

Nama : W. Faisal Hari Dewanto
NIM : L200180046
Kelas : B

Laporan Praktikum PBO BAB 1 – 12

1. Laporan Modul 1

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.18362.535]
(c) 2019 Microsoft Corporation. All rights reserved.

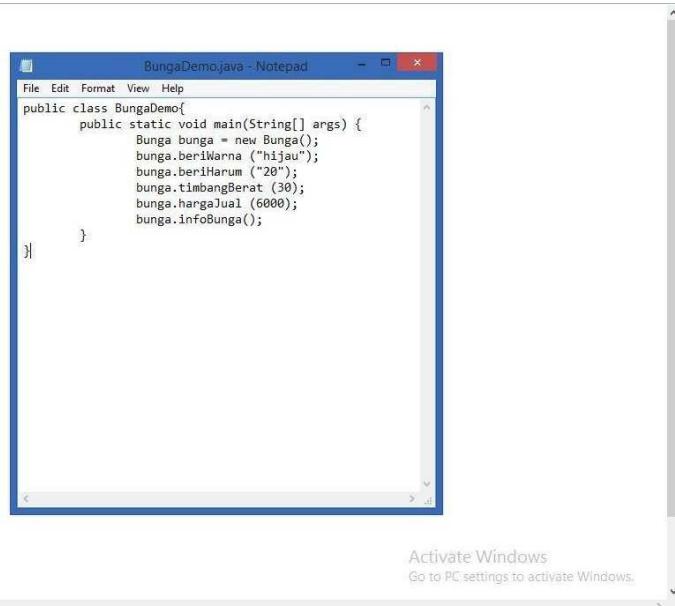
C:\Users\Ibra>java
Usage: java [-options] class [args...]
            (to execute a class)
        or  java [-options] -jar jarfile [args...]
            (to execute a jar file)
where options include:
    -d32          use a 32-bit data model if available
    -d64          use a 64-bit data model if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

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

    -D<name>=<value>
                  set a system property
    -verbose:[class|gc|jni]
                  enable verbose output
    -version      print product version and exit
    -version:<value>
                  Warning: this feature is deprecated and will be removed
                  in a future release.
                  require the specified version to run
    -showversion  print product version and continue
    -jre-restrict-search | -no-jre-restrict-search
                  Warning: this feature is deprecated and will be removed
                  in a future release.
                  include/exclude user private JREs in the version search
    -? -help       print this help message
    -X           print help on non-standard options
    -ea[:<packagename>...|:<classname>]
    -enableassertions[:<packagename>...|:<classname>]
                  enable assertions with specified granularity
    -da[:<packagename>...|:<classname>]
    -disableassertions[:<packagename>...|:<classname>]
                  disable assertions with specified granularity
    -esa | -enablesystemassertions
                  enable system assertions
    -dsa | -disablesystemassertions
                  disable system assertions
    -agentlib:<libname>[=<options>]
                  load native agent library <libname>, e.g. -agentlib:hprof
                  see also, -agentlib:jdwp=help and -agentlib:hprof=help
    -agentpath:<pathname>[=<options>]
                  load native agent library by full pathname
    -javaagent:<jarpath>[=<options>]
                  load Java programming language agent, see java.lang.instrument
    -splash:<imagepath>
                  show splash screen with specified image
See http://www.oracle.com/technetwork/java/javase/documentation/index.html for more details.

C:\Users\Ibra>
```

2. Laporan Modul 2



```
public class Bunga {
    String warna;
    String harum;
    int berat;
    double harga;

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

    void beriHarum (String harumBunga) {
        harum = harumBunga;
    }

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

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

    void infoBunga() {
        System.out.println(
            "warna : "+ warna + "\n" +
            "harum Bunga : " + harum + "\n" +
            "berat Bunga: "+ berat + "\n" + "gr" +
            "harga Bunga : Rp. " + harga );
    }
}

public static void main(String[] args) {
    Bunga bunga = new Bunga();
    bunga.beriWarna ("hijau");
    bunga.beriHarum ("20");
    bunga.timbangBerat (30);
    bunga.hargaJual (6000);
    bunga.infoBunga();
}
```

```
C:\Users\ASUS_White\Downloads>dir
Volume in drive C has no label.
Volume Serial Number is B03B-D6E4

Directory of C:\Users\ASUS_White\Downloads

23/09/2019  10:10    <DIR>          .
23/09/2019  10:10    <DIR>          ..
23/09/2019  09:52           1.133 Bunga.class
23/09/2019  10:06           787 Bunga.java
20/09/2019  15:27           519 BungaDemo.class
23/09/2019  09:59           237 BungaDemo.java
22/09/2019  11:21    <DIR>          Compressed
27/05/2019  08:21    <DIR>          Documents
11/09/2019  18:29    <DIR>          Music
14/09/2019  07:04           2.625.171.456 OpenMandrivaLx.4.0-plasma.x86_64.iso
20/09/2019  16:22           419 Program.class
13/09/2019  20:29           108 Program.java
14/09/2019  05:48    <DIR>          Programs
23/09/2019  10:05           1.343 Roti.class
19/09/2019  06:10           713 Roti.java
06/01/2017  15:04           83.291 ServiceLogin.htm
21/09/2019  09:01    <DIR>          Video
02/12/2016  16:08           51.841.223 videoplayback_4
                           11 File(s)  2.677.101.229 bytes
                           7 Dir(s)   8.379.207.680 bytes free

C:\Users\ASUS_White\Downloads>javac -version
javac 1.8.0_111

C:\Users\ASUS_White\Downloads>javac RotiDemo.java
javac: file not found: RotiDemo.java
Usage: javac <options> <source files>
use -help for a list of possible options

C:\Users\ASUS_White\Downloads>javac BungaDemo.java

C:\Users\ASUS_White\Downloads>java BungaDemo
Jumlah : hijau
Harganya Bunga : 20
Berat Bunga: 30
Harga Bunga : Rp. 6000.0

C:\Users\ASUS_White\Downloads>
```

3. Modul 3

- Penerapan variable local

```
modul3 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Files Services <default config>
Source History ...
...java CarDemo.java Car.java ATM.java Roti.java RotiDemo.java Modul3.java localvariable.java
modul3 JavaApplication1 JavaApplication1 JavaApplication1.java
modul3 Source Packages modul3 LocalVariable.java
modul3 Test Packages
modul3 Libraries
Praktikum PBO kelas C Test Libraries
Praktikum PBO kelas C Source Packages
<empty>
modul3 - Navigator >
Members LocalVariable
  hitungUsia()
  main(String[] args)
modul3 - Output (run) >
Output - modul3 (run) x
run:
Usia saya : 20
BUILD SUCCESSFUL (total time: 0 seconds)
21:06 INS
```

- Latihan 1

```
LocalVariable - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Files Services <default config> ...
Source History ...
...java LocalVariable.java StaticVariable.java InstanceVariable.java StaticVariableAccess.java NonVoidMethod.java VoidMethod.java Lati...
modul3 JavaApplication1 JavaApplication1 JavaApplication1.java
modul3 LocalVariable
modul3 Source Packages
  LocalVariable.java
  MethodParameter.java
  Nilai.java
  NonVoidMethod.java
  StaticVariable.java
  StaticVariableAccess.java
  VoidMethod.java
modul3 Test Packages
modul3 Libraries
berlatihan - Navigator >
Members LocalVariable
  beratBadan()
  hitungUsia()
  main(String[] args)
LocalVariable > beratBadan()
Notifications Output - LocalVariable (run) x
Output - LocalVariable (run) x
run:
Exception in thread "main" java.lang.RuntimeException: Uncompilable source code - cannot find symbol
  symbol  : Variable usia
  location: Class LocalVariable
    at LocalVariable.beratBadan(LocalVariable.java:27)
    at LocalVariable.main(LocalVariable.java:32)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
    at java.lang.reflect.Method.invoke(Method.java:492)
    at com.intellij.rt.execution.junit.JUnitStarter.main(JUnitStarter.java:63)
BUILD FAILED (total time: 0 seconds)
21:31 INS
```

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

• Instance Variable

The screenshot shows the NetBeans IDE interface with the title "modul3 - NetBeans IDE 8.2". The left pane displays the project structure under "Projects". The main pane shows the code for "LocalVariable.java". The code defines a class "LocalVariable" with instance variables "umur" and "usia", and methods "hitungUsia()", "beratBadan()", and a static main method. The output window shows the execution results: "Usia saya : 20" and "Berat badan saya : 3".

```

public class LocalVariable {
    int umur = 0;
    public void hitungUsia() {
        int usia = 0;
        int tahunSekarang = 2019;
        int tahunLahir = 1999;

        usia = tahunSekarang - tahunLahir;

        System.out.println("Usia saya : " + usia);
    }
    public void beratBadan() {
        int berat = 0;
        int beratBadan = 42;
        int beratLahir = 3;

        berat = beratLahir + (umur/2);

        System.out.println("Berat badan saya :" + berat);
    }
    public static void main(String[] args) {
        LocalVariable usia = new LocalVariable();
        usia.hitungUsia();
        usia.beratBadan();
    }
}

```

• Static Variable

The screenshot shows the NetBeans IDE interface with the title "LocalVariable - NetBeans IDE 8.2". The left pane displays the project structure under "Projects". The main pane shows the code for "StaticVariable.java". The code defines a class "StaticVariable" with static variables "akredитasi" and "jurusan", and two static methods "firstMethod()" and "secondMethod()". The output window shows the execution results: "Akredитasi : " + akredитasi and "Jurusan : " + jurusan.

```

/*
 * 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 LocalVariable;
public class StaticVariable {
    public static char akredитasi;
    public static final String jurusan = "Informatika";
    void firstMethod() {
        System.out.println(jurusan);
    }
    void secondMethod() {
        System.out.println("Akredитasi : " + akredитasi);
    }
}

```

LocalVariable - NetBeans IDE 8.2

```

/*
 * Author: asus
 */
public class StaticVariable{
    public static char akreditasii;
    public static final String jurusan = "Informatika";
}

void firstMethod(){
    System.out.println(jurusan);
}

void secondMethod() {
    System.out.println("Akreditasii : " + akreditasii);
}

public static void main(String[] args) {
    StaticVariable.akreditasii = 'B';
    StaticVariable billy = new StaticVariable();
    billy.firstMethod();
    billy.secondMethod();
}

```

Notifications Output - LocalVariable (run) x

```

Info: 
Info: Informatika
Info: Akreditasii : B
BUILD SUCCESSFUL (total time: 0 seconds)

```

• Method Non Void

LocalVariable - NetBeans IDE 8.2

```

String nim = "L200180034";
public String getNama() {
    return nama;
}

public String getNTM() {
    return nim;
}

public void tampil() {
    System.out.println(nama);
    System.out.println(nim);
}

public static void main(String[] args) {
    NonVoidMethod aku = new NonVoidMethod();
    aku.tampil();
}

```

Notifications Output - LocalVariable (run) x

```

Info: 
Info: Aliyan Sovera
Info: L200180034
BUILD SUCCESSFUL (total time: 0 seconds)

```

• Parameter Method

LocalVariable - NetBeans IDE 8.2

```

/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package LocalVariable;
public class MethodParameter {
    String nama;
    public String setName (String nama) {
        return this.nama = nama;
    }
    public static void main(String[] args) {
        MethodParameter mp = new MethodParameter();
        mp.setName("Gewen");
        System.out.println(mp.name);
    }
}

```

MethodParameter > @ main

Notifications Output - LocalVariable (run) x

run

Output - LocalVariable (run)

BUILD SUCCESSFUL (total time: 0 seconds)

20:35 INS

LocalVariable - NetBeans IDE 8.2

