActivityAnimal.java
- ActivityLampu.java
- ApikasiLampu.java
- Lampu.java
- Mamalia.java

Test Packages Libraries Test Libraries

Modul5 Modul6 Modul7

Lampu - Navigator x

Members

- Lampu :: ActivityLampu
- hidupkanLampu()
- matikanLampu()
- redupkanLampu()
- setSaklar(int saklar) : int
- statusLampu : int

Output

21 }

22 }

23 }

24 }

25 }

26 }

27 }

28 }

29 }

30 }

31 }

32 }

33 }

34 }

35 }

36 }

37 }

38 }

39 }

40 }

41 }

42 }

43 }

44 }

45 }

46 }

47 }

48 }

49 }

Modul10 - NetBeans IDE 8.0.2

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

ActivityAnimal.java ActivityLampu.java ApikasiLampu.java Lampu.java Mamalia.java

Projects Services Files

Modul10

Source Packages <default package>

- ActivityAnimal.java
- ActivityLampu.java
- ApikasiLampu.java
- Lampu.java
- Mamalia.java

Test Packages Libraries Test Libraries

Modul5 Modul6 Modul7

main - Navigator

Members

ApikasiLampu

- main(String[] args)

Output - Modul10 (run)

```

run:
Status Lampu = 0
Ketikkan
1 Untuk menyalaikan Lampu
0 Untuk mematikan Lampu
2 Untuk meregedupkan Lampu
2
Lampu telah diregedupkan
BUILD SUCCESSFUL (total time: 8 seconds)

```

27:35 | INS

Modul10 - NetBeans IDE 8.0.2

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

ActivityAnimal.java ActivityLampu.java ApikasiLampu.java Lampu.java Mamalia.java

Projects Services Files

Modul10

Source Packages <default package>

- ActivityAnimal.java
- ActivityLampu.java
- ApikasiLampu.java
- Lampu.java
- Mamalia.java

Test Packages Libraries Test Libraries

Modul5 Modul6 Modul7

travel - Navigator

Members

Mamalia :: ActivityAnimal

- eat()
- main(String[] args)
- noOfLegs(): int
- travel()

Output

16:5 | INS

Modul10 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Services Files

ActivityAnimal.java ActivityLampu.java ApikasiLampu.java Lampu.java Mamalia.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 Win 8.1
10 */
11 public class Mamalia implements ActivityAnimal{
12     @Override
13     public void eat(){
14         System.out.println("Mammal eats");
15     }
16
17     @Override
18     public void travel(){
19         System.out.println("Mammal Travels ");
20     }
21     public int noOfLegs(){
22         return 0;
23     }
24 }
```

Members

- Mamalia :: ActivityAnimal
- eat()
- main(String[] args)
- noOfLegs(): int
- travel()

Output - Modul10 (run)

```
run:
Mammal eats
Mammal Travels
BUILD SUCCESSFUL (total time: 0 seconds)
```

18:26 INS

MODUL 11

1. Inner Class

The screenshot shows two instances of the NetBeans IDE interface, both titled "Modul11 - NetBeans IDE 8.0.2".

Top Window (OuterDemo.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.
 */
/*
 *
 * @author Win 8.1
 */
public class OuterDemo {
    int num;

    //inner class
    private class InnerDemo{
        private void print(){
            System.out.println("Ini merupakan method inner class");
        }
    }

    //akses method inner class dari method outer class
    void displayInner(){
        InnerDemo inner = new InnerDemo();
        inner.print();
    }
}
```

Bottom Window (Myclass.java):

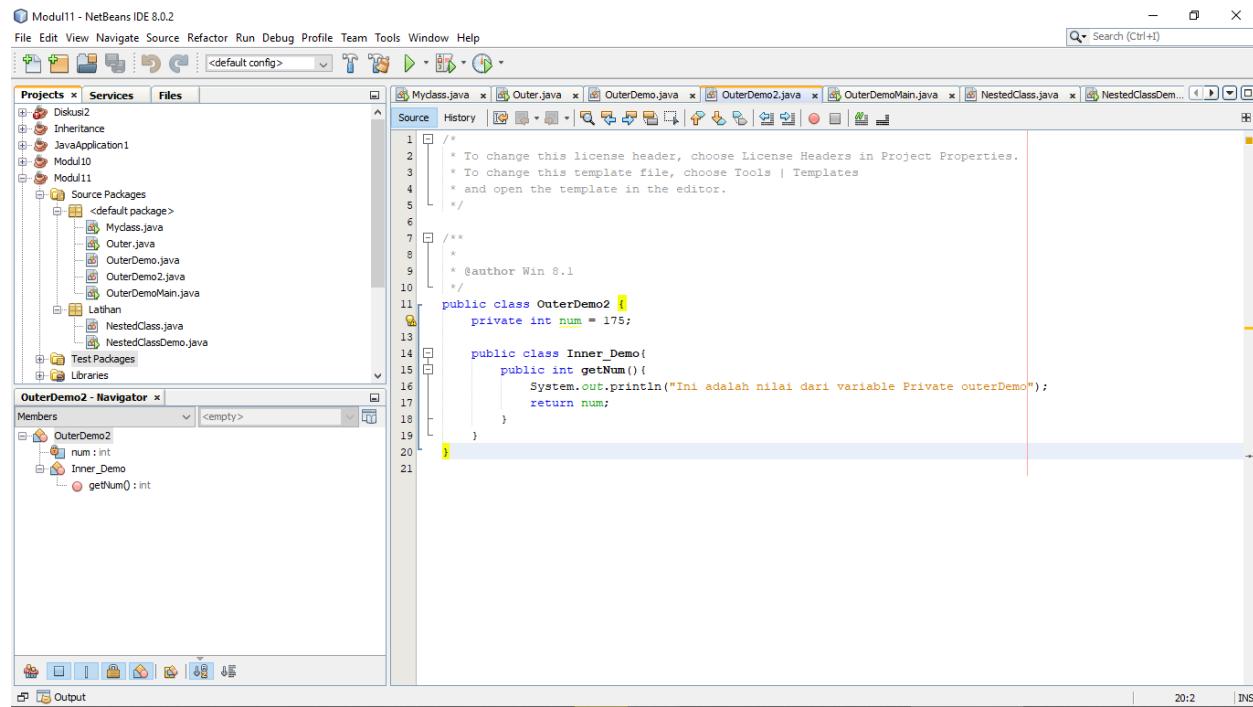
```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
/*
 *
 * @author Win 8.1
 */
public class Myclass {
    public static void main(String[] args){
        //membuat object outer class
        OuterDemo outer = new OuterDemo();

        //mengakses method outer class
        outer.displayInner();
    }
}
```

