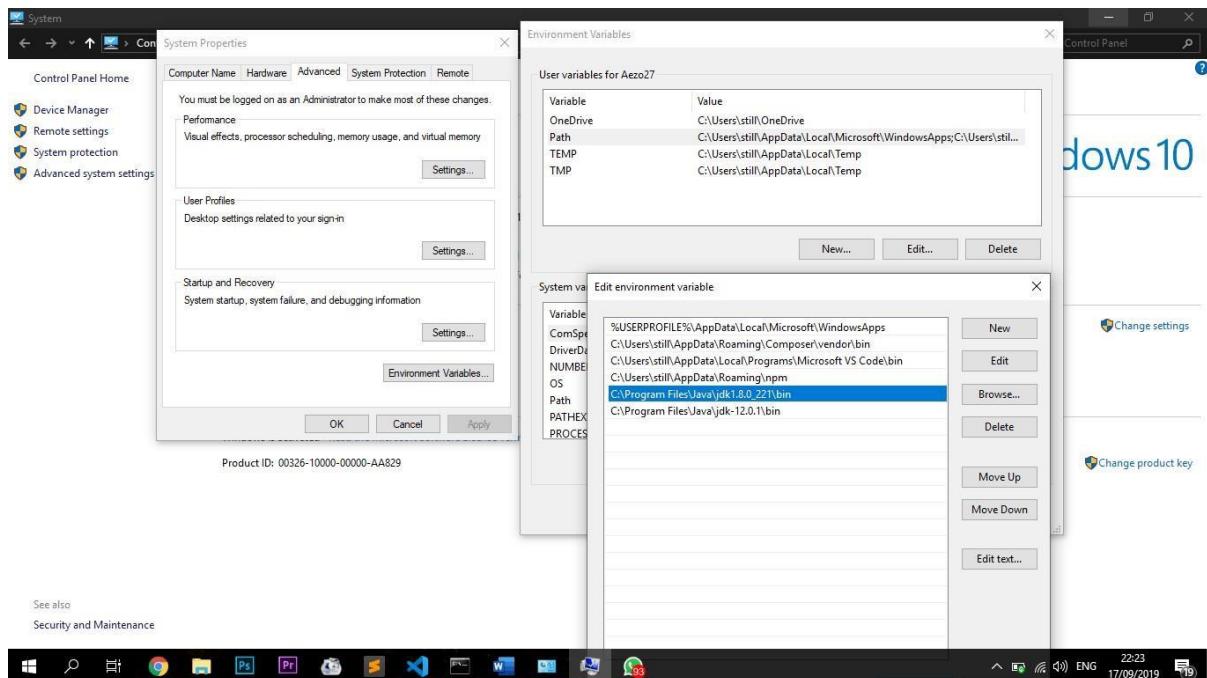


Laporan Pemrograman Berorientasi Objek Modul 1 - 12

Nama : Aulia Anis Rahmawati
NIM : L200180041
Kelas : B

Modul 1

Tugas Praktikum 1

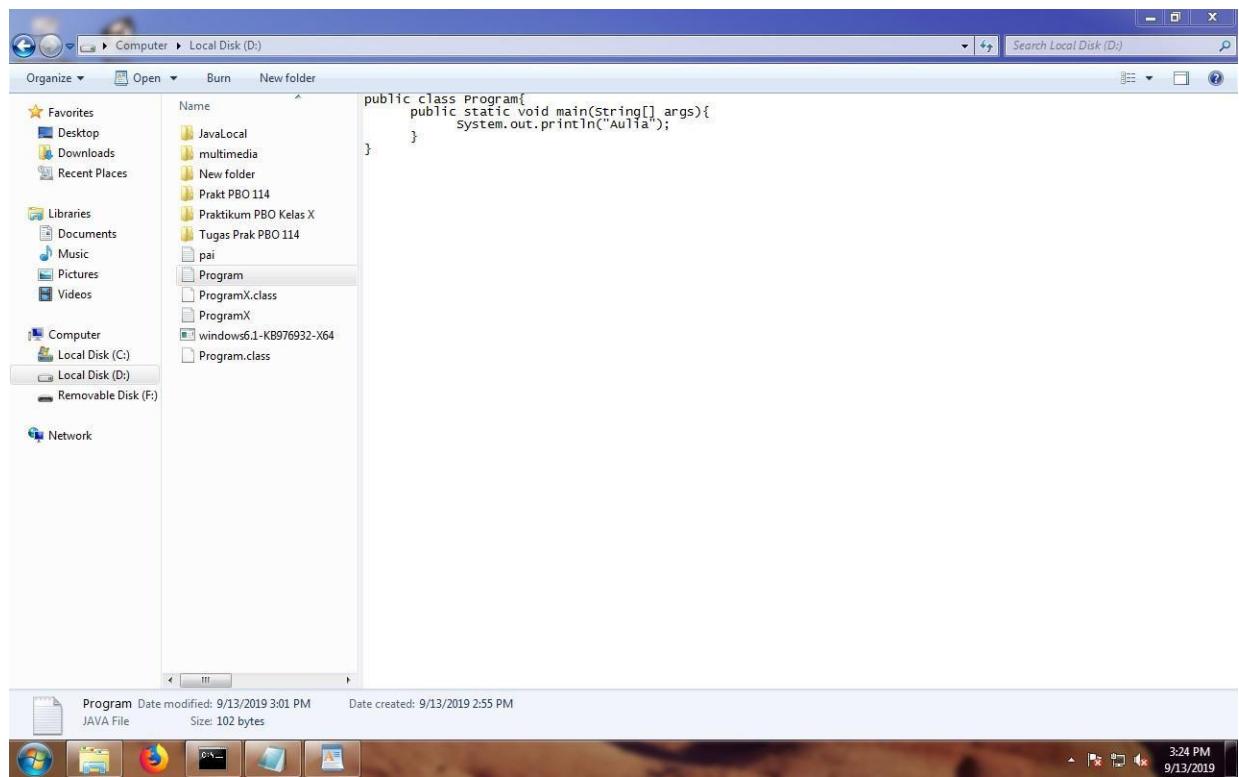
A screenshot of Visual Studio Code (VS Code) running on a Windows 10 desktop. The code editor shows a Java file named 'Program.java' with the following code:

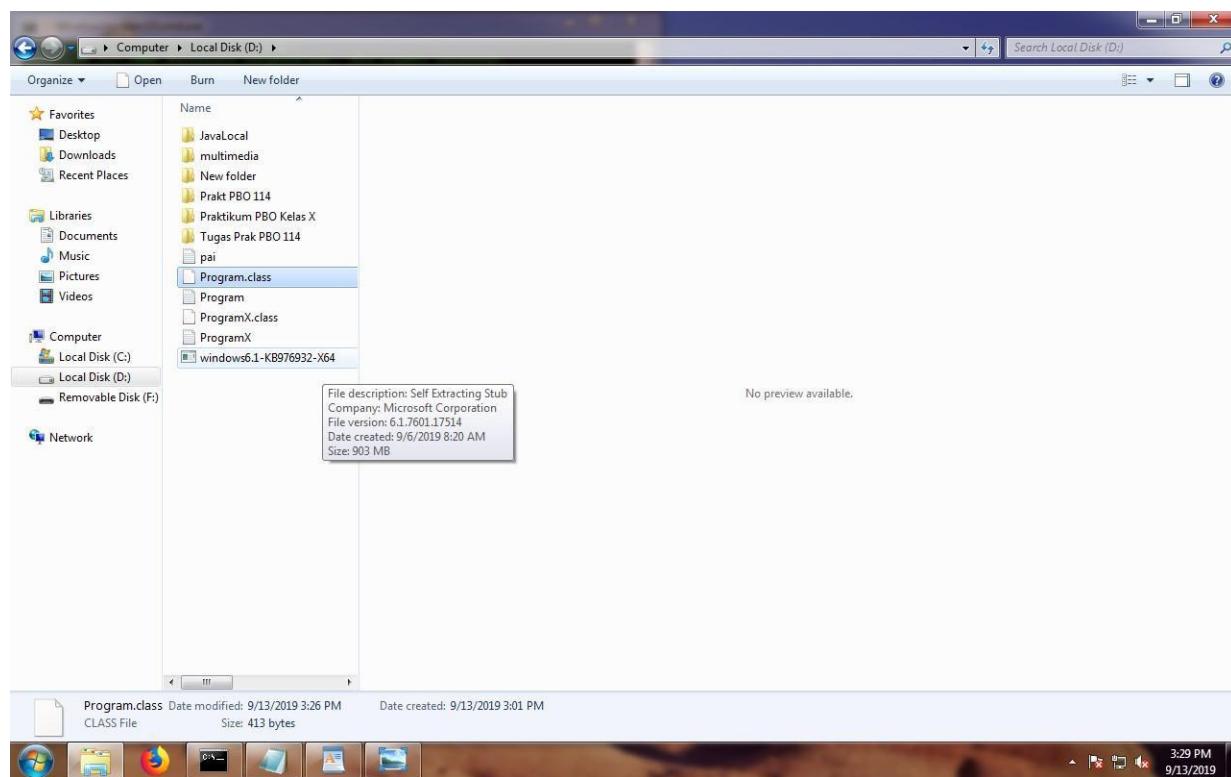
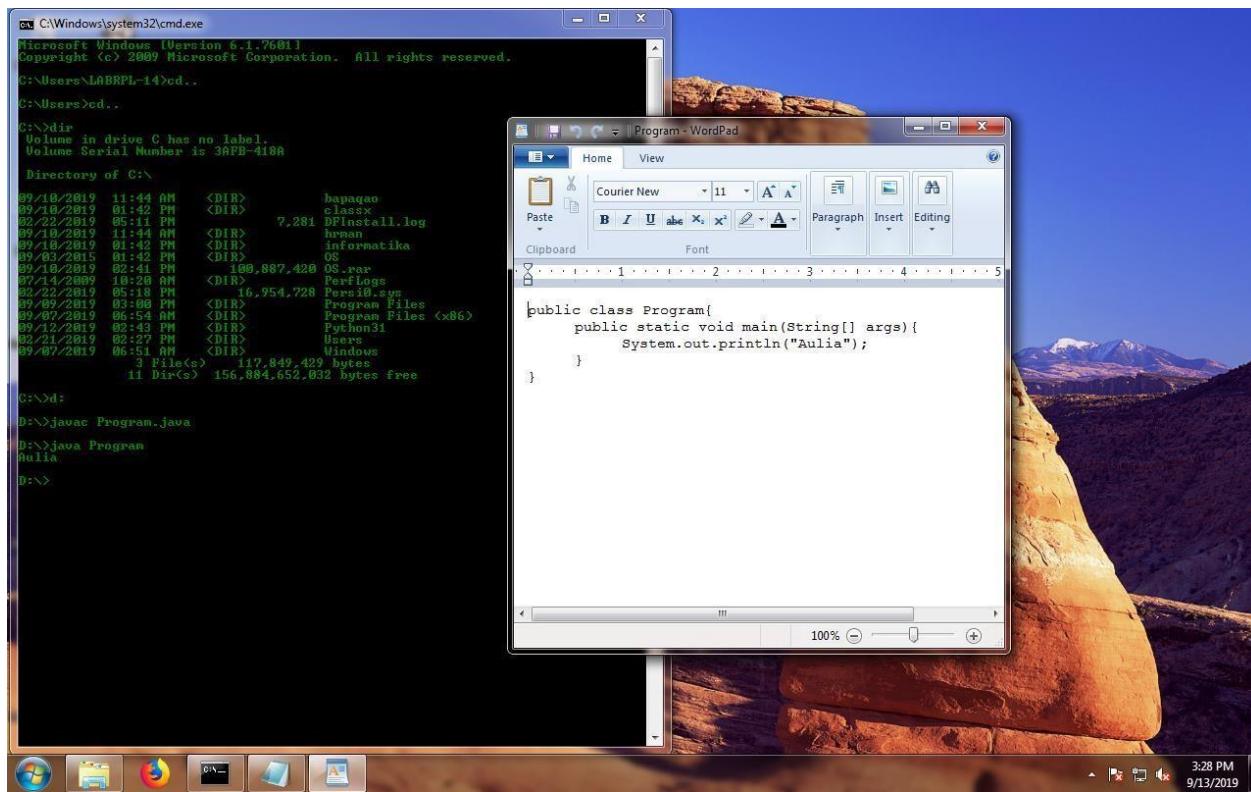
```
1 //tungu class Program
2 public class Program{
3     //membuat method main()
4     public static void main(String[] args) {
5         //statemen untuk menampilkan String
6         System.out.println("Hello World");
7     }
8 }
9 //tutup blok class Program
10 }
```

The terminal below shows the command-line output of the Java program:

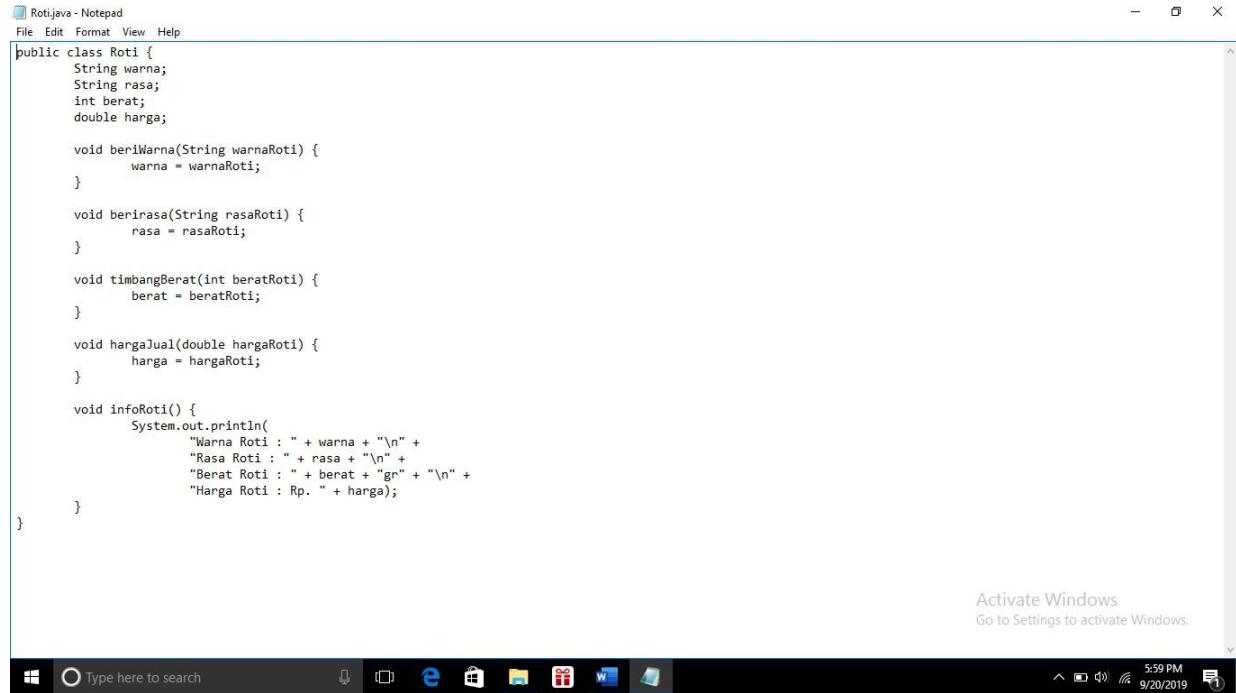
```
E:
E:\>cd E:\Tugas\Java
E:\Tugas\Java>javac Program.java
E:\Tugas\Java>java Program
Hello World
E:\Tugas\Java>
```

The status bar at the bottom indicates the file is on line 10, column 5, with tab size 4, and shows Java as the active language. The date/time is 17/09/2019 19:47.





Modul 2



The screenshot shows a Windows operating system desktop. In the center, there is a Notepad window titled "Rotijava - Notepad". The window contains the following Java code:

```
Rotijava - 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 + "\n" +
            "Rasa Roti : " + rasa + "\n" +
            "Berat Roti : " + berat + "gr" + "\n" +
            "Harga Roti : Rp. " + harga);
    }
}
```

At the bottom of the screen, the Windows taskbar is visible, featuring the Start button, a search bar with the placeholder "Type here to search", and several pinned icons for apps like File Explorer, Edge, and Mail. On the far right of the taskbar, the system tray displays the date and time (5:59 PM, 9/20/2019), battery status, and network connectivity.

A screenshot of a Windows desktop environment. At the top is a window titled "RotiDemo.java - Notepad" containing Java code. Below it is a taskbar with icons for File Explorer, Edge, and other applications. To the right is a "Control Panel" window. A watermark in the center-right says "Activate Windows Go to Settings to activate Windows." The desktop background is a nature scene.

```
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();
    }
}

Activate Windows
Go to Settings to activate Windows.

6:00 PM 9/20/2019
```

A screenshot of a Windows desktop environment showing multiple windows. In the foreground, there are two overlapping File Explorer windows displaying contents of a "New Volume (F:)" drive. One window shows a directory structure with "multimedia", "oop", and "oop praktik PBO E" folders. The other window shows files like "Program.class", "Roti.java", "RotiDemo.java", "Roti.class", and "RotiDemo.class". Behind these, a Command Prompt window is open with the following output:

```
Volume Serial Number is 0C0F-6EF4
Directory of F:\
09/10/2019 02:08 PM <DIR>      multimedia
09/12/2019 11:09 AM <DIR>      oop
09/12/2019 03:33 PM <DIR>      oop praktik PBO E
09/13/2019 03:33 PM           422 Program.class
09/13/2019 03:52 PM           114 Program.java
09/13/2019 03:51 PM           536 Roti.java
09/13/2019 03:49 PM           225 RotiDemo.java
09/13/2019               4 File(s)     1,297 bytes
09/13/2019             3 Dir(s)   269,226,430,656 bytes free

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

F:>
```

```
Hewan.java - Notepad
File Edit Format View Help
public class Hewan {
    String warna;
    String kaki;
    int berat;
    String kategori;

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

    void jumlahKaki(String kakiHewan) {
        kaki = kakiHewan;
    }

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

    void kategoriHewan(String sifatHewan) {
        kategori = sifatHewan;
    }

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

Activate Windows
Go to Settings to activate Windows.

```
HewanDemo.java - Notepad
File Edit Format View Help
public class HewanDemo{
    public static void main(String[] args) {
        Hewan hewan = new Hewan();
        hewan.beriWarna("Putih");
        hewan.jumlahKaki("4");
        hewan.timbangBerat(3);
        hewan.kategoriHewan("Jinak");
        hewan.infoHewan();
    }
}
```

Activate Windows
Go to Settings to activate Windows.



```
ca Command Prompt
Volume Serial Number is 188A-E192

Directory of D:\

09/20/2019  03:09 PM           1,089 Hewan.class
09/20/2019  03:09 PM            561 Hewan.java
09/20/2019  03:09 PM            516 HewanDemo.class
09/20/2019  03:08 PM            241 HewanDemo.java
09/10/2019  06:59 AM    <DIR>          multimedia
09/13/2019  03:52 PM            537 Roti.java
09/20/2019  02:56 PM            234 RotiDemo.java
09/06/2019  02:44 PM      947,070,088 windows6.1-KB976932-X64.exe
                           7 File(s)   947,073,266 bytes
                           1 Dir(s)  267,844,485,120 bytes free

D:>javac Hewan.java
D:>javac HewanDemo.java
D:>java HewanDemo
Warna Hewan : Putih
Jumlah kaki : 4
Berat Hewan : 3 KG
Kategori : Jinak

D:>
```

Car.java - Notepad

```
File Edit Format View Help
public class Car {
    int cadence;
    int speed;
    int gear;

    void changeCadence(int changeCadence) {
        cadence = changeCadence;
    }

    void speedUp(int speedUp) {
        speed = speedUp;
    }

    void changeGear(int changeGear) {
        gear = changeGear;
    }

    void printInfo() {
        System.out.println(
            "Cadence : " + cadence + "\n" +
            "Speed : " + speed + "\n" +
            "Gear : " + gear + "\n");
    }
}
```

Activate Windows
Go to Settings to activate Windows.

CarDemo.java - Notepad

```
File Edit Format View Help
public class CarDemo{
    public static void main(String[] args) {
        Car car1 = new Car();
        Car car2 = new Car();

        car1.changeCadence(50);
        car1.speedUp(20);
        car1.changeGear(2);
        car1.printInfo();

        car2.changeCadence(30);
        car2.speedUp(10);
        car2.changeGear(1);
        car2.printInfo();
    }
}
```

Activate Windows
Go to Settings to activate Windows.

```
ca Command Prompt
1 Dir(s) 267,844,431,872 bytes free

D:\>javac Car.java
Car.java:22: error: ')' expected
        "Gear : " + gear + "\n" + "\n";
                                         ^
1 error

D:\>javac Car.java
Car.java:22: error: ')' expected
        "Gear : " + gear + "\n" + "\n";
                                         ^
1 error

D:\>javac Car.java

D:\>javac CarDemo.java

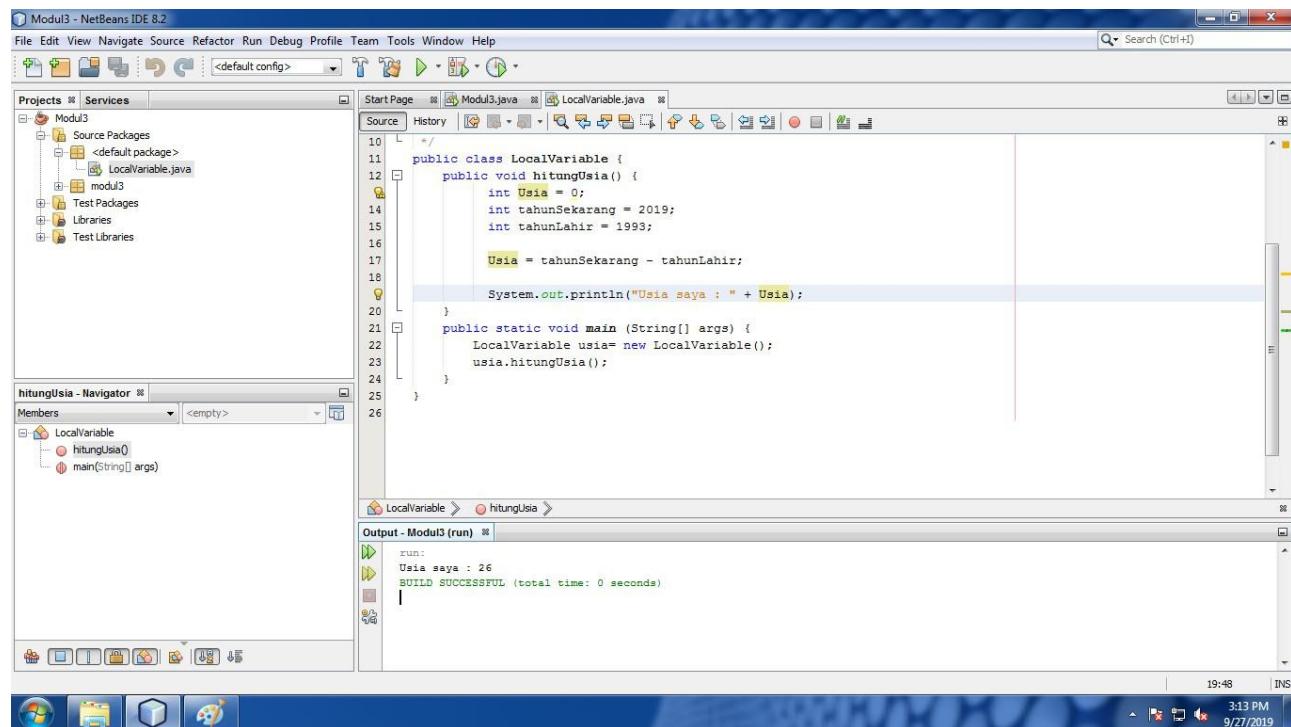
D:\>java CarDemo
Cadence : 50
Speed : 20
Gear : 2

Cadence : 30
Speed : 10
Gear : 1

D:\>
```

Modul 3

Latihan 1.

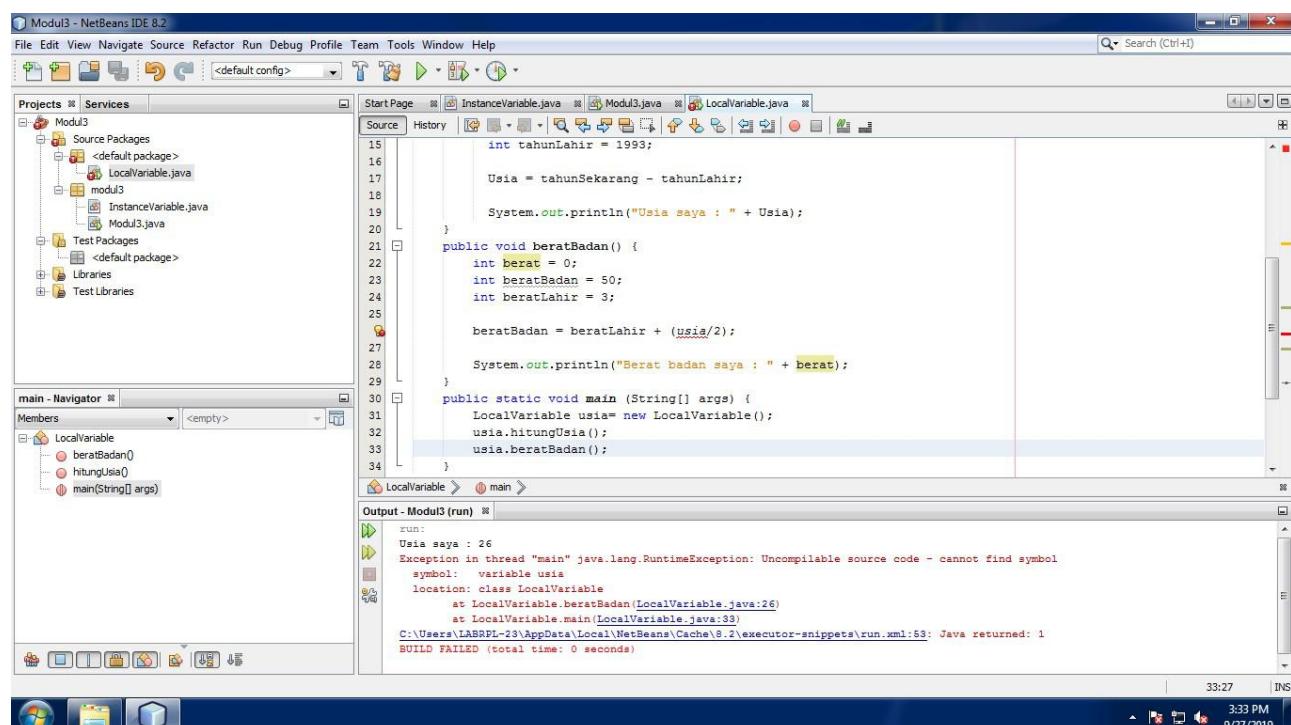


The screenshot shows the NetBeans IDE interface with the following details:

- Project Explorer:** Shows a project named "Modul3" with a source package containing "LocalVariable.java".
- Code Editor:** Displays the code for 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  * To enable Java code completion features for this file, select Tools | Enable Java Code Completion in the
5  * IDE Options dialog.
6  */
7  public class LocalVariable {
8     public void hitungUsia() {
9         int Usia = 0;
10    int tahunSekarang = 2019;
11    int tahunLahir = 1993;
12
13    Usia = tahunSekarang - tahunLahir;
14
15    System.out.println("Usia saya : " + Usia);
16
17 }
18
19 public static void main (String[] args) {
20     LocalVariable usia= new LocalVariable();
21     usia.hitungUsia();
22 }
23
24 }
25
26 }
```
- Navigator:** Shows members of LocalVariable: hitungUsia() and main(String[] args).
- Output:** Shows the run output:

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



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

- Project Explorer:** Shows a project named "Modul3" with source packages containing "LocalVariable.java", "InstanceVariable.java", and "Modul3.java".
- Code Editor:** Displays the code for InstanceVariable.java:

```
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34 
```
- Navigator:** Shows members of LocalVariable: beratBadan(), hitungUsia(), and main(String[] args).
- Output:** Shows the run output:

```
run:
Usia saya : 26
Exception in thread "main" java.lang.RuntimeException: Uncompilable source code - cannot find symbol
  symbol:   variable usia
  location: class LocalVariable
    at LocalVariable.beratBadan(LocalVariable.java:26)
    at LocalVariable.main(LocalVariable.java:33)
C:\Users\LABRPI-23\AppData\Local\NetBeans\Cache\8.2\executor-snippets\run.xml:53: Java returned: 1
BUILD FAILED (total time: 0 seconds)
```

2. Tidak bisa, karena usia berada pada method yang berbeda maka terjadi error.

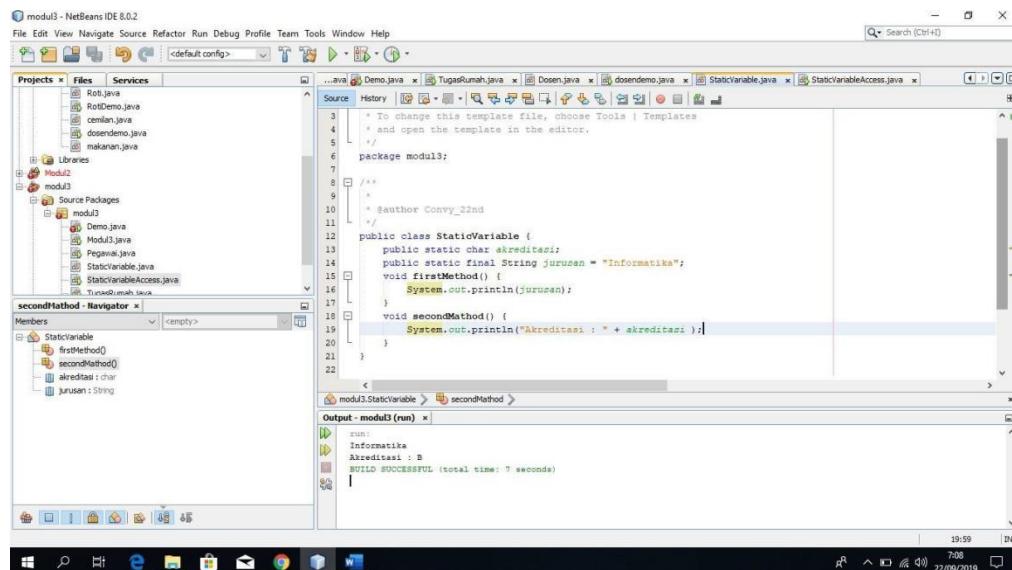
Latian 2.