```

public class Lathan3 {
    String nama;
    int nip;
    double gaji;
    public String SetName(String nama) {
        return this.nama = nama;
    }
    public int setNip(int nip) {
        return this.nip = nip;
    }
    public double setGaji(double gaji) {
        return this.gaji = gaji;
    }
    public void infoPegawai() {
        System.out.println(
            "Nama: " + nama + "\n" +
            "NIP: " + nip + "\n" +
            "Gaji: " + gaji + "\n");
    }
}

```

Lathan3 > @ infoPegawai

Notifications Output - LocalVariable (run) x

run

Output - LocalVariable (run)

Name: Syah
NIP: 1999
Gaji: 5.0

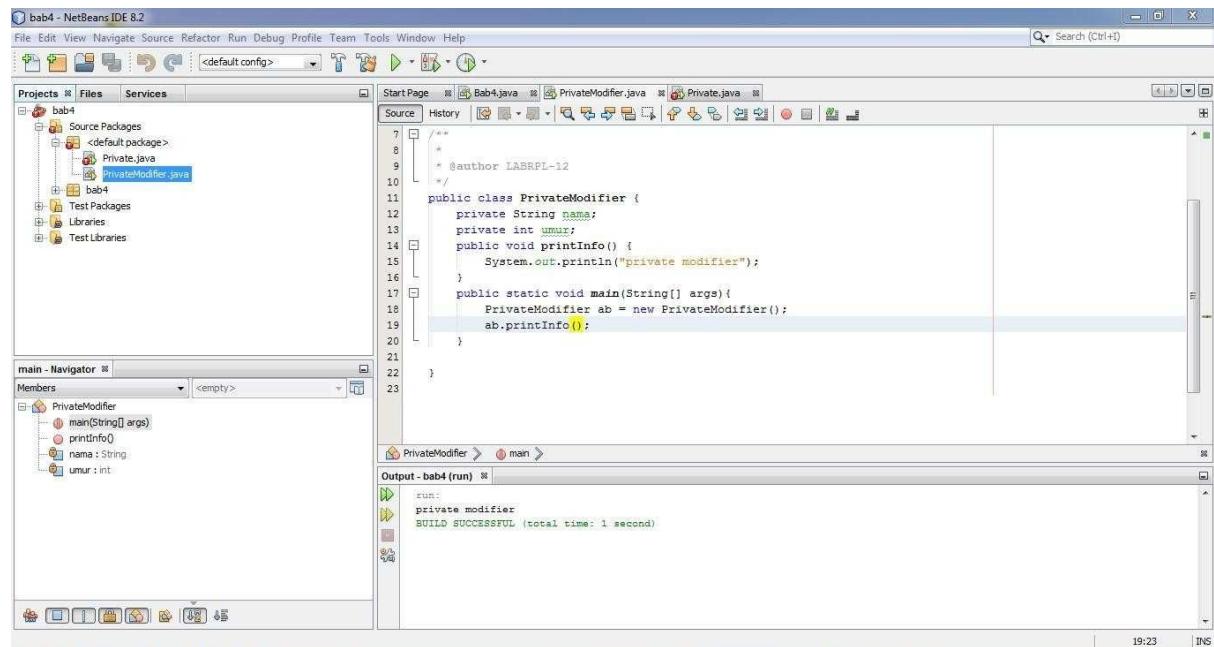
Name: Gue
NIP: 0
Gaji: 2.5

Name: Gow
NIP: 2046
Gaji: 4.5

26:32 INS

4. Modul 4

• Private Modifier

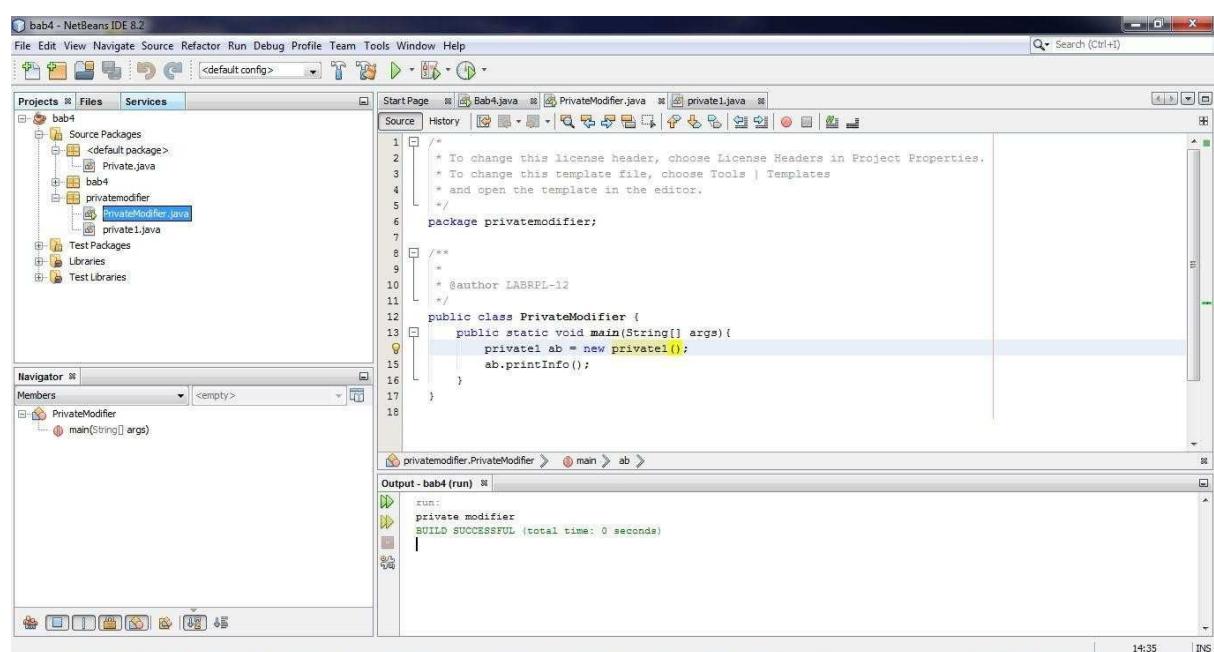


The screenshot shows the NetBeans IDE 8.2 interface. The Projects panel on the left contains a project named 'bab4' with files 'Private.java' and 'PrivateModifier.java'. The Source editor on the right displays the code for 'PrivateModifier.java':

```
7  /*
8  * @author LABRPL-12
9  */
10 public class PrivateModifier {
11     private String name;
12     private int umur;
13     public void printInfo() {
14         System.out.println("private modifier");
15     }
16     public static void main(String[] args) {
17         PrivateModifier ab = new PrivateModifier();
18         ab.printInfo();
19     }
20 }
21
22
23
```

The Navigator panel below shows members of the 'PrivateModifier' class: 'main(String[] args)', 'printInfo()', 'nama : String', and 'umur : int'. The Output panel at the bottom shows the run results:

```
run:
private modifier
BUILD SUCCESSFUL (total time: 1 second)
```



The screenshot shows the NetBeans IDE 8.2 interface. The Projects panel on the left contains a project named 'bab4' with files 'Private.java', 'PrivateModifier.java', and 'privatemodifier.java'. The Source editor on the right displays the code for 'privatemodifier.java':

```
1  /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6  package privatemodifier;
7
8  /**
9  * @author LABRPL-12
10 */
11
12 public class PrivateModifier {
13     public static void main(String[] args) {
14         private1 ab = new private1();
15         ab.printInfo();
16     }
17 }
18
```

The Navigator panel below shows members of the 'privatemodifier.PrivateModifier' class: 'main(String[] args)'. The Output panel at the bottom shows the run results:

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

- Default Modifier

The screenshot shows the JavaApplication1 project in NetBeans IDE 8.2. The code editor displays a Java class named `defaultmodifier` with a `jumlah` method. The output window shows a successful build with a total time of 0 seconds.

```
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 Bab4;
7
8  /**
9  *
10 * @author asus
11 */
12 public class defaultmodifier {
13     int a = 1;
14     int b = 2;
15     int c;
16     void jumlah() {
17         c = a + b;
18         System.out.println(c);
19     }
20 }
```

Output - JavaApplication1 (run) >

```
3
BUILD SUCCESSFUL (total time: 0 seconds)
```

Akses dalam 1 package

The screenshot shows the JavaApplication1 project in NetBeans IDE 8.2. The code editor displays 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 Bab4;  
7  
8 /**  
9 *  
10 * @author asus  
11 */  
12 public class classlain2 {  
13     public static void main(String[] args) {  
14         defaultmodifier fg = new defaultmodifier();  
15         fg.jumlah();  
16     }  
17 }  
18
```

The Navigator pane shows the members of the `defaultmodifier` class, which include `jumlah()`, `a : int`, `b : int`, and `c : int`. The Output pane shows a successful build:

```
3  
BUILD SUCCESSFUL (total time: 0 seconds)
```

Tidak bias diakses karena method tersebut terdapat dalam package yang berbeda

```

JavaApplication1 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services <default config...> Search (Ctrl+I)
Source History & Palettes
JavaApplication1
  Source Packages
    Bab4
      Public.java
      PublicDemo.java
      classlain2.java
      defaultmodifier.java
    Javaapplication1
      JavaApplication1.java
      classlain.java
  Test Packages
  Libraries
  Test Utilities
  LocalVariable
  Projek
  Tiketkonser
  Navigator <empty>
  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 javaapplication1;
7
8 import Bab4.defaultmodifier;
9
10 /**
11  *
12  * @author asus
13  */
14 public class classlain {
15     public static void main(String[] args) {
16         defaultmodifier fg = new defaultmodifier();
17         fg.jumlah();
18     }
19 }

```

```

javaapplication1.classlain > main
Notifications Output - JavaApplication1 (run)
num:
D Exception in thread "main" java.lang.RuntimeException: Uncompilable source code - jumblah() is not public in Bab4.defaultmodifier; cannot be accessed from outside package
at javaapplication1.classlain.main(classlain.java:17)
C:\Users\asus\appdata\local\temp\javaw\1.8.0_131\executables\run.xml:39: Java returned: 1
BUILD FAILED (total time: 0 seconds)

```

Build of JavaApplication1 (run) failed.

● Protected Modifier

```

JavaApplication1 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services <default config...> Search (Ctrl+I)
Source History & Palettes
JavaApplication1
  Source Packages
    Bab4
      Public.java
      PublicDemo.java
      classlain2.java
      classlain3.java
      defaultmodifier.java
      protectedmodifier.java
    Javaapplication1
      JavaApplication1.java
      classlain.java
  Test Packages
  Libraries
  Test Utilities
  LocalVariable
  Projek
  Tiketkonser
  Navigator <empty>
  Members
    protectedmodifier
      printinfo()
      sendmessage()
  
```

```

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 Bab4;
7
8 /**
9  *
10  * @author asus
11  */
12 public class protectedmodifier {
13     protected void printinfo(){
14         System.out.println("protected modifier");
15     }
16     protected void sendmessage(){
17         System.out.println("this a is message");
18     }
19 }

```

```

Bab4.protectedmodifier > printinfo
Notifications Output - JavaApplication1 (run)
num:
D protected modifier
this a is message
BUILD SUCCESSFUL (total time: 0 seconds)

```

Build of JavaApplication1 (run) successful.

Bisa diakses dalam 1 package yang sama

```

JavaApplication1 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Files Services <default config...> Search (Ctrl+F)
JavaApplication1
  Source Packages
    Bab4
      Public.java
      PublicDemo.java
      classlain2.java
      classlain3.java
      defaultmodifier.java
      protectedmodifier.java
    Javaapplication1
      JavaApplication1.java
      classlain.java
  Test Packages
  Libraries
  Test Libraries
  LocalVariable
  Projek
  Tiketkonser
  Projek
  Members <empty>
  classlain3
    main(String[] args)
  Bab4.classlain3 > main
  Notifications Output - JavaApplication1 (run) -
  run:
  protected modifier
  this is message
  BUILD SUCCESSFUL (total time: 0 seconds)

```

• Public Modifier

```

JavaApplication1 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Files Services <default config...> Search (Ctrl+F)
JavaApplication1
  Source Packages
    Bab4
      Public.java
      PublicDemo.java
      classlain2.java
      classlain3.java
      classlain4.java
      defaultmodifier.java
      protectedmodifier.java
      publicclass.java
    Javaapplication1
      JavaApplication1.java
      classlain.java
  Test Packages
  Libraries
  Test Libraries
  LocalVariable
  Projek
  Members <empty>
  publicclass
    Public
      kali()
        a : int
        b : int
        c : int
  Bab4.publicclass >
  Notifications Output - JavaApplication1 (run) -
  run:
  Hasil kali = 90
  Hasil bagi = 3
  Hasil tambah = 7
  Hasil kurang = -3
  Hasil rata-rata = 10
  BUILD SUCCESSFUL (total time: 0 seconds)

```

Bisa diakses dalam 1 package yang sama

```

JavaApplication1 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History <default config... > Search (Ctrl+I)
Projects Files Services ..\v6 Public.java defaultmodifier.java dclassain2.java classain.java protectedmodifier.java dclassain3.java publicclass.java dclassain4.java
Bab4
  - Source Packages
    - Public.java
    - PublicDemo.java
    - classain2.java
    - classain3.java
    - classain4.java
    - defaultmodifier.java
    - protectedmodifier.java
    - publicclass.java
  - javaapplication1
    - JavaApplication1.java
    - classain.java
  - Test Packages
  - Libraries
  - Test Libraries
  - LocalVariable
  - Projek
main - Navigator <empty>
Members <empty>
dclassain4
  - main(String[] args)

```

```

public class classain4 {
    public static void main(String[] args) {
        Public Kali = new Public();
        Kali.kali();
    }
}

```

```

Notifications Output - JavaApplication1 (run)
Kali.kali = 90
BUILD SUCCESSFUL total time: 0 seconds

```

Tidak bias diakses dari package lain

```

LocalVariable - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History <default config... > Search (Ctrl+I)
Projects Files Services ..\v6 dclassain2.java classain.java protectedmodifier.java dclassain3.java publicclass.java dclassain4.java class5.java dclassain5.java
protectedmodifier.java
  - publicclass.java
  - Javaapplication1
  - Test Packages
  - Libraries
  - Test Libraries
  - LocalVariable
  - Source Packages
    - <default package>
      - InstanceVariable.java
      - Lathian3.java
      - LocalVariable.java
      - MethodParameter.java
      - Nilai.java
      - NonVoidMethod.java
      - StaticVariable.java
      - StaticVariableAccess.java
      - VoidMethod.java
      - dclassain5.java
dclassain5
  - main(String[] args)

```

```

public class classain5 {
    public static void main(String[] args) {
        Public Kali = new Public();
        Kali.kali();
    }
}

```

```

Notifications Output - LocalVariable (run)
run
Exception in thread "main" java.lang.RuntimeException: Uncompilable source code - cannot find symbol
  symbol:   class Public
  location: class classain5
    at classain5.main(classain5.java:12)
C:\Users\asus\AppData\Local\NetBeans\Cache\15.6\executor-snippets\run.xml:59: Java returned: 1
BUILD FAILED (total time: 0 seconds)