Output - Modul11 (run):

```
run:
Ini merupakan method inner class
BUILD SUCCESSFUL (total time: 0 seconds)
```

2. Mengakses Private Member

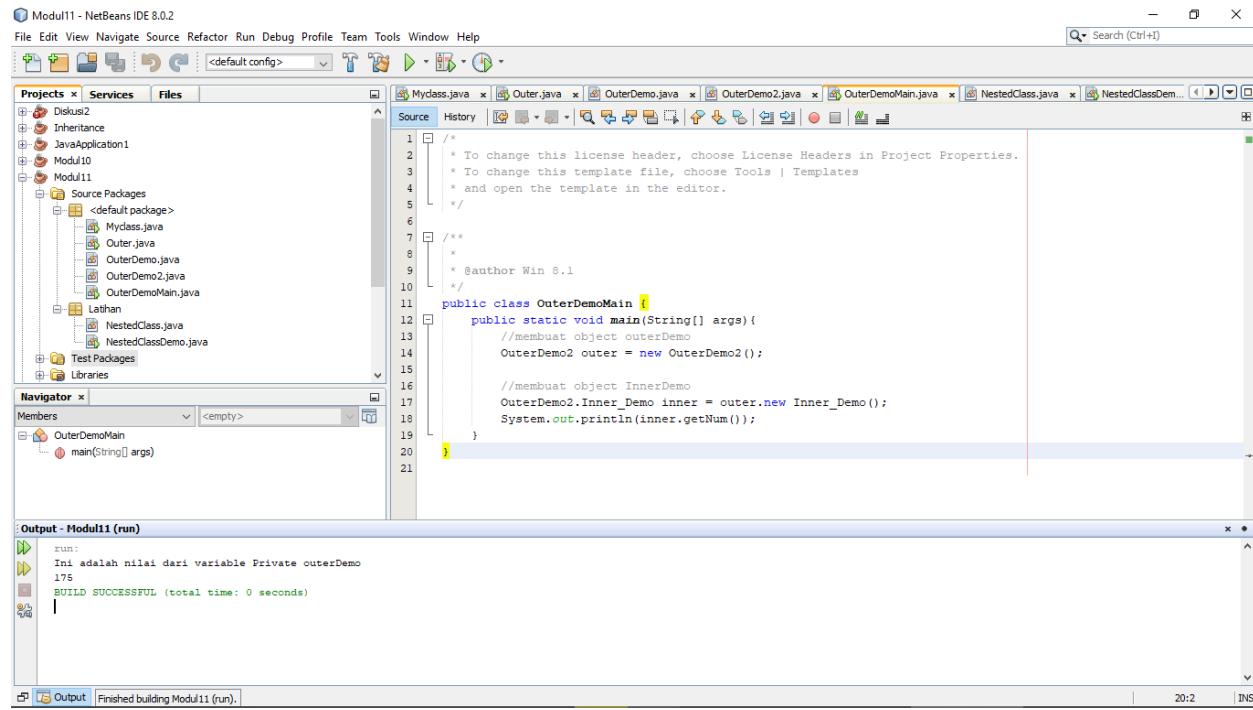


The screenshot shows the NetBeans IDE interface with the project 'Modul11' open. The 'Source Packages' node contains several Java files: Myclass.java, Outer.java, OuterDemo.java, OuterDemo2.java, OuterDemoMain.java, NestedClass.java, and NestedClassDemo.java. The 'OuterDemo2 - Navigator' tool window shows the members of the OuterDemo2 class: num (int), Inner_Demo, and getNum() (int). The 'OuterDemo2.java' editor tab is active, displaying the following code:

```
/*
 * 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 Win 8.1
 */
public class OuterDemo2 {
    private int num = 175;

    public class Inner_Demo{
        public int getNum(){
            System.out.println("Ini adalah nilai dari variable Private outerDemo");
            return num;
        }
    }
}
```



The screenshot shows the NetBeans IDE interface with the project 'Modul11' open. The 'Source Packages' node contains the same Java files as the previous screenshot. The 'Navigator' tool window shows the members of the OuterDemoMain class: main(String[] args). The 'OuterDemoMain.java' editor tab is active, displaying the following code:

```
/*
 * 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 Win 8.1
 */
public class OuterDemoMain {
    public static void main(String[] args){
        //membuat object outerDemo
        OuterDemo2 outer = new OuterDemo2();

        //membuat object InnerDemo
        OuterDemo2.Inner_Demo inner = outer.new Inner_Demo();
        System.out.println(inner.getNum());
    }
}
```

The 'Output - Modul11 (run)' tool window at the bottom shows the execution results:

```
run:
Ini adalah nilai dari variable Private outerDemo
175
BUILD SUCCESSFUL (total time: 0 seconds)
```

3. Static Nested Class

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

- Projects Tab:** Shows the project structure with modules like Modul11, JavaApplication1, and Modul10.
- Source Editor:** Displays the code for Myclass.java, which contains an outer class Outer and a static nested class NestedDemo. The code includes a main method that prints "Ini adalah method static nested class".
- Navigator Tab:** Shows the members of the Outer class: main(String[] args), NestedDemo, and myMethod().
- Output Tab:** Shows the build output: "run: Ini adalah method static nested class BUILD SUCCESSFUL (total time: 0 seconds)".

Latihan

1. NestedClass

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

- Projects Tab:** Shows the project structure with modules like Modul11, JavaApplication1, and Modul10.
- Source Editor:** Displays the code for Myclass.java, which contains a nested class NestedClass and a static nested class StaticNestedClass. The NestedClass has a printNama() method and a StaticNestedClass inner class. The StaticNestedClass has a cetakNama() method.
- Navigator Tab:** Shows the members of the NestedClass: printNama(), nama, nim, and InnerClass. It also shows the members of the StaticNestedClass: cetakNama(), jurusan, and InnerClass.
- Output Tab:** Shows the build output: "run: BUILD SUCCESSFUL (total time: 0 seconds)".