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

- Projects** tab: Shows the project structure for "Modul3". It contains two source packages: "Modul3" and "modul3". The "Modul3" package contains a file named "LocalVariable.java". The "modul3" package contains files "InstanceVariable.java" and "Modul3.java".
- Source** tab: Displays the Java code for the "LocalVariable" class. The code initializes a variable "Usia" to 0, calculates age ("tahunSekarang - tahunLahir"), and prints the result. It then calculates BMI ("beratLahir + (Usia/2)") and prints the result.
- Output - Modul3 (run)**: Shows the terminal output of the run command. It includes the command "run:", the printed output "Usia saya : 26", "Berat badan saya : 3", and the build message "BUILD SUCCESSFUL (total time: 0 seconds)".
- Navigator**: Shows the members of the "LocalVariable" class, including methods "beratBadan()", "hitungUsia()", and "main(String[] args)", and a variable "Usia : int".
- System Bar**: Shows the system tray icons and the status bar indicating the time as 3:46 PM and the date as 9/27/2019.

```
10  */
11  public class LocalVariable {
12      int Usia = 0;
13      public void hitungUsia() {
14          int Usia = 0;
15          int tahunSekarang = 2019;
16          int tahunLahir = 1993;
17
18          Usia = tahunSekarang - tahunLahir;
19
20          System.out.println("Usia saya : " + Usia);
21      }
22      public void beratBadan() {
23          int berat = 0;
24          int beratBadan = 50;
25          int beratLahir = 3;
26
27          berat = beratLahir + (Usia/2);
28
29          System.out.println("Berat badan saya : " + berat);
30      }
31  }
```

Static Variable



modul3 - NetBeans IDE 8.0.2

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

Projects x Files Services

Source History |

...java Demo.java TugasRumah.java Dosen.java dosendemo.java StaticVariable.java StaticVariableAccess.java

Source

```
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6 package modul3;
7
8 /**
9  * @author Convyy_22nd
10 */
11 public class StaticVariable {
12     public static char akreditasi;
13     public static final String jurusan = "Informatika";
14     void firstMethod() {
15         System.out.println(jurusan);
16     }
17     void secondMethod() {
18         System.out.println("Akreditasi : " + akreditasi);
19     }
20 }
```

secondMethod - Navigator x

Members

- firstMethod()
- secondMethod()
- akreditasi : char
- jurusan : String

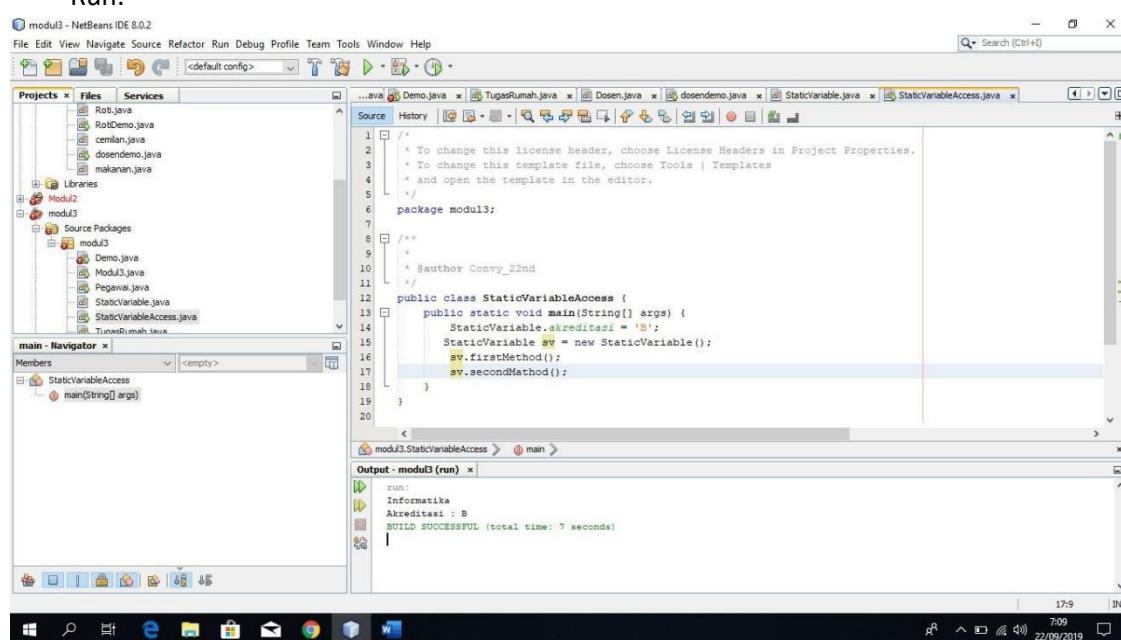
Output - modul3 (run) x

run:

```
Informatika
Akreditasi : B
BUILD SUCCESSFUL (total time: 7 seconds)
```

19:59 7/08 22/09/2019

Run:



modul3 - NetBeans IDE 8.0.2

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

Projects x Files Services

Source History |

...java Demo.java TugasRumah.java Dosen.java dosendemo.java StaticVariable.java StaticVariableAccess.java

Source

```
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  * @author Convyy_22nd
10 */
11 public class StaticVariableAccess {
12     public static void main(String[] args) {
13         StaticVariable sv = new StaticVariable();
14         sv.firstMethod();
15         sv.secondMethod();
16     }
17 }
```

main - Navigator x

Members

- main(String[] args)

Output - modul3 (run) x

run:

```
Informatika
Akreditasi : B
BUILD SUCCESSFUL (total time: 7 seconds)
```

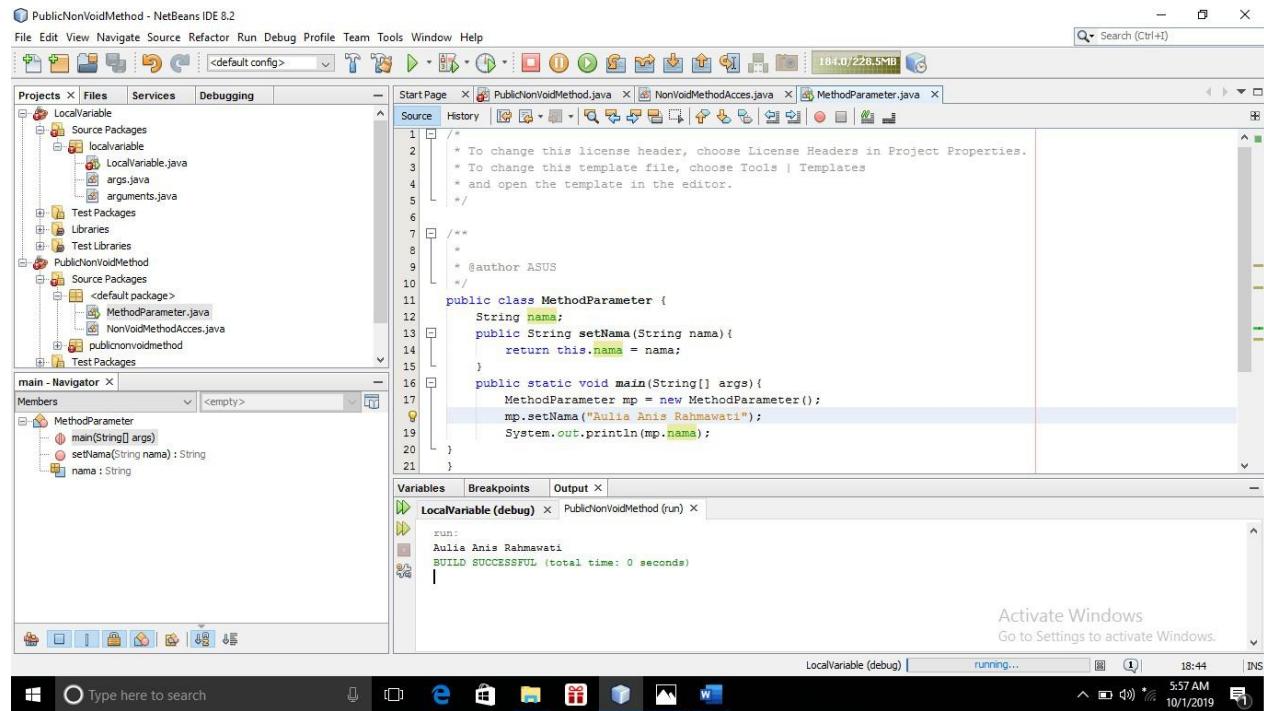
17:09 7/09 22/09/2019

METHOD NON-VOID

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

- File Menu:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Toolbar:** Standard NetBeans toolbar with icons for file operations, search, and project navigation.
- Projects Tab:** Shows the project structure with packages like LocalVariable, PublicNonVoidMethod, and Test Packages.
- Source Editor:** Displays the code for `NonVoidMethodAccess.java`. The code is as follows:11 /*
12 * @author ASUS
13 */
14 public class NonVoidMethodAccess {
15 public static void main (String[] args){
16 PublicNonVoidMethod q = new PublicNonVoidMethod();
17
18 q.setName();
19 q.setNim();
20 q.getName();
21 q.getNim();
22 q.info();
23 }
24 }
- Navigator Tab:** Shows the members of the `NonVoidMethodAccess` class, specifically the `main(String[] args)` method.
- Variables Tab:** Shows the variables being monitored during the debug session, including `LocalVariable (debug)` and `PublicNonVoidMethod (run)`.
- Output Tab:** Shows the run output with the message: "run:
Name : Aulia Anis Rahmawati
NIM : L200180041
BUILD SUCCESSFUL (total time: 0 seconds)"
- System Tray:** Shows the Windows taskbar with the Start button, search bar, and system icons.
- Status Bar:** Shows the status bar with "Activate Windows", "Go to Settings to activate Windows.", "LocalVariable (debug)", "running...", "18:1", "5:47 AM", and "10/1/2019".

PARAMETER METHOD



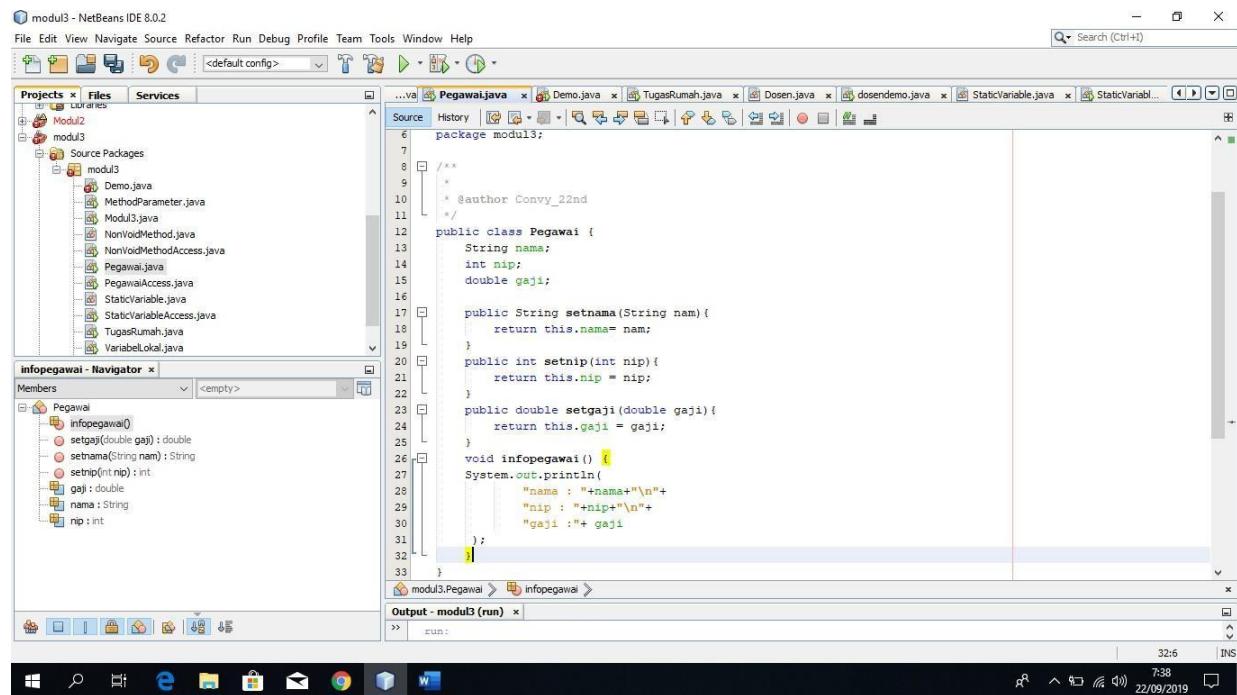
```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 * @author ASUS
 */
public class MethodParameter {
    String nama;
    public String setNama(String nama){
        return this.nama = nama;
    }
    public static void main(String[] args){
        MethodParameter mp = new MethodParameter();
        mp.setNama("Aulia Anis Rahmawati");
        System.out.println(mp.nama);
    }
}
```

Activate Windows
Go to Settings to activate Windows.

LocalVariable (debug) running... 18:44 5:57 AM 10/1/2019

Latihan 3.



```
package modul3;

/*
 * @author Convyn_22nd
 */
public class Pegawai {
    String nama;
    int nip;
    double gaji;
    public String setnama(String nam){
        return this.nama=nam;
    }
    public int setnip(int nip){
        return this.nip = nip;
    }
    public double setgaji(double gaji){
        return this.gaji = gaji;
    }
    void infopegawai(){
        System.out.println(
            "name : "+nama+"\n"+
            "nip : "+nip+"\n"+
            "gaji :" + gaji
        );
    }
}
```

modul3 (run) run:

modul3.Pegawai > infopegawai >

Output - modul3 (run) >> run:

7:38 22/09/2019

Run Latihan 3:

```
public class Pegawai {  
    String nama;  
    String NIP;  
    double gaji;  
}  
public String setNama(String nama){  
    return this.nama = nama; }  
public String setNIP(String NIP){  
    return this.NIP = NIP;  
}  
public double setgaji(double gaji){  
    return this.gaji= gaji;  
}  
public static void main(String[] args){  
    Pegawai pg1 = new Pegawai();  
    Pegawai pg2 = new Pegawai();  
    Pegawai pg3 = new Pegawai();  
    Pegawai pg4 = new Pegawai();  
    Pegawai pg5 = new Pegawai();  
  
    pg1.setNama("Aulia");  
    System.out.println(pg1.nama);  
    pg1.setNIP("1009");  
    System.out.println(pg1.NIP);  
    pg1.setgaji(30.5);  
    System.out.println(pg1.gaji);
```

```
pg2.setNama("Ayu");
System.out.println(pg2.nama);
pg2.setNIP("1010");
System.out.println(pg2.NIP);
pg2.setgaji(20.5);
System.out.println(pg2.gaji);

pg3.setNama("Sinta");
System.out.println(pg3.nama);
pg3.setNIP("1011");
System.out.println(pg3.NIP);
pg3.setgaji(25.5);
System.out.println(pg3.gaji);

pg4.setNama("Dimas");
System.out.println(pg4.nama);
pg4.setNIP("1012");
System.out.println(pg4.NIP);
pg4.setgaji(20.5);
System.out.println(pg4.gaji);

pg5.setNama("Lia");
System.out.println(pg5.nama);
pg5.setNIP("1013");
System.out.println(pg5.NIP);
pg5.setgaji(17.5);
System.out.println(pg5.gaji);
}

}
```

```
run:
Aulia
1009
30.5
Ayu
1010
20.5
Sinta
1011
25.5
Dimas
1012
20.5
Lia
1013
17.5
BUILD SUCCESSFUL (total time: 1 second)
```

METHOD VOID

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

- Title Bar:** modul3 - 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:** Projects x Files Services. The modul3 project is expanded, showing files like Demo.java, MethodParameter.java, Modul3.java, NonVoidMethod.java, NonVoidMethodAccess.java, Pegawai.java, PegawaiAccess.java, StaticVariable.java, StaticVariableAccess.java, TugasRumah.java, VariabelLokal.java, and VoidMethod.java.
- Source Editor:** Displays the content of VoidMethod.java:

```
11  /*
12   * 
13   * public class VoidMethod {
14   *     int hour, minute, second;
15   *     public void duration(int hour, int minute, int second) {
16   *         this.hour = hour;
17   *         this.minute = minute;
18   *         this.second = second;
19   *     }
20   *     public void info() {
21   *         System.out.println("Total Waktu \n" + hour +
22   *                             " jam " + minute +
23   *                             " menit " + second +
24   *                             " detik");
25   *     }
26   *     public static void main (String[] args) {
27   *         VoidMethod vm = new VoidMethod();
28   *         vm.duration(1, 30, 15);
29   *         vm.info();
30   *     }
31   */
32 }
```
- Navigator:** main - Navigator. Shows members of VoidMethod: duration(int hour, int minute, int second), info(), and main(String[] args). It also lists local variables: hour : int, minute : int, and second : int.
- Output:** Output - modul3 (run) x. Shows the run output:

```
run:
Total Waktu
1 jam 30 menit 15 detik
BUILD SUCCESSFUL (total time: 0 seconds)
```
- System Tray:** Shows standard Windows system tray icons.

Pekerjaan Rumah

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

- Title Bar:** modul3 - 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:** Projects x Files Services. The modul3 project is expanded, showing files like MethodParameter.java, NonVoidMethod.java, NonVoidMethodAccess.java, Pegawai.java, PegawaiAccess.java, StaticVariable.java, StaticVariableAccess.java, VariabelLokal.java, and Nilai.java.
- Source Editor:** Displays the content of Nilai.java:

```
6  package modul3;
7
8  /**
9   * 
10  * @author Convyn_22nd
11  */
12  public class Nilai {
13      int nilaiMID;
14      int nilaiTugas;
15      int nilaiUAS;
16      double MID, Tugas, UAS;
17      double nilaiTotal;
18      public void setnilaimid(int a){
19          this.nilaiMID = a;
20          MID = a * 1.0;
21      }
22      public double getnilaimid(){
23          return MID;
24      }
25      public void setnilaitugas(int b){
26          this.nilaiTugas = b;
27          Tugas = b*2.0;
28      }
29      public double getnilaitugas(){
30          return Tugas;
31      }
32      public void setnilaiuas(int c){
33          this.nilaiUAS = c;
34      }
35 }
```
- Navigator:** InfoUN - Navigator. Shows members of Nilai: InginUAS, getnilaimid(), getnilaitugas(), getnilauas(), setnilaimid(int a), setnilaitugas(int b), and setnilauas(int c).
- Output:** Output - modul3 (run) x. Shows the run output:

```
>> run:
```
- System Tray:** Shows standard Windows system tray icons.

modul3 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Files Services

Source Packages modul3

- MethodParameter.java
- Modul3.java
- Nilai.java
- NilaiAccess.java
- NonVoidMethod.java
- NonVoidMethodAccess.java
- Pegawai.java
- PegawaiAccess.java
- StaticVariable.java
- StaticVariableAccess.java
- VaribelLokal.java
- VoidMethod.java

InfoUN - Navigator

Members <empty>

Nilai

- InfoUN()
 - getnilaimd(): double
 - getnilaitugas(): double
 - getnilaiuas(): double
 - qw(): double
 - setnilaimd(int a)
 - setnilaitugas(int b)
 - setnilaiuas(int c)
- MID : double
- Tugas : double
- UAS : double
- nilaiTotal : int

Source History

```

24
25     public void setnilaitugas(int b){
26         this.nilaiTugas = b;
27         Tugas = b*2.0;
28     }
29     public double getnilaitugas(){
30         return Tugas;
31     }
32     public void setnilaiuas(int c){
33         this.nilaiMID = c;
34         UAS = c*3.0;
35     }
36     public double getnilaiuas(){
37         return UAS;
38     }
39     public double qw(){
40         nilaiTotal = ((UAS + MID + Tugas)/3) ;
41         return nilaiTotal;
42     }
43     public void InfoUN(){
44         System.out.println(
45             "Nilai MID : "+ MID + "\n" +
46             "Nilai Tugas : "+ Tugas + "\n" +
47             "Nilai UAS : "+ UAS + "\n" +
48             "Nilai Total : "+ nilaiTotal
49         );
50     }
51 }
```

Output - modul3 (run) >

>> run:

48:26 8:10 22/09/2019

Run :

modul3 - NetBeans IDE 8.0.2

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

Search (Ctrl+F)

Projects Files Services

Source Packages modul3

- MethodParameter.java
- Modul3.java
- Nilai.java
- NilaiAccess.java
- NonVoidMethod.java
- NonVoidMethodAccess.java
- Pegawai.java
- PegawaiAccess.java
- StaticVariable.java
- StaticVariableAccess.java
- VaribelLokal.java
- VoidMethod.java

main - Navigator

Members <empty>

NilaiAccess

- main(String[] args)

Source History

```

6 package modul3;
7
8 /**
9  * @author Convyn_22nd
10 */
11 public class NilaiAccess {
12     public static void main(String[] args){
13         Nilai q = new Nilai();
14
15         q.setnilaiuas(10);
16         q.setnilaitugas(20);
17         q.setnilaimid(30);
18         q.getnilaimid();
19         q.getnilaitugas();
20         q.getnilaiuas();
21         q.qw();
22         q.InfoUN();
23     }
24 }
```

Output - modul3 (run) >

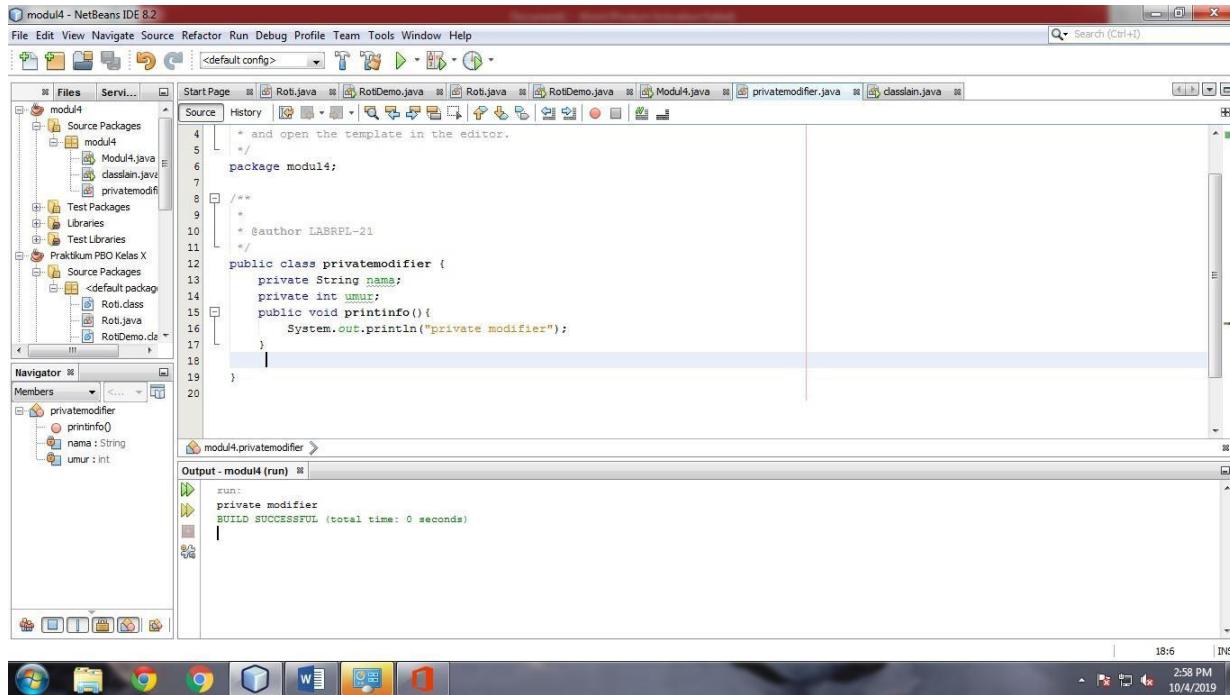
run:

Nilai MID : 30.0
 Nilai Tugas : 40.0
 Nilai UAS : 30.0
 Nilai Total : 33.333333333333336
 BUILD SUCCESSFUL (total time: 0 seconds)

22:16 8:11 22/09/2019

Modul 4

4.1 Private Modifier



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

- Title Bar:** modul4 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar icons.
- Toolbox:** Standard NetBeans toolbox icons.
- Project Explorer:** Shows the project structure with packages: modul4, Test Packages, Libraries, Test Libraries, and Praktikum PBO Kelas X. Under modul4, there are Source Packages (modul4), Test Packages (modul4), and Libraries (modul4). The Source Packages contain files: Modul4.java, classlan.java, and privatemodif.java.
- Code Editor:** Displays the content of the privatemodif.java file:

```
4  * and open the template in the editor.
5  */
6  package modul4;
7
8  /**
9   *
10  * @author LABRPL-21
11  */
12 public class privatemodifier {
13     private String nama;
14     private int umur;
15     public void printinfo(){
16         System.out.println("private modifier");
17     }
18 }
19
20 }
```
- Navigator:** Shows the members of the privatemodifier class: printinfo0, nama : String, and umur : int.
- Output:** Shows the run output for modul4 (run):

```
run:
private modifier
BUILD SUCCESSFUL (total time: 0 seconds)
```
- System Tray:** Shows standard Windows system tray icons.
- Status Bar:** Shows the time as 18:56 and the status as INS.

Modul4 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Source Page Roti.java RotDemo.java Roti.java RotDemo.java Modul4.java privatemodifier.java classlain.java

Start Page Roti.java RotDemo.java Roti.java RotDemo.java Modul4.java privatemodifier.java classlain.java

Source History

```

1  /*
2   * To change this license header, choose License Headers in Project Properties.
3   * To change this template file, choose Tools | Templates
4   * and open the template in the editor.
5   */
6  package modul4;
7
8  /**
9   * @author LABRPL-21
10  */
11 public class classlain {
12     public static void main(String[] args) {
13         privatemodifier ab = new privatemodifier();
14         ab.printinfo();
15     }
16 }
17
18

```

modul4.classlain > main > ab

Output - modul4 (run) :

```

run:
private modifier
BUILD SUCCESSFUL (total time: 0 seconds)

```

14:33 10/4/2019

4.2 Default modifier

Modul4 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Files Services Start Page PrivateModifier.java Private.java DefaultModifier.java Default.java

Source Page PrivateModifier.java Private.java DefaultModifier.java Default.java

Source History

```

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

```

Output - Modul4 (run) :

```

Debugger Console Modul4 (run) :
run:
1
2
BUILD SUCCESSFUL (total time: 0 seconds)

```

20:1 10/4/2019

1. Akses dalam satu package

- Bisa di akses karena class tersebut terdapat dalam package yang sama

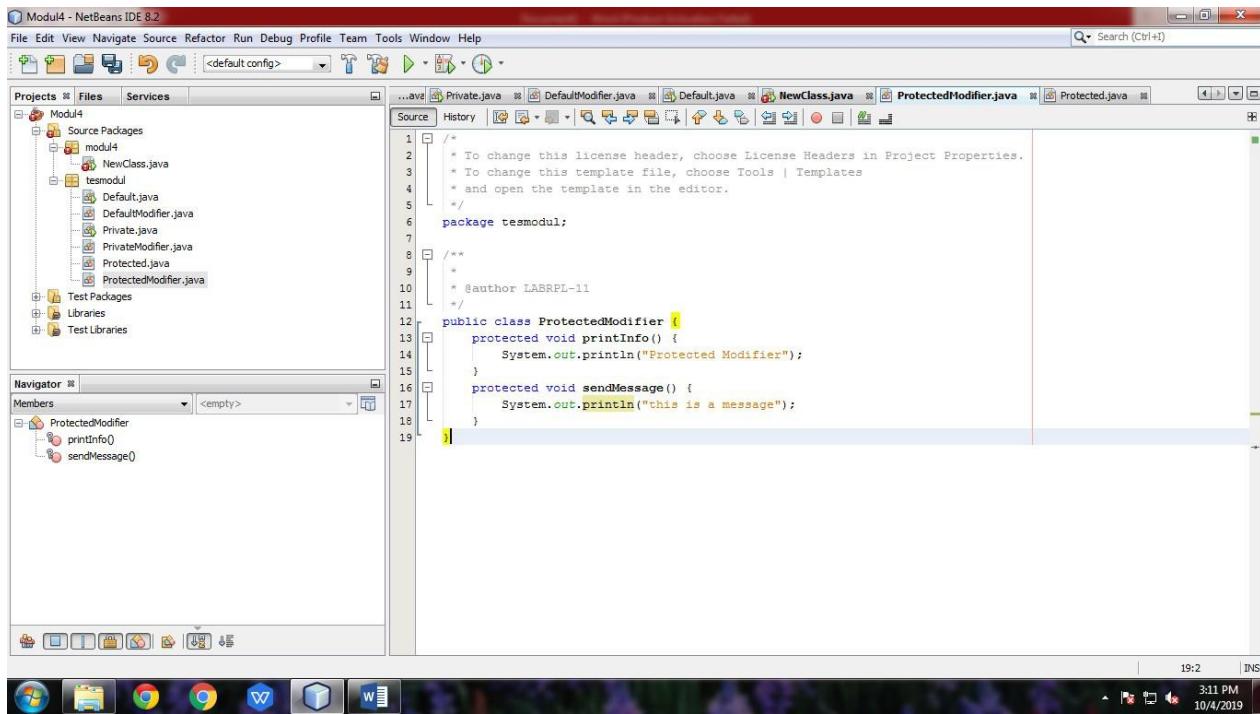
```
1 * To change this license header, choose License Headers in Project Properties.
2 * To change this template file, choose Tools | Templates
3 * and open the template in the editor.
4 */
5
6 /**
7  * @author LABRPL-11
8 */
9
10 public class Default {
11     public static void main(String[] args) {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

2. Mengakses dalam package yang lain

- Tidak bisa di akses karena method tersebut dalam package yang berbeda

```
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 modul4;
7
8 import tesmodul.DefaultModifier;
9
10 /**
11  * @author LABRPL-11
12 */
13
14 public class NewClass {
15     public static void main(String[] args) {
16         DefaultModifier defaultVar = new DefaultModifier();
17         System.out.println(defaultVar.a);
18         System.out.println(defaultVar.b);
19     }
20 }
21
22
```

4.3 Protected Modifier

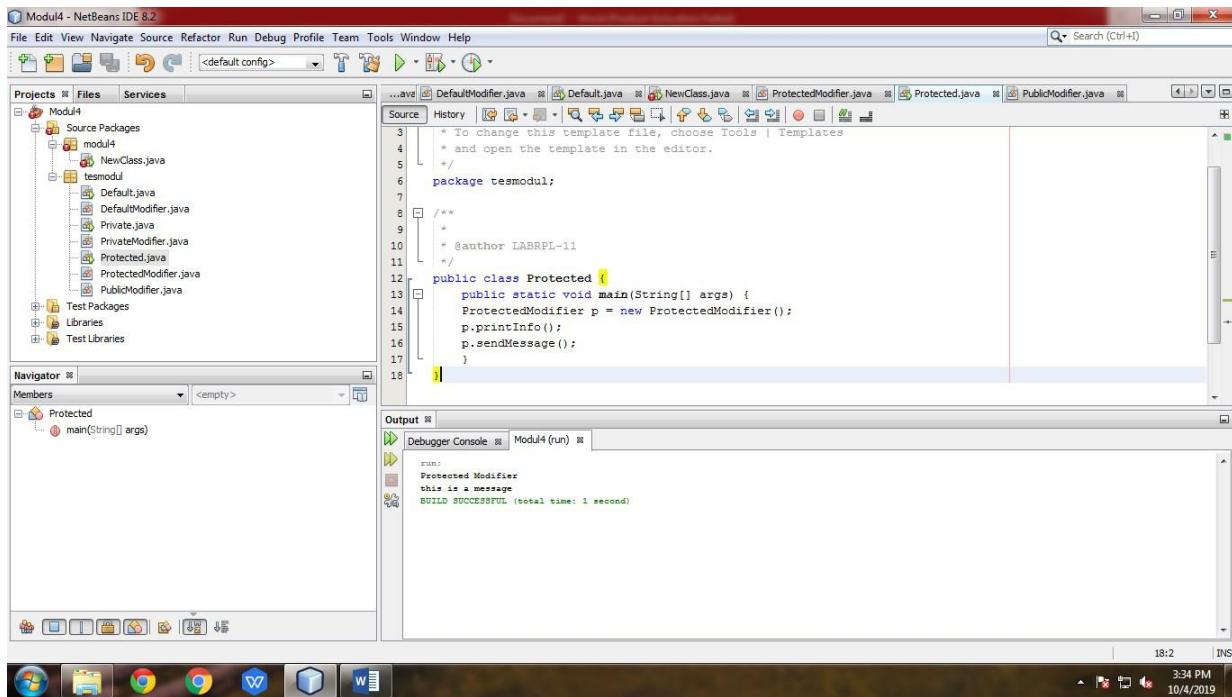


The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** Modul4 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Projects Tab:** Shows a project named "Modul4" containing packages "modul4" and "tesmodul".
- Source Editor:** Displays the "ProtectedModifier.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 package tesmodul;
7
8 /**
9 * @author LABRPL-11
10 */
11 public class ProtectedModifier {
12     protected void printInfo() {
13         System.out.println("Protected Modifier");
14     }
15     protected void sendMessage() {
16         System.out.println("this is a message");
17     }
18 }
```
- Navigator Tab:** Shows the members of the "ProtectedModifier" class: "printInfo()" and "sendMessage()".
- Bottom Status Bar:** Shows the date and time: 10/4/2019, 3:11 PM.