```

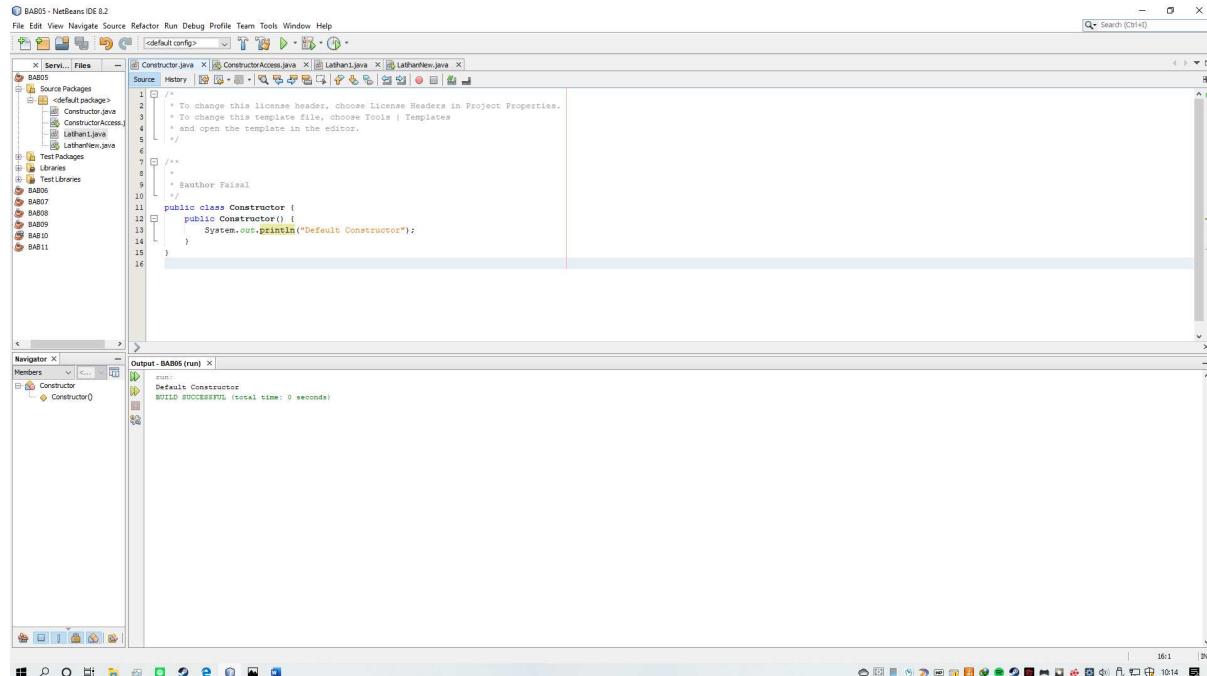
- Latihan

```
JavaApplication1 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
<default config>
Projects Services <default config>
JavaApplication1 PublicDemo.java Public.java defaultmodifier.java classain2.java classain.java protectedmodifier.java classain3.java publicclass.java classain4.java
  Source Packages
    Bab4
      Public.java
      PublicDemo.java
      classain2.java
      classain3.java
      classain4.java
      defaultmodifier.java
      protectedmodifier.java
      publicclass.java
  JavaApplication1 JavaApplication1.java classain.java
  Test Packages
  Libraries
  Test Libraries
  LocalVariable
  Projek

Source History
<empty>
Members
  Public
    bagi()
    kali()
    kurang()
    rata()
    tambah()
    a: int
    b: int
    c: int
Bab4.Bab4
  package Bab4;
  ...
  /**
   * 
   * @author asus
   */
  public class Bab4 {
    public int a = 2;
    public int b = 5;
    public int c = 9;
    public void kali() {
      int d = a*b;
      System.out.println("Hasil kali = "+d);
    }
    public void bagi() {
      int e = a/b;
      System.out.println("Hasil bagi = "+e);
    }
    public void tambah() {
      int f = a+b;
      System.out.println("Hasil tambah = "+f);
    }
    public void kurang() {
      int g = a-b;
      System.out.println("Hasil kurang = "+g);
    }
    public void rata() {
      int h = a+b/2;
      System.out.println("Hasil rata-rata = "+h);
    }
  }
  Bab4.Bab4
  Notifications Output - JavaApplication1 (run) x
  Hasil kali = 10
  Hasil bagi = 2
  Hasil tambah = 7
  Hasil kurang = 4
  Hasil rata = 4.5
  BUILD SUCCESSFUL (total time: 0 seconds)
  13:22 IN5
```

5. Modul 5

- Default Constructor



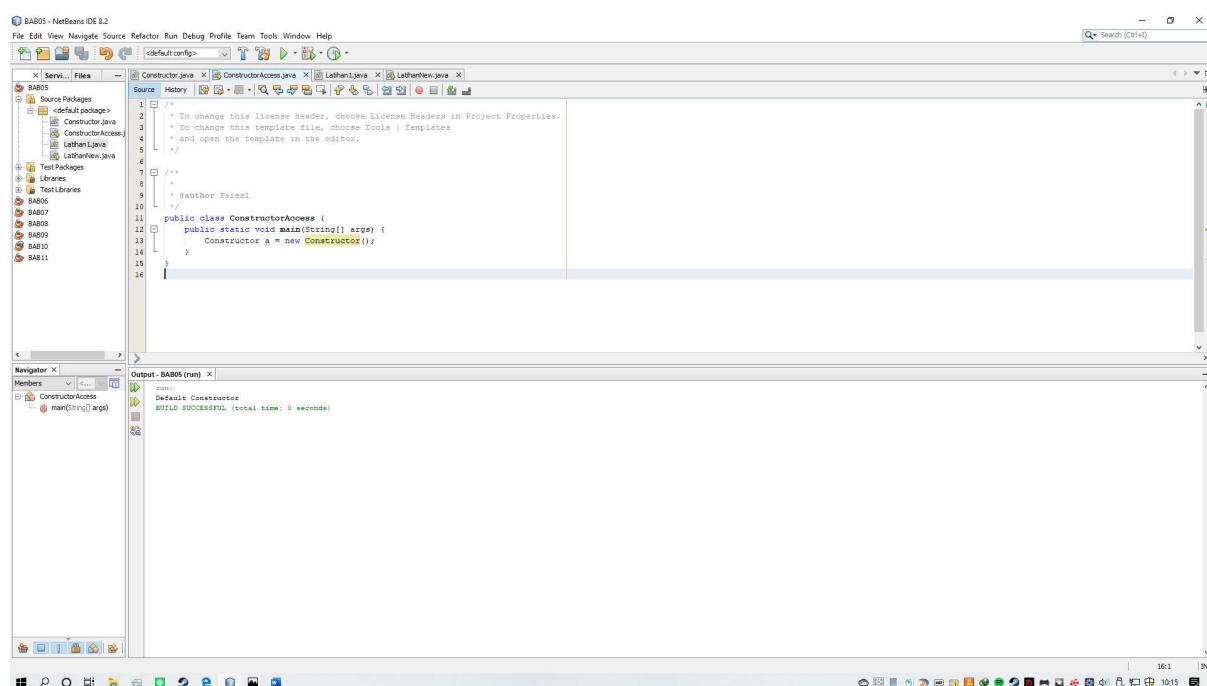
The screenshot shows the NetBeans IDE interface with the title "BAB05 - NetBeans IDE 8.2". The main window displays the code for "Constructor.java" in the Source editor:

```
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 Faisal
8 */
9 public class Constructor {
10     public Constructor() {
11         System.out.println("Default Constructor");
12     }
13 }
14
15
16
```

The Navigator pane on the left shows the package structure: "BAB05" > "Default package" > "Constructor.java". The Output pane at the bottom shows the run results:

```
Output - BAB05 (run) x
Members
Constructor
Constructor

run:
Default Constructor
BUILD SUCCESSFUL (total time: 0 seconds)
```



The screenshot shows the NetBeans IDE interface with the title "BAB05 - NetBeans IDE 8.2". The main window displays the code for "ConstructorAccess.java" in the Source editor:

```
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 Faisal
8 */
9 public class ConstructorAccess {
10     public static void main(String[] args) {
11         Constructor a = new Constructor();
12     }
13 }
14
15
16
```

The Navigator pane on the left shows the package structure: "BAB05" > "Default package" > "ConstructorAccess.java". The Output pane at the bottom shows the run results:

```
Output - BAB05 (run) x
Members
ConstructorAccess
mainDrive[arg]

run:
Default Constructor
BUILD SUCCESSFUL (total time: 0 seconds)
```

- Latihan

BAB05 - NetBeans IDE 8.2

```

1 /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5 */
6
7 /**
8  * 
9  * @author Faisal
10 */
11 public class Latihan1 {
12     String Nama = "Faisal Hari Dewanto";
13     String NIM = "12001300646";
14     String Alamat = "Klaten";
15
16     public Latihan1() {
17         System.out.println("Nama :" + Nama);
18         System.out.println("NIM :" + NIM);
19         System.out.println("Alamat :" + Alamat);
20     }
21 }
22

```

Latihan1 > Latihan1 >

Output: BAB05 (run) >

```

run:
Nama: Faisal Hari Dewanto
NIM: 12001300646
Alamat: Klaten
BUILD SUCCESSFUL (total time: 0 seconds)

```

BAB05 - NetBeans IDE 8.2

```

1 /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5 */
6
7 /**
8  * 
9  * @author Faisal
10 */
11 public class LatihamNew {
12     public static void main(String[] args) {
13         Latihan1 b = new Latihan1();
14     }
15 }
16

```

LatihamNew > main >

Output: BAB05 (run) >

```

run:
Nama: Faisal Hari Dewanto
NIM: 12001300646
Alamat: Klaten
BUILD SUCCESSFUL (total time: 0 seconds)

```

- Parameterized Constructor

BAB05 - NetBeans IDE 8.2

```

    1 /**
    2  * To change this license header, choose License Headers in Project Properties.
    3  * To change this template file, choose Tools | Templates
    4  * and open the template in the editor.
    5 */
    6 /**
    7  * Author Faisal
    8 */
    9
    10 public class ParameterConstructor {
    11     String name, nim;
    12     int semester;
    13
    14     public ParameterConstructor(String nama, int semester, String nim) {
    15         this.name = nama;
    16         this.semester = semester;
    17         this.nim = nim;
    18     }
    19     public void info() {
    20         System.out.println("Name :" + name + "\nNim :" + nim + "\nSemester :" + semester);
    21     }
    22 }
    23
    24
  
```

Output - BAB05 (run)

```

  run:
  Name :Faisal Hari
  Nim :1200180044
  Semester :3
  BUILD SUCCESSFUL (total time: 0 seconds)
  
```

BAB05 - NetBeans IDE 8.2

```

  1 /**
  2  * To change this license header, choose License Headers in Project Properties.
  3  * To change this template file, choose Tools | Templates
  4  * and open the template in the editor.
  5 */
  6 /**
  7  * Author Faisal
  8 */
  9
  10 public class ParameterNew {
  11     public static void main(String[] args) {
  12         ParameterConstructor c = new ParameterConstructor("Faisal Hari", 3, "1200180044");
  13         c.info();
  14     }
  15 }
  16
  17
  
```

Output - BAB05 (run)

```

  run:
  Name :Faisal Hari
  Nim :1200180044
  Semester :3
  BUILD SUCCESSFUL (total time: 0 seconds)
  
```

• Latihan 2

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

- File Menu:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Toolbar:** Standard toolbar with icons for New, Open, Save, Cut, Copy, Paste, Find, Select All, and others.
- Code Editor:** Displays the `Buku.java` file content. The code defines a `Buku` class with attributes `namaPengarang`, `judulBuku`, `tahunTerbit`, and `cetakanKe`, and a constructor that initializes these values. It also includes methods `info1`, `info2`, `info3`, and a static `main` method that creates three `Buku` objects and prints their details.
- Output Panel:** Shows the run output for the `BAB05` run. The output shows the details of the three books created in the `main` method.
- Bottom Bar:** Shows the system tray with various icons and the current date and time (401 10:44).

```

    package default.package;
    public class Buku {
        String namaPengarang;
        String judulBuku;
        int tahunTerbit;
        int cetakanKe;
        double hargaJual;
        public Buku (String name, String judulBuku) {
            this.namaPengarang = name;
            this.judulBuku = judulBuku;
        }
        public Buku (int tahun, int cetakanKe) {
            this.tahunTerbit = tahun;
            this.cetakanKe = cetakanKe;
        }
        public Buku (double hargaJual) {
            this.hargaJual = hargaJual;
        }
        public void info1() {
            System.out.println("Nama Pengarang : " + namaPengarang + "\nJudul Buku : " + judulBuku);
        }
        public void info2() {
            System.out.println("Tahun Terbit : " + tahunTerbit + "\nCetakan ke : " + cetakanKe);
        }
        public void info3() {
            System.out.println("Harga Jual : " + hargaJual);
        }
    }
    public static void main(String[] args) {
        Buku a1 = new Buku("Faisal De Hootman", "The Force Always Be With You");
        Buku a2 = new Buku(1995, 1);
        Buku a3 = new Buku (120000);
        a1.info1();
        a2.info2();
        a3.info3();
    }
}
  
```

- Tugas

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

- Project:** BAB05
- Source Packages:** Default package (containing Bedata.java, Biaya.java, Constructor.java, ConstructorAccess.java, Lethain.java, Lethainhen.java, ParameterConstructor.java, Parameterhen.java, Tugas.java)
- Code Editor:** 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
7 /**
8 *
9 * @author Faisal
10 */
11 public class Tugas {
12     public Tugas() {
13         System.out.println("Faisal Hari Dewanto");
14     }
15
16     String nama, alamat;
17     int umur;
18
19     public Tugas(String Nama, int Umur, String Alamat) {
20         this.nama = Nama;
21         this.umur = Umur;
22         this.alamat = Alamat;
23     }
24
25     public void info() {
26         System.out.println("Nama : " + nama + "\nUmur : " + umur + "\nAlamat : " + alamat);
27     }
28 }
```
- Output Window:** Output - BAB05 (run)


```

run:
Faisal Hari Dewanto
Name : Faisal
Umur : 19
Alamat : Klaten
BUILD SUCCESSFUL (total time: 0 seconds)
|
```

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

- Project:** BAB05
- Source Packages:** Default package (containing Bedata.java, Biaya.java, Constructor.java, ConstructorAccess.java, Lethain.java, Lethainhen.java, ParameterConstructor.java, Parameterhen.java, Tugas.java)
- Code Editor:** Bedata.java


```

1 /**
2 *
3 * To change this license header, choose License Headers in Project Properties.
4 * To change this template file, choose Tools | Templates
5 * and open the template in the editor.
6 */
7
8 /**
9 *
10 * @author Faisal
11 */
12 public class Bedata {
13     public static void main(String[] args) {
14         Tugas a = new Tugas ("Faisal", 19, "Klaten");
15         Tugas b = new Tugas ();
16         a.info();
17     }
18 }
```
- Output Window:** Output - BAB05 (run)


```

run:
Faisal Hari Dewanto
Name : Faisal
Umur :
Alamat : Klaten
BUILD SUCCESSFUL (total time: 0 seconds)
|
```

6. Modul 6

- Single Inheritance

The screenshot shows the NetBeans IDE 8.2 interface. The left pane displays the project structure under 'Source Packages' and 'Source Packages'. The central editor pane contains the following Java code for the Pegawai 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 Faisal
 */
public class Pegawai {
    double gajiPokok = 500000;
}
```

The right pane shows the 'Output - BAB06 (run)' window, which is currently empty.