2. Nested Class Demo

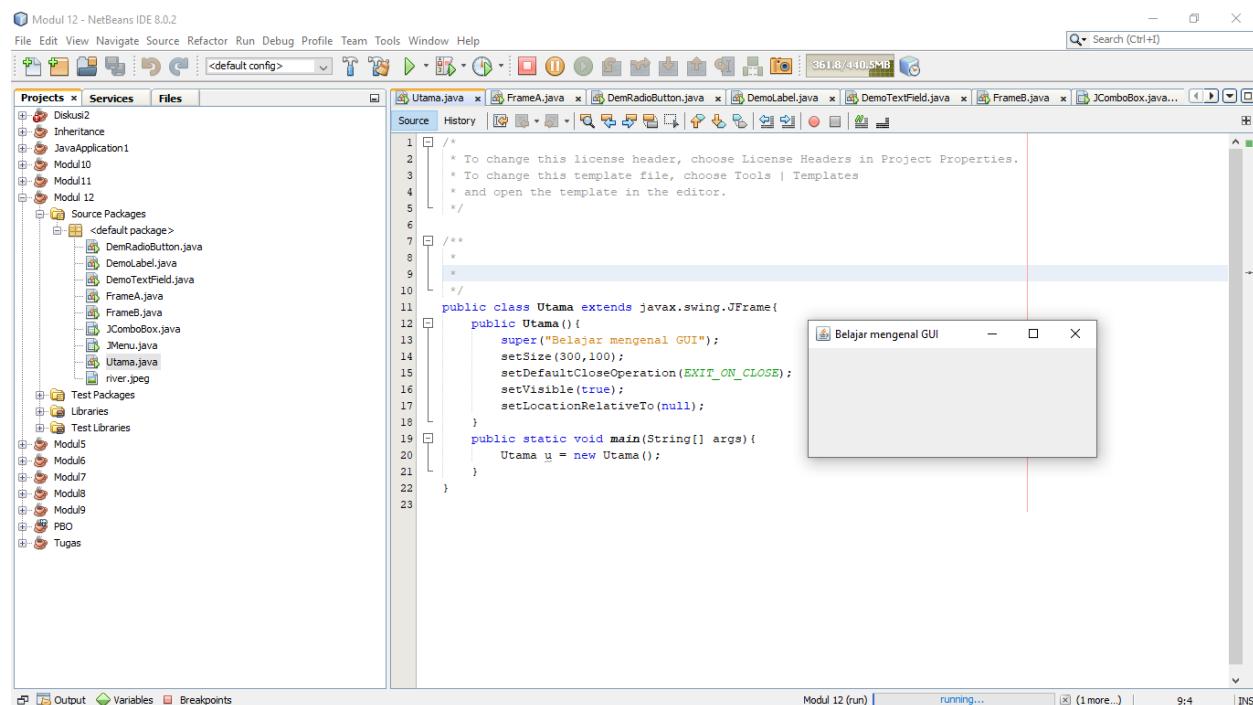
The screenshot shows the NetBeans IDE interface with the following details:

- Project Explorer:** Shows the project structure under "Modul11". It includes packages like "Diskusi2", "Inheritance", "JavaApplication1", "Modul10", and "Modul11". Under "Modul11", there are "Source Packages" containing "Myclass.java", "Outer.java", "OuterDemo.java", "OuterDemo2.java", "OuterDemoMain.java", and "NestedClassDemo.java". There are also "Test Packages" and "Libraries".
- Code Editor:** The main editor window displays the code for "NestedClassDemo.java". The code defines a package named "Latihan" and a public class named "NestedClassDemo". The class contains a static void main method that creates instances of NestedClass, StaticNestedClass, and InnerClass, and calls their respective methods.
- Navigator:** The "NestedClassDemo - Navigator" panel shows the members of the class, specifically the "main(String[] args)" method.
- Output:** The "Output - Modul11 (run)" panel shows the run results:
 - run:
 - Afiq Tri Nugraha : L200180080
 - Jurusan : Informatika
 - BUILD SUCCESSFUL (total time: 0 seconds)

MODUL 12

LATIHAN

Frame



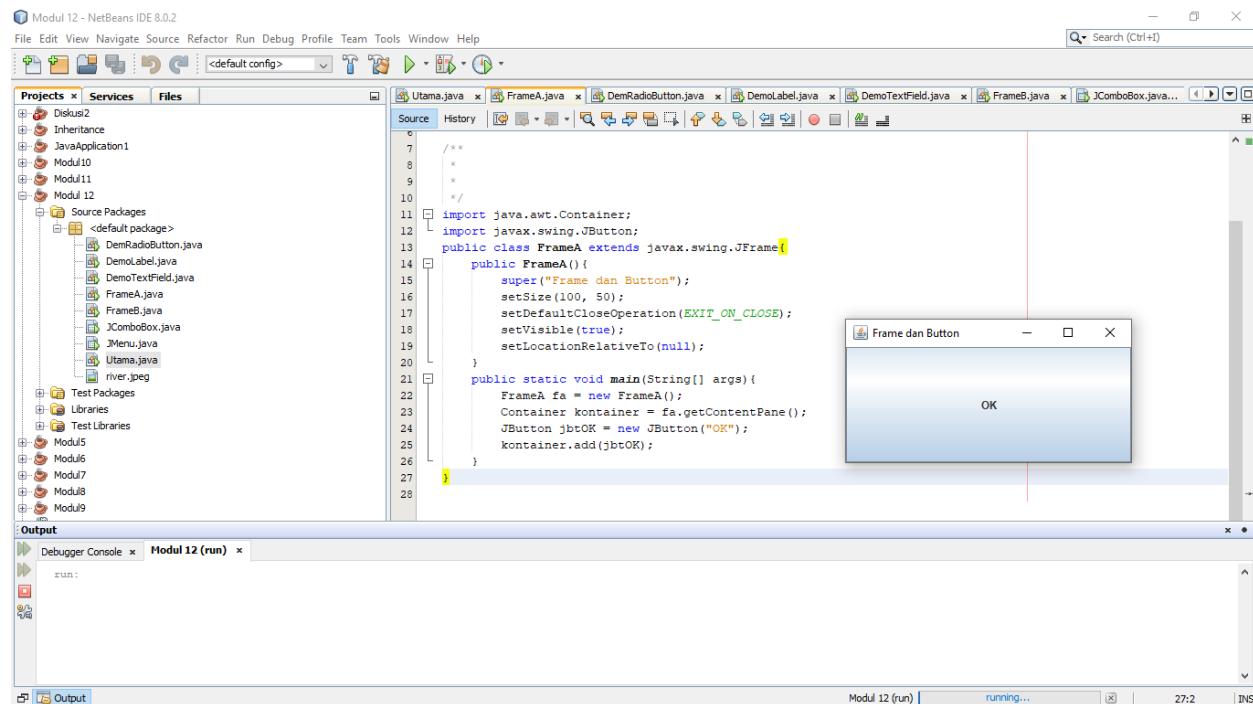
Konstruktor	Keterangan
JFrame()	<ul style="list-style-type: none">• Jendela utama yang digunakan untuk menampilkan komponen yang kita inginkan.• Membuat JFrame tanpa judul.
JFrame(String Judul)	<ul style="list-style-type: none">• Pemberian nama pada jendela utama yang ditampilkan.• Membuat JFrame dengan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

Metode	Keterangan
void setSize(int lebar, int tinggi)	Mengatur ukuran frame.
void setLocation(int x, int y)	Mengatur lokasi frame dihitung dari kiri atas.
void setVisible(boolean)	Menentukan JFrame ditampilkan atau tidak.