- Bisa di akses dalam satu package yang sama



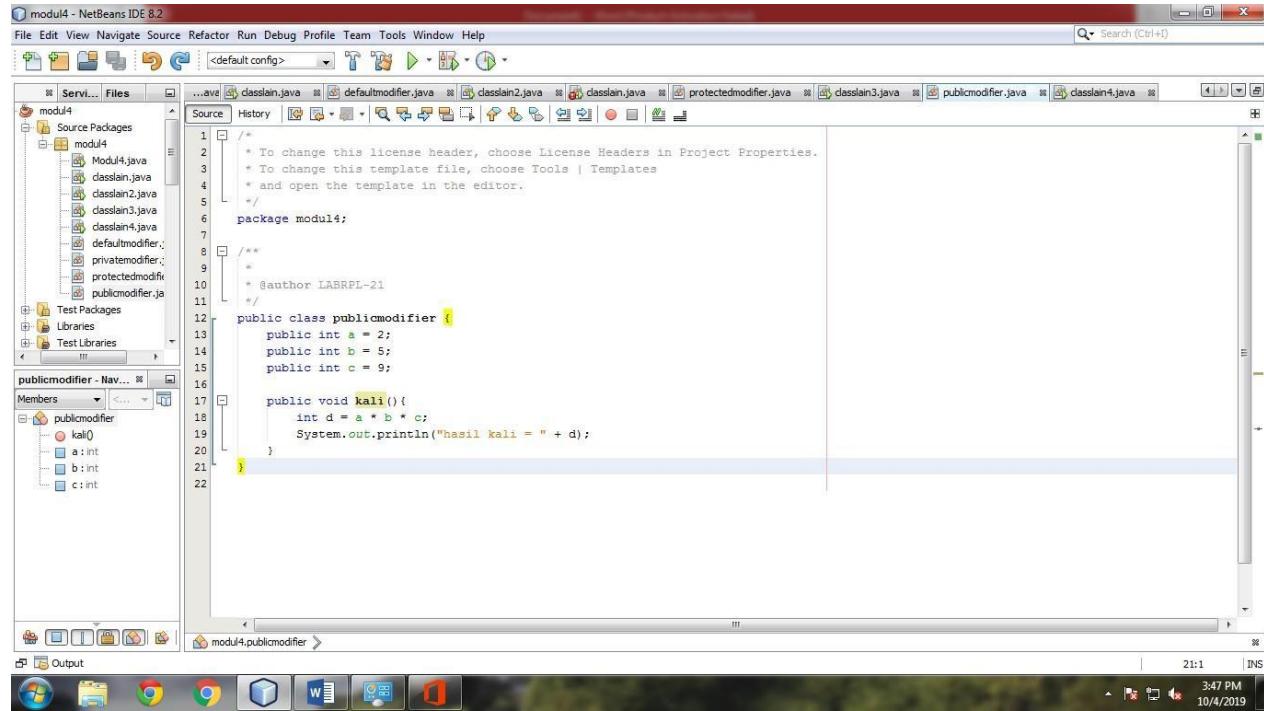
The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** Modul4 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Projects Tab:** Shows a project named "Modul4" containing packages "modul4" and "tesmodul".
- Source Editor:** Displays the "ProtectedModifier.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 package tesmodul;
7
8 /**
9 * @author LABRPL-11
10 */
11 public class Protected {
12     public static void main(String[] args) {
13         ProtectedModifier p = new ProtectedModifier();
14         p.printInfo();
15         p.sendMessage();
16     }
17 }
```
- Output Tab:** Shows the "Debugger Console" output:

```
run:
Protected Modifier
this is a message
BUILD SUCCESSFUL (total time: 1 second)
```
- Bottom Status Bar:** Shows the date and time: 10/4/2019, 3:34 PM.

Latihan 4



1. Diakses dalam satu package

- Bisa diakses karena didalam package yang sama

modul4 - NetBeans IDE 8.2

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

Source Packages modul4 Modul4.java classlain.java classlain2.java classlain3.java classlain4.java defaultmodifier; privatemodifier; protectedmodifier; publicmodifier.java

Test Packages Libraries Test Libraries

Navigator Members classlain4 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 package modul4;
7
8 /**
9 *
10 * @author LABRPL-21
11 */
12 public class classlain4 {
13     public static void main(String[] args) {
14         publicmodifier gj = new publicmodifier();
15         gj.kali();
16     }
17 }

```

Output - modul4 (run)

```

run:
basil kali = 90
BUILD SUCCESSFUL (total time: 0 seconds)

```

Output Finished building modul4 (run). 15:14 3:48 PM 10/4/2019

2. Akses dalam package lain

- Tidak bisa diakses karena berada diluar package

packagelain - NetBeans IDE 8.2

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

Source Packages packagelain packagelain.java classlain.java

Test Packages Libraries Test Libraries

Praktikum PBO Kelas X

Source Packages <default package> Rot.class Rot.java RotDemo.class RotDemo.java

main - Navigator Members classlain 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 package packagelain;
7
8 /**
9 *
10 * @author LABRPL-21
11 */
12 public class classlain {
13     public static void main(String[] args) {
14         publicmodifier gj = new publicmodifier();
15         gj.kali();
16     }
17 }

```

Output - packagelain (run)

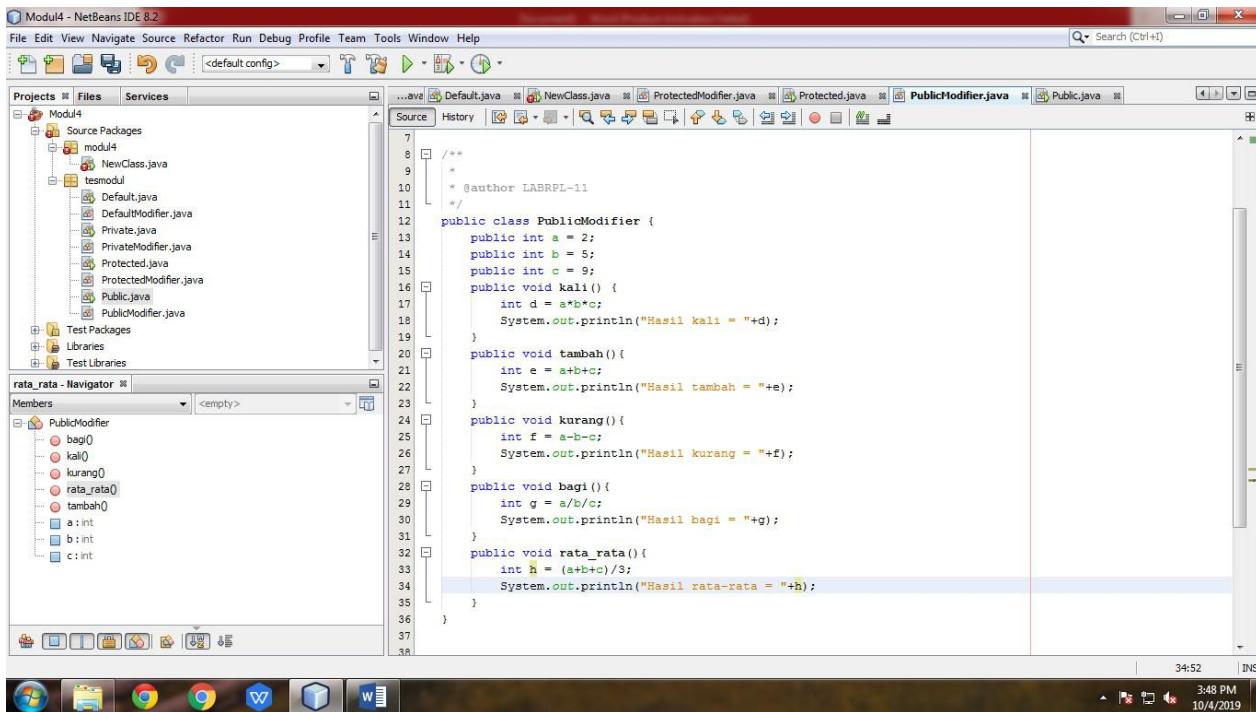
```

run:
Exception in thread "main" java.lang.RuntimeException: Uncompilable source code - cannot find symbol
  symbol:   class publicmodifier
  location: class packagelain.classlain
    at packagelain.classlain.main(classlain.java:14)
C:\Users\LABRPL-21\AppData\Local\NetBeans\Cache\8.2\executor-snippets\run.xml:53: Java returned: 1
BUILD FAILED (total time: 1 second)

```

Output Build of packagelain (run) failed. 16:6 3:50 PM 10/4/2019

4.4 Public Modifier



Modul4 - NetBeans IDE 8.2

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

Projects Files Services ...avi Default.java NewClass.java ProtectedModifier.java Protected.java PublicModifier.java Public.java

Source History

```
7  /**
8  * 
9  * @author LABRPL-11
10 */
11
12 public class PublicModifier {
13     public int a = 2;
14     public int b = 5;
15     public int c = 9;
16     public void kali() {
17         int d = a*b*c;
18         System.out.println("Hasil kali = "+d);
19     }
20     public void tambah() {
21         int e = a+b+c;
22         System.out.println("Hasil tambah = "+e);
23     }
24     public void kurang() {
25         int f = a-b-c;
26         System.out.println("Hasil kurang = "+f);
27     }
28     public void bagi() {
29         int g = a/b/c;
30         System.out.println("Hasil bagi = "+g);
31     }
32     public void rata_rata() {
33         int h = (a+b+c)/3;
34         System.out.println("Hasil rata-rata = "+h);
35     }
36 }
37
38
```

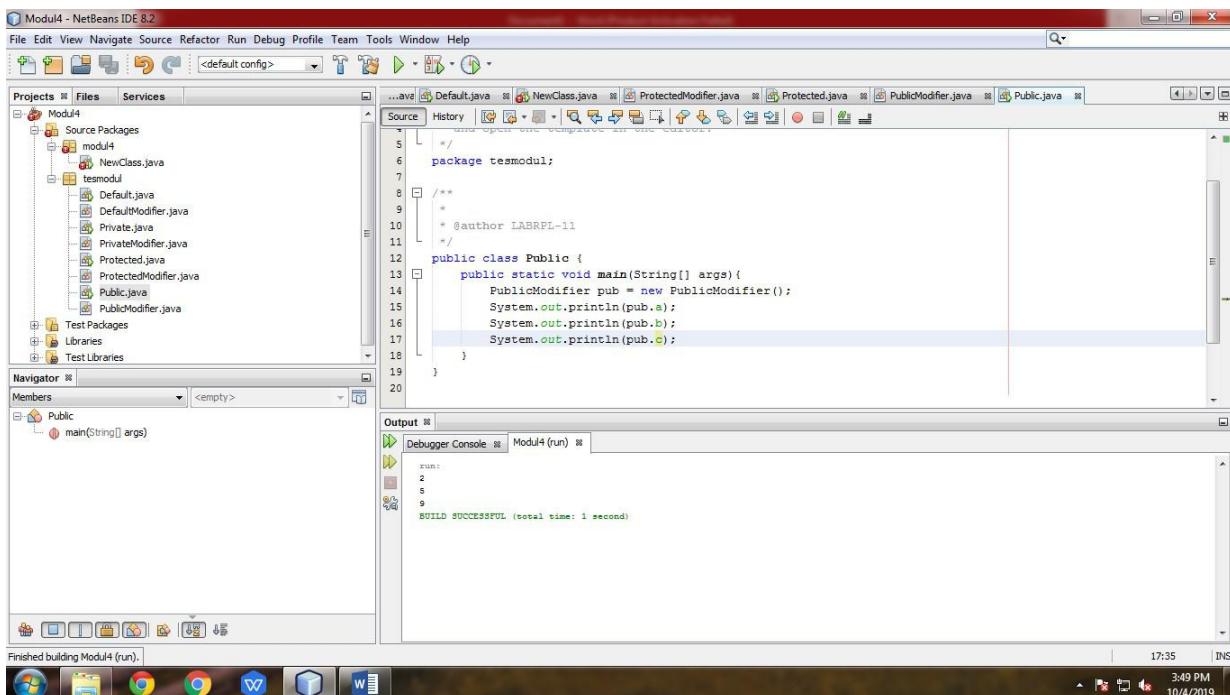
Navigator

Members

- PublicModifier
 - bagi0
 - kali0
 - kurang0
 - rata_rata0
 - tambah0
 - a : int
 - b : int
 - c : int

34:52 3:48 PM 10/4/2019

This screenshot shows the NetBeans IDE interface with the PublicModifier.java file open. The code defines a class named PublicModifier with various methods (kali, tambah, kurang, bagi, rata_rata) that perform arithmetic operations on integer variables a, b, and c. The IDE's navigation pane shows the members of the class, and the output pane at the bottom right shows the build log.



Modul4 - NetBeans IDE 8.2

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

Projects Files Services ...avi Default.java NewClass.java ProtectedModifier.java Protected.java PublicModifier.java Public.java

Source History

```
5  /*
6  * package tesmodul;
7  *
8  */
9  /**
10  * @author LABRPL-11
11  */
12 public class Public {
13     public static void main(String[] args){
14         PublicModifier pub = new PublicModifier();
15         System.out.println(pub.a);
16         System.out.println(pub.b);
17         System.out.println(pub.c);
18     }
19 }
```

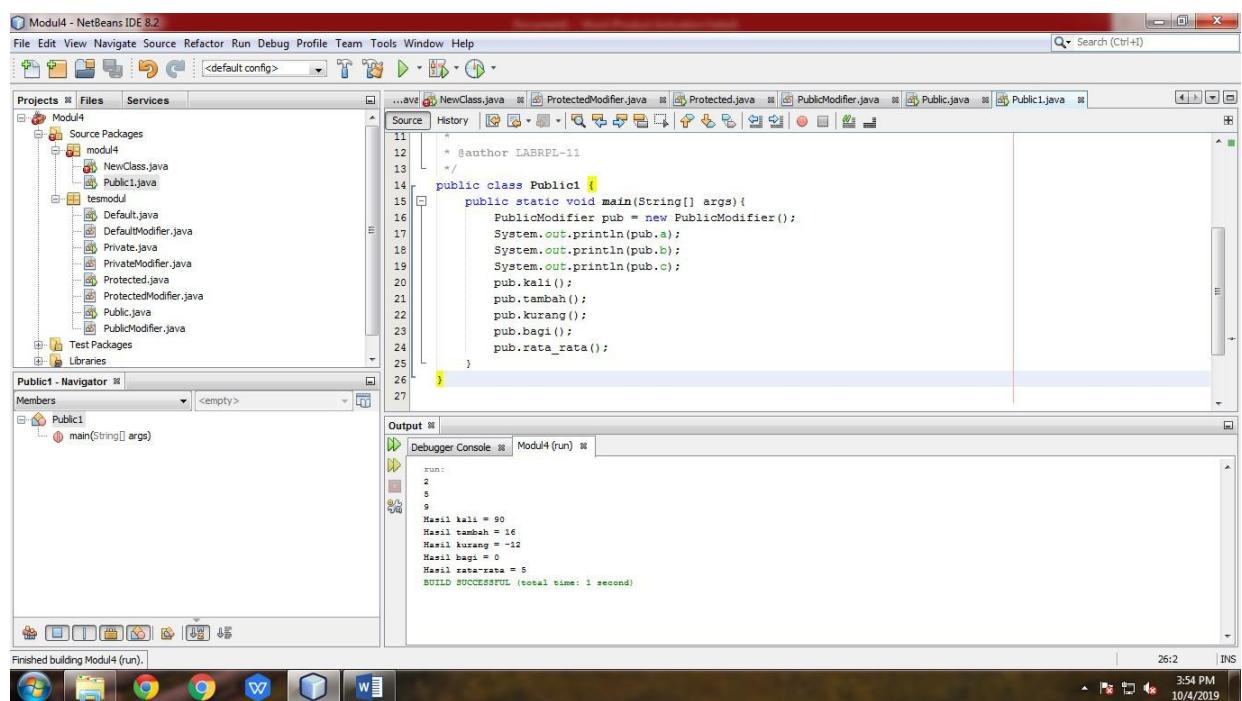
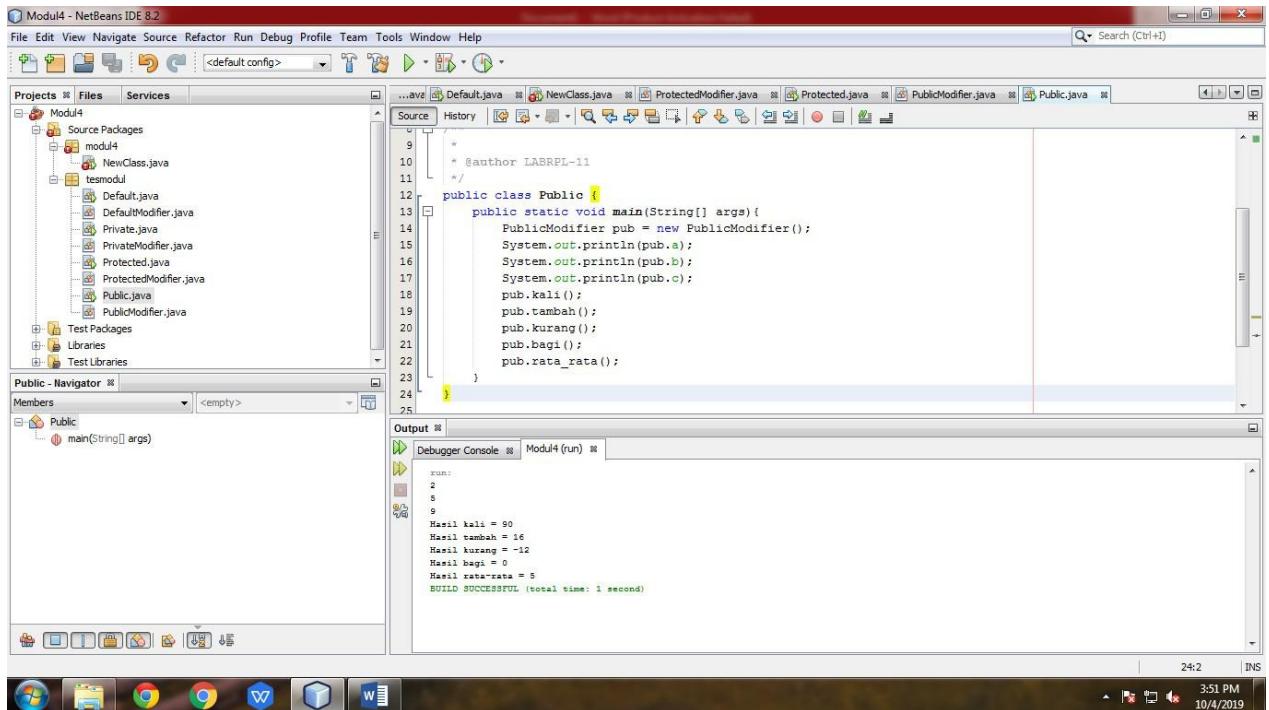
Output

Debugger Console Modul4 (run)

```
2
5
9
BUILD SUCCESSFUL (total time: 1 second)
```

17:35 3:49 PM 10/4/2019

This screenshot shows the NetBeans IDE interface with the Public.java file open. This file contains a main method that creates an instance of the PublicModifier class and prints the values of its fields (a, b, c). The output pane shows the results of the program execution: 2, 5, and 9. The status bar at the bottom indicates a successful build.



Modul 5

CONSTRUCTOR

- 5.1 DEFAULT CONSTRUCTOR

➤ Program 1. Default Constructor

The screenshot shows the modul5 - NetBeans IDE 8.0.2 interface. The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and a search bar. The Projects tab shows a hierarchy of Java files under modul5, including Lathan1.java, PrivateModifier.java, PublicModifier.java, Lathan4.java, Lathan41.java, Constructor.java, and ConstructorAccess.java. The Files tab is selected, displaying the source code for Constructor.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 modul5;
7
8 /**
9 * Author: WimB
10 */
11 public class Constructor {
12     public Constructor(){
13         System.out.println("Default Constructor");
14     }
15 }
16
17
```

The Services tab is also visible. The Navigator tab shows the members of the Constructor class, with 'Constructor' being the current item. The Output tab shows the result of running the code: "Default Constructor". The bottom status bar shows the date as 10/16/2019 and the time as 16:2.

➤ Program 2. Mengakses default constructor

The screenshot shows the NetBeans IDE interface with the title "modul5 - NetBeans IDE 8.0.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and a search bar. The Projects tab shows a hierarchy of Java files under "modul5": Lathan4.java, PrivateModifier.java, ProtectedModifier.java, PublicModifier.java, modul5New, Lathan401.java, Lathan441.java, Test Packages, Libraries, and modul5. The modul5 node contains Source Packages (modul5) and Libraries. The modul5 package contains Constructor.java and ConstructorAccess.java. The Files tab shows the "ConstructorAccess.java" file open, containing the following code:

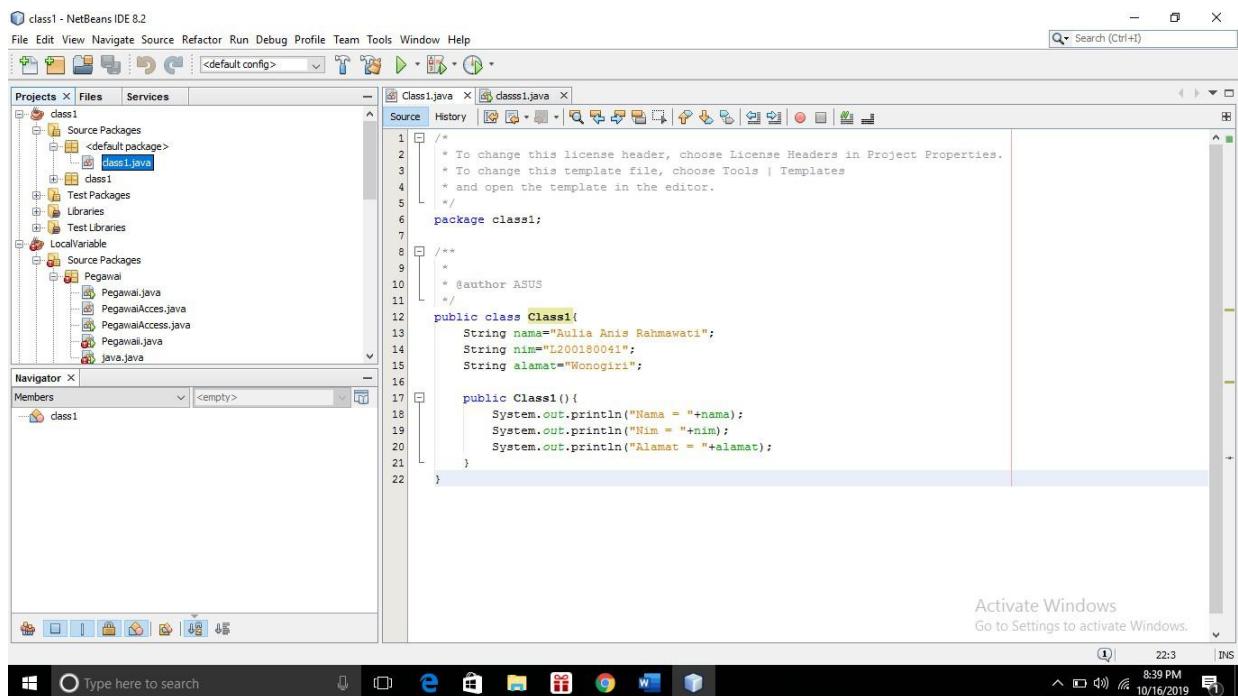
```
1 // To change this license header, choose License Headers in Project Properties.
2 // To change this template file, choose Tools | Templates
3 // and open the template in the editor.
4 /*
5  * package modul5;
6  *
7  */
8 /**
9  * @author Win8
10 */
11 public class ConstructorAccess {
12     public static void main(String[] args) {
13         Constructor cons = new Constructor();
14     }
15 }
16
17
```

The Services tab is also visible. The Navigator tab shows "main - Navigator" with "Members" expanded, showing "ConstructorAccess" and "main(String[] args)". The Members list shows "main(String[] args)". The Output tab shows the build log:

```
modul5.ConstructorAccess > man > cons >
Output - modul5 (run) >
=====
BUILD SUCCESSFUL (total time: 3 seconds)
```

The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray.

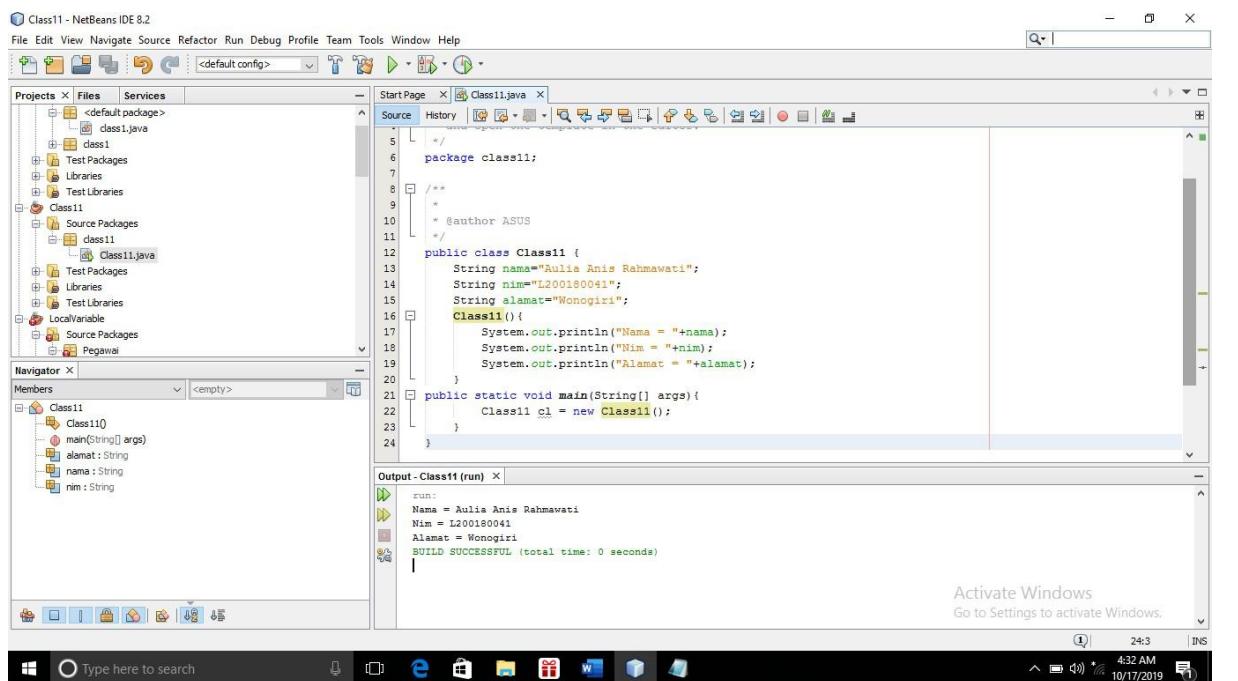
➤ 5.1.1 Latihan 1



```
/*
 * 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 class1;

/**
 *
 * @author ASUS
 */
public class Class1{
    String nama="Aulia Anis Rahmawati";
    String nim="L200180041";
    String alamat="Wonogiri";

    public Class1(){
        System.out.println("Nama = "+nama);
        System.out.println("Nim = "+nim);
        System.out.println("Alamat = "+alamat);
    }
}
```



```
/*
 * 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 class11;

/**
 *
 * @author ASUS
 */
public class Class11 {
    String nama="Aulia Anis Rahmawati";
    String nim="L200180041";
    String alamat="Wonogiri";

    Class11(){
        System.out.println("Nama = "+nama);
        System.out.println("Nim = "+nim);
        System.out.println("Alamat = "+alamat);
    }

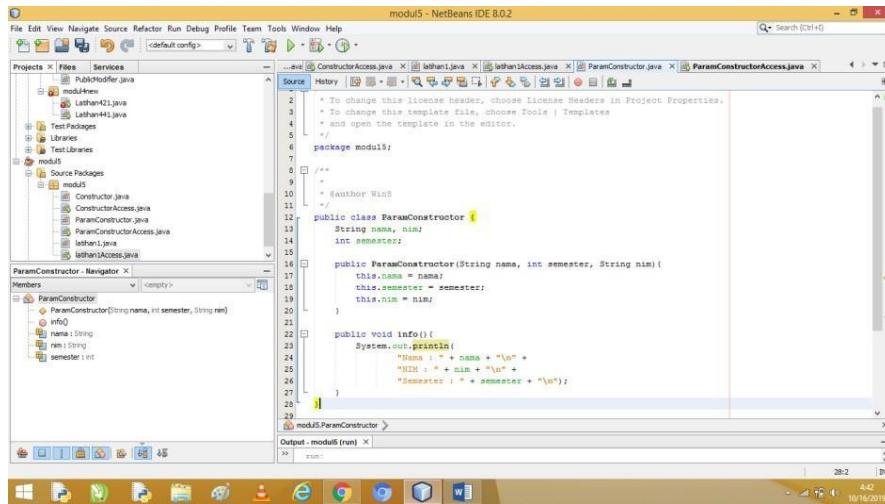
    public static void main(String[] args){
        Class11 cl = new Class11();
    }
}
```

Output - Class11 (run) :

```
run:
Nama = Aulia Anis Rahmawati
Nim = L200180041
Alamat = Wonogiri
BUILD SUCCESSFUL (total time: 0 seconds)
```

- 5.2 PARAMETERIZED CONSTRUCTOR

➤ Program 3. Parameterized Constructor



```
modul5 - NetBeans IDE 8.0.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
File Navigator Tools Help
Projects Files Services
modul5
  + Placeholder.java
    + Lathan41.java
    + Lathan41i.java
  + Test Packages
  + Libraries
  + Test Libraries
  + modul5
    + Source Packages
      + modul5
        + ParamConstructor.java
        + ConstructorAccess.java
        + ParamConstructorAccess.java
        + Lathan1.java
        + Lathan1Access.java
ParamConstructor - Navigator X
Members
  + ParamConstructor(String name, int semester, String nim)
    + info()
      + name : String
      + nim : String
      + semester : int
Source History Diff Find Replace
  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 modul5;
  6 /**
  7  * 
  8  * @author Wina
  9  */
 10 public class ParamConstructor {
 11     String name, nim;
 12     int semester;
 13 
 14     public ParamConstructor(String name, int semester, String nim){
 15         this.name = name;
 16         this.semester = semester;
 17         this.nim = nim;
 18     }
 19 
 20     public void info(){
 21         System.out.println(
 22             "Name : " + name + "\n" +
 23             "NIM : " + nim + "\n" +
 24             "Semester : " + semester + "\n");
 25     }
 26 }
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
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```

➤ Program 4. Mengakses Parameterized Constructor

The screenshot shows the NetBeans IDE interface with the title bar "modul5 - NetBeans IDE 8.0.2". The left sidebar displays the project structure under "Projects" and the current file "ParamConstructorAccess.java" under "Source". The code editor contains the following 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  package modul5;
7
8  /**
9  * @author WinE
10 */
11 public class ParamConstructorAccess {
12     public static void main(String[] args){
13         ParamConstructor pc = new ParamConstructor("Luffy", 3, "L2001500xy");
14
15         pc.info();
16     }
17 }

```

The "Output" window shows the results of the run:

```
run:
Nama : Luffy
NIM : L2001500xy
Semester : 3
BUILD SUCCESSFUL (total time: 8 seconds)
```

The system tray at the bottom right shows the date and time as 10/16/2019.

➤ 5.2.1 Latihan 2

1. Screenshot untuk perintah pada nomor 1

The screenshot shows two instances of the NetBeans IDE interface. Both instances have the same project structure and file list, but show different parts of the "Buku" class code.