The screenshot shows the NetBeans IDE 8.2 interface. The left pane displays the project structure under 'Source Packages' and 'Source Packages'. The central editor pane contains the following Java code for the Programmer class, which extends the Pegawai class:

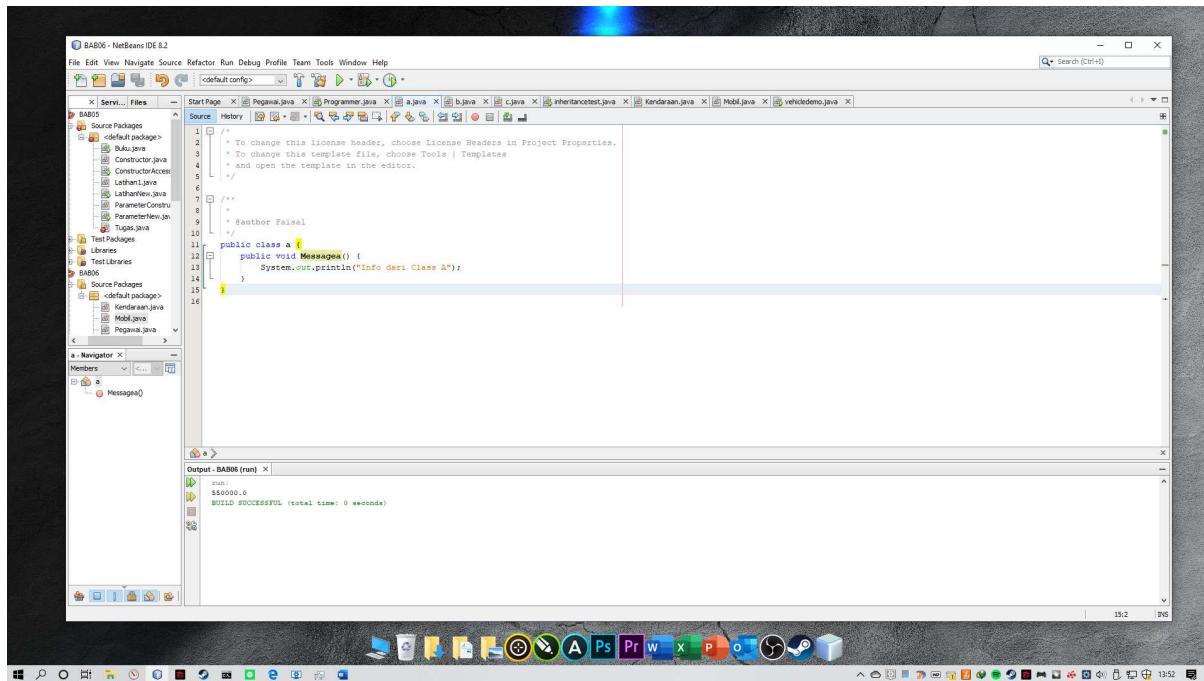
```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
/**
 * @author Faisal
 */
public class Programmer extends Pegawai {
    public static void main(String[] args) {
        double lemburperjam = 50000;
        double gajiperbulan;
        Pegawai pegawai = new Pegawai();
        gajiperbulan = pegawai.gajiPokok + lemburperjam;
        System.out.println(gajiperbulan);
    }
}
```

The right pane shows the 'Output - BAB06 (run)' window, which displays the output of the program:

```
run:
650000.0
BUILD SUCCESSFUL (total time: 0 seconds)
```

The status bar at the bottom indicates 'Finished building BAB06 (run.)'.

- Multilevel Inheritance



The screenshot shows the NetBeans IDE interface with the title "BAB06 - NetBeans IDE 8.2". The left sidebar displays the project structure under "Source Packages" for "BAB06". The main editor window contains the following Java code for class A:

```

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   * @author Faisal
9   */
10 public class a {
11     public void Messagea() {
12         System.out.println("Info dari Class A");
13     }
14 }

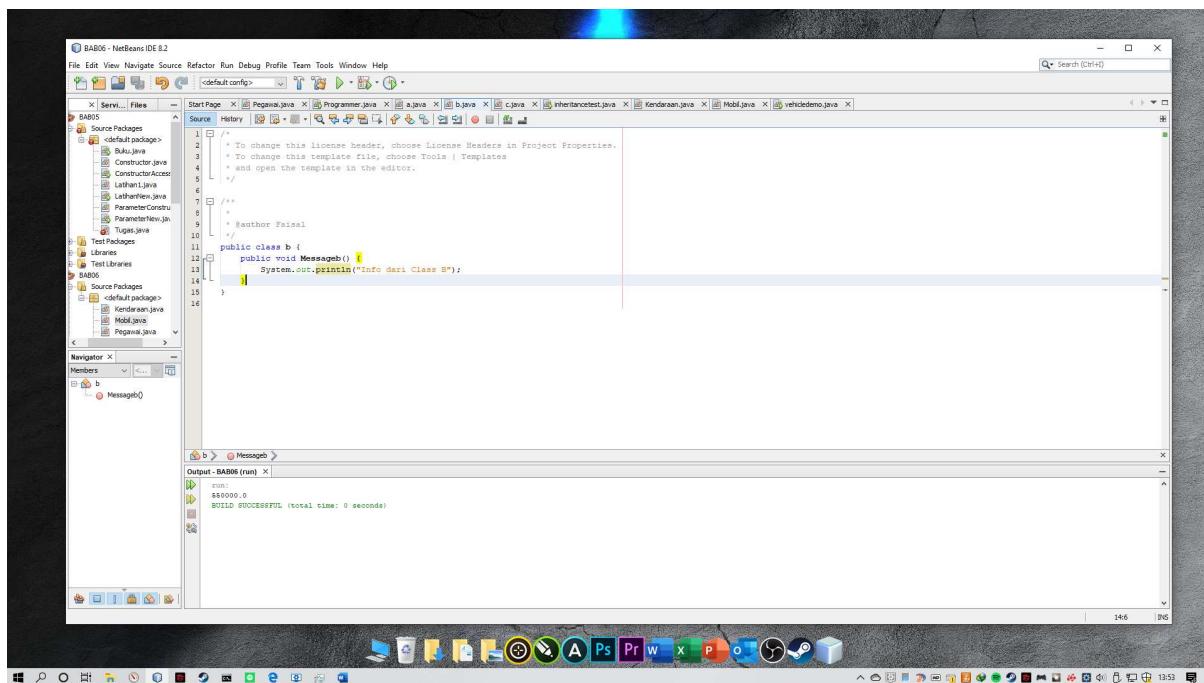
```

The output window at the bottom shows the results of running the code:

```

Output - BAB06 (run) x
run:
$80000.0
BUILD SUCCESSFUL (total time: 0 seconds)

```



This screenshot shows the same NetBeans IDE environment after adding class B. The code for class B 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   * @author Faisal
9   */
10 public class b {
11     public void Messageb() {
12         System.out.println("Info dari Class B");
13     }
14 }

```

The output window shows the results of running the code again:

```

Output - BAB06 (run) x
run:
$80000.0
BUILD SUCCESSFUL (total time: 0 seconds)

```

The screenshot shows the NetBeans IDE 8.2 interface. The project 'BAB06' is open, and the code editor displays the 'Message.java' file. The code defines a class 'Message' with a static main method that prints 'Info dari Class C'. The output window shows the build was successful.

```
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 Faisal
10 */
11 public class Message {
12     public static void main(String[] args) {
13         System.out.println("Info dari Class C");
14     }
15 }
16
```

```
Output - BAB06 (run) x
run:
$80000.0
BUILD SUCCESSFUL (total time: 0 seconds)
```

The screenshot shows the NetBeans IDE 8.2 interface. The project 'BAB06' is open, and the code editor displays the 'inheritancetest.java' file. The code defines a static main method that creates instances of classes A, B, and C and calls their respective message methods. The output window shows the build was successful.

```
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 Faisal
10 */
11 public class inheritancetest {
12     public static void main(String[] args) {
13         A a = new A();
14         B b = new B();
15         C c = new C();
16
17         A.Messagea();
18         B.Messageb();
19         C.Messagec();
20         C.Messageb();
21         C.Messagea();
22         C.Messagec();
23     }
24 }
25
```

```
Inheritancetest > main >
Output - BAB06 (run) x
run:
Info dari Class A
Info dari Class B
Info dari Class B
Info dari Class C
Info dari Class C
Info dari Class C
BUILD SUCCESSFUL (total time: 0 seconds)
```

- Latihan

```

BAB05 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
default config> Start Page Pegasus.java Programmer.java a.java b.java c.java inheritancest.java Kendaraan.java Mobil.java vehicledemo.java
Services Files
BAB05
Source Packages
  < default package >
    Kendaraan.java
    Mobil.java
    Pegasus.java
    Programmer.java
    a.java
    b.java
    c.java
    inheritancest.java
  Test Packages
  Libraries
  Test Libraries
BAB07
BAB08
Source Packages
  < default package >
    Kendaraan.java
    Mobil.java
    Pegasus.java
  Test Packages
  Libraries
  Test Libraries
BAB09
BAB10
Source Packages
  < default package >
    Kendaraan.java
    Mobil.java
    Pegasus.java
  Test Packages
  Libraries
  Test Libraries
Output - BAB05 (run) x
Jumlah roda kendaraan : 4
Jumlah kursi kendaraan : 4
Berat kendaraan : 900
Bahan bakar mobil : bensin
Jumlah kursi : 4
BUILD SUCCESSFUL (total time: 0 seconds)

```

```

BAB05 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
default config> Start Page Pegasus.java Programmer.java a.java b.java c.java inheritancest.java Kendaraan.java Mobil.java vehicledemo.java
Services Files
BAB05
Source Packages
  < default package >
    Kendaraan.java
    Mobil.java
    Pegasus.java
  Test Packages
  Libraries
  Test Libraries
BAB07
BAB08
Source Packages
  < default package >
    Kendaraan.java
    Mobil.java
    Pegasus.java
  Test Packages
  Libraries
  Test Libraries
BAB09
BAB10
Source Packages
  < default package >
    Kendaraan.java
    Mobil.java
    Pegasus.java
  Test Packages
  Libraries
  Test Libraries
Output - BAB05 (run) x
Jumlah roda kendaraan : 4
Jumlah kursi kendaraan : 4
Berat kendaraan : 900
Bahan bakar mobil : bensin
Jumlah kursi : 4
BUILD SUCCESSFUL (total time: 0 seconds)

```

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 "BAB06 - NetBeans IDE 8.2". The left sidebar displays the project structure under "Sources Packages" and "Test Packages". The main editor window contains the following Java 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 Faisal
 */
public class vehicledemo {
    public static void main(String[] args) {
        Kendaraan a = new Kendaraan();
        Mobil b = new Mobil();
        a.lok();
        b.rofl();
    }
}
```

The "Output" panel at the bottom shows the program's run output:

```
RUN:
Jumlah roda kendaraan : 4
Jumlah kursi kendaraan : 4
Bahan bakar kendaraan : 900
Bahan bakar mobil : bensin
Jumlah kursi : 4
BUILD SUCCESSFUL (total time: 0 seconds)
```

7. Modul 7

• Class Karyawan

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

- Project:** BAB07 - NetBeans IDE 8.2
- Source Packages:** default package (containing Karyawan.java, Karyawandemo.java, Manager.java, Managerdemo.java)
- Code Editor:** Karyawan.java (content below)
- Output:** Output - BAB07 (ran) (content below)
- Taskbar:** Shows various application icons including A, Ps, Pr, w, x, P, o.

```
/*
 * Author Faisal
 */
public class Karyawan {
    private String nama;
    private float gaji;
    private int usia;

    public String getName() {
        return nama;
    }

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

    public float getGaji() {
        return gaji;
    }

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

    public int getUsia() {
        return usia;
    }

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