`void setLocationRelativeTo(Component)`

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

Modul 12 - NetBeans IDE 8.0.2

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

Projects Services Files

Utama.java FrameA.java DemRadioButton.java DemoLabel.java DemoTextField.java FrameB.java JComboBox.java...

Source History

```
7  /**
8  *
9  *
10 */
11 import java.net.URL;
12 import javax.swing.ImageIcon;
13 import javax.swing.JButton;
14 import javax.swing.JPanel;
15 public class FrameB extends javax.swing.JFrame{
16     public FrameB(){
17         super("Frame dan Button");
18         setSize(500, 500);
19         setDefaultCloseOperation(EXIT_ON_CLOSE);
20         setVisible(true);
21         setLocationRelativeTo(null);
22     }
23     public static void main(String[] args){
24         FrameB fb = new FrameB();
25         JPanel panel = new JPanel();
26         URL img = FrameB.class.getResource("river.jpeg");
27         JButton jbtOK = new JButton("OK");
28         JButton jbtImg = new JButton(new ImageIcon(img));
29         panel.add(jbtOK);
30         panel.add(jbtImg);
31         fb.add(panel);
32         fb.setVisible(true);
33     }
34 }
35 
```

Frame dan Button



Modul 12 (run) #2 running... 34:2 INS

Label

Modul 12 - NetBeans IDE 8.0.2

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

Projects Services Files

Utama.java FrameA.java DemRadioButton.java DemoLabel.java DemoTextField.java FrameB.java JComboBox.java...

Source History

```
1
2 import java.net.URL;
3 import javax.swing.ImageIcon;
4 import javax.swing.JLabel;
5 import javax.swing.JPanel;
6 import javax.swing.SwingConstants;
7 public class DemoLabel {
8     public static void main(String[] args){
9         Utama u = new Utama();
10        u.setSize(500, 500);
11        URL img = FrameB.class.getResource("river.jpeg");
12        ImageIcon ikon = new ImageIcon(img);
13        JLabel label = new JLabel("Label", ikon, SwingConstants.CENTER);
14        JPanel panel = new JPanel();
15        panel.add(label);
16        u.add(panel);
17    }
18 }
```