Screenshot 1 (Top): The code editor shows the beginning of the Buku class and its constructor. The constructor takes three parameters: namaPengarang, judulBuku, and tahunTerbit. It initializes the instance variables with these values.

```
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  /**
9  * @author WinE
10 */
11 public class Buku {
12     String namaPengarang;
13     String judulBuku;
14     int tahunTerbit;
15     int cetakanKe;
16     double hargaJual;
17
18     public Buku(String namaPengarang, String judulBuku) {
19         this.namaPengarang = namaPengarang;
20         this.judulBuku = judulBuku;
21     }
22
23     public Buku(int tahunTerbit, int cetakanKe) {
24         this.tahunTerbit = tahunTerbit;
25         this.cetakanKe = cetakanKe;
26     }
27 }
```

Screenshot 2 (Bottom): The code editor shows the complete implementation of the Buku class, including the constructor and the "info()" method. The "info()" method prints the details of the book to the console.

```
29     public Buku(double hargaJual) {
30         this.hargaJual = hargaJual;
31     }
32
33     public Buku(String namaPengarang, String judulBuku, int tahunTerbit, int cetakanKe, double hargaJual) {
34         this.namaPengarang = namaPengarang;
35         this.judulBuku = judulBuku;
36         this.tahunTerbit = tahunTerbit;
37         this.cetakanKe = cetakanKe;
38         this.hargaJual = hargaJual;
39     }
40
41     public void info(){
42         System.out.println(
43             "Nama Pengarang : " + namaPengarang + "\n" +
44             "Judul Buku : " + judulBuku + "\n" +
45             "Tahun Terbit : " + tahunTerbit + "\n" +
46             "Cetakan ke : " + cetakanKe + "\n" +
47             "Harga Jual : Rp. " + hargaJual + "\n");
48     }
49
50 }
```

2. Screenshot untuk perintah pada nomor 2

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

- Title Bar:** modulis - NetBeans IDE 8.0.2
- Toolbar:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Project Explorer (Projects Tab):** Shows the project structure with modules like modisView, modisView, Test Packages, Libraries, and modisU5. Under modisU5, there are packages like modis and BukuAccess. The BukuAccess package contains files: Buku.java, BukuAccess.java, Constructor.java, ConstructorAccess.java, ParamConstructor.java, and ParamConstructorAccess.java.
- Code Editor (lathan.java Tab):** Displays Java code for the BukuAccess class. The code defines a static main method that creates ten Buku objects (b1 to b10) with various attributes like title, author, year, and price. It then iterates through these objects and calls the info() method for each.
- Output (Output - modulis (run) Tab):** Shows the results of the program execution, which are the details of the ten books.
- Bottom Bar:** Contains icons for file operations like Open, Save, Print, and Run.

```
10 * @Author Wins
11
12 public class BukuAccess {
13     public static void main(String[] args) {
14         Buku b1 = new Buku("A", "FIFO", 2019, 1, 200000);
15         Buku b2 = new Buku("B", "TAIGORROT", 2018, 2, 150000);
16         Buku b3 = new Buku("C", "SISIDOG", 2017, 3, 175000);
17         Buku b4 = new Buku("D", "SUS", 2019, 1, 250000);
18         Buku b5 = new Buku("E", "MAKLUMUS", 2018, 2, 300000);
19         Buku b6 = new Buku("F", "PERM STATUS", 2017, 3, 180000);
20         Buku b7 = new Buku("G", "PENGARUH KONSEP", 2018, 1, 280000);
21         Buku b8 = new Buku("H", "PENROGRAMAN VISUAL", 2018, 1, 1450000);
22         Buku b9 = new Buku("I", "METODE NUMERIK", 2019, 1, 100000);
23         Buku b10 = new Buku("J", "MATENATIKA DISKRIT", 2017, 2, 220000);
24
25         b1.info();
26         b2.info();
27         b3.info();
28         b4.info();
29         b5.info();
30         b6.info();
31         b7.info();
32         b8.info();
33         b9.info();
34         b10.info();
35     }
36 }
```

Outputnya:

The screenshot shows the NetBeans IDE interface with the title bar "modul5 - 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 others. The Projects tab shows a file structure with "PublModifier.java" and "modul5" package containing "BukuAccess.java", "Constructor.java", "ConstructorAccess.java", "ParamConstructor.java", and "ParamConstructorAccess.java". The Files tab shows "lathan1.java" and "lathan1Access.java". The Services tab is empty. The Output tab shows the following five book records:

No	Nama Pengarang	Judul Buku	Tahun Terbit	Cetakan ke	Harga Jual
1	A	PBO	2019	1	Rp. 200000.0
2	B	ALGORI	2018	2	Rp. 150000.0
3	C	ZIGZIG	2017	3	Rp. 175000.0
4	D	30	2019	1	Rp. 250000.0
5	E	KALKULUS	2018	1	Rp. 300000.0
6	F	W.W. STATISTIK	2019	1	Rp. 300000.0

The Navigator and Members tabs are visible at the bottom left. The status bar at the bottom right shows "37:1" and the date "10/16/2019".

modul5 - NetBeans IDE 8.0.2

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

Projects X Files Services (default config) +

modul5.java Lathen421.java Lathen441.java

modul5 Test Packages Libraries Test Libraries modul5 Source Packages modul5 Buku.java BukuAccess.java Constructor.java Constructor Access.java ParamConstructor.java ParamConstructorAccess.java

Output - modul5 (run) X

Nama Pengarang : F
Judul Buku : WEB STATIS
Tahun Terbit : 2017
Cetakan ke : 1
Harga Jual : Rp. 180000.0

Nama Pengarang : G
Judul Buku : LOGICA DAN KINERJAAN
Tahun Terbit : 2018
Cetakan ke : 1
Harga Jual : Rp. 250000.0

Nama Pengarang : H
Judul Buku : PEMROGRAMAN VISUAL
Tahun Terbit : 2018
Cetakan ke : 1
Harga Jual : Rp. 1450000.0

Nama Pengarang : I
Judul Buku : METODE NUMERIK
Tahun Terbit : 2018
Cetakan ke : 1
Harga Jual : Rp. 100000.0

Nama Pengarang : J
Judul Buku : MATEMATIKA DISKRIT
Tahun Terbit : 2017
Cetakan ke : 2
Harga Jual : Rp. 220000.0

BUILD SUCCESSFUL (total time: 2 seconds)

modul5 - NetBeans IDE 8.0.2

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

Projects Files Services

modul5

Buku.java BukuAccess.java Constructor.java ConstructorAccess.java ParamConstructor.java ParamConstructorAccess.java latihan1.java latihan1Access.java tugas.java tugasAccess.java

tugas - Navigator

Members <empty>

tugas

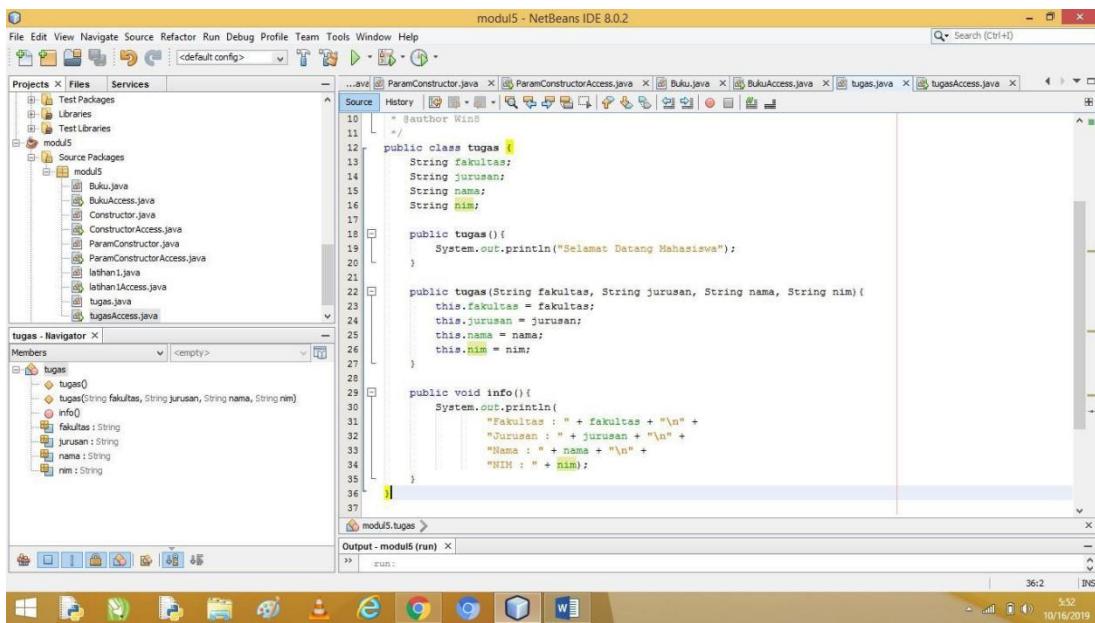
- tugas()
- tugas(String fakultas, String jurusan, String nama, String nim)
- info()
- fakultas : String
- jurusan : String
- nama : String
- nim : String

Source History

```
1  package modul5;
2
3  import java.util.Scanner;
4
5  public class tugas {
6      String fakultas;
7      String jurusan;
8      String nama;
9      String nim;
10
11     public tugas() {
12         System.out.println("Selamat Datang Mahasiswa");
13     }
14
15     public tugas(String fakultas, String jurusan, String nama, String nim) {
16         this.fakultas = fakultas;
17         this.jurusan = jurusan;
18         this.nama = nama;
19         this.nim = nim;
20     }
21
22     public void info() {
23         System.out.println(
24             "Fakultas : " + fakultas + "\n" +
25             "Jurusan : " + jurusan + "\n" +
26             "Nama : " + nama + "\n" +
27             "NIM : " + nim);
28     }
29
30 }
31
32
33
34
35
36
37
```

Output - modul5 (run) >> run:

36:2 5:52 10/16/2019



Tugas

Tugas - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects X Files Services

Tugas.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 ASUS
11 */
12 public class Tugas {
13     String text;
14     public Tugas() {
15         System.out.println("Ini Default Constructor");
16     }
17     public Tugas(String text){
18         this.text = text;
19         System.out.println(text);
20     }
21 }
22
```

Navigator X

Members

Tugas

- Tugas()
- Tugas(String text)
- text : String

Activate Windows
Go to Settings to activate Windows.

Type here to search

22:1 9:00 PM 10/16/2019

TugasAcces - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects X Files Services

TugasAcces.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 tugasacces;
7
8 /**
9  *
10 * @author ASUS
11 */
12 public class TugasAcces {
13     public static void main(String[] args) {
14         Tugas a = new Tugas();
15         Tugas b = new Tugas("Ini Tugas Wowow");
16     }
17 }
18
```

Navigator X

Members

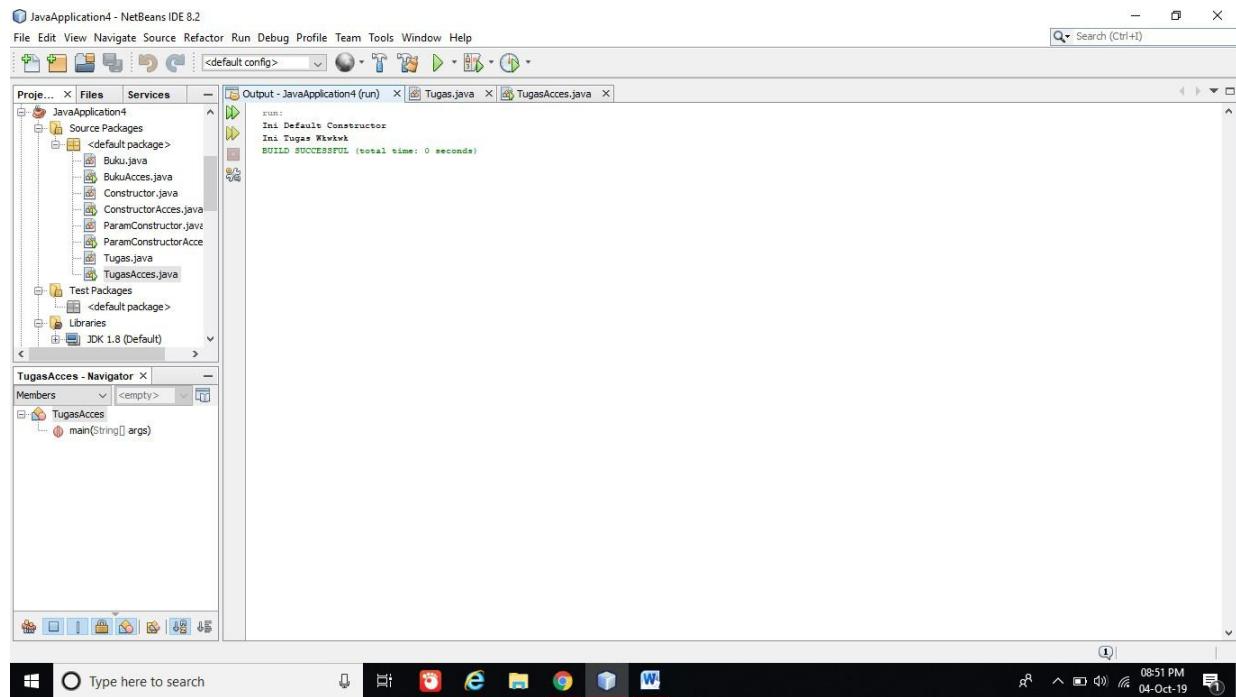
TugasAcces

- main(String[] args)

Activate Windows
Go to Settings to activate Windows.

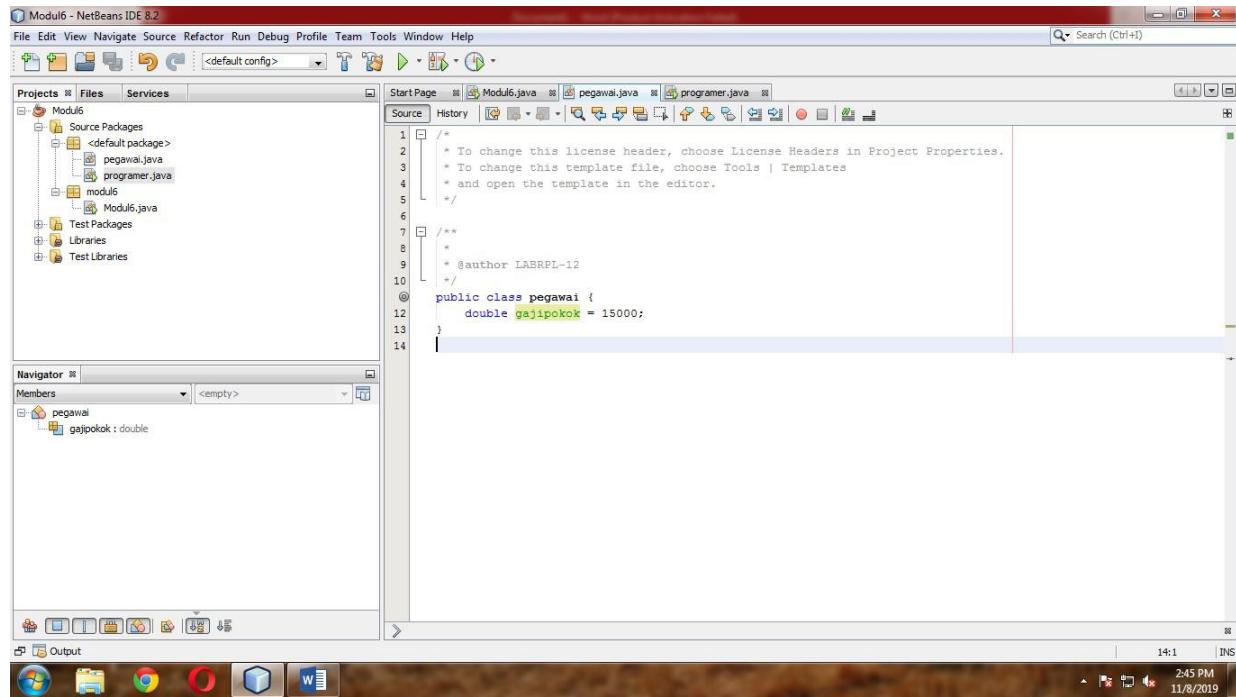
Type here to search

18:1 8:50 PM 10/16/2019



Modul 6

6.1.1 Single Inheritance



Modul6 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Files Services

Start Page Modul6.java pegawai.java programmer.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 LABRPL-12
10 */
11 public class programmer extends pegawai {
12     public static void main (String[] args) {
13         double lemburperjam = 5000;
14         double gajiperbulan;
15         pegawai pegawai1 = new pegawai();
16         gajiperbulan = pegawai1.gajipokok + lemburperjam; System.out.println(gajiperbulan);
17     }
18 }
```

Navigator Members <empty>

Output - Modul6 (run)

```

run:
20000.0
BUILD SUCCESSFUL (total time: 0 seconds)

```

Output Finished building Modul6 (run).

13:31 2:46 PM 11/8/2019

1. Hierarchical Inheritance

Modul6 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Files Services

Start Page Modul6.java pegawai.java programmer.java teknisi.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 LABRPL-12
10 */
11 public class teknisi extends pegawai {
12     public static void main (String[] args) {
13         double lemburperjam = 40000;
14         double gajiperbulan;
15         pegawai pegawai2 = new pegawai();
16         gajiperbulan = pegawai2.gajipokok + lemburperjam; System.out.println(gajiperbulan);
17     }
18 }
```

Navigator Members <empty>

Output - Modul6 (run)

```

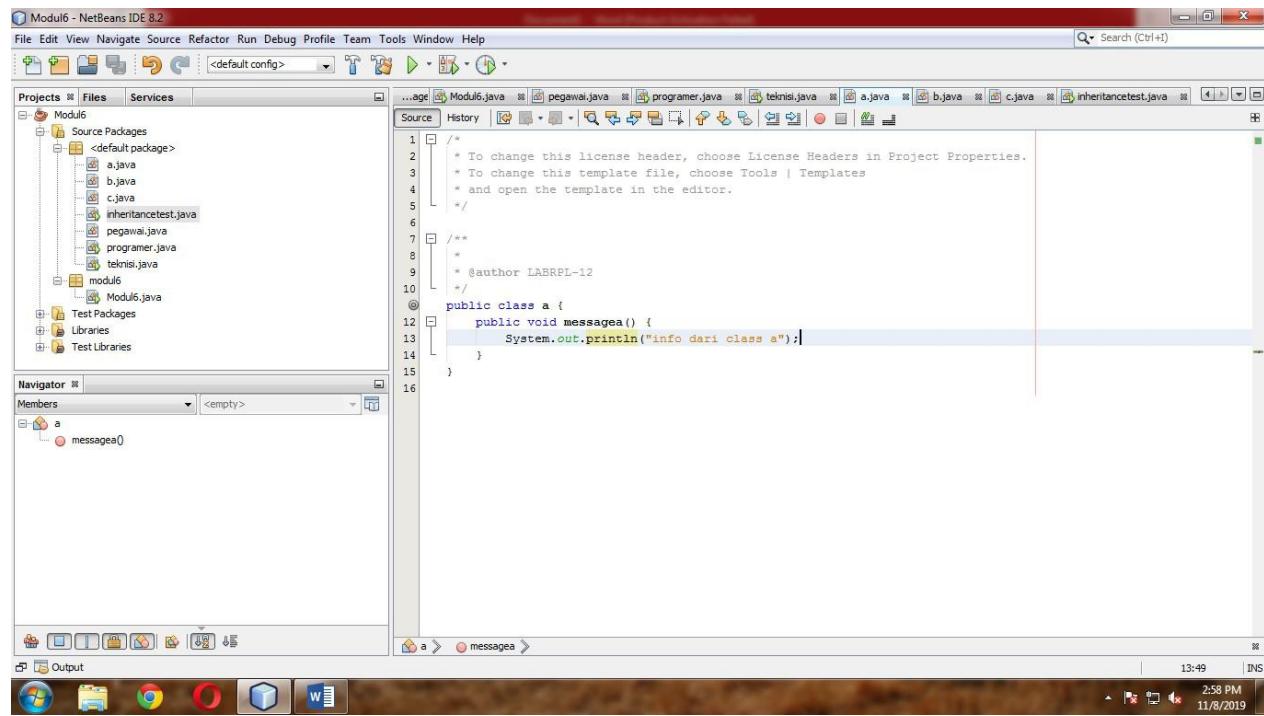
run:
55000.0
BUILD SUCCESSFUL (total time: 0 seconds)

```

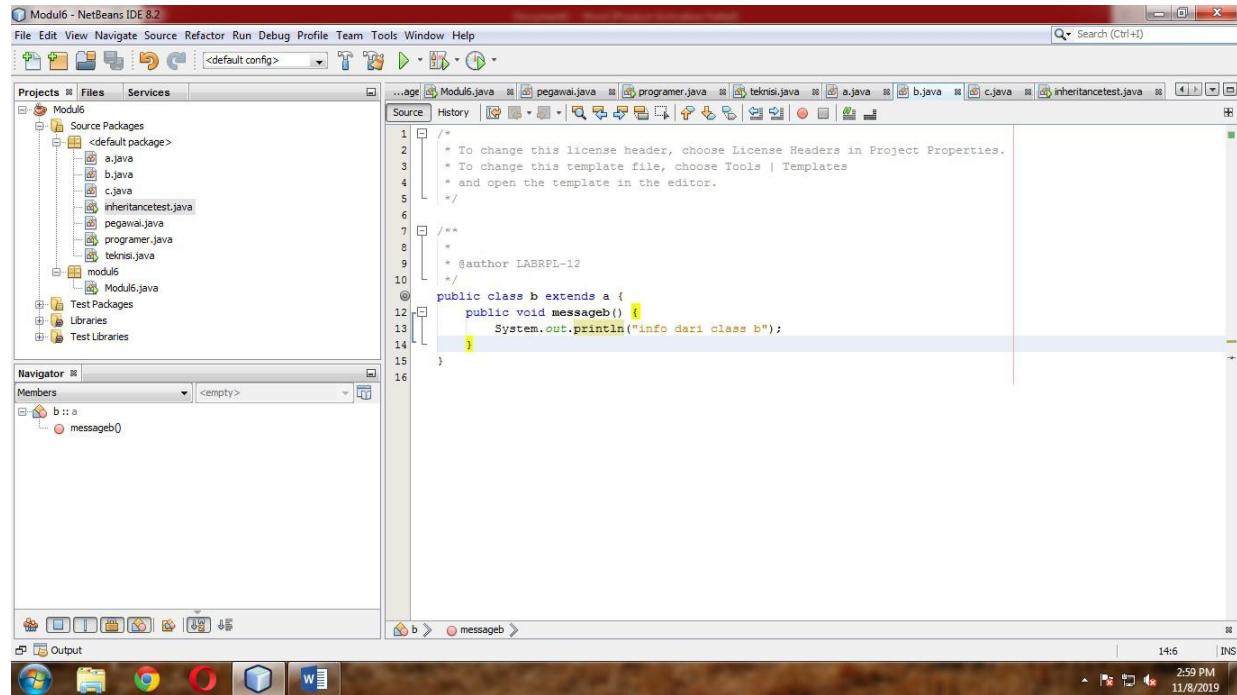
Output Finished building Modul6 (run).

19:11 2:50 PM 11/8/2019

2. Multilevel Inheritance



```
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-12
10 */
11 public class a {
12     public void messagea() {
13         System.out.println("info dari class a");
14     }
15 }
```



```
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-12
10 */
11 public class b extends a {
12     public void messageb() {
13         System.out.println("info dari class b");
14     }
15 }
```

Modul6 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Files Services

Modul6

Source Packages

- <default package>
 - a.java
 - b.java
 - c.java
 - inheritancetest.java
 - pegawai.java
 - programer.java
 - teknisi.java
- modul6
 - Modul6.java

Test Packages Libraries Test Libraries

Navigator

Members <empty>

- c :: b
 - messagec()

Output

2:59 PM 11/8/2019

Modul6 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Files Services

Modul6

Source Packages

- <default package>
 - a.java
 - b.java
 - c.java
 - inheritancetest.java
 - pegawai.java
 - programer.java
 - teknisi.java
- modul6
 - Modul6.java

Test Packages Libraries Test Libraries

Navigator

Members <empty>

- inheritancetest
 - main(String[] args)

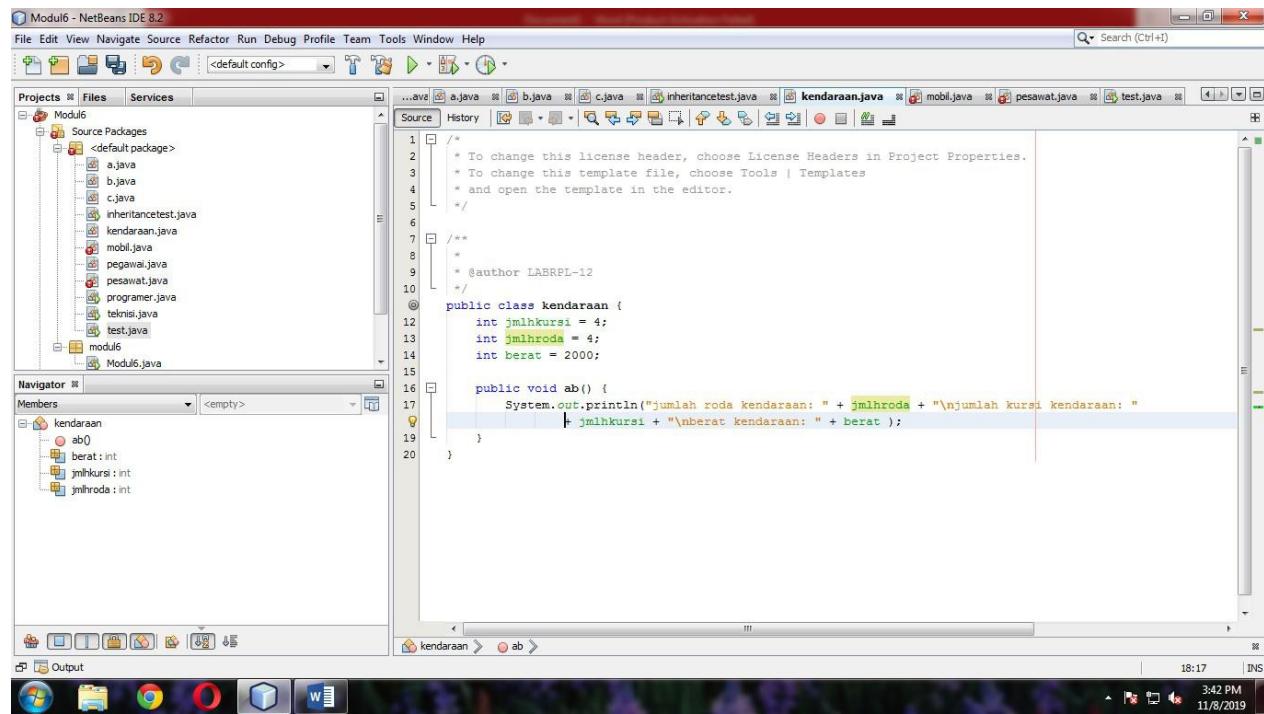
Output - Modul6 (run)

```
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)
```

Output Finished building Modul6 (run).

2:59 PM 11/8/2019

6.2. LATIHAN

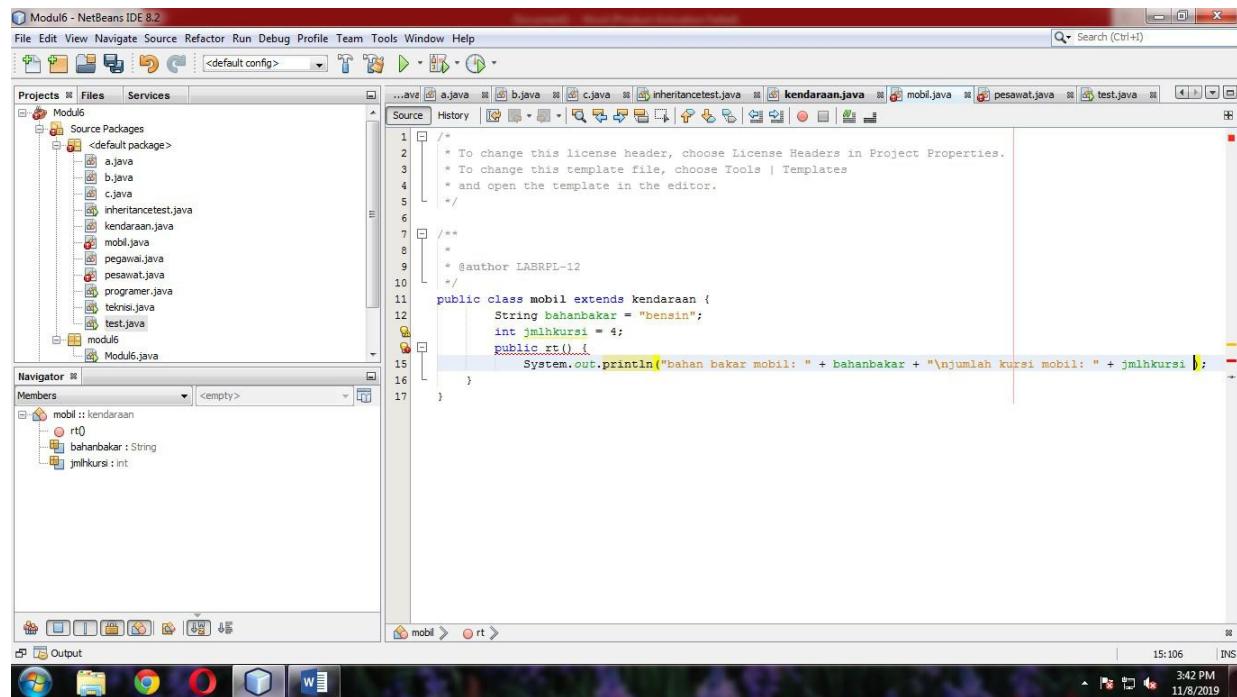


The screenshot shows the NetBeans IDE interface with the title "Modul6 - NetBeans IDE 8.2". The Projects panel lists several Java files: a.java, b.java, c.java, inheritancetest.java, kendaraan.java, mobil.java, pegawai.java, pesawat.java, programer.java, teknisi.java, test.java, modul6, and Modul6.java. The Navigator panel shows members of the kendaraan class: ab0, berat: int, jmlhkursi: int, and jmlhroda: int. The Source editor displays the code for the kendaraan class:

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

/**
 *
 * @author LABRPL-12
 */
public class kendaraan {
    int jmlhkursi = 4;
    int jmlhroda = 4;
    int berat = 2000;

    public void ab() {
        System.out.println("jumlah roda kendaraan: " + jmlhroda + "\njumlah kursi kendaraan: "
                           + jmlhkursi + "\nberat kendaraan: " + berat);
    }
}
```



The screenshot shows the NetBeans IDE interface with the title "Modul6 - NetBeans IDE 8.2". The Projects panel lists the same Java files as the previous screenshot. The Navigator panel shows members of the mobil class: rt0, bahanbakar: String, and jmlhkursi: int. The Source editor displays the code for the mobil class, which extends the kendaraan class:

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

/**
 *
 * @author LABRPL-12
 */
public class mobil extends kendaraan {
    String bahanbakar = "bensin";
    int jmlhkursi = 4;
    public rt() {
        System.out.println("bahan bakar mobil: " + bahanbakar + "\njumlah kursi mobil: " + jmlhkursi);
    }
}
```

The screenshot shows the NetBeans IDE interface with the title "Modul6 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like New, Open, Save, Cut, Copy, Paste, Find, and Run. The Projects tab shows a project named "Modul6" with source packages "default package" containing files a.java, b.java, c.java, inheritanceTest.java, kendaraan.java, mobil.java, pesawat.java, programer.java, teknisi.java, test.java, and "modul6" and "Modul6.java". The Files tab shows the same files. The Services tab is empty. The Source tab is selected, displaying the following 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-12
10 */
11 public class pesawat extends kendaraan {
12     String bahanbakar = "avtur";
13     int berat = 60;
14     public void yu(){
15         System.out.println("bahan bakar pesawat: " + bahanbakar + "\nberat pesawat: " + berat);
16     }
17 }
18
```

The Navigator tab shows members of the pesawat class: yu() and bahanbakar : String. The Output tab shows a single entry: "pesawat > yu >". The status bar at the bottom right shows the time as 3:42 PM and the date as 11/8/2019.

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

- Title Bar:** Modul6 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Search Bar:** Search (Ctrl+F)
- Toolbar:** Standard NetBeans icons for file operations.
- Projects Tab:** Shows "Modul6" as the current project with "Source Packages" expanded, listing files: a.java, b.java, c.java, inheritancetest.java, kendaraan.java, mobil.java, pegawai.java, pesawat.java, programer.java, teknisi.java, test.java.
- Navigator Tab:** Members section shows "test" and "main(String[] args)".
- Code Editor:** Displays the "test.java" source 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-12
 */
public class test {
    public static void main(String[] args) {
        Kendaraan e = new kendaraan();
        mobil f = new mobil();
        pesawat g = new pesawat();

        e.ab();
        f.rt();
        g.yu();
    }
}
```
- Output Tab:** Shows the run output:

```
run:
jumlah roda kendaraan: 4
jumlah kursi kendaraan: 4
berat kendaraan: 2000
bahan bakar mobil: bensin
jumlah kursi mobil: 4
bahan bakar pesawat: avtur
berat pesawat: 60
BUILD SUCCESSFUL (total time: 1 second)
```
- System Tray:** Icons for Task View, File Explorer, Google Chrome, Mozilla Firefox, and Windows Start.
- System Clock:** 19:16
- System Date:** 11/8/2019

6.3 TUGAS

The screenshots show the NetBeans IDE interface with two Java projects: 'Modul6' and 'Modul6'. The top screenshot displays the 'bangundatar.java' file, which contains 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.
 */
public class bangundatar {
    double luas;
    double keliling;
    public hitungluas(){
        System.out.println("ini method untuk hitung luas");
    }
    public hitungkeliling(){
        System.out.println("ini method untuk menghitung keliling");
    }
}
```

The bottom screenshot displays the 'persegi.java' file, which contains the following code:

```
/*
 * @author LABRPL-12
 */
public class persegi extends bangundatar{
    int s = 4;
    public hitungluas(){
        luas = s*s;
        System.out.println("luas persegi" + luas);
    }
    public hitungkeliling(){
        keliling = 4*s;
        System.out.println("keliling persegi" + keliling);
    }
    public static void main(String[] args){
        persegi pu = new persegi();
        pu.hitungluas();
        pu.hitungkeliling();
    }
}
```

Both screenshots show the output window at the bottom displaying the results of the run command:

```
run:
luas persegil6.0
keliling persegil6.0
BUILD SUCCESSFUL (total time: 1 second)
```

Modul6 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Services Files

Navigator

Inheritancetest.java

Modul6

- Source Packages
 - <default package>
 - a.java
 - b.java
 - bangundatar.java
 - c.java
 - inheritancestest.java
 - kendaraan.java
 - mobil.java
 - pegawai.java
 - persegi.java
 - persegipanjang.java
 - pesawat.java
 - programer.java
 - segitiga.java
 - segitigasamakaki.java
 - segitigasamasisi.java
 - teknisi.java
 - test.java
 - modul6
 - Modul6.java

Test Packages

 - Libraries
 - Test Libraries

Output

13:18 INS

3:59 PM 11/8/2019

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

Modul6 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Services Files

Navigator

Inheritancetest.java

Modul6

Source Packages

- <default package>
 - a.java
 - b.java
 - bangundatar.java
 - c.java
 - inheritancestest.java
 - kendaraan.java
 - mobil.java
 - pegawai.java
 - persegi.java
 - persegipanjang.java
 - pesawat.java
 - programer.java
 - segitiga.java
 - segitigasamakaki.java
 - segitigasamasisi.java
 - teknisi.java
 - test.java
- modul6
 - Modul6.java

Test Packages

- Libraries
- Test Libraries

Output

12:17 INS

3:59 PM 11/8/2019

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

Modul6 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Services Files

Navigator

Modul6

- Source Packages
 - <default package>
 - a.java
 - b.java
 - bangundatar.java
 - c.java
 - inheritancetest.java
 - kendaraan.java
 - mobil.java
 - pegawai.java
 - persegi.java
 - persegipanjang.java
 - pesawat.java
 - programer.java
 - segitiga.java
 - segitigasamakai.java
 - segitigasamasisi.java
 - teknisi.java
 - test.java
 - modul6
 - Modul6.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  
7 /**  
8  *  
9  * @author LABRPL-12  
*/  
10  
11 public class segitigasamakai extends segitiga {  
12     double sisimiring;  
13 }  
14
```

Output

12:23 4:00 PM 11/8/2019

Modul6 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects Services Files

Navigator

Modul6

- Source Packages
 - <default package>
 - a.java
 - b.java
 - bangundatar.java
 - c.java
 - inheritancetest.java
 - kendaraan.java
 - mobil.java
 - pegawai.java
 - persegi.java
 - persegipanjang.java
 - pesawat.java
 - programer.java
 - segitiga.java
 - segitigasamakai.java
 - segitigasamasisi.java
 - teknisi.java
 - test.java
 - modul6
 - Modul6.java
- Test Packages
- Libraries
- Test Libraries