```
Faisal Hari
500000.0
19
BUILD SUCCESSFUL (total time: 0 seconds)
```

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

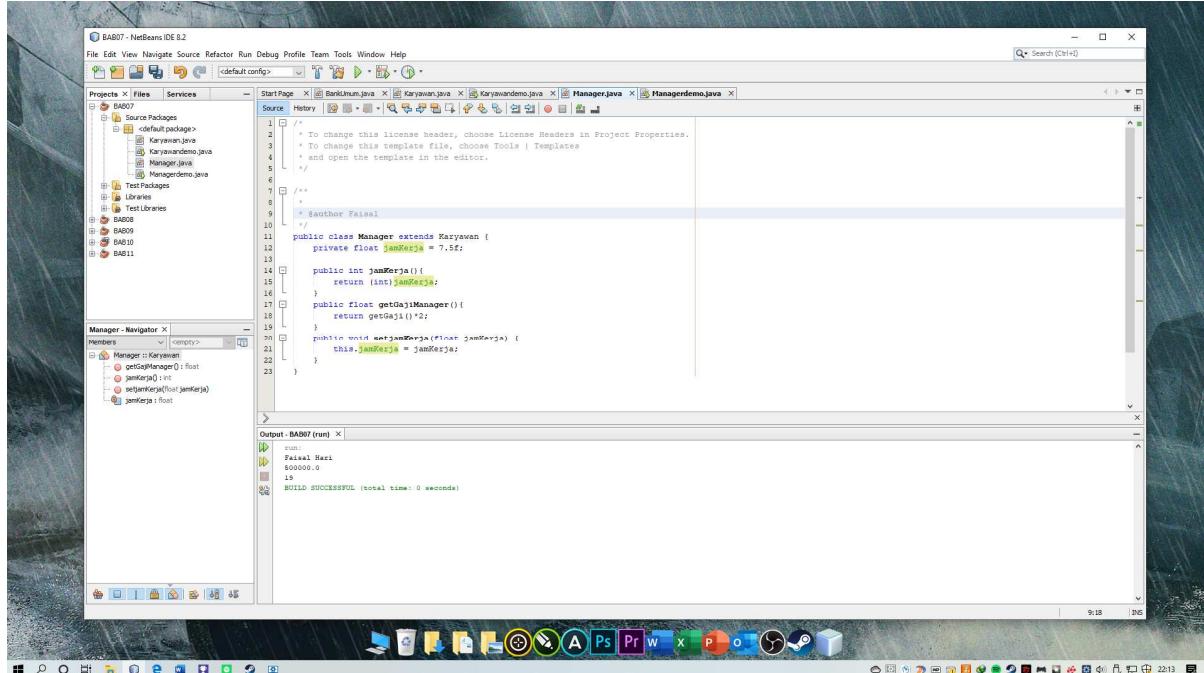
- Project:** BAB07 - NetBeans IDE 8.2
- Source Packages:** default package (containing Karyawan.java, Karyawandemo.java, Manager.java, Managerdemo.java)
- Code Editor:** Karyawandemo.java (content below)
- Output:** Output - BAB07 (ran) (content below)
- Taskbar:** Shows various application icons including A, Ps, Pr, w, x, P, o.

```
/*
 * and open the template in the editor.
 */
public class Karyawandemo {
    public static void main (String[] args) {
        Karyawan k1 = new Karyawan();
        k1.setName("Faisal Hari");
        k1.setGaji(500000);
        k1.setUsia(19);

        System.out.println(k1.getName());
        System.out.println(k1.getGaji());
        System.out.println(k1.getUsia());
    }
}
```

```
Faisal Hari
500000.0
19
BUILD SUCCESSFUL (total time: 0 seconds)
```

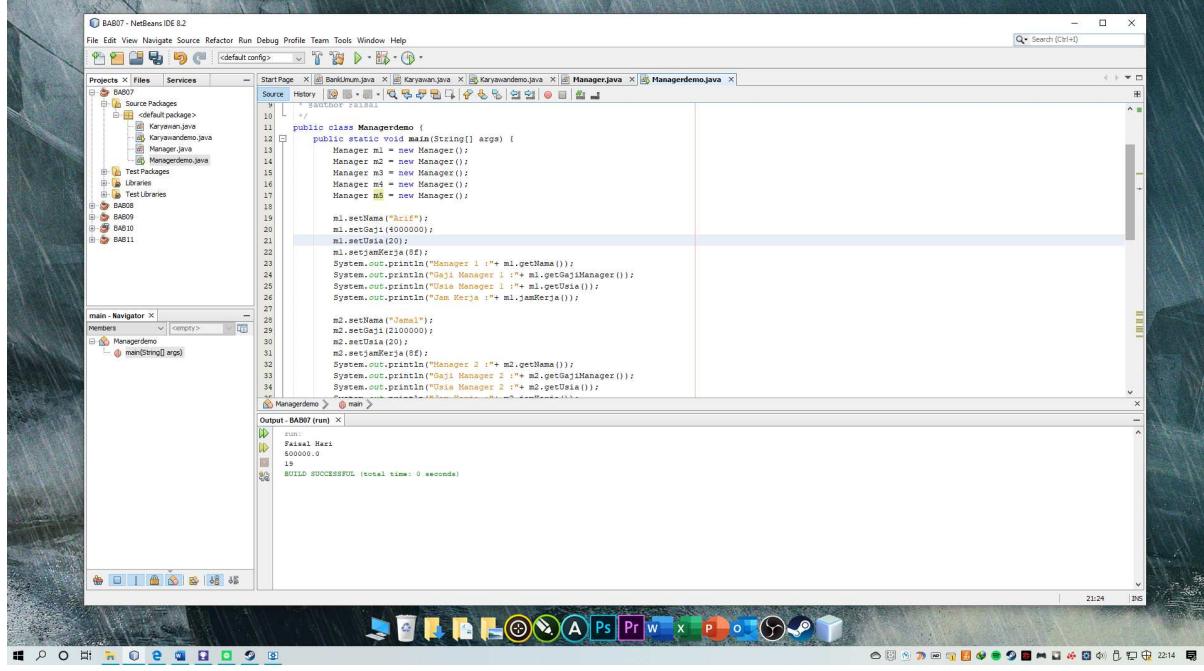
- Class Manager



```

BAB07 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
default config...
Start Page | BankInum.java | Karyawan.java | Karyawandemo.java | Manager.java | Managerdemo.java | 
Projects | Files | Services | 
Source History | 
<default package>
  Karyawan.java
  Karyawandemo.java
  Manager.java
  Managerdemo.java
  Manager - Navigator x
    Members <empty>
  Manager :: Karyawan
    ● getGajiManager(): float
    ● jamKerja: int
    ● setGajiManager(float gaji)
    ● setjamKerja(float kerja)
  Managerdemo
  Test Packages
  Libraries
  Test Libraries
  BAB08
  BAB09
  BAB10
  BAB11
Output - BAB07 (run) x
  Faisal Hazi
  500000.0
  19
  BUILD SUCCESSFUL (total time: 0 seconds)
  9:18  ING

```



```

BAB07 - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
default config...
Start Page | BankInum.java | Karyawan.java | Karyawandemo.java | Manager.java | Managerdemo.java | 
Projects | Files | Services | 
Source History | 
<default package>
  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.setName("Faisal");
      m1.setGaji(400000);
      m1.setUsia(20);

      m2.setName("Edu");
      m2.setGaji(500000);
      m2.setUsia(20);

      m3.setName("Huda");
      m3.setGaji(400000);
      m3.setUsia(20);

      m4.setName("Nurul");
      m4.setGaji(500000);
      m4.setUsia(20);

      m5.setName("Zain");
      m5.setGaji(400000);
      m5.setUsia(20);
    }
  }
  Managerdemo
  main()
  Managerdemo - Navigator x
    Members <empty>
  Managerdemo
  Output - BAB07 (run) x
  Faisal Hazi
  500000.0
  Edu Huda
  500000.0
  20
  20
  20
  20
  20
  BUILD SUCCESSFUL (total time: 0 seconds)
  21:24  ING

```

BAB07 - NetBeans IDE 6.2

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

default.conf?

Projects > File Services

Start Page X Karyawandemo.java X Karyawandemo.java X Manager.java X Managerdemo.java X

Search (Ctrl+F)

Source History

Source Packages

Source History

Managerdemo.java

Karyawandemo.java

Karyawandemo.java

Manager.java

Managerdemo.java

Test Packages

Libraries

Test Libraries

BAB09

BAB10

BAB11

main - Navigator X

Members < empty>

Managerdemo main(args)

```

38     m3.setGaji(1000000);
39     m3.setUsia(10);
40     m3.setJamKerja(8);
41     System.out.println("Manager 3 :"+ m3.getNama());
42     System.out.println("Gaji Manager 3 :"+ m3.getGajiManager());
43     System.out.println("Usia Manager 3 :"+ m3.getUsia());
44     System.out.println("Jam Kerja :"+ m3.jamKerja());
45
46     m4.setNama("Dobleh");
47     m4.setGaji(3400000);
48     m4.setUsia(20);
49     m4.setJamKerja(8);
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
55     m5.setNama("Kabur");
56     m5.setGaji(5700);
57     m5.setUsia(20);
58     m5.setJamKerja(8);
59     System.out.println("Manager 5 :"+ m5.getNama());
60     System.out.println("Gaji Manager 5 :"+ m5.getGajiManager());
61     System.out.println("Usia Manager 5 :"+ m5.getUsia());
62     System.out.println("Jam Kerja :"+ m5.jamKerja());
63
64

```

Managerdemo > main

Output - BAB07 (run) X

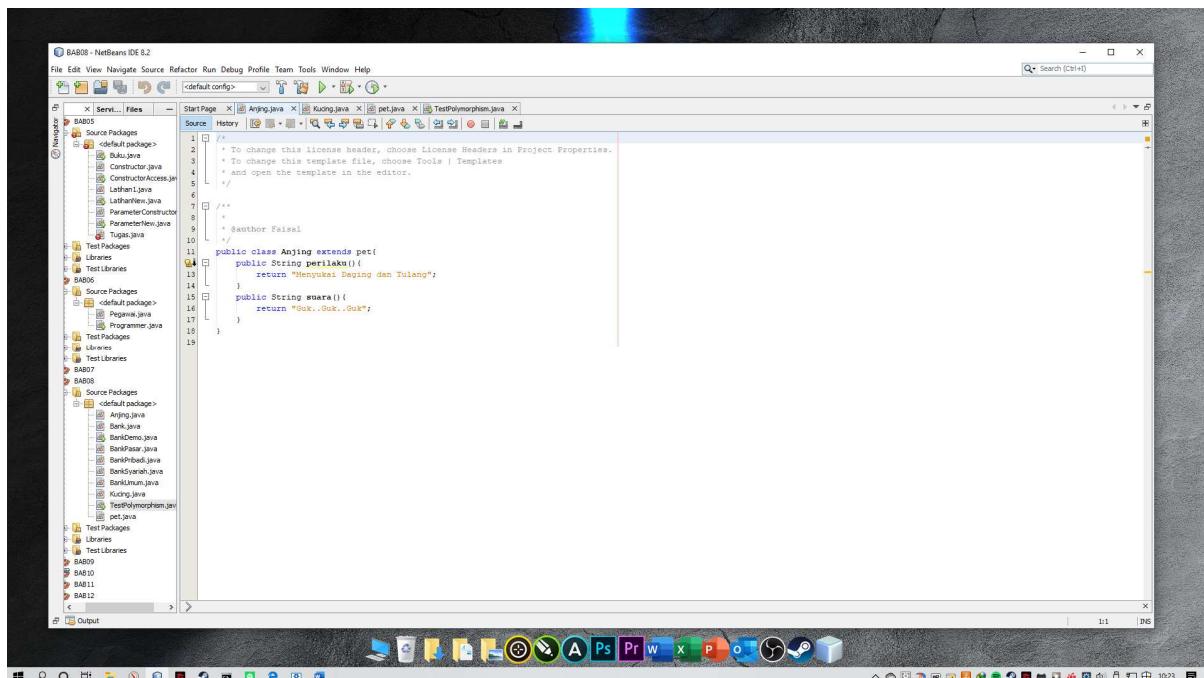
run:

Manager 1 :Arif
 Gaji Manager 1 :8000000.0
 Usia Manager 1 :20
 Jam Kerja :8
 Manager 2 :Jamal
 Gaji Manager 2 :42000000.0
 Usia Manager 2 :20
 Jam Kerja :8
 Manager 3 :Taufik
 Gaji Manager 3 :20000000.0
 Usia Manager 3 :20
 Jam Kerja :8
 Manager 4 :Dobleh
 Gaji Manager 4 :68000000.0
 Usia Manager 4 :20
 Jam Kerja :8
 Manager 5 :Kabur
 Gaji Manager 5 :114000.0
 Usia Manager 5 :20
 Jam Kerja :8

BUILD SUCCESSFUL (total time: 0 seconds)

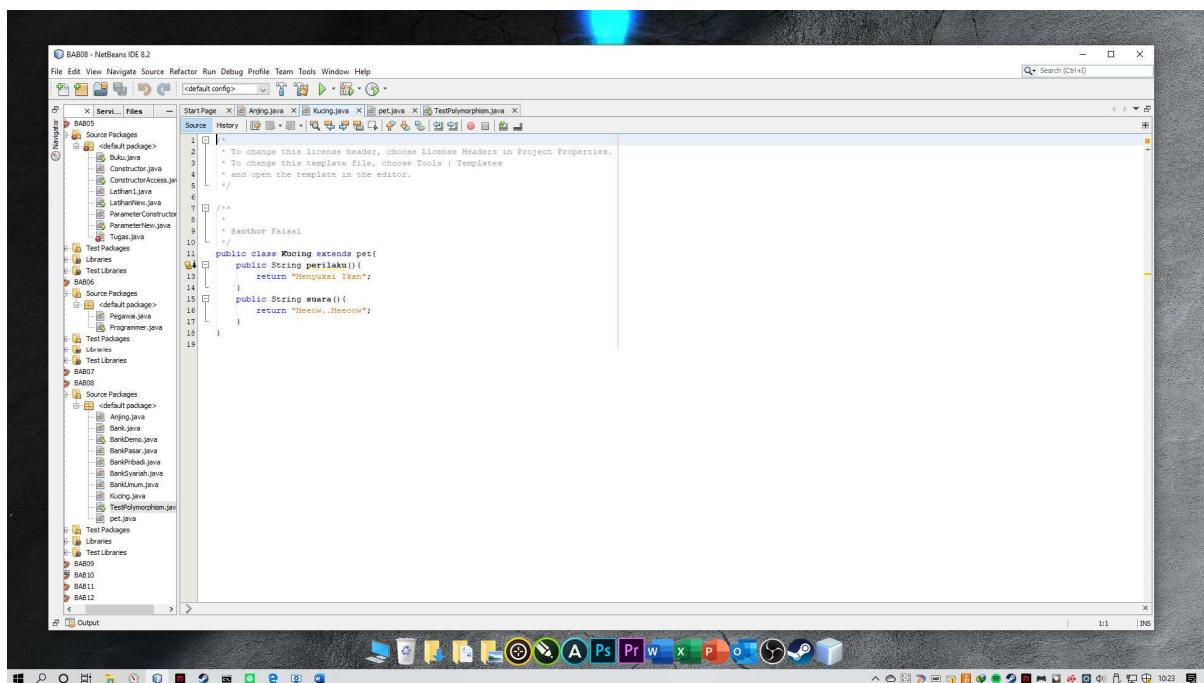
8. Modul 8

- Latihan



The screenshot shows the NetBeans IDE interface with the project 'BAB08' selected. The left pane displays the package structure, showing several source packages like 'Bab08', 'Bab09', and 'Bab10'. The right pane shows the code editor for the 'Anjing.java' file. The code defines a class 'Anjing' that extends 'pet'. It contains two methods: 'perilaku()' which returns 'Menyukai Ragi dan Tulang', and 'suara()' which returns 'Guk..Guk..Guk'. A copyright notice and author information are present at the top of the 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.
 */
package Bab08;
public class Anjing extends pet{
    public String perilaku(){
        return "Menyukai Ragi dan Tulang";
    }
    public String suara(){
        return "Guk..Guk..Guk";
    }
}
```