Belajar mengenal GUI



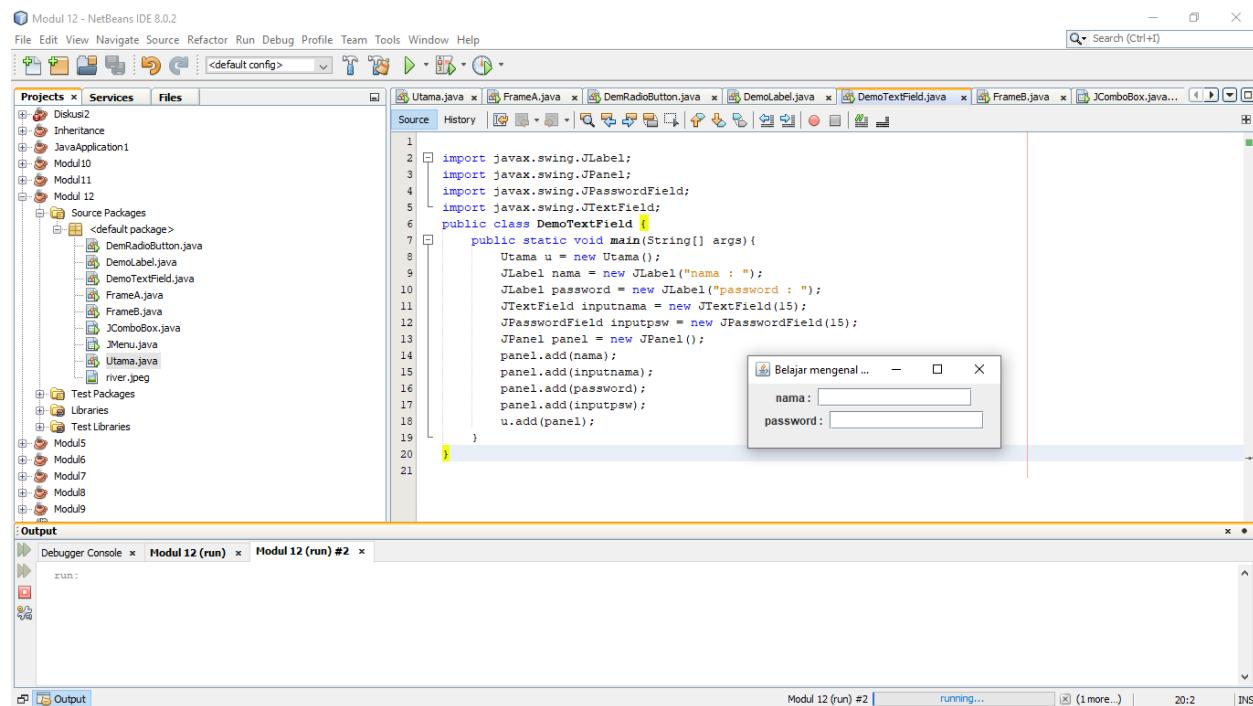
Modul 12 (run) running... 1:1 INS

Konstruktor

Keterangan

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

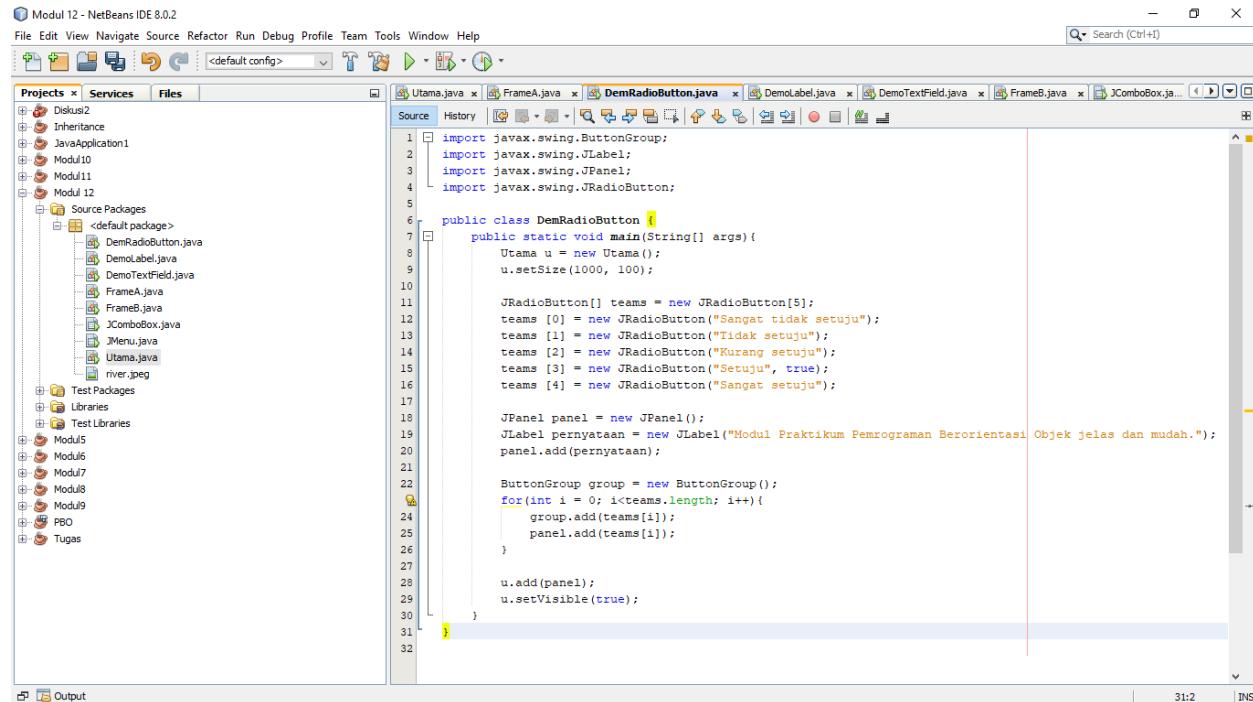


Konstruktor	Penjelasan
<code>JTextField()</code>	Text Field kosong tanpa tulisan.
<code>JTextField(int i)</code>	Text Field dengan panjang yang ditentukan.
<code>JTextField(String i)</code>	Teks Field dengan teks yang sudah ditentukan.
<code>JTextField(String teks, int i)</code>	Teks Field dengan teks dan panjang kolom yang sudah ditentukan

Parameter dalam class JTextField	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 Check