Source History

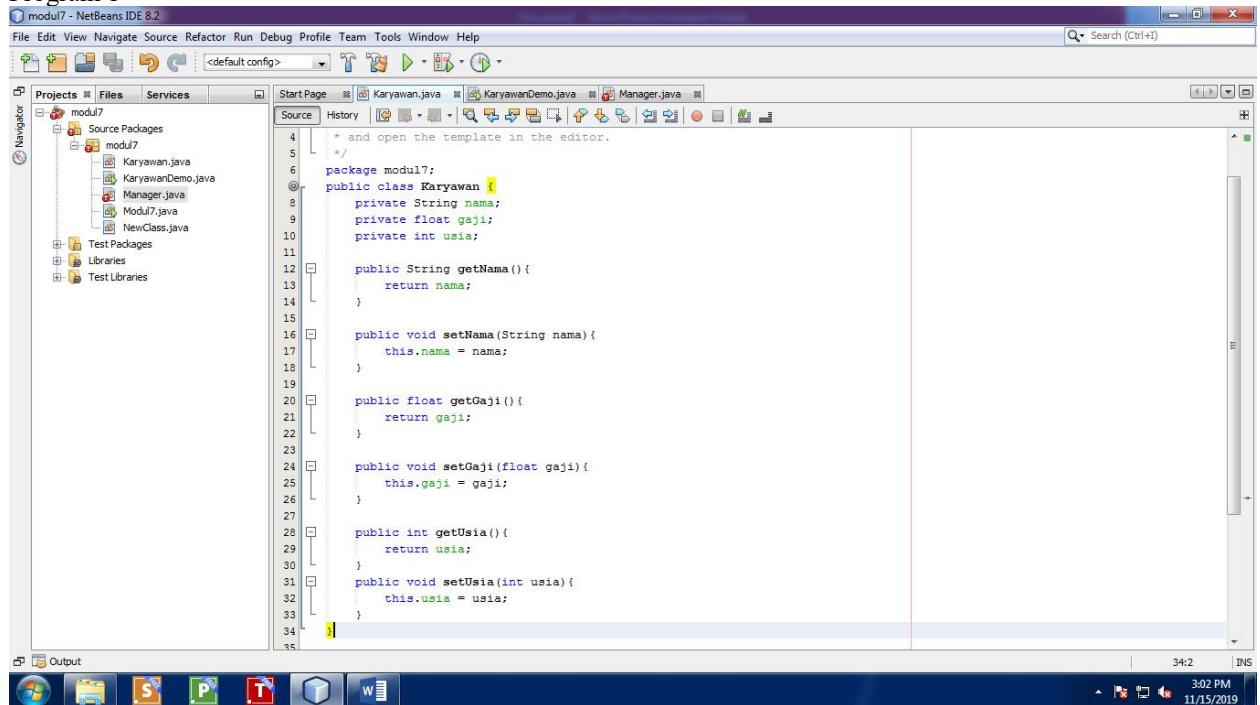
```
1 /*  
2  * To change this license header, choose License Headers in Project Properties.  
3  * To change this template file, choose Tools | Templates  
4  * and open the template in the editor.  
5 */  
6  
7 /**  
8  *  
9  * @author LABRPL-12  
*/  
10  
11 public class segitigasamasisi {  
12     double sis1;  
13 }  
14
```

Output

12:17 4:00 PM 11/8/2019

Modul 7

7.1. Gambaran Umum Program 1

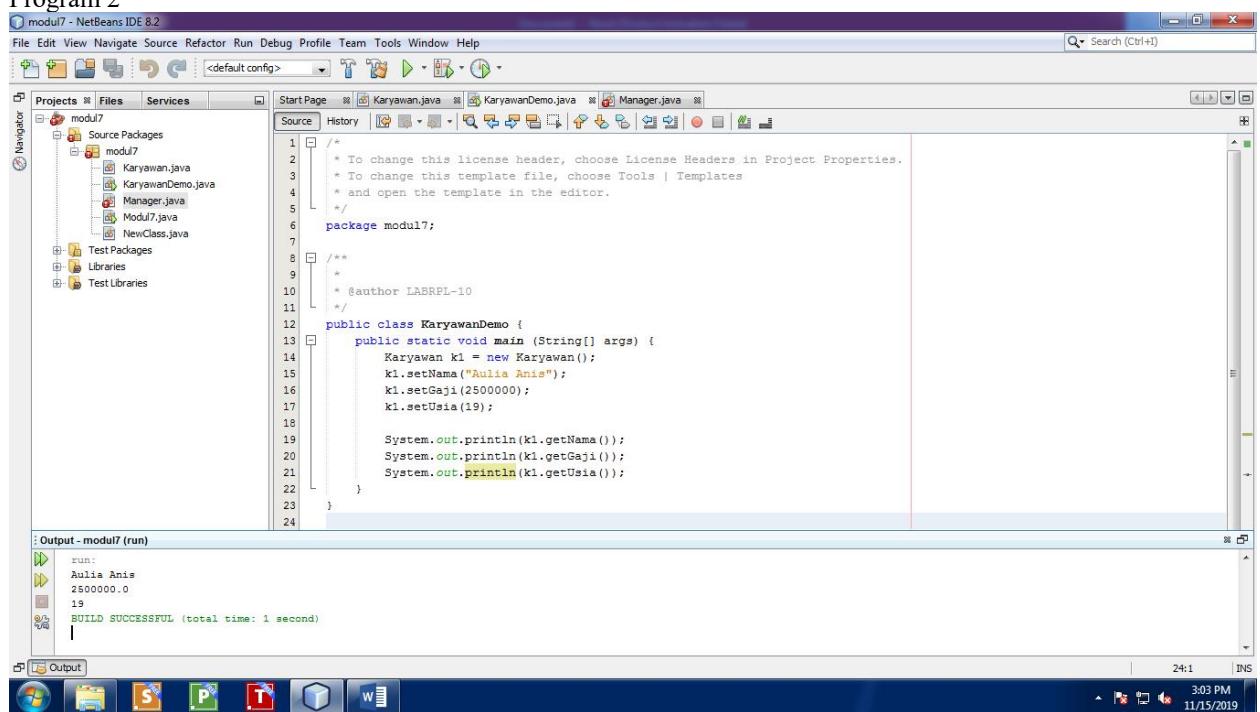


The screenshot shows the NetBeans IDE interface with the title bar "modul7 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for New Project, Open Project, Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, and others. The Projects tab shows a project named "modul7" with source packages "modul7" containing files Karyawan.java, KaryawanDemo.java, Manager.java, Modul7.java, and NewClass.java. The Files tab shows test packages, libraries, and test libraries. The central editor pane displays the Karyawan.java code:

```
4  * and open the template in the editor.
5  */
6  package modul7;
7  public class Karyawan {
8      private String nama;
9      private float gaji;
10     private int usia;
11
12     public String getNama(){
13         return nama;
14     }
15
16     public void setNama(String nama){
17         this.nama = nama;
18     }
19
20     public float getGaji(){
21         return gaji;
22     }
23
24     public void setGaji(float gaji){
25         this.gaji = gaji;
26     }
27
28     public int getUsia(){
29         return usia;
30     }
31     public void setUsia(int usia){
32         this.usia = usia;
33     }
34 }
```

The status bar at the bottom shows "34:2 INS" and the system tray indicates the date and time as "11/15/2019 3:02 PM".

Program 2



The screenshot shows the NetBeans IDE interface with the title bar "modul7 - NetBeans IDE 8.2". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for New Project, Open Project, Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, and others. The Projects tab shows a project named "modul7" with source packages "modul7" containing files Karyawan.java, KaryawanDemo.java, Manager.java, Modul7.java, and NewClass.java. The Files tab shows test packages, libraries, and test libraries. The central editor pane displays the KaryawanDemo.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  package modul7;
7
8  /**
9   * @author LABRPL-10
10 */
11 public class KaryawanDemo {
12     public static void main (String[] args) {
13         Karyawan k1 = new Karyawan();
14         k1.setNama("Aulia Anis");
15         k1.setGaji(2500000);
16         k1.setUsia(19);
17
18         System.out.println(k1.getNama());
19         System.out.println(k1.getGaji());
20         System.out.println(k1.getUsia());
21     }
22 }
23 }
```

The Output tab at the bottom shows the run results:

```
run:
Aulia Anis
2500000.0
19
BUILD SUCCESSFUL (total time: 1 second)
```

The status bar at the bottom shows "24:1 INS" and the system tray indicates the date and time as "11/15/2019 3:03 PM".

Program 3

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

- Title Bar:** Modul7 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Includes icons for New Project, Open Project, Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, and others.
- Projects Tab:** Shows the project structure with modules like Modul7, Source Packages, and Libraries.
- Navigator Tab:** Shows the class members for Manager.java, including methods setJamKerja, getGajiManager, and jamKerja, and a field jamKerja.
- Code Editor:** Displays the Java code for Manager.java. The code defines a class Manager that extends Karyawan. It includes a private float variable jamKerja initialized to 7.5f, and public methods to get and set this value. The code is annotated with Javadoc-style comments and a license header.

The screenshot shows the NetBeans IDE interface with the title "Modul7 - NetBeans IDE 8.2". The left sidebar displays the project structure under "Modul7" with packages "Source Packages" and "Test Packages". The main editor window shows the Java code for "ManagerDemo.java". The code creates five Manager objects (m1-m5) and prints their details. The code is as follows:

```
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.setNama("Aulia Anis");
        m1.setGaji(1000000);
        m1.setUsia(19);
        m1.setJamKerja(8.5f);
        System.out.println("Manager 1:" + m1.getNama());
        System.out.println("Gaji Manager 1:" + m1.getGajiManager());
        System.out.println("Usia Manager 1:" + m1.getUsia());
        System.out.println("Jam Kerja:" + m1.jamKerja());

        m2.setNama("Aulia");
        m2.setGaji(2000000);
        m2.setUsia(19);
        m2.setJamKerja(8.5f);
        System.out.println("Manager 2:" + m2.getNama());
        System.out.println("Gaji Manager 2:" + m2.getGajiManager());
        System.out.println("Usia Manager 2:" + m2.getUsia());
        System.out.println("Jam Kerja:" + m2.jamKerja());

        m3.setNama("Anis");
        m3.setGaji(3000000);
        m3.setUsia(19);
        m3.setJamKerja(8.5f);
        System.out.println("Manager 3:" + m3.getNama());
        System.out.println("Gaji Manager 3:" + m3.getGajiManager());
        System.out.println("Usia Manager 3:" + m3.getUsia());
        System.out.println("Jam Kerja:" + m3.jamKerja());

        m4.setNama("Rahma");
        m4.setGaji(4000000);
        m4.setUsia(19);
        m4.setJamKerja(8.5f);
        System.out.println("Manager 4:" + m4.getNama());
        System.out.println("Gaji Manager 4:" + m4.getGajiManager());
        System.out.println("Usia Manager 4:" + m4.getUsia());
        System.out.println("Jam Kerja:" + m4.jamKerja());
    }
}
```

Modul7 - NetBeans IDE 8.2

```

30     m2.setUsia(19);
31     m2.setjamKerja(8.5f);
32     System.out.println("Manager 2:" + m2.getNama());
33     System.out.println("Gaji Manager 2:" + m2.getGajiManager());
34     System.out.println("Usia Manager 2:" + m2.getUsia());
35     System.out.println("Jam Kerja:" + m2.jamKerja());

36     m3.setNama("Anis");
37     m3.setGaji(3000000);
38     m3.setUsia(19);
39     m3.setjamKerja(8.5f);
40     System.out.println("Manager 3:" + m3.getNama());
41     System.out.println("Gaji Manager 3:" + m3.getGajiManager());
42     System.out.println("Usia Manager 3:" + m3.getUsia());
43     System.out.println("Jam Kerja:" + m3.jamKerja());

44     m4.setNama("Rahma");
45     m4.setGaji(4000000);
46     m4.setUsia(19);
47     m4.setjamKerja(8.5f);
48     System.out.println("Manager 4:" + m4.getNama());
49     System.out.println("Gaji Manager 4:" + m4.getGajiManager());
50     System.out.println("Usia Manager 4:" + m4.getUsia());
51     System.out.println("Jam Kerja:" + m4.jamKerja());

52     m5.setNama("Wati");
53     m5.setGaji(5000000);
54     m5.setUsia(19);
55     m5.setjamKerja(8.5f);
56     System.out.println("Manager 5:" + m5.getNama());
57     System.out.println("Gaji Manager 5:" + m5.getGajiManager());
58     System.out.println("Usia Manager 5:" + m5.getUsia());
59     System.out.println("Jam Kerja:" + m5.jamKerja());
60
61 }
62
63 }
64
65

```

Modul7 - NetBeans IDE 8.2

```

47     m4.setGaji(4000000);
48     m4.setUsia(19);
49     m4.setjamKerja(8.5f);
50     System.out.println("Manager 4:" + m4.getNama());
51     System.out.println("Gaji Manager 4:" + m4.getGajiManager());
52     System.out.println("Usia Manager 4:" + m4.getUsia());
53     System.out.println("Jam Kerja:" + m4.jamKerja());

54     m5.setNama("Wati");
55     m5.setGaji(5000000);
56     m5.setUsia(19);
57     m5.setjamKerja(8.5f);
58     System.out.println("Manager 5:" + m5.getNama());
59     System.out.println("Gaji Manager 5:" + m5.getGajiManager());
60     System.out.println("Usia Manager 5:" + m5.getUsia());
61     System.out.println("Jam Kerja:" + m5.jamKerja());
62
63 }
64
65

```

Output: Modul7 (run) x

```

Info
Manager 1:Aulia Anis
Gaji Manager 1:2000000.0
Usia Manager 1:19
Jam Kerja:8.5
Manager 2:Aulia
Gaji Manager 2:4000000.0
Usia Manager 2:19
Jam Kerja:8.5
Manager 3:Anis
Gaji Manager 3:3000000.0
Usia Manager 3:19
Jam Kerja:8.5
Manager 4:Rahma
Gaji Manager 4:8000000.0
Usia Manager 4:19
Jam Kerja:8.5
Manager 5:Wati
Gaji Manager 5:1000000.0
Usia Manager 5:19
Jam Kerja:8.5
BUILD SUCCESSFUL (total time: 0 seconds)

```

Modul 8

- LATIHAN

➤ Kucing

The screenshot shows the NetBeans IDE 8.2 interface with the project 'Modul_8' open. The 'Source Packages' node contains a package named 'pet'. Inside this package is a file named 'Kucing.java'. The code defines a class 'Kucing' that extends 'pet'. It has two methods: 'perilaku()' which returns 'Menyukai Ikan', and 'suara()' which returns 'Meow..Meow'. The code is annotated with a license header and author information.

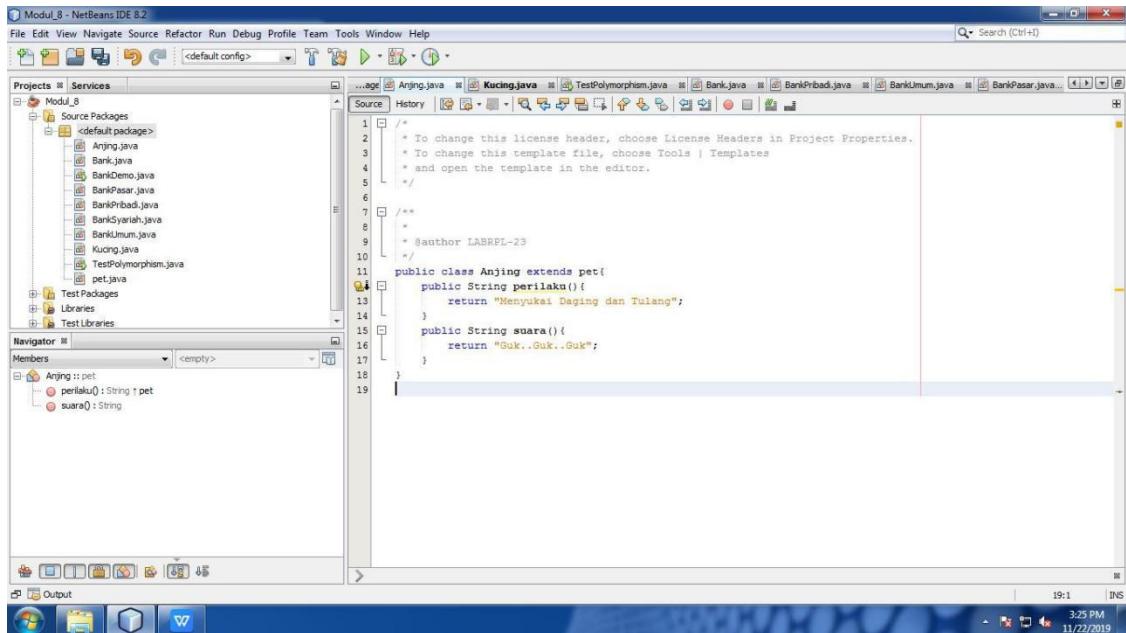
```
1  /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6
7 /**
8 *
9 * @author LABRPL-23
10 */
11 public class Kucing extends pet{
12     public String perilaku(){
13         return "Menyukai Ikan";
14     }
15     public String suara(){
16         return "Meow..Meow";
17     }
18 }
19
```

➤ Pet

The screenshot shows the NetBeans IDE 8.2 interface with the project 'Modul_8' open. The 'Source Packages' node contains a package named 'pet'. Inside this package is a file named 'pet.java'. The code defines a class 'pet' with private attribute 'nama'. It has three methods: 'beriNama(String beriNama)' which sets the name, 'panggilNama()' which returns the name, and 'perilaku()' which returns 'Hewan Penurut'. The code is annotated with a license header and author information.

```
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-23
10 */
11 public class pet {
12     private String nama;
13
14     public void beriNama(String beriNama){
15         this.nama = beriNama;
16     }
17     public String panggilNama(){
18         return this.nama;
19     }
20     public String perilaku(){
21         return "Hewan Penurut";
22     }
23 }
```

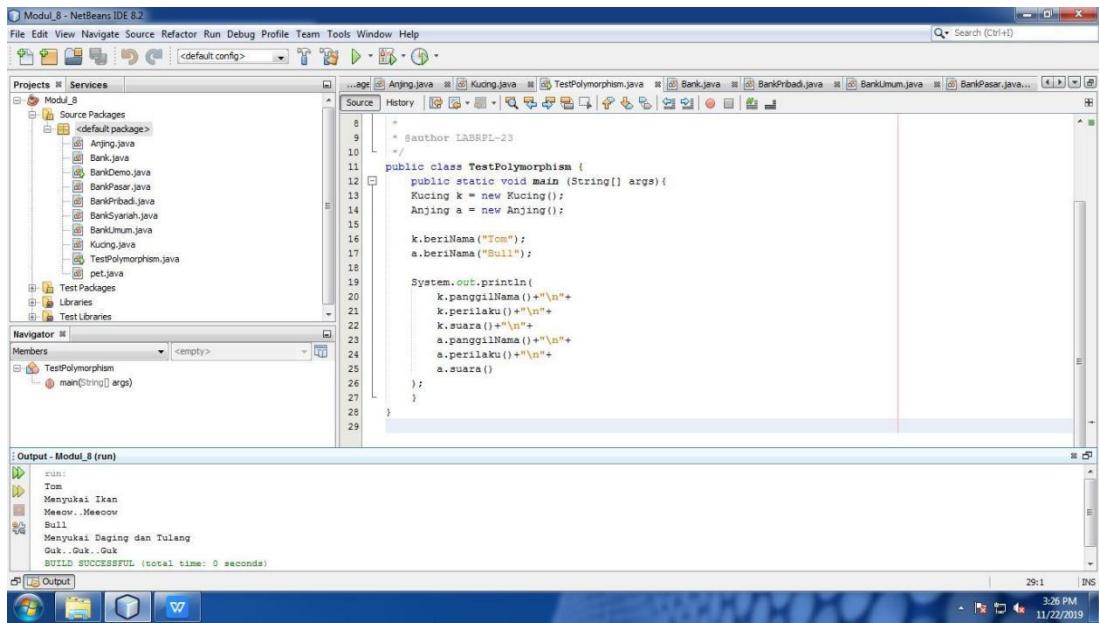
➤ Anjing



The screenshot shows the NetBeans IDE interface with the project 'Modul_8' open. The 'Source' tab is selected in the editor, displaying the code for 'Anjing.java'. The code defines a class 'Anjing' that extends 'pet'. It contains two methods: 'perilaku()' which returns 'Menyukai Daging dan Tulang', and 'suara()' which returns 'Guk..Guk..Guk'. The code is annotated with a license header and author information. The 'Projects' and 'Navigator' panes are visible on the left, and the 'Output' pane is at the bottom.

```
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-23
10 */
11 public class Anjing extends pet{
12     public String perilaku(){
13         return "Menyukai Daging dan Tulang";
14     }
15     public String suara(){
16         return "Guk..Guk..Guk";
17     }
18 }
19
```

➤ TestPolymorphism



The screenshot shows the NetBeans IDE interface with the project 'Modul_8' open. The 'Source' tab is selected in the editor, displaying the code for 'TestPolymorphism.java'. The code creates instances of 'Kucing' and 'Anjing' and prints their names and sounds. The 'Output' pane at the bottom shows the console output: 'Tom Menyukai Ikan Meow..Meow Bull Menyukai Daging dan Tulang Guk..Guk..Guk BUILD SUCCESSFUL (total time: 0 seconds)'. The 'Projects' and 'Navigator' panes are visible on the left, and the 'Output' pane is at the bottom.

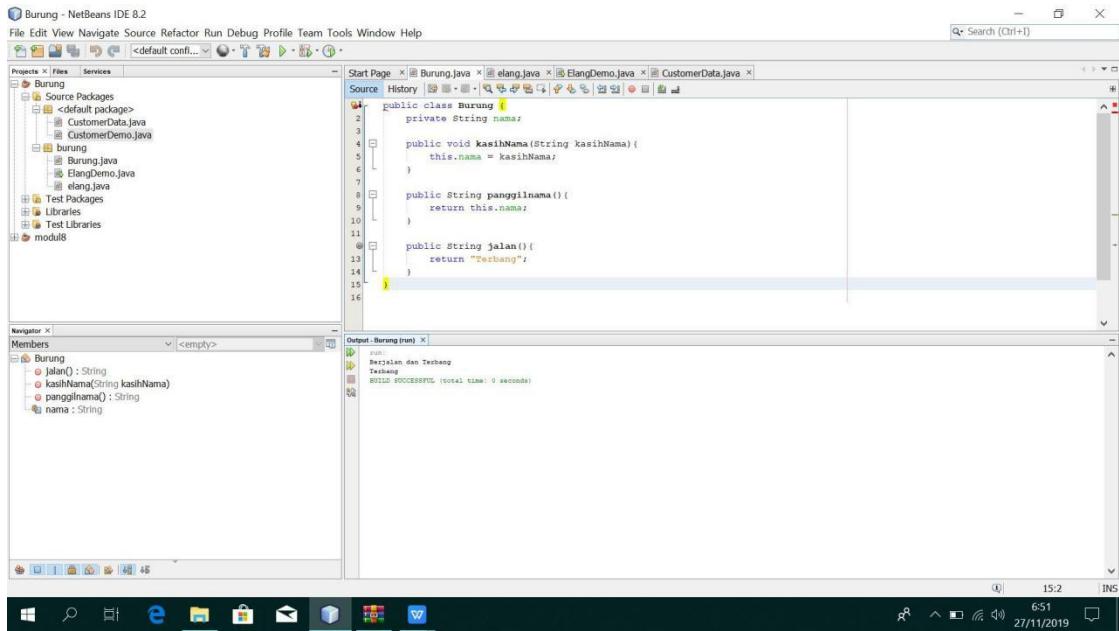
```
8  /*
9  * @author LABRPL-23
10 */
11 public class TestPolymorphism {
12     public static void main (String[] args){
13         Kucing k = new Kucing();
14         Anjing a = new Anjing();
15
16         k.beriNama("Tom");
17         a.beriNama("Bull");
18
19         System.out.println(
20             k.panggilNama()+"\n"+
21             k.perilaku()+"\n"+
22             k.suara()+"\n"+
23             a.panggilNama()+"\n"+
24             a.perilaku()+"\n"+
25             a.suara()
26         );
27     }
28 }
```

Output - Modul_8 (run)

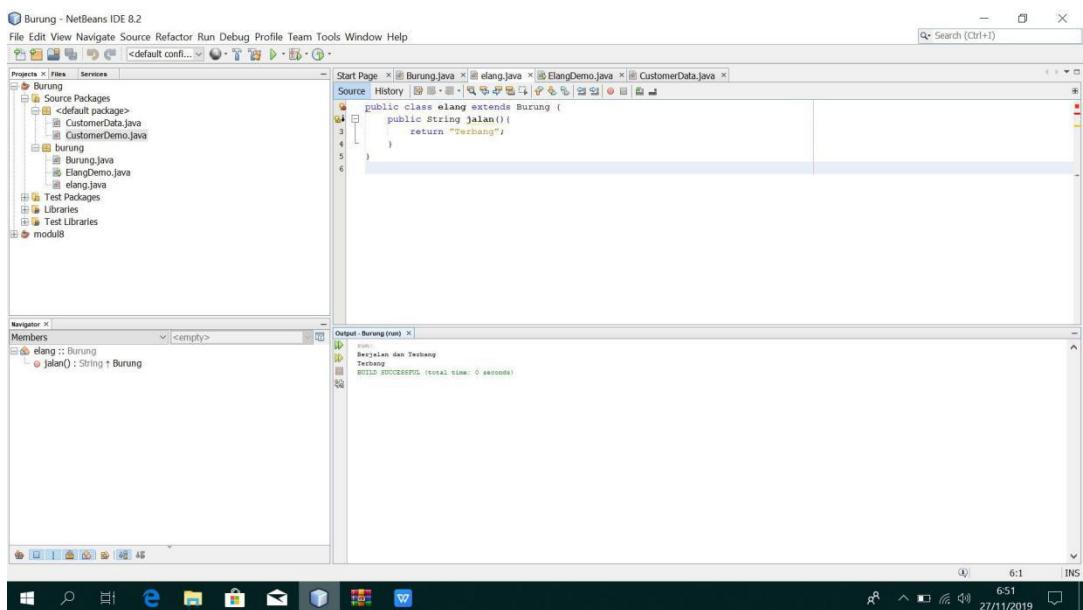
```
Tom
Menyukai Ikan
Meow..Meow
Bull
Menyukai Daging dan Tulang
Guk..Guk..Guk
BUILD SUCCESSFUL (total time: 0 seconds)
```

- **TUGAS**

- Burung



➤ Elang



➤ Elang Demo

The screenshot shows the NetBeans IDE 8.2 interface with the title "Burung - NetBeans IDE 8.2". The Projects tab displays a package named "burung" containing several Java files: Burung.java, ElangDemo.java, CustomerData.java, and others. The Source tab shows the code for ElangDemo.java:

```
public class ElangDemo {
    public static void main (String[] args){
        elang e = new elang();
        e.kasihNama("Berjalan dan Terbang");
        System.out.println(
            e.panggilNama()+"\n"+
            e.jalan());
    }
}
```

The Output tab shows the results of running the program: "Berjalan dan Terbang" and "BUILD SUCCESSFUL (total time: 0 seconds)". The status bar at the bottom right indicates the date and time as 27/11/2019 and 6:52 PM.

● Customer Data

The screenshot shows the NetBeans IDE 8.2 interface with the title "Modul_8 - NetBeans IDE 8.2". The Projects tab displays a package named "CustomerData" containing several Java files: Burung.java, CustomerData.java, CustomerDemo.java, ElangDemo.java, Kucing.java, TestPolymorphism.java, and others. The Source tab shows the code for CustomerData.java:

```
public class CustomerData {
    private String nama;
    private String alamat;
    private String TanggalLahir;
    private String pekerjaan;
    private int gaji;

    public String getNama(){
        return nama;
    }

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

    public String getAlamat(){
        return alamat;
    }

    public void setAlamat(String alamat){
        this.alamat = alamat;
    }

    public String getTanggalLahir(){
        return TanggalLahir;
    }

    public void setTanggalLahir(String TanggalLahir){
        this.TanggalLahir = TanggalLahir;
    }
}
```

The status bar at the bottom right indicates the date and time as 11/22/2019 and 3:55 PM.

Modul_8 - NetBeans IDE 8.2

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

Source History Search (Ctrl+I)

Projects Services ...java Burung.java CustomerData.java CustomerDemo.java BangDemo.java Kucing.java TestPolymorphism.java elang.java pet.java

Navigator Members CustomerData

- getAlamat() String
- getGaji() int
- getNama() String
- getPekerjaan() String
- getTanggalLahir() String
- setAlamat(String alamat)
- setGaji(int gaji)
- setNama(String nama)
- setPekerjaan(String pekerjaan)
- setTanggalLahir(String TanggalLahir)
- TanggalLahir : String
- alamat : String

Source History Search (Ctrl+I)

```

31     this.alamat = alamat;
32 }
33
34     public String getTanggalLahir(){
35         return TanggalLahir;
36     }
37
38     public void setTanggalLahir(String TanggalLahir){
39         this.TanggalLahir = TanggalLahir;
40     }
41
42     public String getPekerjaan(){
43         return pekerjaan;
44     }
45
46     public void setPekerjaan(String pekerjaan){
47         this.pekerjaan = pekerjaan;
48     }
49
50     public int getGaji(){
51         return gaji;
52     }
53
54     public void setGaji(int gaji){
55         this.gaji = gaji;
56     }
57 }
```

Output

9:21 3:55 PM 11/22/2019

● Customer Demo

modul8 - NetBeans IDE 8.2

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

Source History Search (Ctrl+I)

Projects Services Start Page X Hewan.java X Kucing.java X Hewandemo.java X Pet.java X Anjingku.java X Kucingku.java X TestPolymorphism.java X Elang.java X customerdata.java X customerdatademo.java

customerdata demo

```

10
11     public class customerdatademo {
12         public static void main(String[] args){
13             customerdata ov = new customerdata();
14             ov.overloading("budi", "sukoharjo", 12, "dokter", 120000);
15
16             customerdata co = new customerdata();
17             co.overloading("veni", "sukoharjo", 14, "guru", 120000);
18
19             customerdata op = new customerdata();
20             op.overloading("vara", "sukoharjo", 13, "pns", 1230000);
21
22             customerdata po = new customerdata();
23             po.overloading("dias", "sukoharjo", 22, "pegawai", 120000);
24
25             customerdata eo = new customerdata();
26             eo.overloading("deni", "sukoharjo", 2, "dokter", 120000);
27
28             customerdata er = new customerdata();
29             er.overloading("reni", "sukoharjo", 12, "dokter", 120000);
30
31             customerdata ple = new customerdata();
32             ple.overloading("rudi", "sukoharjo", 14, "akuntan", 120000);
33
34             customerdata ove = new customerdata();
35             ove.overloading("deri", "sukoharjo", 21, "dokter", 120000);
```

customerdatademo > main >

modul8 - NetBeans IDE 8.2

```

19     customerdata op = new customerdata();
20     op.overloading("vara", "sukoharjo", 13, "pns", 1230000);
21
22     customerdata po = new customerdata();
23     po.overloading("dias", "sukoharjo", 22, "pegawai", 120000);
24
25     customerdata eo = new customerdata();
26     eo.overloading("deni", "sukoharjo", 2, "dokter", 120000);
27
28     customerdata er = new customerdata();
29     er.overloading("reni", "sukoharjo", 12, "dokter", 120000);
30
31     customerdata ple = new customerdata();
32     ple.overloading("rudi", "sukoharjo", 14, "akuntan", 120000);
33
34     customerdata ove = new customerdata();
35     ove.overloading("deri", "sukoharjo", 21, "dokter", 120000);
36
37     customerdata ovr = new customerdata();
38     ovr.overloading("sendi", "sukoharjo", 24, "traverel", 120000);
39
40     customerdata ovq = new customerdata();
41     ovq.overloading("rendi", "sukoharjo", 25, "pedagang", 120000);
42
43 }
44

```

Keluarannya :

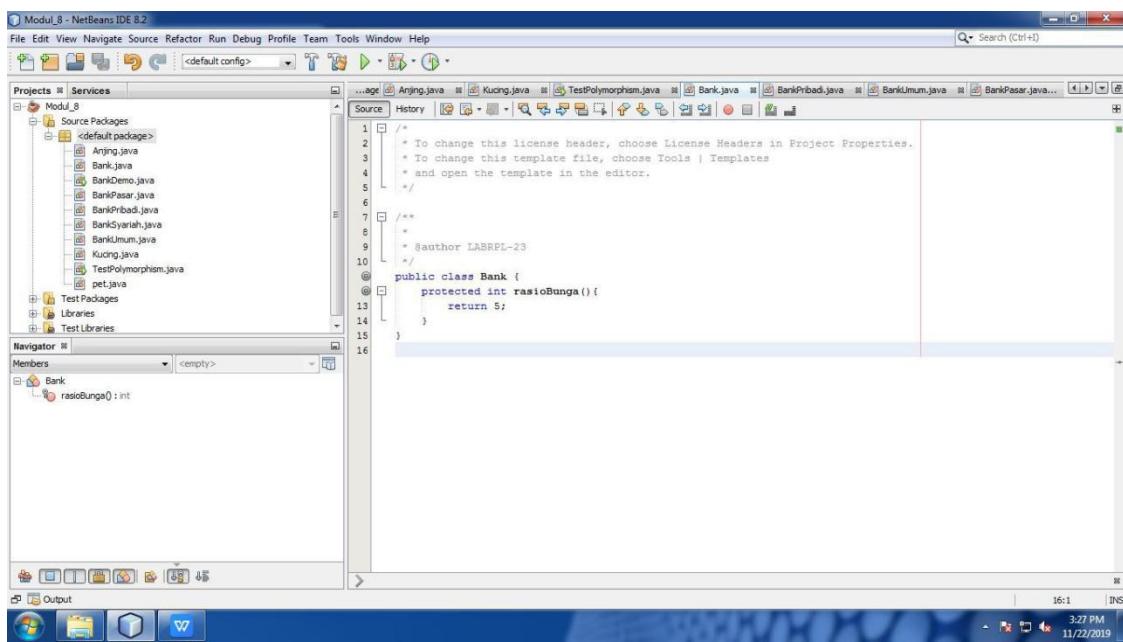
modul8 - NetBeans IDE 8.2