The screenshot shows the NetBeans IDE interface with the project 'BAB08' selected. The left pane displays the package structure, showing several source packages like 'Bab08', 'Bab09', and 'Bab10'. The right pane shows the code editor for the 'Kucing.java' file. The code defines a class 'Kucing' that extends 'pet'. It contains two methods: 'perilaku()' which returns 'Menyukai Ikan', and 'suara()' which returns 'Meow..Meow..'. A copyright notice and author information are present at the top of the 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.
 */
package Bab08;
public class Kucing extends pet{
    public String perilaku(){
        return "Menyukai Ikan";
    }
    public String suara(){
        return "Meow..Meow..";
    }
}
```

```
* 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: Faisal
 */
public class pet {
    private String name;
    public void beriNama(String beriNama){
        this.name = beriNama;
    }
    public String panggilNama(){
        return this.name;
    }
    public String perilaku(){
        return "Bewen Penutut";
    }
}
```

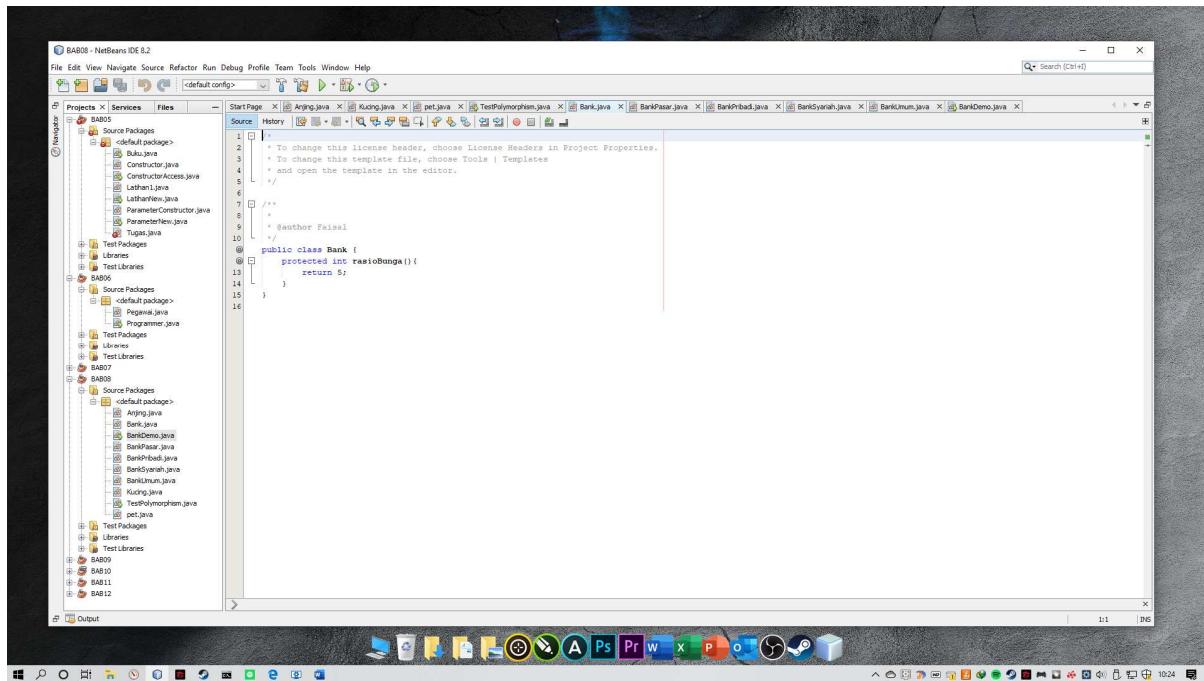
```
* To change this license header, choose License Headers in Project Properties.
* To change this template file, choose Tools | Templates
* and open the template in the editor.

public class TestPolymorphism {
    public static void main (String[] args){
        Kucing k = new Kucing();
        Anjing a = new Anjing();
        k.beriNama("Tom");
        a.beriNama("Bill");
        System.out.println(
            k.pet() + "\n" +
            k.perilaku() + "\n" +
            k.suara() + "\n" +
            a.panggilNama() + "\n" +
            a.perilaku() + "\n" +
            a.suara()
        );
    }
}
```

Output - BAB08 (run)

```
run:
Tom
Menyukai Ikan
Meow, Meow
Bill
Menyukai Baging dan Tulang
Gak, Gak, Gak
BUILD SUCCESSFUL (total time: 0 seconds)
```

- Tugas

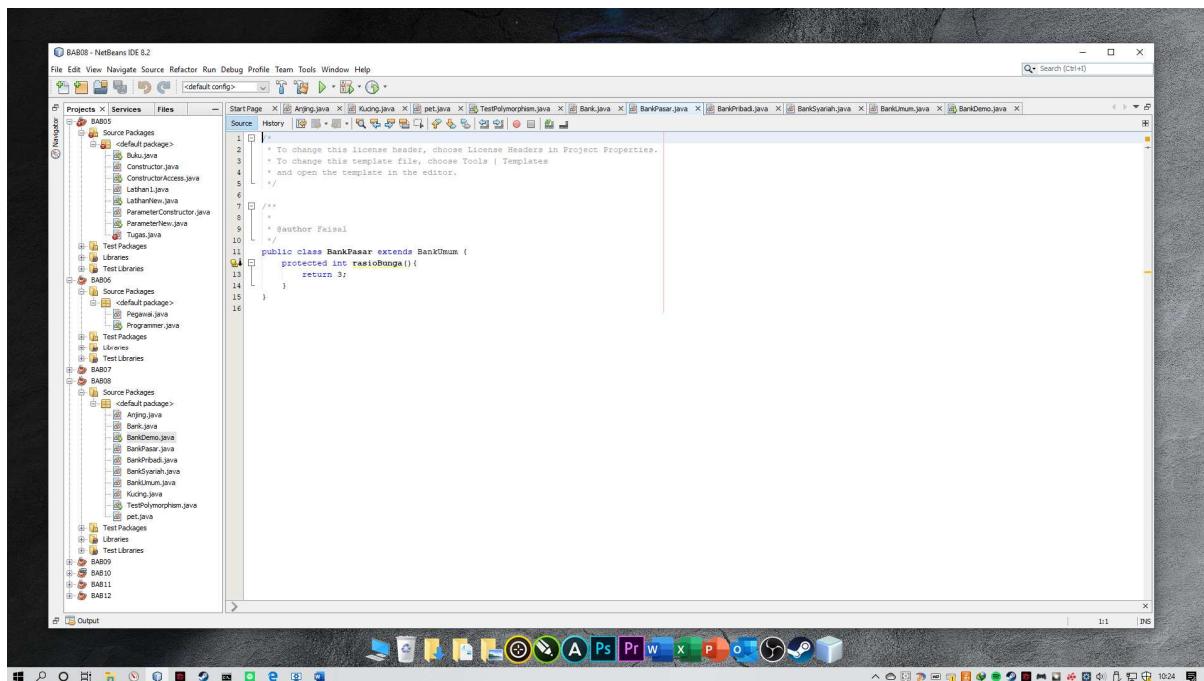


The screenshot shows the NetBeans IDE interface with the project 'BAB08' selected. The code editor displays the following Java code:

```

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 Faisal
10 */
11 public class Bank {
12     protected int rasioBunga(){
13         return 5;
14     }
15 }

```

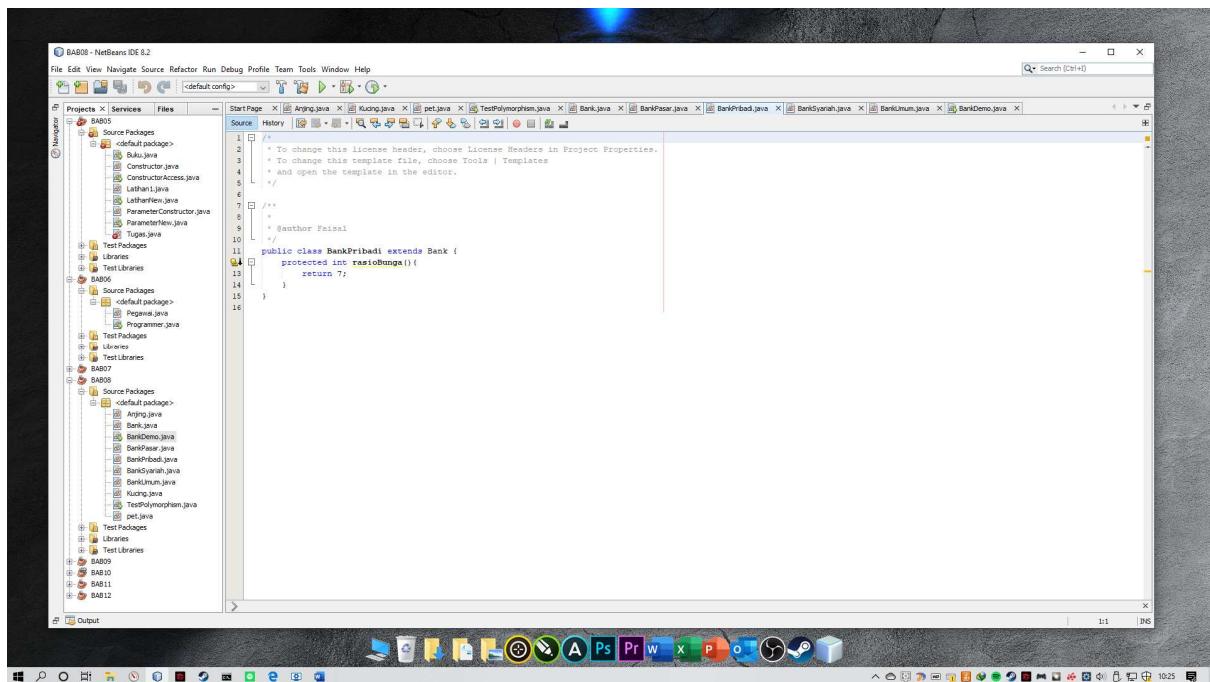


The screenshot shows the NetBeans IDE interface with the project 'BAB08' selected. The code editor displays the following Java code:

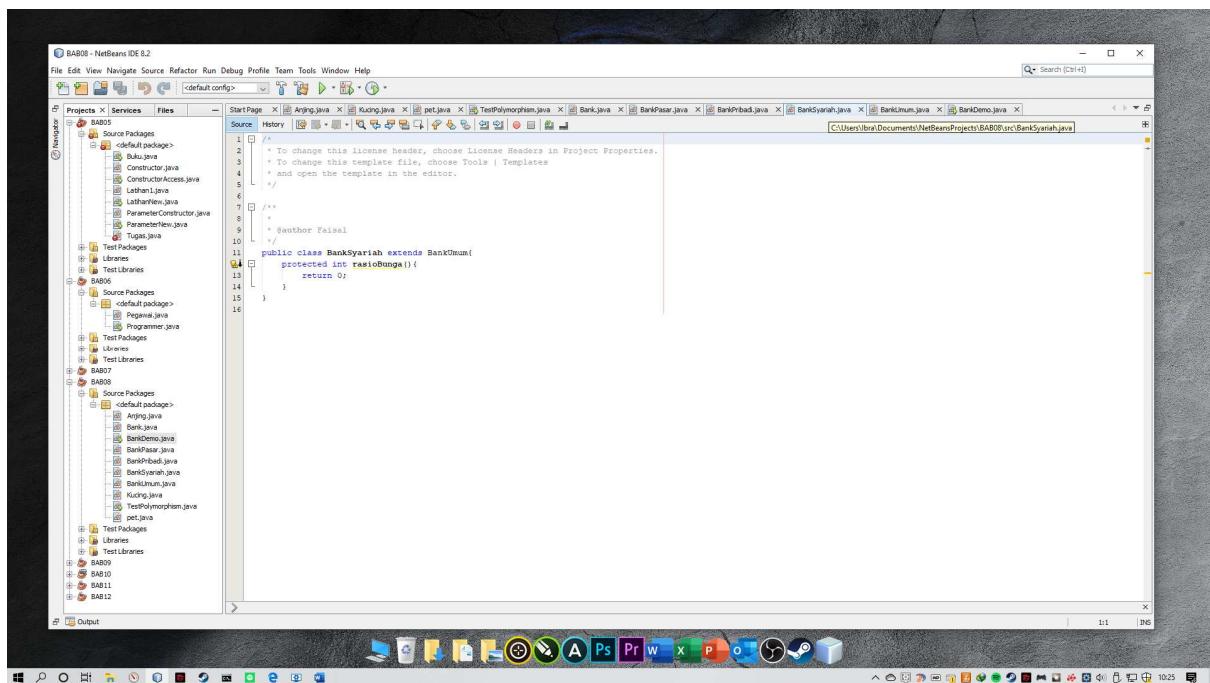
```