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

- Menu Bar:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Toolbar:** Standard NetBeans toolbar.
- Search Bar:** Search (Ctrl+I).
- Project Explorer:** Shows projects like Diskusi2, Inheritance, JavaApplication1, Modul10, Modul11, and Modul12. Under Modul12, there is a Source Packages folder containing DemRadioButton.java, DemoLabel.java, DemoTextField.java, FrameA.java, FrameB.java, JComboBox.java, JMenu.java, Utama.java, and river.jpeg.
- Code Editor:** Displays the DemRadioButton.java code. The code creates a JFrame with a JPanel containing five JRadioButton buttons labeled "Sangat tidak setuju", "Tidak setuju", "Kurang setuju", "Setuju", and "Sangat setuju". A JLabel with the text "Modul Praktikum Pemrograman Berorientasi Objek jelas dan mudah." is also added to the panel. A tooltip "Objek jelas dan mudah." appears over the JLabel.
- Status Bar:** Shows line numbers (31:2) and mode indicators (INS).

```

import javax.swing.ButtonGroup;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JRadioButton;

public class DemRadioButton {
    public static void main(String[] args) {
        Utama u = new Utama();
        u.setSize(1000, 100);

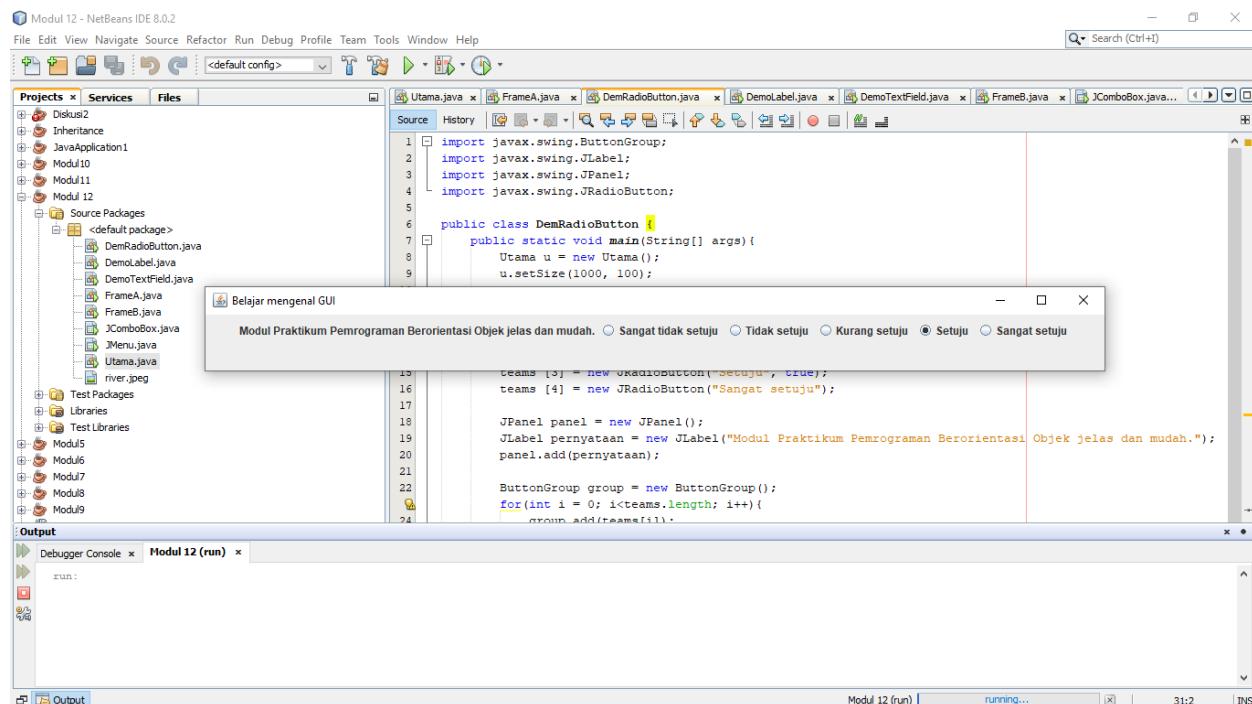
        JRadioButton[] teams = new JRadioButton[5];
        teams [0] = new JRadioButton("Sangat tidak setuju");
        teams [1] = new JRadioButton("Tidak setuju");
        teams [2] = new JRadioButton("Kurang setuju");
        teams [3] = new JRadioButton("Setuju", true);
        teams [4] = new JRadioButton("Sangat setuju");

        JPanel panel = new JPanel();
        JLabel pernyataan = new JLabel("Modul Praktikum Pemrograman Berorientasi Objek jelas dan mudah.");
        panel.add(pernyataan);

        ButtonGroup group = new ButtonGroup();
        for(int i = 0; i<teams.length; i++){
            group.add(teams[i]);
            panel.add(teams[i]);
        }

        u.add(panel);
        u.setVisible(true);
    }
}

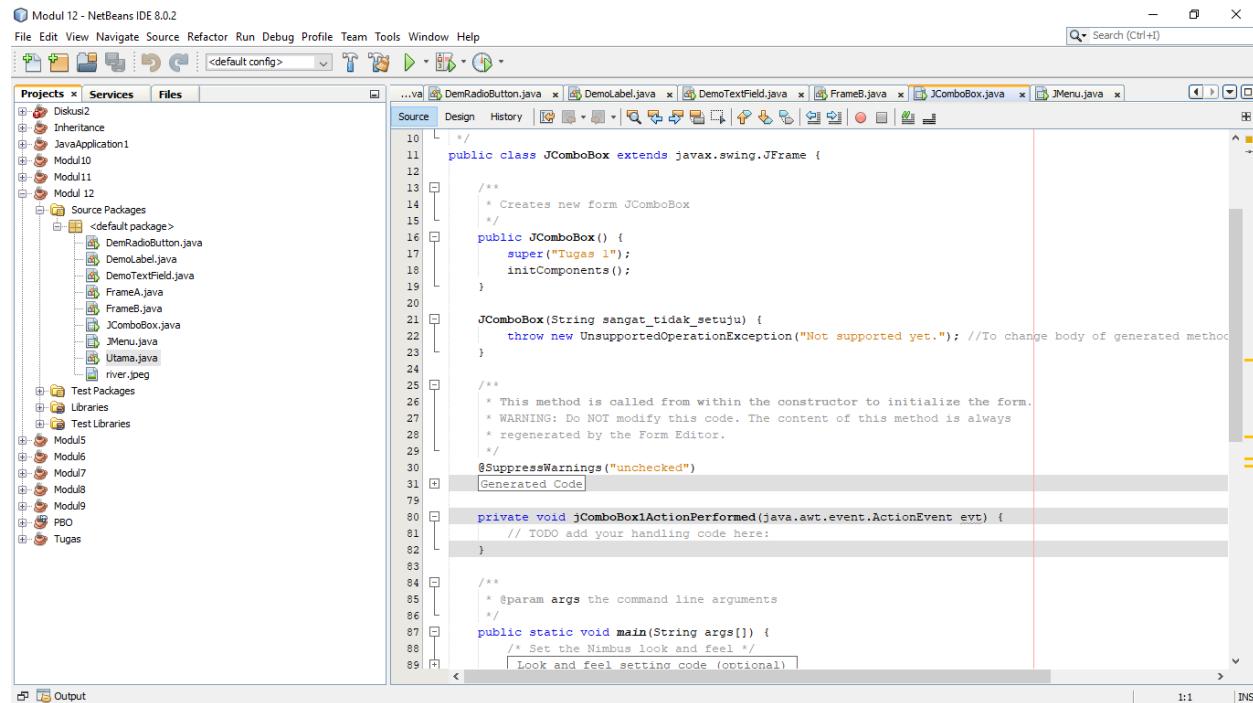
```