```

Output - modul8 (run) x
=====
{
    "name": "vara",
    "alamat": "sukoharjo",
    "tgllahir": 13,
    "pekerjaan": "dokter",
    "gaji": 1230000
},
{
    "name": "dias",
    "alamat": "sukoharjo",
    "tgllahir": 22,
    "pekerjaan": "pegawai",
    "gaji": 120000
},
{
    "name": "eo",
    "alamat": "sukoharjo",
    "tgllahir": 2,
    "pekerjaan": "dokter",
    "gaji": 120000
},
{
    "name": "reni",
    "alamat": "sukoharjo",
    "tgllahir": 12,
    "pekerjaan": "dokter",
    "gaji": 120000
},
{
    "name": "ple",
    "alamat": "sukoharjo",
    "tgllahir": 14,
    "pekerjaan": "akuntan",
    "gaji": 120000
},
{
    "name": "ove",
    "alamat": "vara",
    "tgllahir": 21,
    "pekerjaan": "pns",
    "gaji": 1230000
},
{
    "name": "deri",
    "alamat": "sukoharjo",
    "tgllahir": 21,
    "pekerjaan": "dokter",
    "gaji": 120000
},
{
    "name": "ovr",
    "alamat": "sukoharjo",
    "tgllahir": 24,
    "pekerjaan": "traverel",
    "gaji": 120000
},
{
    "name": "sendi",
    "alamat": "sukoharjo",
    "tgllahir": 25,
    "pekerjaan": "pedagang",
    "gaji": 120000
}
}

```

● Bank

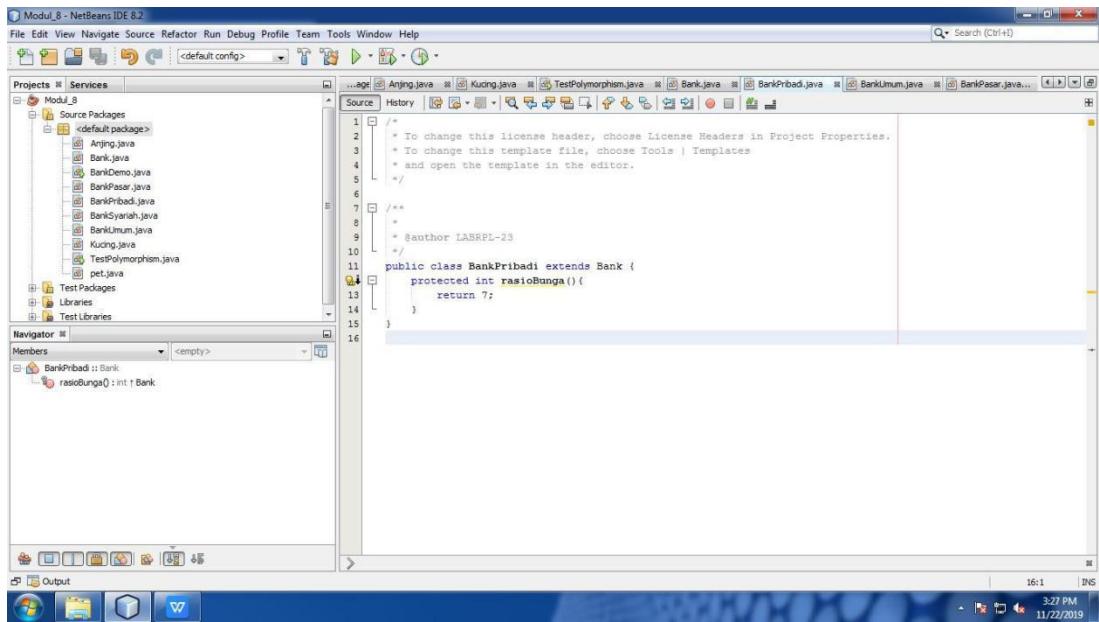


The screenshot shows the NetBeans IDE 8.2 interface with the following details:

- Title Bar:** Modul_8 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Projects Tab:** Shows the project "Modul_8" with its source packages and files.
- Navigator Tab:** Shows the class "Bank" with its member variable "ratioBunga".
- Source Editor:** Displays the code for the "Bank" class:

```
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-23
10 */
11 public class Bank {
12     protected int ratioBunga() {
13         return 5;
14     }
15 }
```
- Output Tab:** Shows standard operating system output.
- System Tray:** Shows the date and time as 11/22/2019 3:27 PM.

➤ Bank Pribadi

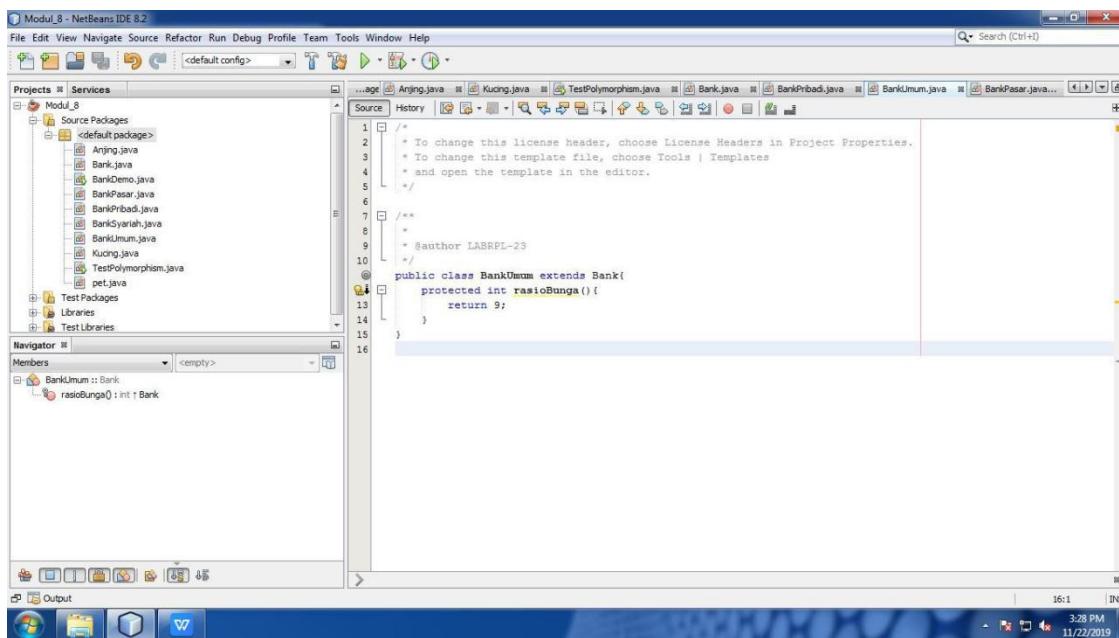


The screenshot shows the NetBeans IDE 8.2 interface with the following details:

- Title Bar:** Modul_8 - NetBeans IDE 8.2
- Menu Bar:** File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Projects Tab:** Shows the project "Modul_8" with its source packages and files.
- Navigator Tab:** Shows the class "BankPribadi" which extends "Bank" with its member variable "ratioBunga".
- Source Editor:** Displays the code for the "BankPribadi" class:

```
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-23
10 */
11 public class BankPribadi extends Bank {
12     protected int ratioBunga() {
13         return 7;
14     }
15 }
```
- Output Tab:** Shows standard operating system output.
- System Tray:** Shows the date and time as 11/22/2019 3:27 PM.

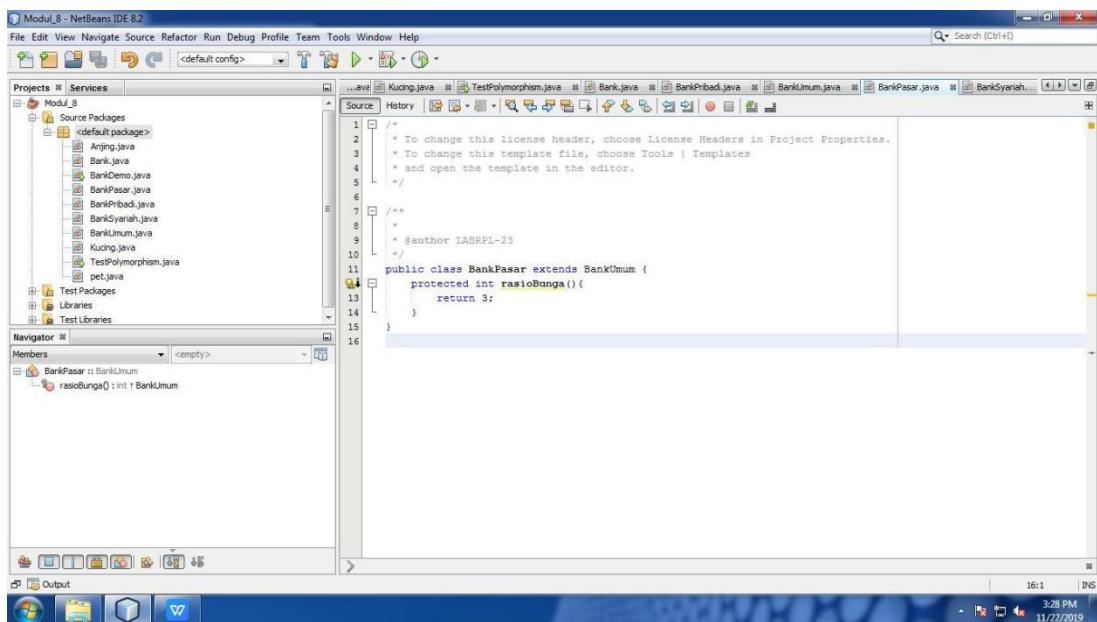
➤ Bank Umum



The screenshot shows the NetBeans IDE 8.2 interface with the title bar "Modul_8 - NetBeans IDE 8.2". The main window displays the source code for the "BankUmum" class. The code defines a class "BankUmum" that extends "Bank" and implements the "Bank" interface. It contains a protected method "ratioBunga" that returns 9. The code is annotated with JavaDoc comments and a copyright notice.

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
public class BankUmum extends Bank{
    protected int ratioBunga(){
        return 9;
    }
}
```

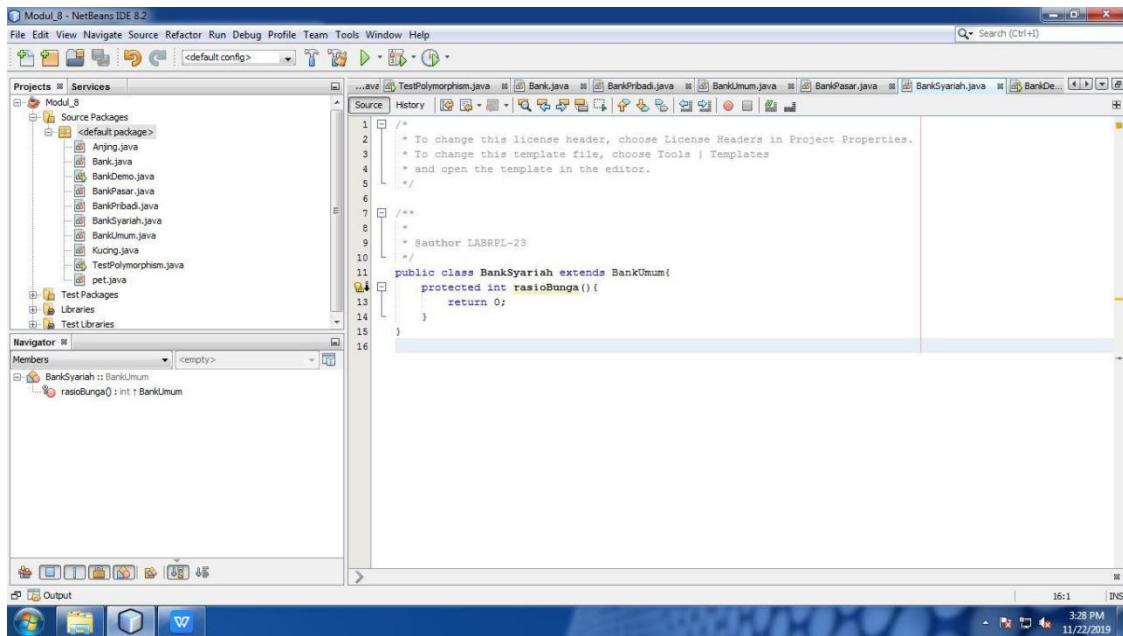
➤ Bank Pasar



The screenshot shows the NetBeans IDE 8.2 interface with the title bar "Modul_8 - NetBeans IDE 8.2". The main window displays the source code for the "BankPasar" class. The code defines a class "BankPasar" that extends "BankUmum" and implements the "Bank" interface. It contains a protected method "ratioBunga" that returns 3. The code is annotated with JavaDoc comments and a copyright notice.

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
public class BankPasar extends BankUmum {
    protected int ratioBunga(){
        return 3;
    }
}
```

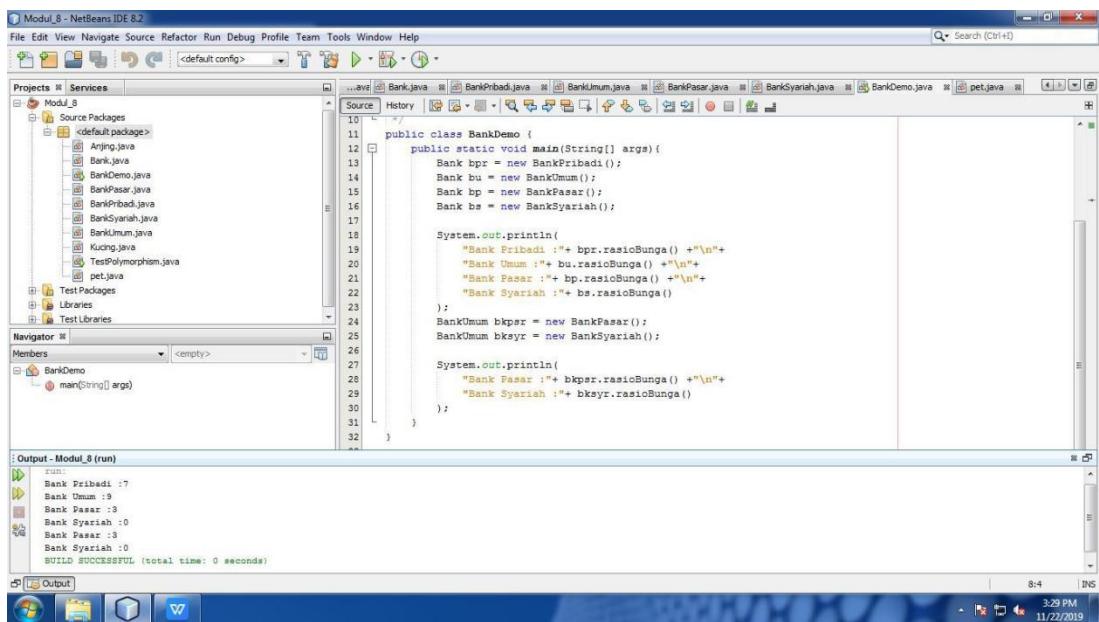
➤ Bank Syariah



The screenshot shows the NetBeans IDE interface with the title "Modul_8 - NetBeans IDE 8.2". The main window displays the Java code for the `BankSyariah` class, which extends `BankUmum`. The code includes a protected method `rasioBunga` that returns 0. The code editor has tabs for `Source` and `History`. The left sidebar shows the project structure under "Source Packages" and the "Navigator" pane which lists the `BankSyariah` class and its method `rasioBunga`.

```
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 LABREPI-23
10 */
11 public class BankSyariah extends BankUmum{
12     protected int rasioBunga(){
13         return 0;
14     }
15 }
```

➤ Bank Demo



The screenshot shows the NetBeans IDE interface with the title "Modul_8 - NetBeans IDE 8.2". The main window displays the Java code for the `BankDemo` class, which contains a `main` method. This method creates instances of `BankUmum`, `BankPasar`, and `BankSyariah` and prints their `rasioBunga` values. The code editor has tabs for `Source` and `History`. The left sidebar shows the project structure under "Source Packages" and the "Navigator" pane which lists the `BankDemo` class and its `main` method. The bottom panel shows the "Output" tab with the build log, indicating a successful build.

```
10 /**
11  * 
12  */
13 public class BankDemo {
14     public static void main(String[] args){
15         Bank bpr = new BankPribadi();
16         Bank bu = new BankUmum();
17         Bank bp = new BankPasar();
18         Bank bs = new BankSyariah();
19
20         System.out.println(
21             "Bank Pribadi :" + bpr.rasioBunga() +"\n"+
22             "Bank Umum :" + bu.rasioBunga() +"\n"+
23             "Bank Pasar :" + bp.rasioBunga() +"\n"+
24             "Bank Syariah :" + bs.rasioBunga()
25         );
26
27         BankUmum bkpr = new BankPasar();
28         BankUmum bksy = new BankSyariah();
29
30         System.out.println(
31             "Bank Pasar :" + bkpr.rasioBunga() +"\n"+
32             "Bank Syariah :" + bksy.rasioBunga()
33         );
34     }
35 }
```

Output - Modul_8 (run)

```
Bank Pribadi :7
Bank Umum :9
Bank Pasar :3
Bank Syariah :0
BUILD SUCCESSFUL (total time: 0 seconds)
```

Modul 9

9.1. OBJECT CLASS ABSTRACT

Program 1

The screenshot shows the NetBeans IDE interface with the project 'Modul9' open. The 'AbstrakClass.java' file is selected in the tabs. The code defines a class 'AbstrakClass' with three integer fields (a, b, c) and a method 'kali()' that returns their product.

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

Program 2

The screenshot shows the NetBeans IDE interface with the project 'Modul9' open. The 'ObjekAbstrakClass.java' file is selected in the tabs. The code defines a class 'ObjekAbstrakClass' with a static main method that creates an instance of 'AbstrakClass' with values 2, 3, and 4.

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
public class ObjekAbstrakClass {
    public static void main(String[] args){
        AbstrakClass ac = new AbstrakClass(2,3,4);
    }
}
```

Program 3

The screenshot shows the NetBeans IDE 8.2 interface. The left pane displays a project named 'Modu9' with a 'Source Packages' node containing several Java files: AbstrakClass.java, Balok.java, Bola.java, JajarGenjang.java, Kerucut.java, Kubus.java, Lingkaran.java, Main.java, MethodMain.java, ObjekAbstrakClass.java, ObjekAbstrakClasss.java, Perseg.java, and PersegPanjang.java. The right pane shows the source code for 'TurunanAbstrakClass.java'. The code is as follows:

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
public class TurunanAbstrakClass extends AbstrakClass{
    int x;
    public TurunanAbstrakClass (int a, int b, int c){
        super(a,b,c);
        x = a+b+c;
    }
    public void printX(){
        System.out.println(x);
    }
}
```

Program 4

The screenshot shows the NetBeans IDE 8.2 interface. The left pane displays a project named 'Modu9' with a 'Source Packages' node containing several Java files: AbstrakClass.java, Balok.java, Bola.java, JajarGenjang.java, Kerucut.java, Kubus.java, Lingkaran.java, Main.java, MethodMain.java, ObjekAbstrakClass.java, ObjekAbstrakClasss.java, Perseg.java, and PersegPanjang.java. The right pane shows the source code for 'TurunanAbstrakClass.java'. The code is as follows:

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
public class TurunanAbstrakClass extends AbstrakClass{
    int x;
    public TurunanAbstrakClass (int a, int b, int c){
        super(a,b,c);
        x = a+b+c;
    }
    public void printX(){
        System.out.println(x);
    }
}
```

9.2. METHOD ABSTRACT

Program 5

The screenshot shows the NetBeans IDE interface with the title bar "Modul9 - NetBeans IDE 8.2". The left sidebar displays a project structure for "Modul9" containing various Java files like AbstrakClass.java, Balok.java, Bola.java, etc. The main editor area shows the code for "methodAbstract.java". The code defines an abstract class "methodAbstract" with abstract methods "luas()" and "keliling()", and a concrete method "getLuas()". A copyright notice at the top of the code specifies the license header and author information.

```
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-32
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
```

Program 6

The screenshot shows the NetBeans IDE interface with the title bar "Modul9 - NetBeans IDE 8.2". The left sidebar displays a project structure for "Modul9" containing various Java files. The main editor area shows the code for "Persegi.java", which extends the "methodAbstract" class. It overrides the "luas()" method to return the square of the side length "sisi*sisi" and overrides the "keliling()" method to return four times the side length "4*sisi".

```
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-32
10 */
11 public class Persegi extends methodAbstract{
12     int sisi = 5;
13
14     @Override
15     public int luas(){
16         return sisi*sisi;
17     }
18     @Override
19     public int keliling(){
20         return 4*sisi;
21     }
22 }
23
```

Program 7

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

- Title Bar:** Modul9 - NetBeans IDE 8.2
- Menu Bar:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help
- Toolbar:** Standard NetBeans toolbar with icons for file operations.
- Projects Tab:** Shows a project named "Modul9" containing several source files: AbstractClass.java, Balok.java, Bola.java, JejerGenjang.java, Kerucut.java, Kubus.java, Lingkaran.java, Main.java, MethodMain.java, ObjekAbstrakClass.java, ObjekAbstrakClass.java, Persegi.java, and Persegipanjang.java.
- Source Editor:** Displays the content of MethodMain.java. The code is as follows:

```
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-32
10 */
11 public class MethodMain {
12     public static void main(String[] args){
13         Persegi psg = new Persegi();
14         System.out.println("Kelling Persegi = " + psg.getKelli());
15         System.out.println("Luas Persegi = " + psg.getLuas());
16     }
17 }
18
```

- Navigator Tab:** Shows the members of MethodMain, specifically the main() method.
- Output Tab:** Shows the output of the current session.
- System Tray:** Shows the date and time (11/29/2019, 3:07 PM) and system icons.

9.3. LATIHAN

Persegi panjang

The screenshot shows the NetBeans IDE interface with the title "Modul9 - NetBeans IDE 8.2". The "Projects" panel on the left lists several Java files: AbstrakClass.java, Balok.java, Bola.java, JajarGenjang.java, Kerucut.java, Kubus.java, Lingkaran.java, Main.java, MethodMain.java, ObjekAbstrakClass.java, ObjekAbstrakClass.java, Persegi.java, PersegiPanjang.java, PrismaSegitiga.java, Segitiga.java, and TurunanAbstrakClass.java. The "Navigator" panel shows "Members" with "PersegiPanjang :: methodAbstract". The main editor window displays the code for PersegiPanjang.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 LABRPL-32
10 */
11 public class PersegiPanjang extends methodAbstract {
12     int panjang = 3;
13     int lebar = 5;
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 }
25
```

Jajar genjang

The screenshot shows the NetBeans IDE interface with the title "Modul9 - NetBeans IDE 8.2". The "Projects" panel on the left lists several Java files under "Modul9": Source Packages, AbstrakClass.java, Balok.java, Bola.java, JajarGenjang.java, Kerucut.java, Kubus.java, Lingkaran.java, Main.java, MethodMain.java, ObjekAbstrakClass.java, ObjekAbstrakClass.java, Persegi.java, and PersegiPanjang.java. The "Navigator" panel shows "Members" with "JajarGenjang :: methodAbstract". The main editor window displays the code for JajarGenjang.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 LABRPL-32
10 */
11 public class JajarGenjang extends methodAbstract {
12     int panjang = 12;
13     int lebar = 15;
14     int alas = 4;
15     int tinggi = 3;
16
17     @Override
18     public int luas(){
19         return alas*tinggi;
20     }
21
22     @Override
23     public int keliling(){
24         return 2*(panjang+lebar);
25     }
26 }
```

Lingkaran

The screenshot shows the NetBeans IDE interface with the title "Modul9 - NetBeans IDE 8.2". The main window displays the source code for the "Lingkaran.java" file. The code defines a class "Lingkaran" that extends "methodAbstract". It includes two overridden methods: "luas()" which returns $\pi * jari * jari$, and "keliling()" which returns $2\pi * jari$. The code is annotated with JavaDoc comments and a license header.

```
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-32  
10 */  
11 public class Lingkaran extends methodAbstract {  
12     int jari = 14;  
13  
14     @Override  
15     public int luas(){  
16         return 22/7*jari*jari;  
17     }  
18     @Override  
19     public int keliling(){  
20         return 22/7*2*jari;  
21     }  
22 }  
23
```

Segitiga

The screenshot shows the NetBeans IDE interface with the title "Modul9 - NetBeans IDE 8.2". The main window displays the source code for the "Segitiga.java" file. The code defines a class "Segitiga" that extends "methodAbstract". It includes two overridden methods: "luas()" which returns $\frac{alas * tinggi}{2}$, and "keliling()" which returns $3 * alas$. The code is annotated with JavaDoc comments and a license header.

```
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-32  
10 */  
11 public class Segitiga extends methodAbstract {  
12     int alas = 5;  
13     int tinggi = 2;  
14  
15     public int luas(){  
16         return alas*tinggi/2;  
17     }  
18     public int keliling(){  
19         return 3*alas;  
20     }  
21 }  
22
```

Modul9 - NetBeans IDE 8.2

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

Projects Services Files

Persegi.java MethodMain.java PersegiPanjang.java JajarGenjang.java Lingkaran.java Segitiga.java

Source History

```
1  /*
2  * @author LABRPL-32
3  */
4
5  public class MethodMain {
6      public static void main(String[] args){
7          Persegi psg = new Persegi();
8          System.out.println("Keliling Persegi = " + psg.getKell());
9          System.out.println("Luas Persegi = " + psg.getLuas());
10
11         PersegiPanjang pp = new PersegiPanjang();
12         System.out.println("\nKeliling Persegi Panjang = " + pp.getKell());
13         System.out.println("Luas Persegi Panjang = " + pp.getLuas());
14
15         JajarGenjang jg = new JajarGenjang();
16         System.out.println("\nKeliling Jajar Genjang = " + jg.getKell());
17         System.out.println("Luas Jajar Genjang = " + jg.getLuas());
18
19         Lingkaran lg = new Lingkaran();
20         System.out.println("\nKeliling Lingkaran = " + lg.getKell());
21         System.out.println("Luas Lingkaran = " + lg.getLuas());
22
23         Segitiga sg = new Segitiga();
24         System.out.println("\nKeliling Segitiga = " + sg.getKell());
25         System.out.println("Luas Segitiga = " + sg.getLuas());
26     }
27 }
28
29
30
31
32
33
34
```

Output

3:11 PM 11/29/2019

Modul9 - NetBeans IDE 8.2

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

Projects Services Files

Persegi.java MethodMain.java PersegiPanjang.java JajarGenjang.java Lingkaran.java Segitiga.java

Source History

```
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
```

Navigator Output - Modul9 (run)

```
run:
Keiling Persegi = 20
Luas Persegi = 25

Keiling Persegi Panjang = 16
Luas Persegi Panjang = 15

Keiling Jajar Genjang = 54
Luas Jajar Genjang = 12

Keiling Lingkaran = 84
Luas Lingkaran = 588

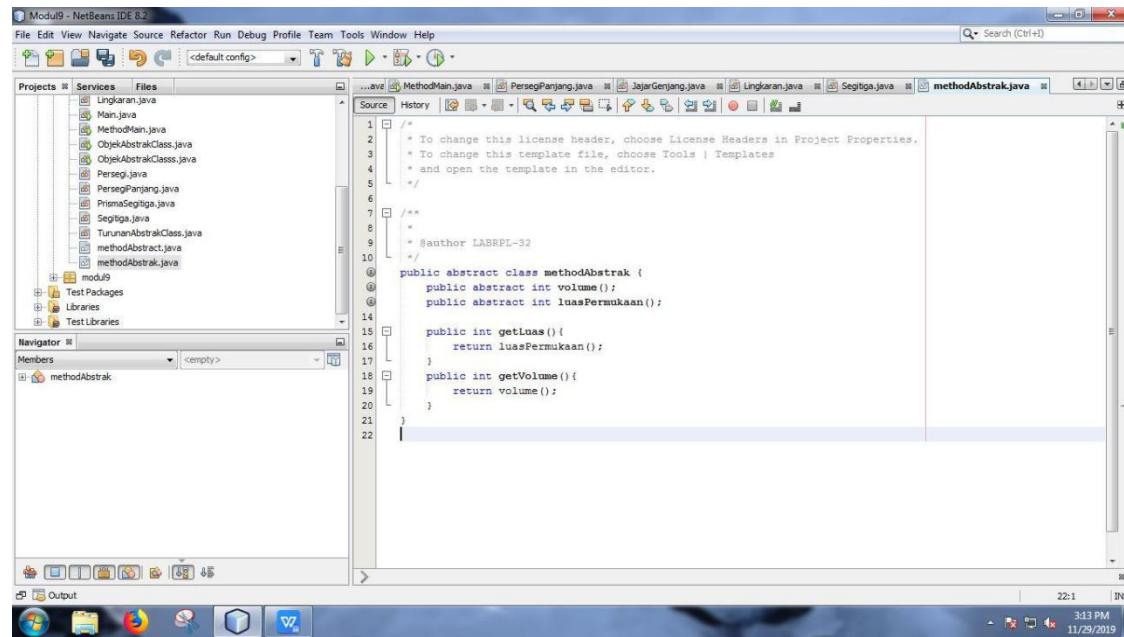
Keiling Segitiga = 15
Luas Segitiga = 5

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

Output

3:12 PM 11/29/2019

9.4. TUGAS

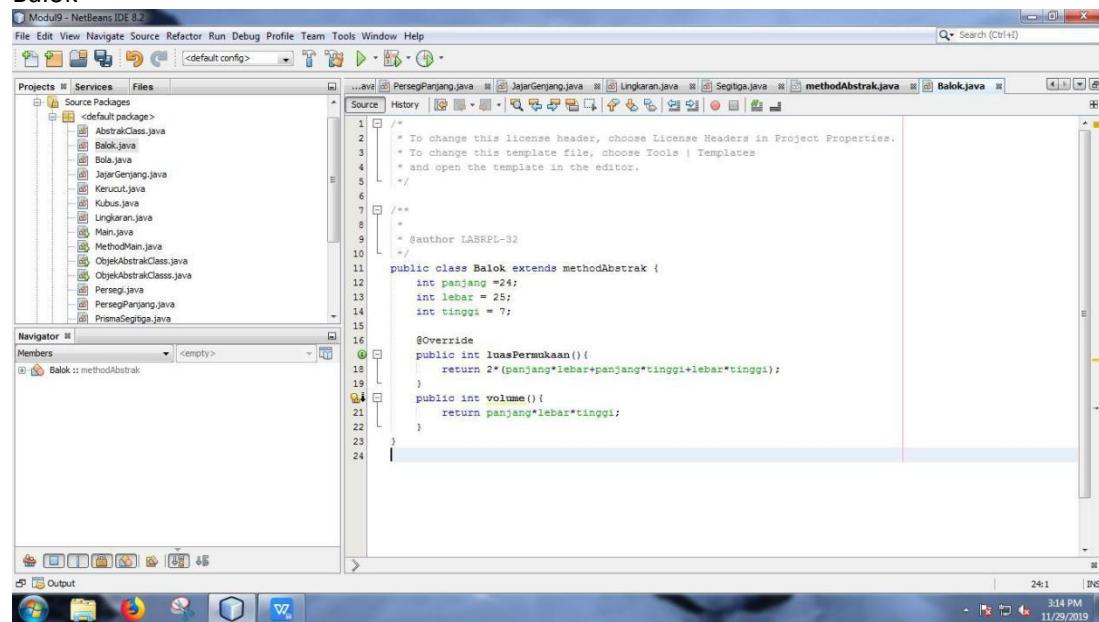


```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
/*
 *
 * @author LABRPL-32
 */
public abstract class methodAbstrak {
    public abstract int volume();
    public abstract int luasPermukaan();
}

public int getLuas(){
    return luasPermukaan();
}

public int getVolume(){
    return volume();
}
```

Balok



```
/*
 * 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-32
 */
public class Balok extends methodAbstrak {
    int panjang = 24;
    int lebar = 25;
    int tinggi = 7;

    @Override
    public int luasPermukaan(){
        return 2*(panjang*lebar+panjang*tinggi+lebar*tinggi);
    }

    public int volume(){
        return panjang*lebar*tinggi;
    }
}
```

Kubus

The screenshot shows the NetBeans IDE 8.2 interface with the title "Modul9 - NetBeans IDE 8.2". The main window displays the Kubus.java file. The code defines a class Kubus that extends methodAbstrak. It has a constructor setting sisi to 6, and methods for calculating surface area (luasPermukaan) and volume.