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 Faisal
10 */
11 public class BankPasar extends BankUmum {
12     protected int rasioBunga(){
13         return 3;
14     }
15 }

```



```
/*
 * 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 bank;
public class BankPribadi extends Bank {
    protected int rasioBunga(){
        return 7;
    }
}
```



```
/*
 * 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 bank;
public class BankSyariah extends BankOmum {
    protected int rasioBunga(){
        return 0;
    }
}
```

The screenshot shows the NetBeans IDE interface with the title "BABOS - NetBeans IDE 8.2". The left sidebar displays the project structure under "Projects X Services". The main area shows the code editor for "BankDemo.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  * @author Faisal
9 */
10
11 public class BankDemo extends Bank{
12     protected int rasioBunga(){
13         return 9;
14     }
15 }
```

The screenshot shows the NetBeans IDE interface with the title "BABOS - NetBeans IDE 8.2". The left sidebar displays the project structure under "Projects X Services". The main area shows the code editor for "BankDemo.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  * @author Faisal
9 */
10
11 public class BankDemo {
12     public static void main(String[] args){
13         Bank bpr = new BankBrialdi();
14         Bank bu = new BankKhum();
15         Bank bp = new BankKesari();
16         Bank bs = new BankSyariah();
17
18         System.out.println(
19             "Bank Brialdi :" + bpr.rasioBunga() +"\n"+
20             "Bank Umum :" + bu.rasioBunga() +"\n"+
21             "Bank Pasar :" + bp.rasioBunga() +"\n"+
22             "Bank Syariah :" + bs.rasioBunga());
23     }
24
25     BankKhum bkpr = new BankBrialdi();
26     BankKhum bksy = new BankSyariah();
27
28     System.out.println(
29         "Bank Pasar :" + bkpr.rasioBunga() +"\n"+
30         "Bank Syariah :" + bksy.rasioBunga());
31 }
32 }
```

The "Output" tab at the bottom shows the run results:

```
Bank Brialdi :7
Bank Umum :5
Bank Pasar :3
Bank Syariah :0
Bank Syariah :0
Error occurred during startup (total time: 0 seconds)
```

9. Modul 9

• Latihan

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

- Projects:** Module9, BAB10, BAB11, BAB9.
- Source Packages:** default package, JajarGenjang, Lingkaran, MethodAbstract, PersegiPanjang, Segitiga.
- Code Editor:** MethodMain.java (selected). The code defines a main method that creates objects of JajarGenjang, Lingkaran, and PersegiPanjang, and prints their areas and perimeters.
- Output - Module9 (run):**

```
Keliling Segitiga = 31
Luas Segitiga = 25
Kelling JajarGenjang = 44
Luas JajarGenjang = 200
Kelling Lingkaran = 20
Luas PersegiPanjang = 50
Kelling PersegiPanjang = 14
Luas Lingkaran = 19
BUILD SUCCESSFUL (total time: 0 seconds)
```

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

- Projects:** Module9, BAB10, BAB11, BAB9.
- Source Packages:** default package, JajarGenjang, Lingkaran, MethodAbstract, PersegiPanjang, Segitiga.
- Code Editor:** JajarGenjang.java (selected). The code defines a class JajarGenjang that extends MethodAbstract. It has fields alas (10), tinggi (20), and b (22). It overrides the area and perimeter methods.
- Output - Module9 (run):**

```
Keliling Segitiga = 31
Luas Segitiga = 25
Kelling JajarGenjang = 44
Luas JajarGenjang = 200
Kelling Lingkaran = 20
Luas PersegiPanjang = 50
Kelling PersegiPanjang = 14
Luas Lingkaran = 19
BUILD SUCCESSFUL (total time: 0 seconds)
```

Module9 - NetBeans IDE 8.2

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

Projects: BAB10 BAB11 BAB12 Modul9 Test Packages Libraries Test Libraries

Start Page | JajarGanjing.java | MethodMan.java | MethodAbstract.java | Lingkaran.java | PersegiPanjang.java | Segitiga.java | default config > Search (Ctrl+F)

Source History Find Replace Go To... Open Recent

```

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  * @author faisal
9 */
10 public class Lingkaran extends MethodAbstract {
11     int pi = 22/7;
12     int jari = ?;
13
14     @Override
15     public int luas () {
16         return pi*jari*jari;
17     }
18
19     @Override
20     public int keliling() {
21         return 2*pi*jari;
22     }
23
24 }
```

Navigator X Members <empty>

- Lingkaran : MethodAbstract
 - keliling() int : MethodAbstract
 - luas() int : MethodAbstract
 - pi int
 - jari int
 - print

Output - Module9 (run) X

```

Keliling Segitiga = 31
Luas Segitiga = 25
Keliling JajarGanjing = 64
Luas JajarGanjing = 200
Keliling Lingkaran = 20
Luas Lingkaran = 50
Luas PersegiPanjang = 50
Keliling Lingkaran = 18
Luas Lingkaran = 14
BUILD SUCCESSFUL (total time: 0 seconds)
```

Module9 - NetBeans IDE 8.2

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

Projects: BAB10 BAB11 BAB12 Modul9 Test Packages Libraries Test Libraries

Start Page | JajarGanjing.java | MethodMan.java | MethodAbstract.java | Lingkaran.java | PersegiPanjang.java | Segitiga.java | default config > Search (Ctrl+F)

Source History Find Replace Go To... Open Recent

```

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  * @author faisal
9 */
10 public class PersegiPanjang extends MethodAbstract {
11     int panjang = 5;
12     int lebar = 10;
13
14     @Override
15     public int luas () {
16         return panjang*lebar;
17     }
18
19     @Override
20     public int keliling(){
21         return 2*panjang+lebar;
22     }
23 }
```

Navigator X Members <empty>

- PersegiPanjang : MethodAbstract
 - keliling() int : MethodAbstract
 - luas() int : MethodAbstract
 - lebar int
 - panjang int
 - print

Output - Module9 (run) X

```

Keliling Segitiga = 31
Luas Segitiga = 25
Keliling JajarGanjing = 64
Luas JajarGanjing = 200
Keliling Lingkaran = 20
Luas Lingkaran = 50
Luas PersegiPanjang = 50
Keliling Lingkaran = 18
Luas Lingkaran = 14
BUILD SUCCESSFUL (total time: 0 seconds)
```

Module9 - NetBeans IDE 8.2

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

Projects X Files Services

Start Page X JajarGanjing.java X MethodMan.java X MethodAbstract.java X Lingkaran.java X PersegPanjang.java X Segitiga.java X

Source History

```

1 /**
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5 */
6
7 /**
8  * @author faisal
9 */
10 public class Segitiga extends MethodAbstract {
11     int alas = 5;
12     int tinggi = 10;
13     int b = 12;
14     int c = 14;
15
16     @Override
17     public int luas () {
18         return alas*tinggi/2;
19     }
20     @Override
21     public int keliling(){
22         return alas+b+c;
23     }
24 }
25
26

```

Navigator X

Members

- Segitiga : MethodAbstract
 - keliling() int
 - luas() int
 - b int
 - c int
 - tinggi int

Output - Module9 (run) X

```

Kelling Segitiga = 31
Luas Segitiga = 25
Kelling JajarGanjing = 64
Luas JajarGanjing = 200
Kelling Lingkaran = 20
Luas Lingkaran = 30
Luas Persegipanjang = 50
Kelling Lingkaran = 18
Luas Lingkaran = 14
BUILD SUCCESSFUL (total time: 0 seconds)

```

Module9 - NetBeans IDE 8.2

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

Projects X Files Services

Start Page X JajarGanjing.java X MethodMan.java X MethodAbstract.java X Lingkaran.java X PersegPanjang.java X Segitiga.java X

Source History

```

1 /**
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5 */
6
7 /**
8  * @author faisal
9 */
10 public abstract class MethodAbstract {
11     public abstract int luas ();
12     public abstract int keliling();
13
14     public int getLuas () {
15         return luas();
16     }
17     public int getKelli(){
18         return keliling();
19     }
20 }
21
22

```

Navigator X

Members

- MethodAbstract
 - getLuas() int
 - getKelli() int
 - luas() int
 - keliling() int
 - luas() int

Output - Module9 (run) X

```

Kelling Segitiga = 31
Luas Segitiga = 25
Kelling JajarGanjing = 64
Luas JajarGanjing = 200
Kelling Lingkaran = 20
Luas Lingkaran = 30
Luas Persegipanjang = 50
Kelling Lingkaran = 18
Luas Lingkaran = 14
BUILD SUCCESSFUL (total time: 0 seconds)

```

● Tugas

Module9 - NetBeans IDE 8.2

```

1 /**
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5 */
6 package BangunRuang;
7
8 /**
9  * @author firda
10 */
11 public class MethodMan {
12     public static void main(String[] args) {
13         Balok blk = new Balok();
14         Bola bla = new Bola();
15         Kerucut krc = new Kerucut();
16         Kubus kbs = new Kubus();
17         Prismasegitiga ps = new Prismasegitiga();
18
19         System.out.println("Volume Balok = " + blk.Volume());
20         System.out.println("LuasPermukaan Balok = " + blk.LuasSelimut());
21         System.out.println("Volume Bola = " + bla.Volume());
22         System.out.println("LuasPermukaan Bola = " + bla.LuasSelimut());
23         System.out.println("Volume Kerucut = " + krc.Volume());
24         System.out.println("Luas Permukaan Kerucut = " + krc.LuasSelimut());
25         System.out.println("Volume Kubus = " + kbs.Volume());
26         System.out.println("Luas Permukaan Kubus = " + kbs.LuasSelimut());
27         System.out.println("Volume Prismasegitiga = " + ps.Volume());
28         System.out.println("Luas Permukaan Prismasegitiga = " + ps.LuasSelimut());
29     }
30 }
31
32

```

Output - Module9 (run) ×

```

run
Volume Balok = 7520
LuasPermukaan Balok = 2392
Volume Bola = 143
LuasPermukaan Bola = 588
Volume Kerucut = 2450
Luas Permukaan Kerucut = 840
Volume Kubus = 1000
Luas Permukaan Kubus = 600
Volume Prismasegitiga = 4000
Luas Permukaan Prismasegitiga = 2400
BUILD SUCCESSFUL (total time: 0 seconds)

```

Module9 - NetBeans IDE 8.2

```

1 /**
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5 */
6 package BangunRuang;
7
8 /**
9  * @author firda
10 */
11 public class MethodMan {
12     public static void main(String[] args) {
13         Balok blk = new Balok();
14         int l = 20;
15         int t = 22;
16         @Override
17         public int Volume(){
18             return p*t*t;
19         }
20         @Override
21         public int LuasSelimut(){
22             return 2*(p*t+p*t);
23         }
24     }
25 }

```

Output - Module9 (run) ×

```

run
Volume Balok = 7520
LuasPermukaan Balok = 2392
Volume Bola = 143
LuasPermukaan Bola = 588
Volume Kerucut = 2450
Luas Permukaan Kerucut = 840
Volume Kubus = 1000
Luas Permukaan Kubus = 600
Volume Prismasegitiga = 4000
Luas Permukaan Prismasegitiga = 2400
BUILD SUCCESSFUL (total time: 0 seconds)

```

Module9 - NetBeans IDE 8.2

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

Projects Services Files

BAB10 BAB11 BAB9 Modul9

BangunRuang

Balok.java Bola.java Kubus.java Kubus.java MethodAbstract.java MethodMain.java PrismaSegitiga.java

Test Packages Test Libraries

Navigator X Members <empty>

```

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 BangunRuang;
7
8 /**
9  * $author firda
10 */
11
12 public class Bola extends MethodAbstract {
13     int pi = 22/7;
14     int jari = 7;
15
16     public int Volume(){
17         return 4/3*pi*jari*jari;
18     }
19
20     @Override
21     public int LuasSelimut(){
22         return 4*pi*jari*jari;
23     }
24 }
```

Output - Module9 (run) X

```

Volume Balok = 7920
LuasPermukaan Balok = 2392
Volume Bola = 147
LuasPermukaan Bola = 558
Volume Kubus = 4860
LuasPermukaan Kubus = 840
Volume Kubus = 1000
Luas Permukaan Kubus = 450
Volume PrismaSegitiga = 4000
Luas Permukaan PrismaSegitiga = 2600
BUILD SUCCESSFUL (total time: 0 seconds)
```

1:1 1410 ING

Module9 - NetBeans IDE 8.2

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

Projects Services Files

BAB10 BAB11 BAB9 Modul9

BangunRuang

Balok.java Bola.java Kubus.java Kubus.java MethodAbstract.java MethodMain.java PrismaSegitiga.java

Test Packages Test Libraries

Navigator X Members <empty>