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

TUGAS

1. Menggunakan class JComboBox untuk membuat program GUI berdasarkan gambar



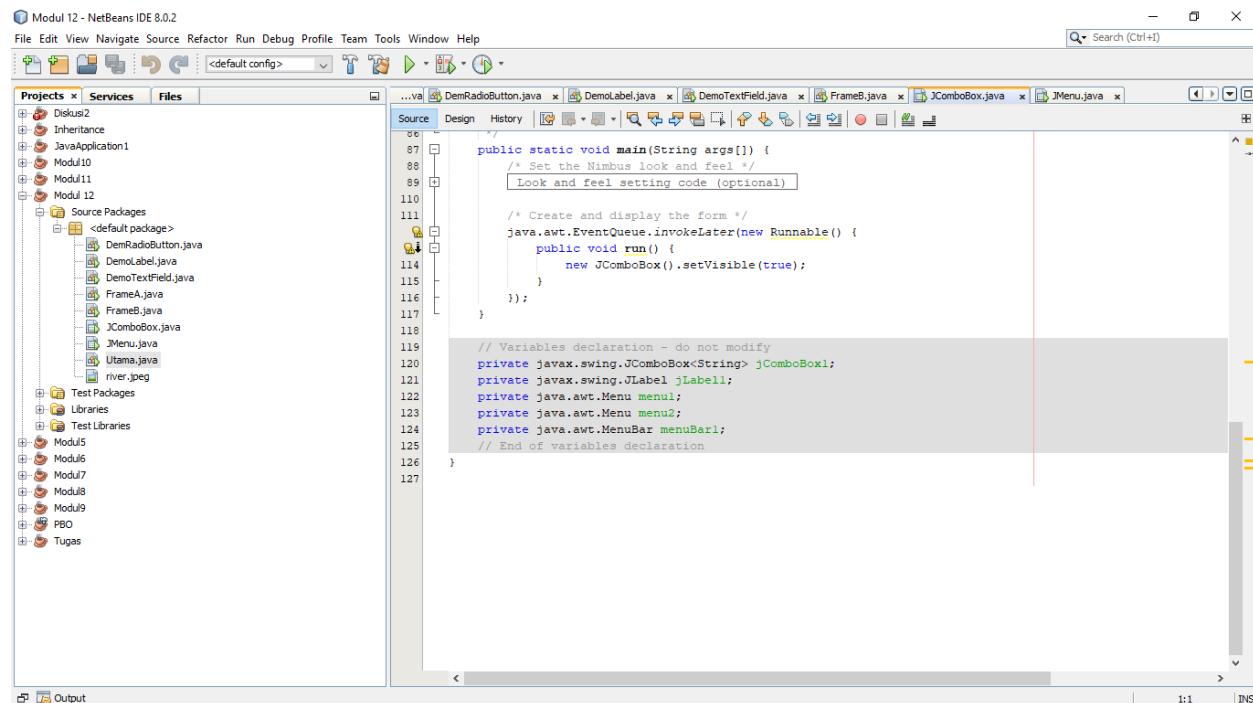
The screenshot shows the NetBeans IDE interface with the title "Modul 12 - NetBeans IDE 8.0.2". The left pane displays the project structure under "Modul 12" with several Java files listed. The right pane shows the source code for the file "JComboBox.java". The code defines a class "JComboBox" that extends javax.swing.JFrame. It includes a constructor that initializes the frame with the title "Tugas 1" and calls the initComponents() method. A private void method named jComboBox1ActionPerformed is defined to handle action events. The main method sets the Nimbus look and feel and creates and displays the form.

```
/*
 * Creates new form JComboBox
 */
public JComboBox() {
    super("Tugas 1");
    initComponents();
}

JComboBox(String sangat_tidak_setuju) {
    throw new UnsupportedOperationException("Not supported yet."); //To change body of generated methods, choose Tools | Templates.
}

/*
 * This method is called from within the constructor to initialize the form.
 * WARNING: Do NOT modify this code. The content of this method is always
 * regenerated by the Form Editor.
 */
@SuppressWarnings("unchecked")
Generated Code
private void jComboBox1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
}

/*
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    Look and feel setting code (optional)
}
```

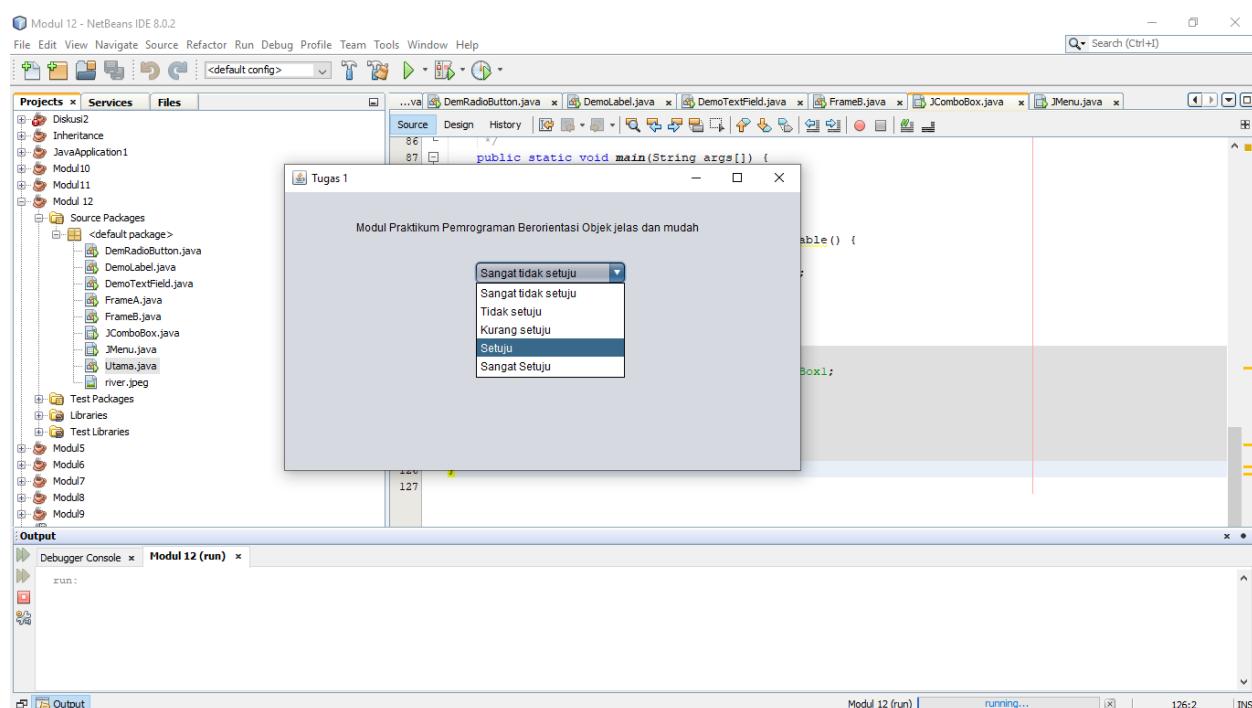
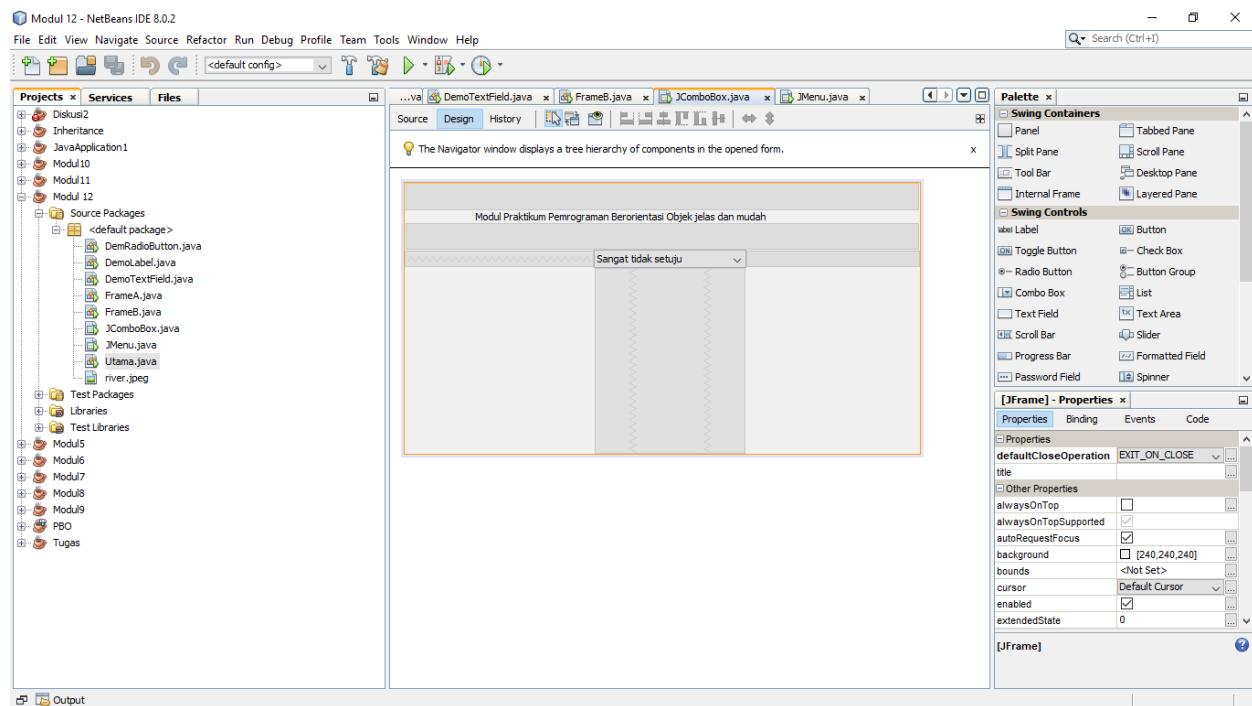