```
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-32
10 */
11 public class Kubus extends methodAbstrak{
12     int sisi = 6;
13
14     public int luasPermukaan(){
15         return 6*sisi;
16     }
17     public int volume(){
18         return sisi*sisi*sisi;
19     }
20 }
21
```

Bola

The screenshot shows the NetBeans IDE 8.2 interface with the title "Modul9 - NetBeans IDE 8.2". The main window displays the Bola.java file. The code defines a class Bola that extends methodAbstrak. It has a constructor setting jari to 14, and methods for calculating surface area (luasPermukaan) and volume.

```
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-32
10 */
11 public class Bola extends methodAbstrak {
12     int jari = 14;
13
14     public int luasPermukaan(){
15         return (22/7)*4*jari*jari;
16     }
17     public int volume(){
18         return (22/7)*(4/3)*jari*jari*jari;
19     }
20 }
21
```

Kerucut

The screenshot shows the NetBeans IDE interface with the title "Modul9 - NetBeans IDE 8.2". The main window displays the Java code for the "Kerucut" class, which extends the "methodAbstrak" class. The code calculates the lateral surface area and volume of a cone.

```
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-32  
10 */  
11 public class Kerucut extends methodAbstrak {  
12     int jari = 7;  
13     int sisi = 3;  
14     int tinggi = 4;  
15  
16     public int luasPermukaan(){  
17         return 22/7*jari*(jari+sisi);  
18     }  
19     public int volume(){  
20         return (int) (0.3*3.14*jari*jari*tinggi);  
21     }  
22 }  
23 }
```

Prisma segitiga

The screenshot shows the NetBeans IDE interface with the title "Modul9 - NetBeans IDE 8.2". The main window displays the Java code for the "PrismaSegitiga" class, which extends the "methodAbstrak" class. The code calculates the lateral surface area and volume of a triangular prism.

```
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-32  
10 */  
11 public class PrismaSegitiga extends methodAbstrak {  
12     int alas = 6;  
13     int tAlas = 6;  
14     int tPrisma = 10;  
15  
16     public int luasPermukaan(){  
17         return(alas*tAlas)+3*alas*tPrisma;  
18     }  
19     public int volume(){  
20         return 1/2*alas*tAlas*tPrisma;  
21     }  
22 }  
23 }
```

Modul9 - NetBeans IDE 8.2

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

cdefault config > T S G

Projects Services Files

- Kerucut.java
- Kubus.java
- Lingkaran.java
- Main.java
- MethodMain.java
- ObjekAbstrakClass.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java
- TurunanAbstrakClass.java
- methodAbstract.java
- methodAbstrak.java

modul9 Test Packages

Navigator Members <empty>

```
Source History > S M F D C P R E L I S
```

```
.../avl methodAbstrak.java Balok.java Kubus.java Bola.java Kerucut.java PrismaSegitiga.java Main.java
```

```
7 /**
8 * @author LABRPL-32
9 */
10 public class Main {
11     public static void main(String[] args){
12         Balok blk = new Balok();
13         System.out.println("Luas Permukaan Balok = " + blk.getLuas());
14         System.out.println("Volume Balok = " + blk.getVolume());
15
16         Kubus kbs = new Kubus();
17         System.out.println("\nLuas Permukaan Kubus = " + kbs.getLuas());
18         System.out.println("Volume Kubus = " + kbs.getVolume());
19
20         Bola bl = new Bola();
21         System.out.println("\nLuas Permukaan Bola = " + bl.getLuas());
22         System.out.println("Volume Bola = " + bl.getVolume());
23
24         Kerucut krc = new Kerucut();
25         System.out.println("\nLuas Permukaan Kerucut = " + krc.getLuas());
26         System.out.println("Volume Kerucut = " + krc.getVolume());
27
28         PrismaSegitiga ps = new PrismaSegitiga();
29         System.out.println("\nLuas Permukaan PrismaSegitiga = " + ps.getLuas());
30         System.out.println("Volume PrismaSegitiga = " + ps.getVolume());
31
32     }
33 }
34 }
```

34:1 INS 3:17 PM 11/29/2019

Modul9 - NetBeans IDE 8.2

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

cdefault config > T S G

Projects Services Files

- Kerucut.java
- Kubus.java
- Lingkaran.java
- Main.java
- MethodMain.java
- ObjekAbstrakClass.java
- ObjekAbstrakClass.java
- Persegi.java
- PersegiPanjang.java
- PrismaSegitiga.java
- Segitiga.java
- TurunanAbstrakClass.java
- methodAbstract.java
- methodAbstrak.java

modul9 Test Packages

Navigator Members

Output - Modul9 (run)

```
run:
Luas Permukaan Balok = 1886
Volume Balok = 4200

Luas Permukaan Kubus = 36
Volume Kubus = 216

Luas Permukaan Bola = 2352
Volume Bola = 8232

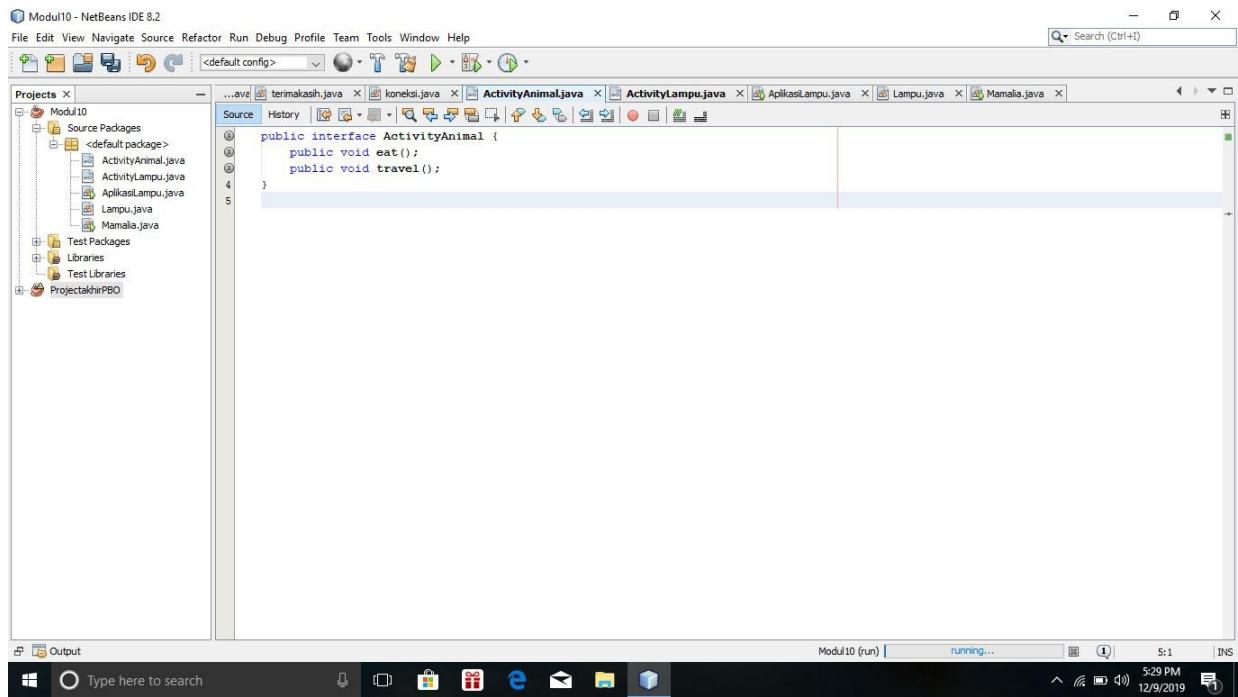
Luas Permukaan Kerucut = 210
Volume Kerucut = 184

Luas Permukaan PrismaSegitiga = 216
Volume PrismaSegitiga = 0
BUILD SUCCESSFUL (total time: 0 seconds)
```

34:1 INS 3:18 PM 11/29/2019

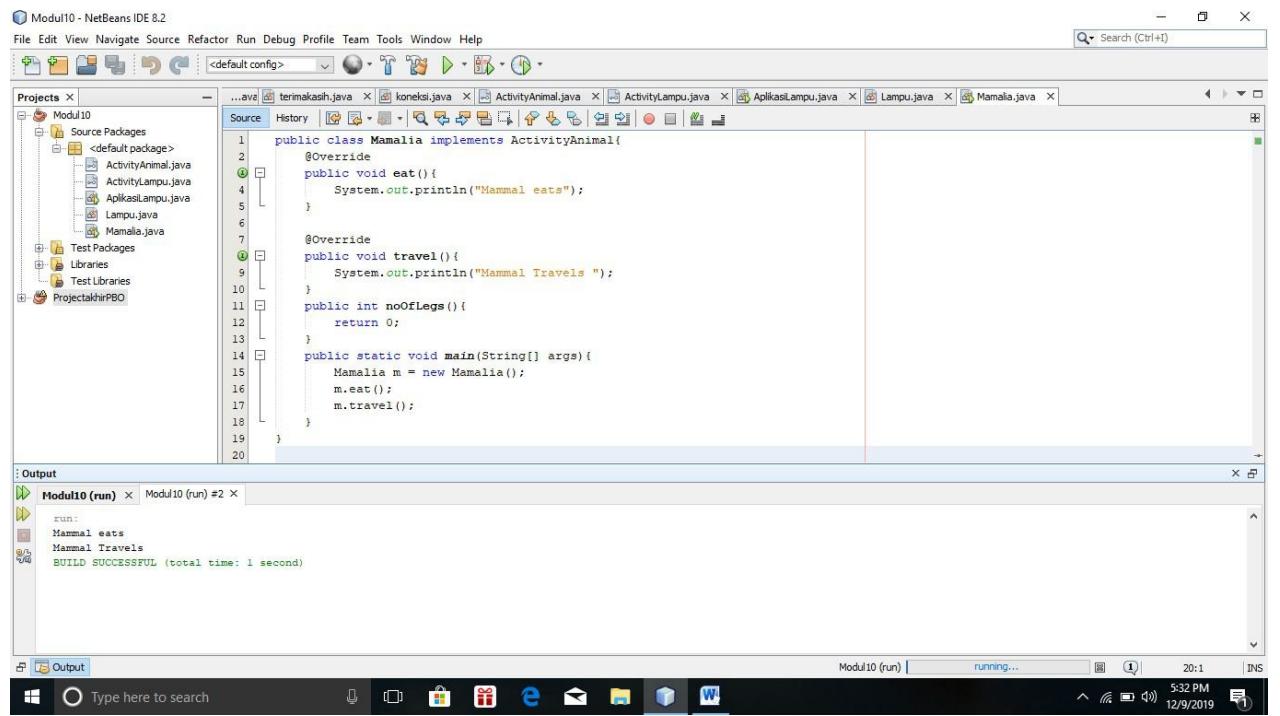
Modul 10

Laporan dan Tugas



The screenshot shows the NetBeans IDE 8.2 interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, and Help. The title bar says "Modul10 - NetBeans IDE 8.2". The main window has a "Projects" panel on the left containing a "Modul10" project with several source packages and files. The central editor pane displays the code for the "ActivityAnimal.java" interface:

```
public interface ActivityAnimal {
    public void eat();
    public void travel();
}
```



The screenshot shows the NetBeans IDE 8.2 interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, and Help. The title bar says "Modul10 - NetBeans IDE 8.2". The main window has a "Projects" panel on the left containing a "Modul10" project with several source packages and files. The central editor pane displays the code for the "Mamalia.java" class:

```
public class Mamalia implements ActivityAnimal{
    @Override
    public void eat(){
        System.out.println("Mammal eats");
    }

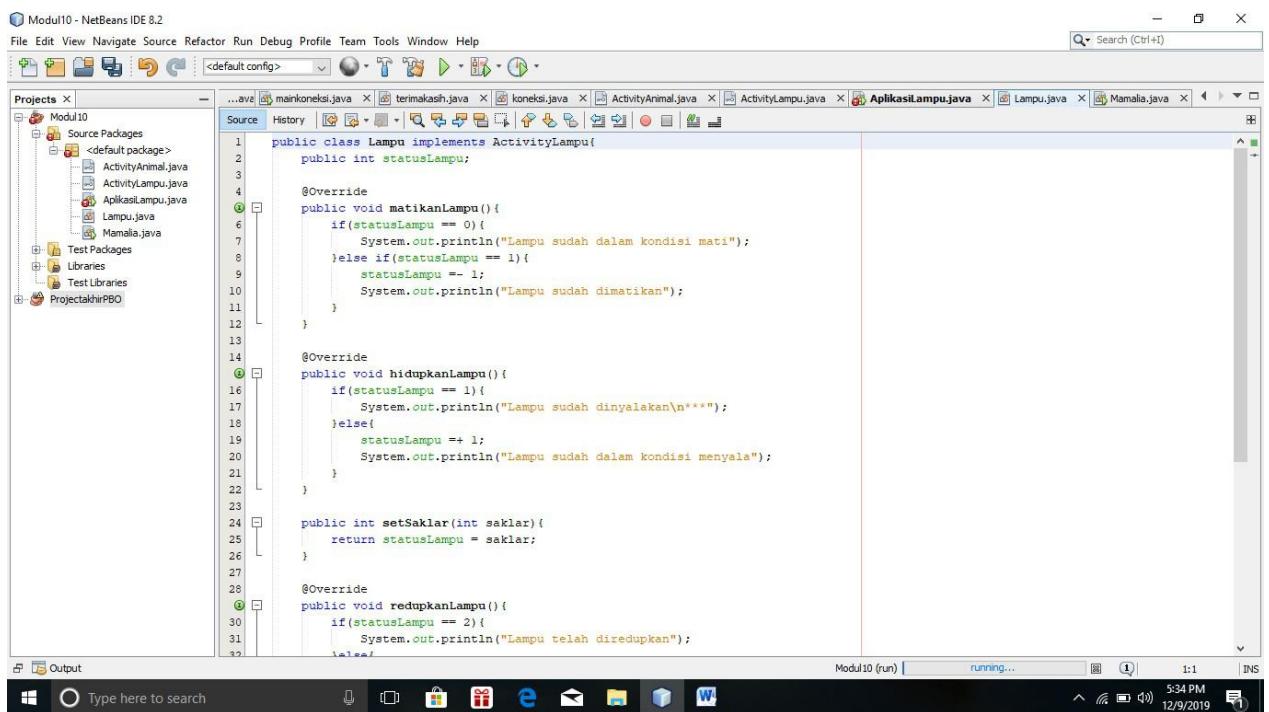
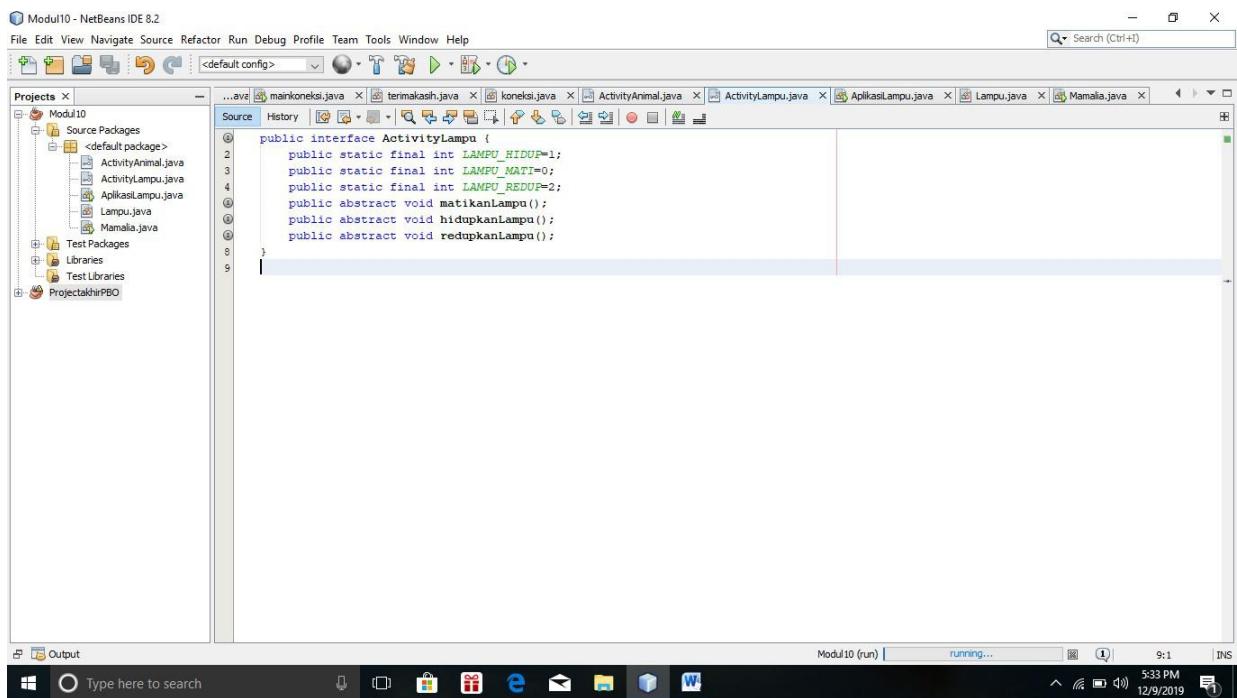
    @Override
    public void travel(){
        System.out.println("Mammal Travels ");
    }

    public int noOfLegs(){
        return 0;
    }

    public static void main(String[] args){
        Mamalia m = new Mamalia();
        m.eat();
        m.travel();
    }
}
```

The bottom "Output" panel shows the run results:

```
run:
Mammal eats
Mammal Travels
BUILD SUCCESSFUL (total time: 1 second)
```



Modul10 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects X ...ave mainkoneksi.java X terimakasih.java X koneksi.java X ActivityAnimal.java X ActivityLampu.java X AplikasiLampu.java X Lampu.java X Mamala.java X

Source History <default config> T G

```

8     }else if(statusLampu == 1){
9         statusLampu -= 1;
10        System.out.println("Lampu sudah dimatikan");
11    }
12}
13
14@Override
15public void hidupkanLampu(){
16    if(statusLampu == 1){
17        System.out.println("Lampu sudah dinyalakan\n***");
18    }else{
19        statusLampu += 1;
20        System.out.println("Lampu sudah dalam kondisi menyala");
21    }
22}
23
24public int setSaklar(int saklar){
25    return statusLampu = saklar;
26}
27
28@Override
29public void redupkanLampu(){
30    if(statusLampu == 2){
31        System.out.println("Lampu telah diredukan");
32    }else{
33        statusLampu +=1;
34        System.out.println("Keredupan Lampu telah ditambah");
35    }
36}
37}
38}
39

```

Output Modul10 (run) | running... 39:1 INS

Type here to search 5:35 PM 12/9/2019

Modul10 - NetBeans IDE 8.2

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

Search (Ctrl+F)

Projects X ...ave mainkoneksi.java X terimakasih.java X koneksi.java X ActivityAnimal.java X ActivityLampu.java X AplikasiLampu.java X Lampu.java X Mamala.java X

Source History <default config> T G

```

1 import java.util.Scanner;
2 public class AplikasiLampu {
3     public static void main(String[] args) {
4         Lampu lampu = new Lampu();
5         Scanner sc = new Scanner(System.in);
6         lampu.statusLampu = lampu.setSaklar(0);
7         System.out.println("Status Lampu = " + lampu.statusLampu +"\n Ketikkan");
8         System.out.println("1 Untuk menyalaikan Lampu\n0 Untuk mematikan Lampu\n2 Untuk meredupkan Lampu");
9
10        if(lampu.setSaklar(sc.nextInt()) == 0){
11            lampu.matiLampu();
12        }else if(lampu.statusLampu == 1){
13            lampu.hidupkanLampu();
14        }else{
15            lampu.redupkanLampu();
16        }
17    }
18}
19}
20

```

Output Modul10 (run) X Modul10 (run) #2 X

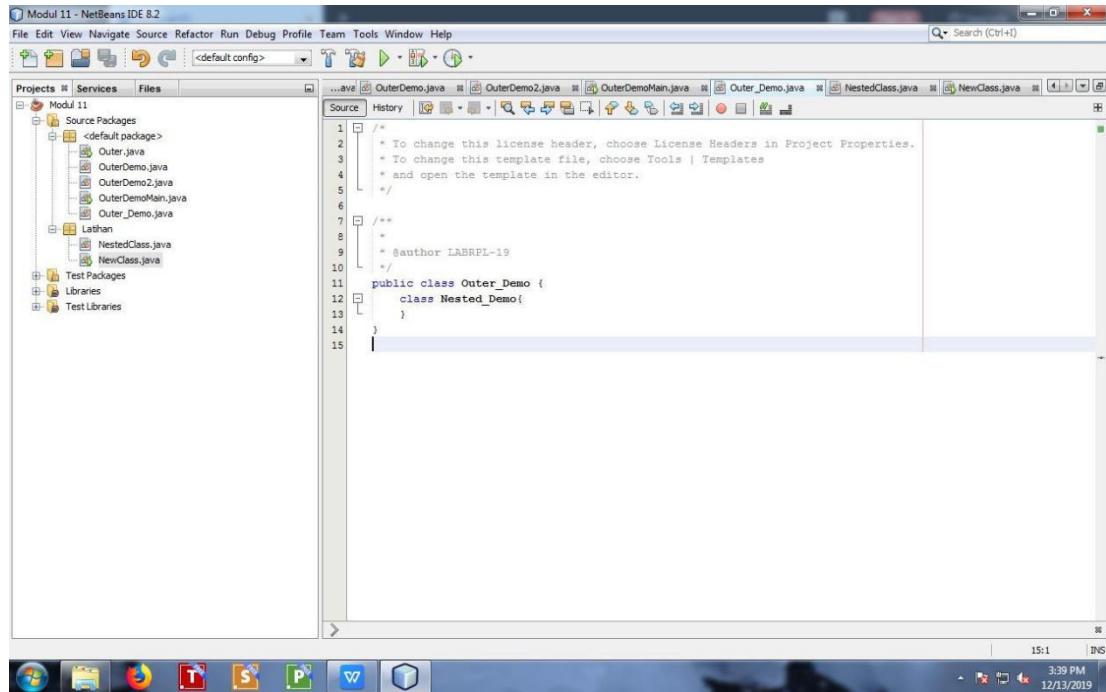
run:
Status Lampu = 0
Ketikkan
1 Untuk menyalaikan Lampu
0 Untuk mematikan Lampu
2 Untuk meredupkan Lampu

Modul10 (run) #2 | running... (1 more...) 20:1 INS

Type here to search 5:36 PM 12/9/2019

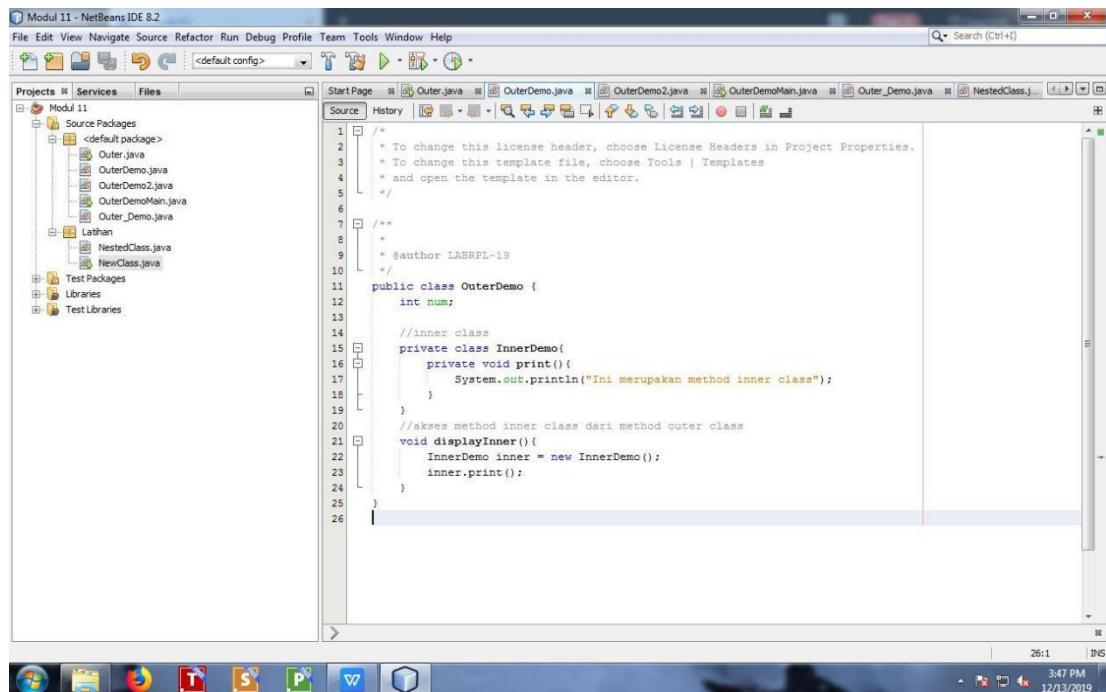
Modul 11

4.5 INNER CLASS



The screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The left pane displays the project structure for "Modul 11" under "Source Packages". The right pane shows the code editor for "Outer_Demo.java". The code defines a public class Outer_Demo with a nested class Nested_Demo.

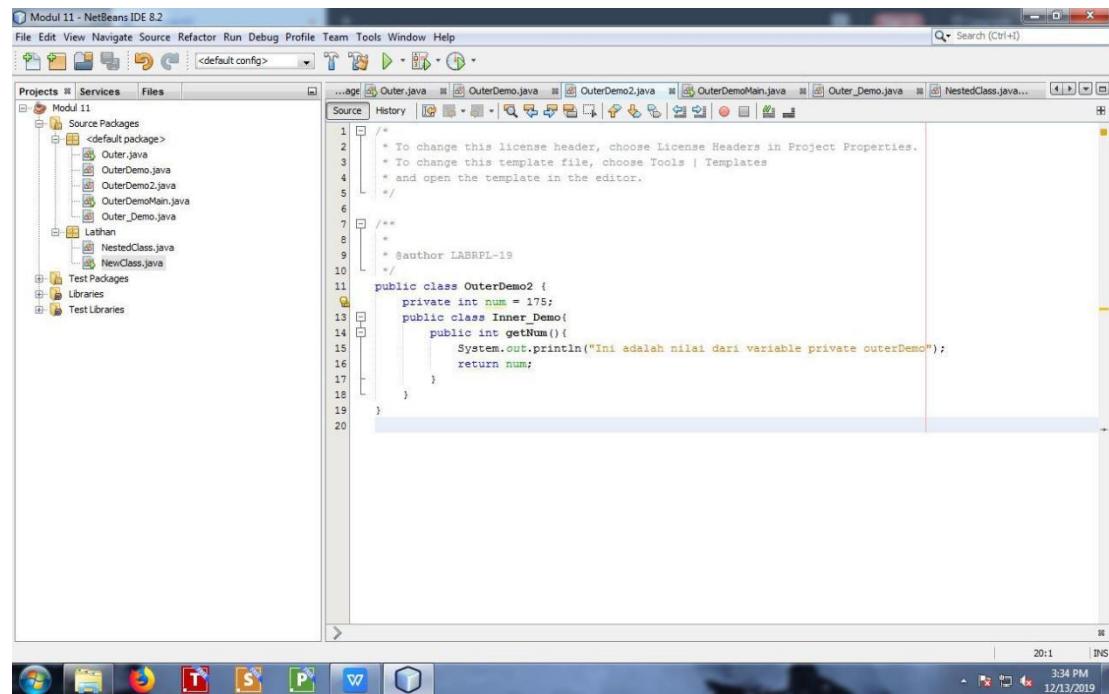
```
1  /*
2   * To change this license header, choose License Headers in Project Properties.
3   * To change this template file, choose Tools | Templates
4   * and open the template in the editor.
5   */
6
7 /**
8 *
9 * @author LABRPL-19
10 */
11 public class Outer_Demo {
12     class Nested_Demo{
13     }
14 }
15
```



The screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The left pane displays the project structure for "Modul 11" under "Source Packages". The right pane shows the code editor for "OuterDemo.java". The code defines a public class OuterDemo with a private inner class InnerDemo. It includes a print method in the inner class and a displayInner method in the outer class that creates an instance of the inner class and calls its print method.

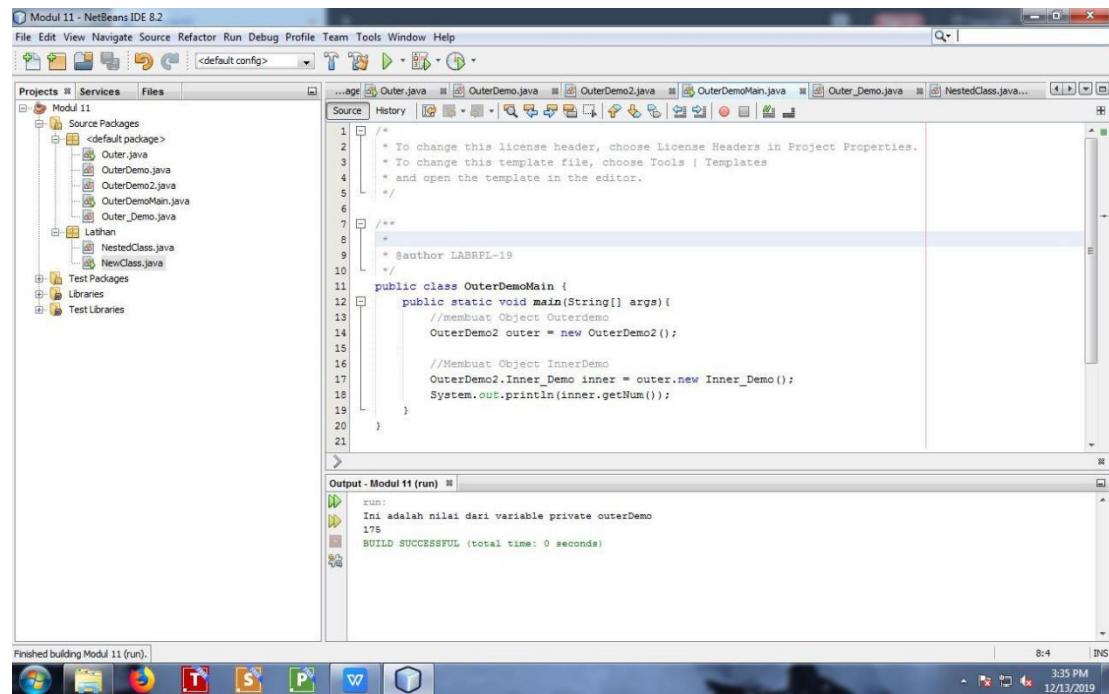
```
1 /**
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6
7 /**
8 *
9 * @author LABRPL-19
10 */
11 public class OuterDemo {
12     int num;
13
14     //inner class
15     private class InnerDemo{
16         private void print(){
17             System.out.println("Ini merupakan method inner class");
18         }
19     }
20     //akses method inner class dari method outer class
21     void displayInner(){
22         InnerDemo inner = new InnerDemo();
23         inner.print();
24     }
25 }
26
```

4.6 MENGAKSES PRIVATE MEMBER



The screenshot shows the NetBeans IDE interface with the title "Modul 11 - NetBeans IDE 8.2". The left pane displays the project structure under "Modul 11" with packages like "Source Packages" and "Lathan". The right pane shows the code editor for "OuterDemo2.java". The code defines a class "OuterDemo2" with a private integer variable "num" set to 175. It contains a nested class "Inner_Demo" with a public method "getNum" that prints the value of "num". The code is as follows:

```
/*
 * 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-19
 */
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 title "Modul 11 - NetBeans IDE 8.2". The left pane displays the project structure under "Modul 11" with packages like "Source Packages" and "Lathan". The right pane shows the code editor for "OuterDemoMain.java". The code defines a main method in "OuterDemoMain" that creates an instance of "OuterDemo2" and prints the value of its private variable "num". The code is as follows:

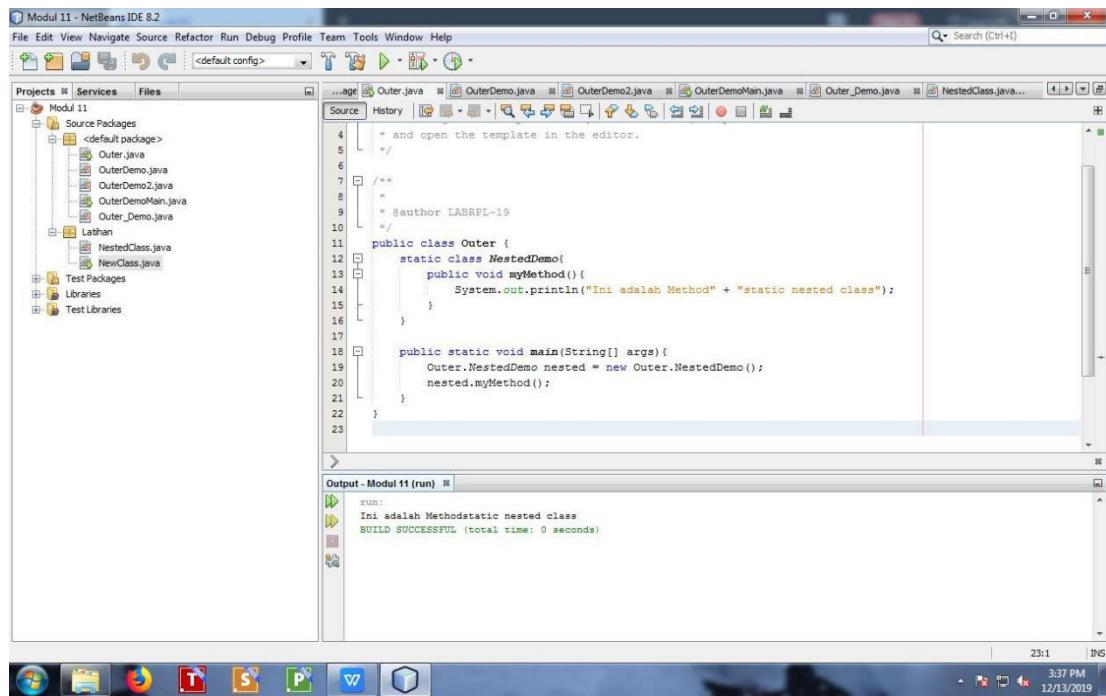
```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
/**
 * @author LABRPL-19
 */
public class OuterDemoMain {
    public static void main(String[] args){
        //Membuat Object Outerdemo
        OuterDemo2 outer = new OuterDemo2();

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

Below the code editor, the "Output" window shows the run results:

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

4.7 STATIC NESTED CLASS

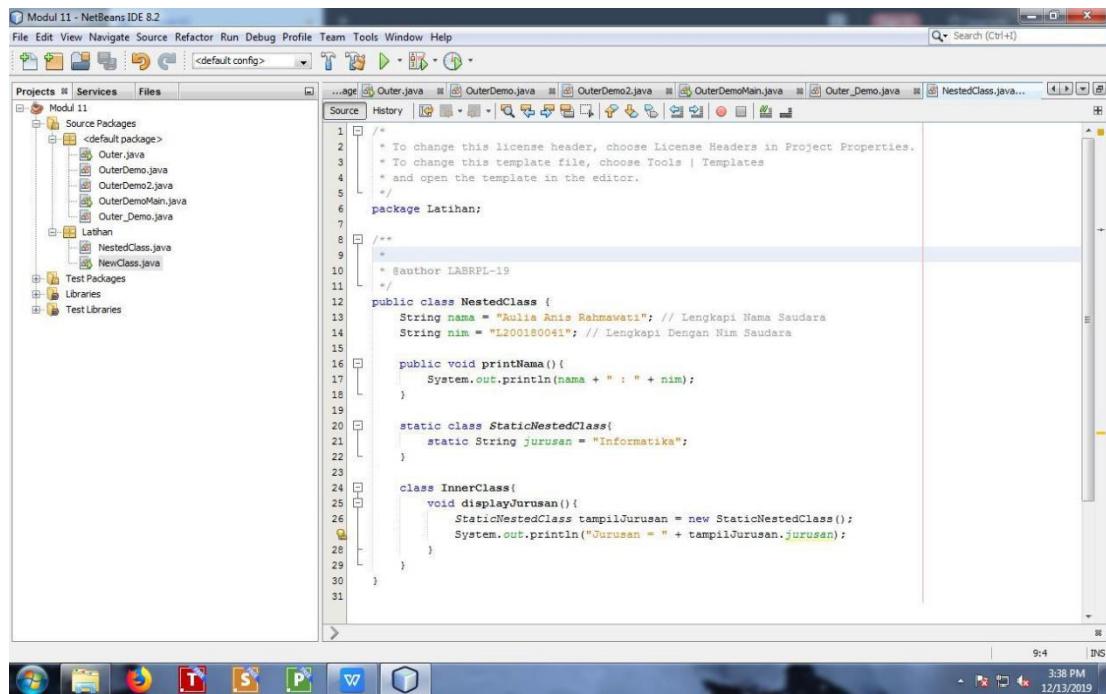


```
4
5     * and open the template in the editor.
6
7     /**
8      *
9      * @author LABRPL-19
10     */
11    public class Outer {
12        static class NestedDemo{
13            public void myMethod(){
14                System.out.println("Ini adalah Method static nested class");
15            }
16        }
17
18        public static void main(String[] args){
19            Outer.NestedDemo nested = new Outer.NestedDemo();
20            nested.myMethod();
21        }
22    }
23
```

Output - Modul 11 (run) :

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

4.8 LATIHAN



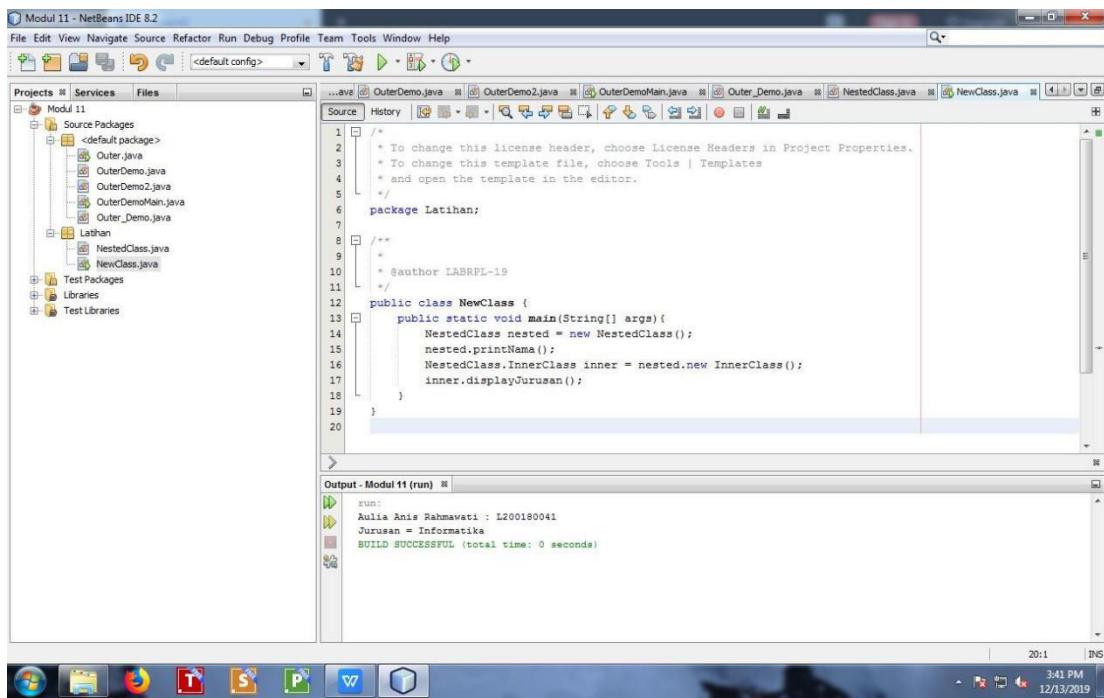
```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package Latihan;

/**
 *
 * @author LABRPL-19
 */
public class NestedClass {
    String nama = "Julia Anis Rahmawati"; // Lengkapi Nama Saudara
    String nim = "L200180041"; // Lengkapi Dengan Nim Saudara

    public void printNama(){
        System.out.println(nama + " : " + nim);
    }

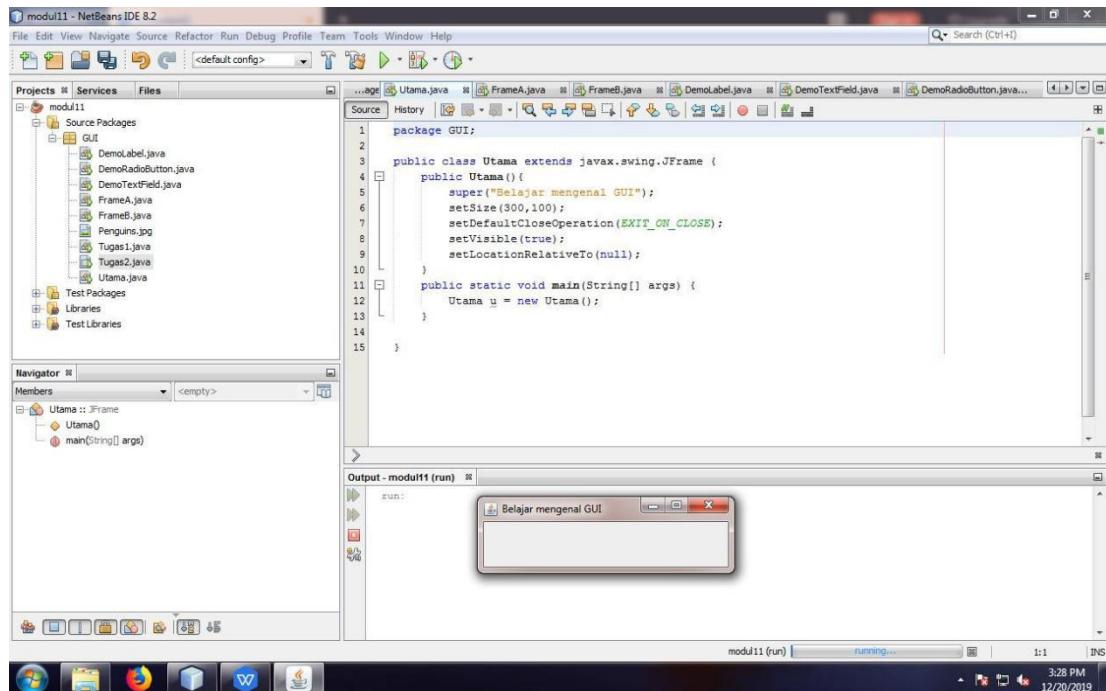
    static class StaticNestedClass{
        static String jurusan = "Informatika";
    }

    class InnerClass{
        void displayJurusan(){
            StaticNestedClass tampilJurusan = new StaticNestedClass();
            System.out.println("Jurusan = " + tampilJurusan.jurusan);
        }
    }
}
```

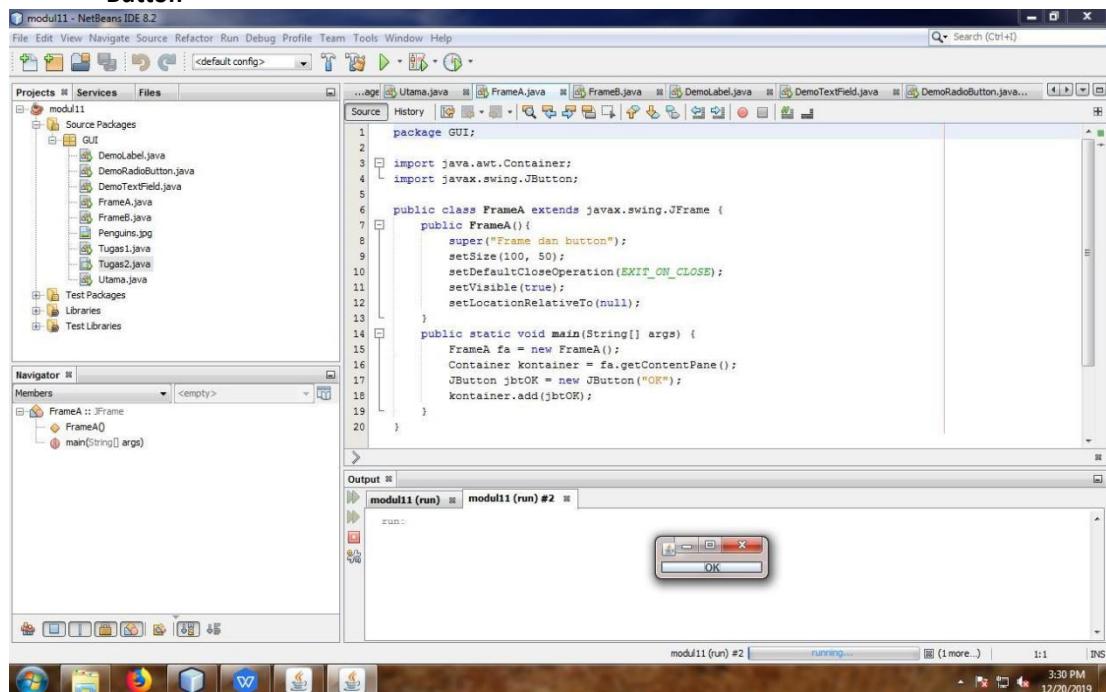


Modul 12

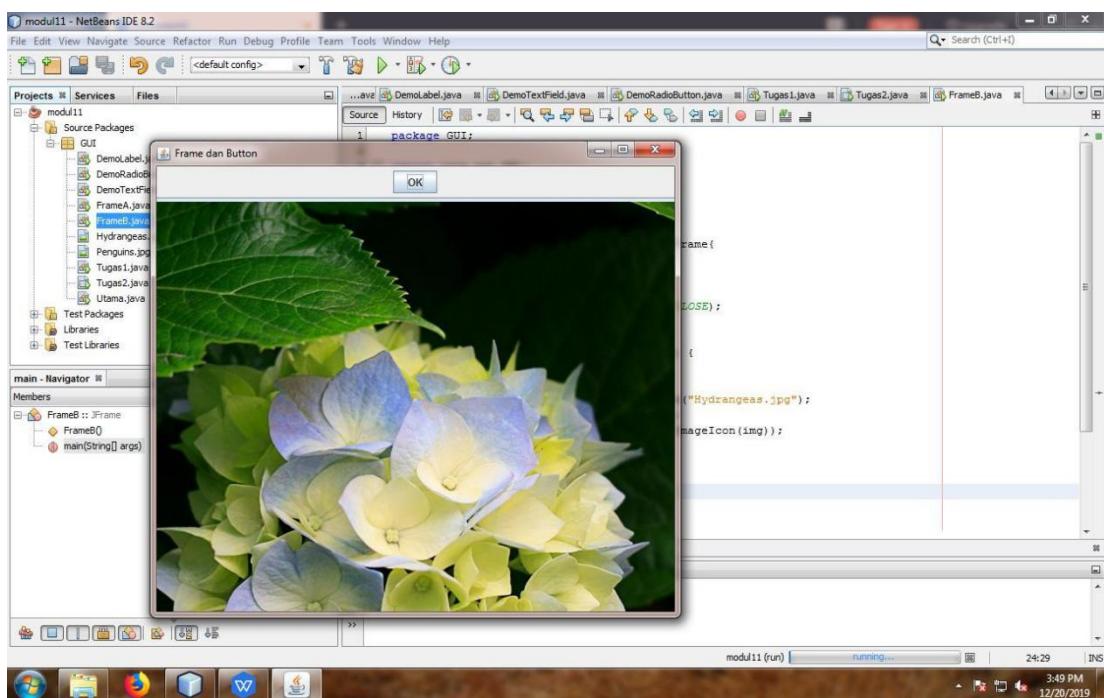
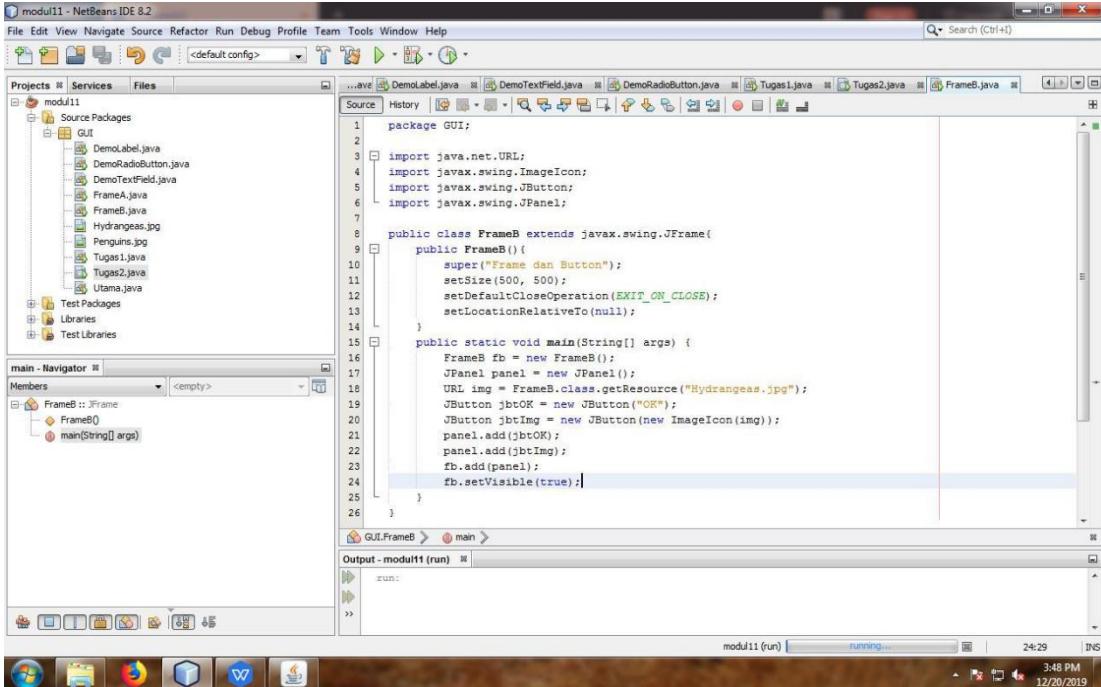
12.5.1 Frame



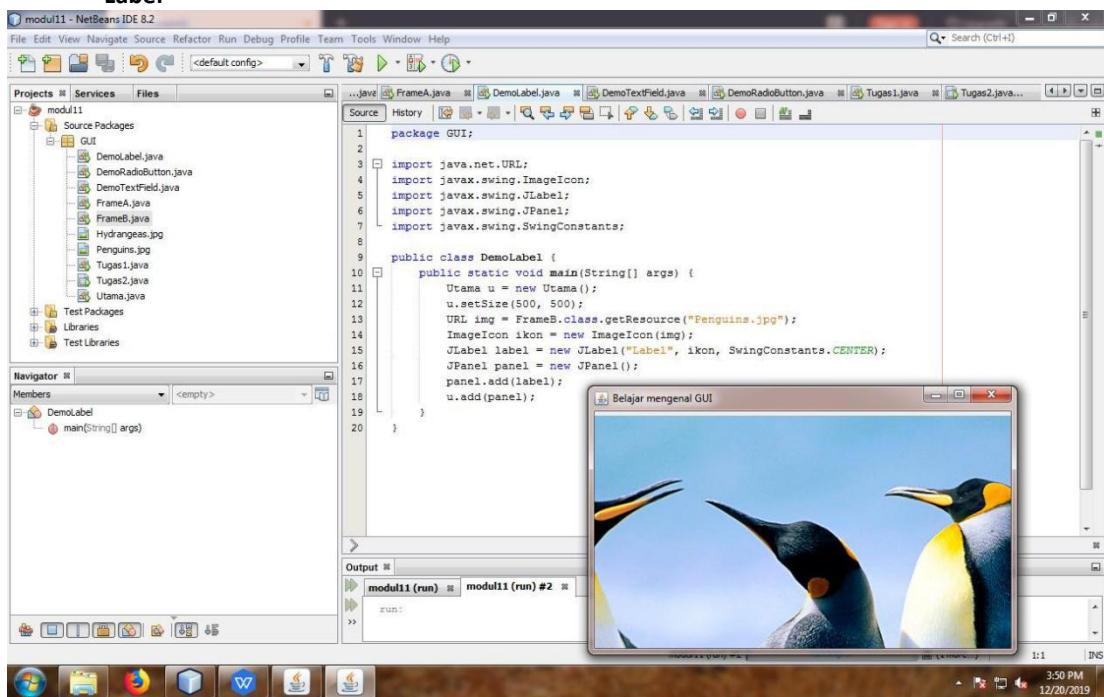
• Button



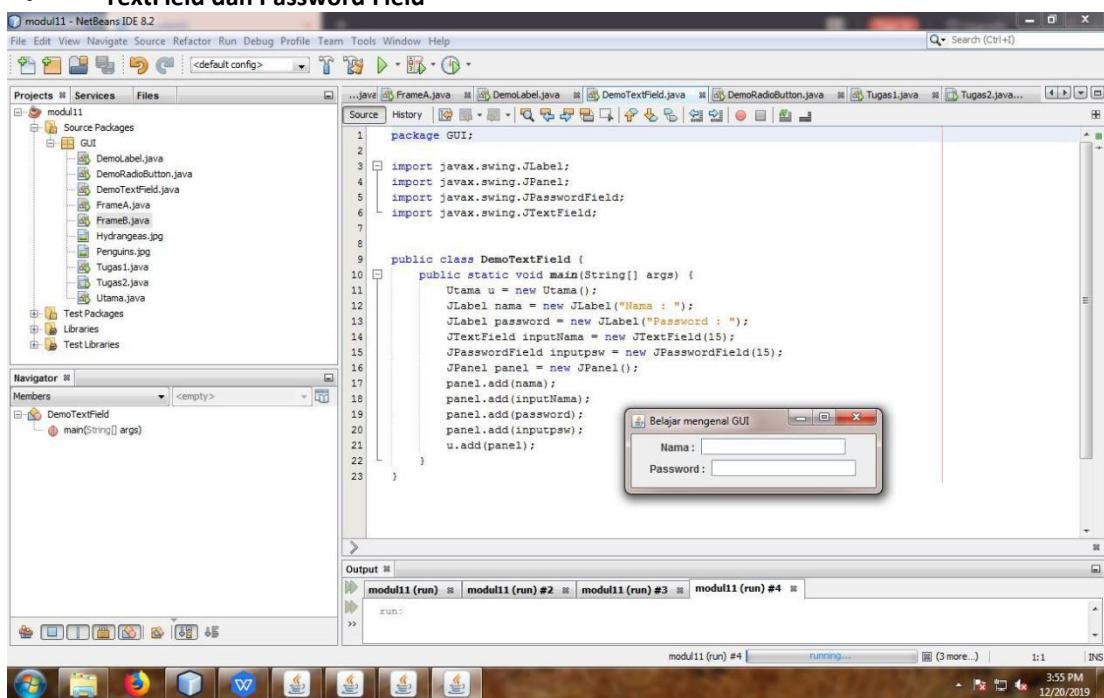
- Container



- **Label**



- **TextField dan Password Field**



• Radio Button dan CheckBox

modul11 - NetBeans IDE 8.2

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

Projects Services Files

modul11

- Source Packages
 - GUI
 - DemoLabel.java
 - DemoRadioButton.java
 - DemoTextField.java
 - FrameA.java
 - FrameB.java
 - Hydrangeas.jpg
 - Penguins.jpg
 - Tugas1.java
 - Tugas2.java
 - Utama.java
 - Test Packages
 - Libraries
 - Test Libraries

Navigator Members <empty>

DemoRadioButton main(String[] args)

```

1 package GUI;
2
3 import javax.swing.ButtonGroup;
4 import javax.swing.JLabel;
5 import javax.swing.JPanel;
6 import javax.swing.JRadioButton;
7
8 public class DemoRadioButton {
9     public static void main(String[] args) {
10         Utama u = new Utama();
11         u.setSize(1000, 100);
12
13         JRadioButton[] teams = new JRadioButton[5];
14         teams [0] = new JRadioButton("Sangat tidak setuju");
15         teams [1] = new JRadioButton("Tidak setuju");
16         teams [2] = new JRadioButton("Kurang setuju");
17         teams [3] = new JRadioButton("Setuju");
18         teams [4] = new JRadioButton("Sangat setuju");
19
20         JPanel panel = new JPanel();
21         JLabel Pertanyaan = new JLabel("Modul Praktikum Pemrograman Berorientasi Objek jelas dan mud");
22         panel.add(Pertanyaan);
23
24         ButtonGroup group = new ButtonGroup();
25         for(int i = 0; i<teams.length; i++){
26             group.add(teams[i]);
27             panel.add(teams[i]);
28         }
29
30         u.add(panel);
31         u.setVisible(true);
32     }
33 }
34 
```

Output modul11 (run) #4 running... (3 more...) 1:1 3:57 PM 12/20/2019

modul11 - NetBeans IDE 8.2

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

Projects Services Files

modul11

- Source Packages
 - GUI
 - DemoLabel.java
 - DemoRadioButton.java
 - DemoTextField.java
 - FrameA.java
 - FrameB.java
 - Hydrangeas.jpg
 - Penguins.jpg
 - Tugas1.java
 - Tugas2.java
 - Utama.java
 - Test Packages
 - Libraries
 - Test Libraries

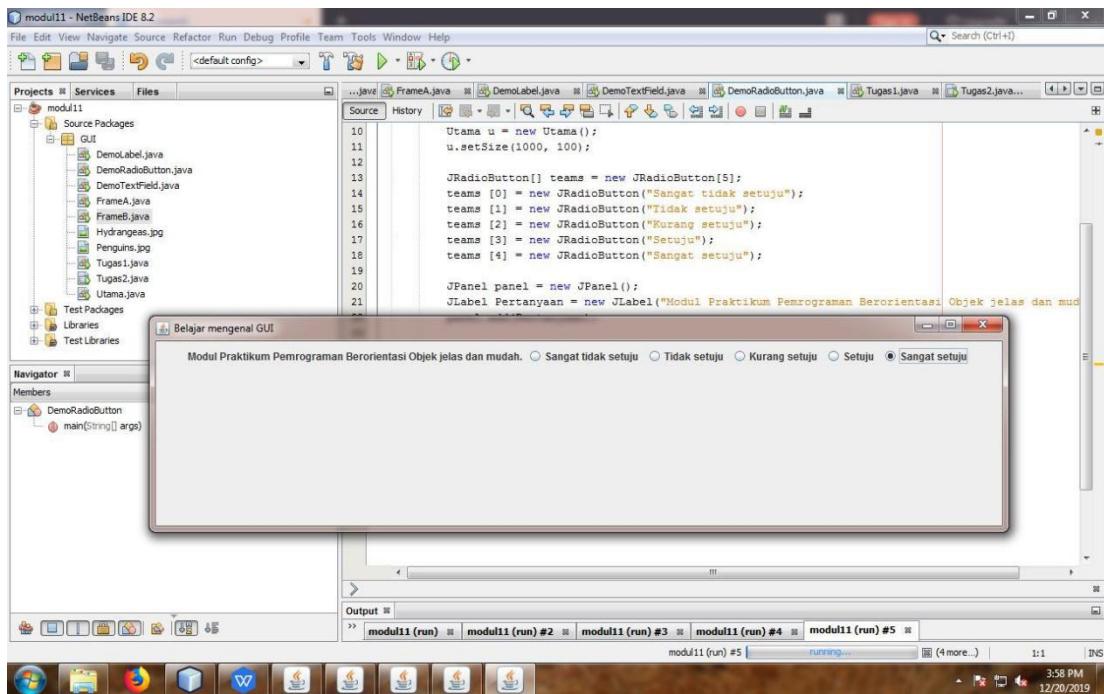
Navigator Members <empty>

DemoRadioButton main(String[] args)

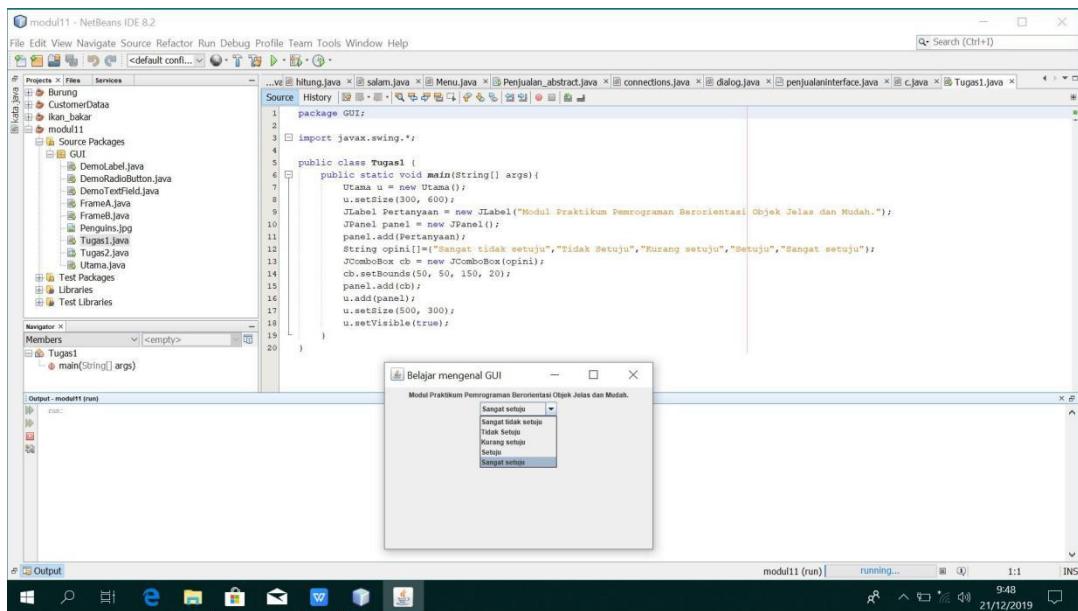
```

10 Utama u = new Utama();
11 u.setSize(1000, 100);
12
13 JRadioButton[] teams = new JRadioButton[5];
14 teams [0] = new JRadioButton("Sangat tidak setuju");
15 teams [1] = new JRadioButton("Tidak setuju");
16 teams [2] = new JRadioButton("Kurang setuju");
17 teams [3] = new JRadioButton("Setuju");
18 teams [4] = new JRadioButton("Sangat setuju");
19
20 JPanel panel = new JPanel();
21 JLabel Pertanyaan = new JLabel("Modul Praktikum Pemrograman Berorientasi Objek jelas dan mud");
22 panel.add(Pertanyaan);
23
24 ButtonGroup group = new ButtonGroup();
25 for(int i = 0; i<teams.length; i++){
26     group.add(teams[i]);
27     panel.add(teams[i]);
28 }
29
30 u.add(panel);
31 u.setVisible(true);
32
33 
```

Output modul11 (run) #4 running... (3 more...) 1:1 3:57 PM 12/20/2019



12.6. TUGAS



modul11 - NetBeans IDE 8.2

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

Projects > Files > Services

.../salam.java < Menu.java < Penjualan_abstract.java < connections.java < dialog.java < penjualaninterface.java < c.java < Tugas1.java < Tugas2.java

Source Design History < Search (Ctrl+F)

```
1 package GUI;
2
3 import java.awt.Color;
4
5 public class Tugas2 extends javax.swing.JFrame {
6
7     public Tugas2() {
8         initComponents();
9     }
10
11    /**
12     * This method is called from within the constructor to initialize the form.
13     * WARNING: Do NOT modify this code. The content of this method is always
14     * regenerated by the Form Editor.
15     */
16    @SuppressWarnings("unchecked")
17    // Generated Code
18
19    private void jMenuItem6ActionPerformed(java.awt.event.ActionEvent evt) {
20        // TODO add your handling code here:
21        jPanell.setBackground(Color.yellow);
22    }
23
24    private void jMenuItem7ActionPerformed(java.awt.event.ActionEvent evt) {
25        // TODO add your handling code here:
26        jPanell.setBackground(Color.green);
27    }
28
29    private void jMenuItem5ActionPerformed(java.awt.event.ActionEvent evt) {
30        // TODO add your handling code here:
31        jPanell.setBackground(Color.red);
32    }
33
34    /**
35     * @param args the command line arguments
36     */
37    public static void main(String args[]) {
38
39        /* Set the Nimbus look and feel */
40        /* Look and feel setting code (optional) */
41        //</editor-fold>
42
43        /* Create and display the form */
44        java.awt.EventQueue.invokeLater(new Runnable() {
45            public void run() {
46                new Tugas2().setVisible(true);
47            }
48        });
49
50        // Variables declaration - do not modify
51        private javax.swing.JPanel jPanell;
52        private javax.swing.JMenuBar jMenuBar1;
53        private javax.swing.JMenuItem jMenuItem5;
54        private javax.swing.JMenuItem jMenuItem6;
55        private javax.swing.JMenuItem jMenuItem7;
56        private javax.swing.JPanel jPanel1;
57    }
58}
```

modul11 (run) | running... | ① | 1:1 | INS

Output

21/12/2019 9:49

modul11 - NetBeans IDE 8.2

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

Projects > Files > Services

.../salam.java < Menu.java < Penjualan_abstract.java < connections.java < dialog.java < penjualaninterface.java < c.java < Tugas1.java < Tugas2.java

Source Design History < Search (Ctrl+F)

```
1 package GUI;
2
3 import java.awt.Color;
4
5 public class Tugas2 extends javax.swing.JFrame {
6
7     public Tugas2() {
8         initComponents();
9     }
10
11    /**
12     * This method is called from within the constructor to initialize the form.
13     * WARNING: Do NOT modify this code. The content of this method is always
14     * regenerated by the Form Editor.
15     */
16    @SuppressWarnings("unchecked")
17    // Generated Code
18
19    private void jMenuItem6ActionPerformed(java.awt.event.ActionEvent evt) {
20        // TODO add your handling code here:
21        jPanell.setBackground(Color.green);
22    }
23
24    private void jMenuItem7ActionPerformed(java.awt.event.ActionEvent evt) {
25        // TODO add your handling code here:
26        jPanell.setBackground(Color.red);
27    }
28
29    /**
30     * @param args the command line arguments
31     */
32    public static void main(String args[]) {
33
34        /* Set the Nimbus look and feel */
35        /* Look and feel setting code (optional) */
36        //</editor-fold>
37
38        /* Create and display the form */
39        java.awt.EventQueue.invokeLater(new Runnable() {
40            public void run() {
41                new Tugas2().setVisible(true);
42            }
43        });
44
45        // Variables declaration - do not modify
46        private javax.swing.JPanel jPanell;
47        private javax.swing.JMenuBar jMenuBar1;
48        private javax.swing.JMenuItem jMenuItem5;
49        private javax.swing.JMenuItem jMenuItem6;
50        private javax.swing.JMenuItem jMenuItem7;
51        private javax.swing.JPanel jPanel1;
52    }
53}
```

modul11 (run) | running... | ① | 1:1 | INS

Output

21/12/2019 9:50