This screenshot is identical to the one above, showing the NetBeans IDE interface with the title "Modul 12 - NetBeans IDE 8.0.2". The left pane shows the project structure. The right pane displays the source code for "JComboBox.java". The main difference is that the "main" method is highlighted with a gray background, indicating it is the current active code block.

```
/*
 * Set the Nimbus look and feel
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    Look and feel setting code (optional)

    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            new JComboBox().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
private javax.swing.JComboBox<String> jComboBox1;
private javax.swing.JLabel jLabel1;
private javax.swing.JMenu menu1;
private javax.swing.JMenu menu2;
private javax.swing.JMenuBar menuBar1;
// End of variables declaration
}
```



2. Membuat program GUI untuk menambah menu. Apabila salah satu menu dipilih maka akan mengubah warna background.

The screenshot shows the NetBeans IDE interface with the title "Modul 12 - NetBeans IDE 8.0.2". 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, Cut, Copy, Paste, Find, and others. The left sidebar shows the Projects view with "Diskus2" expanded, revealing "Inheritance", "JavaApplication1", "Modul10", "Modul11", and "Modul 12". Under "Modul 12", "Source Packages" is expanded, showing files: DemRadioButtons.java, DemoLabel.java, DemoTextField.java, FrameA.java, FrameB.java, JComboBox.java, JMenu.java, Utama.java, and river.jpg. Below these are "Test Packages", "Libraries", and "Test Libraries". Other projects listed include Modul5, Modul6, Modul7, Modul8, Modul9, PBO, and Tugas. The main editor area displays the code for "JMenu.java". The code is as follows:

```
1 import java.awt.Color;
2
3 /**
4 * To change this license header, choose License Headers in Project Properties.
5 * To change this template file, choose Tools | Templates
6 * and open the template in the editor.
7 */
8
9 /**
10 *
11 * @author L200180035
12 */
13 public class JMenu extends javax.swing.JFrame {
14
15     /**
16      * Creates new form JMenu
17     */
18     public JMenu() {
19         initComponents();
20     }
21
22     /**
23      * This method is called from within the constructor to initialize the form.
24      * WARNING: Do NOT modify this code. The content of this method is always
25      * regenerated by the Form Editor.
26      */
27     @SuppressWarnings("unchecked")
28     // Generated Code
29
30     private void jMenuItem1ActionPerformed(java.awt.event.ActionEvent evt) {
31         // TODO add your handling code here:
32         this.getContentPane().setBackground(Color.red);
33     }
34 }
```

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

- Toolbar:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Search Bar:** Search (Ctrl+I).
- Projects Tab:** Projects (selected), Services, Files. Projects listed: Diskus2, Inheritance, JavaApplication1, Modul10, Modul11, Modul12, Source Packages (containing DemRadioButton.java, DemoLabel.java, DemoTextField.java, FrameA.java, FrameB.java, JComboBox.java, JMenu.java, river.jpeg), Test Packages, Libraries, Test Libraries, Modul5, Modul6, Modul7, Modul8, Modul9, PBO, Tugas.
- Code Editor:** Source tab selected. Code for `JMenuBar.java` is displayed, showing the creation of a `JMenuBar`, `JMenu`, and `JMenuItem` objects, and their addition to the frame's content pane.
- Output Tab:** Output.
- Status Bar:** 101:56, INS.

Modul 12 - NetBeans IDE 8.0.2

The screenshot shows the NetBeans IDE interface with the title "Modul 12 - NetBeans IDE 8.0.2". 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, Run, Stop, and Exit. The Projects tab is selected, showing a tree view of projects: Diskus2, Inheritance, JavaApplication1, Modul10, Modul11, Modul 12, Modul5, Modul6, Modul7, Modul8, Modul9, PBO, Tugas. Under Modul 12, Source Packages contains <default package> with files DemRadioButton.java, DemoLabel.java, DemoTextField.java, FrameA.java, FrameB.java, JComboBox.java, JMenu.java, Utama.java, and river.jpeg. Test Packages, Libraries, and Test Libraries are also listed. The Files tab is selected, showing the source code for JMenu.java:

```

java.awt.EventQueue.invokeLater(new Runnable() {
    public void run() {
        new JMenu().setVisible(true);
    }
});

// Variables declaration - do not modify
private javax.swing.JMenu jMenu1;
private javax.swing.JMenu jMenu2;
private javax.swing.JMenuBar jMenuBar1;
private javax.swing.JMenuItem jMenuItem1;
private javax.swing.JMenuItem jMenuItem2;
private javax.swing.JMenuItem jMenuItem3;
private javax.swing.JMenuItem jMenuItem4;
private javax.swing.JMenuItem jMenuItem5;
private javax.swing.JMenuItem jMenuItem6;
private javax.swing.JPopupMenu jPopupMenu1;
// End of variables declaration
}

```

The Source tab is selected, showing the Java code. The Design tab is visible at the top.