```

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 BangunRuang;
7
8 /**
9  * $author firda
10 */
11
12 public class Kerucut extends MethodAbstract{
13     int t = 50;
14     int pi = 22/7;
15     int jari = 7;
16     int s = 40;
17
18     @Override
19     public int Volume(){
20         return (pi*jari*jari*t)*1/3;
21     }
22
23     @Override
24     public int LuasSelimut(){
25         return pi*jari*s;
26     }
27
28 }
```

Output - Module9 (run) X

```

Volume Balok = 7920
LuasPermukaan Balok = 2392
Volume Bola = 147
LuasPermukaan Bola = 558
Volume Kubus = 4860
LuasPermukaan Kubus = 840
Volume Kubus = 1000
Luas Permukaan Kubus = 450
Volume PrismaSegitiga = 4000
Luas Permukaan PrismaSegitiga = 2600
BUILD SUCCESSFUL (total time: 0 seconds)
```

1:1 1411 ING

Module9 - NetBeans IDE 8.2

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

Projects Services Files

Start Page X Balok.java X Bola.java X Kerucut.java X Kubus.java X MethodAbstract.java X MethodMan.java X PrismaSegitiga.java X

Source History

```

1  /*
2   * To change this license header, choose License Headers in Project Properties.
3   * To change this template file, choose Tools | Templates
4   * and open the template in the editor.
5   */
6 package BangunRuang;
7
8 /**
9  * @author firda
10 */
11
12 public class Kerucut extends MethodAbstract{
13     int t = 50;
14     int pi = 22/7;
15     int jari = 7;
16     int s = 40;
17
18     @Override
19     public int Volume(){
20         return (pi*jari*jari*t)/3;
21     }
22     @Override
23     public int LuasSelimut(){
24         return pi*t*jari*s;
25     }
26 }

```

Navigator X

Members

- Kerucut in MethodAbstract
 - LuasSelimut() int : MethodAbstract
 - Volume() int : MethodAbstract
 - a int
 - jari int
 - s int
 - t int

Output - Module9 (run) X

```

Volume Balok = 7000
LuasPermukaan Balok = 2392
Volume Bola = 147
LuasPermukaan Bola = 458
Volume Kerucut = 2450
LuasPermukaan Kerucut = 840
Volume Kubus = 1000
Luas Permukaan Kubus = 450
Volume PrismaSegitiga = 4000
Luas Permukaan PrismaSegitiga = 2600
BUILD SUCCESSFUL (total time: 0 seconds)

```

Module9 - NetBeans IDE 8.2

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

Projects Services Files

Start Page X Balok.java X Bola.java X Kerucut.java X Kubus.java X MethodAbstract.java X MethodMan.java X PrismaSegitiga.java X

Source History

```

1  /*
2   * To change this license header, choose License Headers in Project Properties.
3   * To change this template file, choose Tools | Templates
4   * and open the template in the editor.
5   */
6 package BangunRuang;
7
8 /**
9  * @author firda
10 */
11
12 public class PrismaSegitiga {
13     int a = 10;
14     int t = 20;
15     int tprisma = 40;
16
17     public int Volume(){
18         return a*t/2*tprisma;
19     }
20     public int LuasSelimut(){
21         return t*(a+3*tprisma);
22     }
23 }

```

Navigator X

Members

- PrismaSegitiga
 - LuasSelimut() int
 - Volume() int
 - a int
 - t int
 - tprisma int

Output - Module9 (run) X

```

Volume Balok = 7000
LuasPermukaan Balok = 2392
Volume Bola = 147
LuasPermukaan Bola = 458
Volume Kerucut = 2450
LuasPermukaan Kerucut = 840
Volume Kubus = 1000
Luas Permukaan Kubus = 450
Volume PrismaSegitiga = 4000
Luas Permukaan PrismaSegitiga = 2600
BUILD SUCCESSFUL (total time: 0 seconds)

```

Module9 - NetBeans IDE 8.2

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

Projects Services Files

StartPage Bakal.java Bola.java Kerucut.java Kubus.java MethodAbstract.java MethodMan.java PrismaSegitiga.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 BangunRuang;
7
8 /**
9  * @author Firda
10 */
11 public abstract class MethodAbstract {
12     public abstract int Volume ();
13     public abstract int LuasSelimut();
14     public int getVolume () {
15         return Volume();
16     }
17     public int getSelimut(){
18         return LuasSelimut();
19     }
20 }
21
22
23
24
25

```

Navigator Members

- MethodAbstract
 - LuasSelimut():int
 - Volume():int
 - getSelimut():int
 - getVolume():int

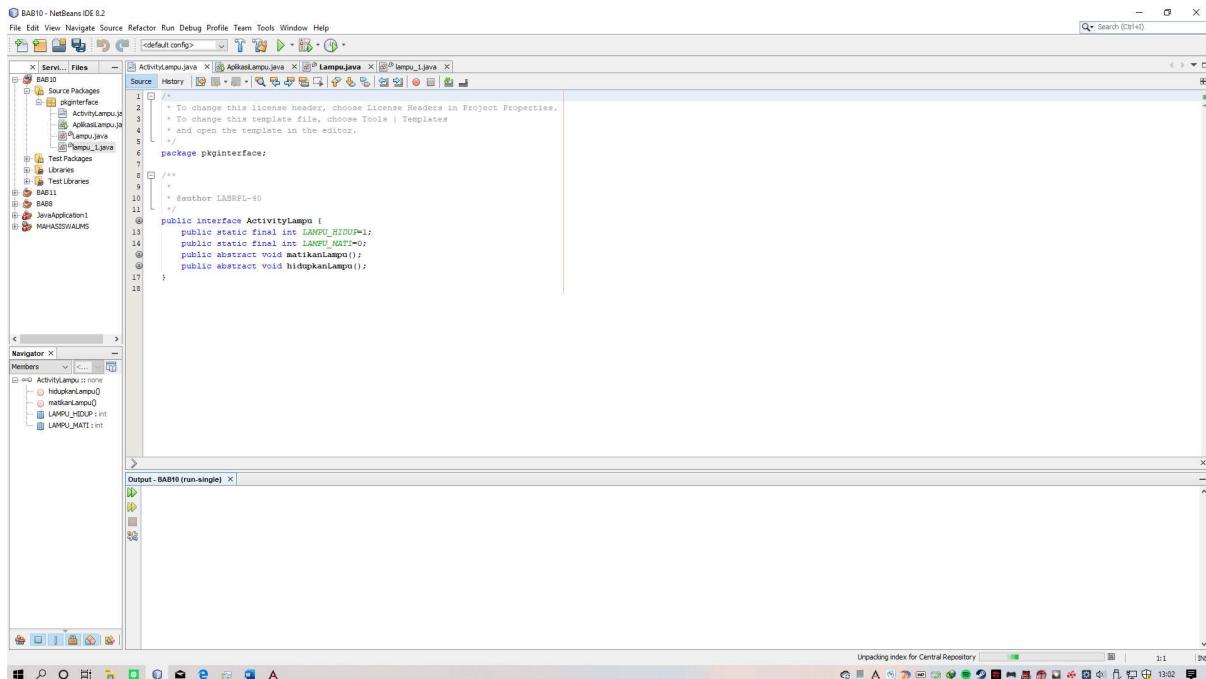
Output - Module9 (run) x

```

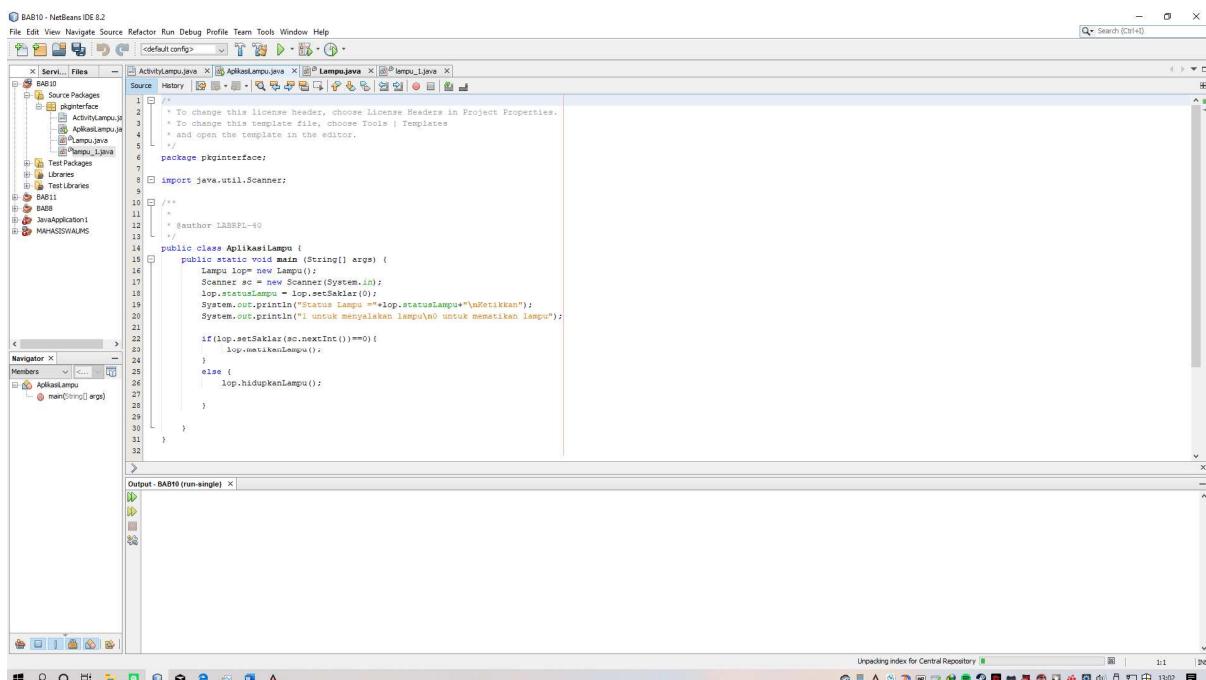
Volume Balok = 7920
LuasPermukaan Balok = 2392
Volume Bola = 147
LuasPermukaan Bola = 598
Volume Kerucut = 945
LuasPermukaan Kerucut = 840
Volume Kubus = 1000
Luas Permukaan Kubus = 450
Volume PrismaSegitiga = 4000
Luas Permukaan PrismaSegitiga = 2600
Luas Permukaan PrismaSegitiga = 2600
BUILD SUCCESSFUL (total time: 0 seconds)

```

10. Modul 10



```
ActivityLampu.java
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 pkginterface;
6 
7 /**
8 * 
9 */
10 /**
11 * @author LABRPL-40
12 */
13 public interface ActivityLampu {
14     public static final int LAMPU_HIDUP=1;
15     public static final int LAMPU_MATI=0;
16     public abstract void matikanLampu();
17     public abstract void hidupkanLampu();
18 }
```



```
ApkLampu.java
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 pkginterface;
6 
7 import java.util.Scanner;
8 
9 /**
10 * 
11 */
12 /**
13 * @author LABRPL-40
14 */
15 public class ApkLampu {
16     public static void main (String[] args) {
17         Langu lop = new Langu();
18         System.out.println("Status Lampu : "+lop.getStatusLampu());
19         lop.setStatLampu = lop.setStatLampu(0);
20         System.out.println("Status Lampu : "+lop.getStatusLampu());
21         System.out.println("1 untuk menyalaakan lampu\n0 untuk nematikan lampu");
22         if(lop.setStatLampu(ex.nextInt())==0) {
23             lop.aulikenLampu();
24         }
25         else {
26             lop.hidupkanLampu();
27         }
28     }
29 }
30 }
31 }
32 }
```

BAB10 - NetBeans IDE 8.2

```

    1 package pkginterface;
    2
    3 * To change this license header, choose License Headers in Project Properties.
    4 * To change this template file, choose Tools | Templates
    5 * and open the template in the editor.
    6
    7 package pkginterface;
    8
    9 /**
    10 * Author: LABRFL-40
    11 */
    12 class Lampu {
    13
    14     public int statusLampu;
    15
    16     @Override
    17     public void matikanLampu() {
    18         if(statusLampu==0) {
    19             System.out.println("Lampu sudah dalam kondisi mati");
    20         } else if(statusLampu==1) {
    21             statusLampu=0;
    22             System.out.println("Lampu sudah dimatikan");
    23         }
    24     }
    25
    26     @Override
    27     public void hidupkanLampu() {
    28
    29         if(statusLampu==1) {
    30             System.out.println("Lampu sudah dinyalakan\n***");
    31         } else {
    32             statusLampu=1;
    33             System.out.println("Lampu sudah dalam kondisi menyala");
    34         }
    35     }
    36
    37     public int setSeklar(int seklar) {
    38         return statusLampu = seklar;
    39     }
    40 }

```

Output: BAB10 (run-single)

```

ant -f C:\Users\Ibra\Documents\NetBeansProjects\BAB10 -Djavac.includes=pkginterface\AplikasiLampu.java -Dob.internal.action.name=run.single -Drun.class=pkginterface.AplikasiLampu run-single
Deleting: C:\Users\Ibra\Documents\NetBeansProjects\BAB10\build\built-jar.properties
Updating property file: C:\Users\Ibra\Documents\NetBeansProjects\BAB10\build\built-jar.properties
Compiling 1 source file to C:\Users\Ibra\Documents\NetBeansProjects\BAB10\build\classes
compile-single:
run-single:
statusLampu == 0
Ketikkan
1 untuk menyala lampu
0 untuk mematikan lampu
Lampu sudah dalam kondisi mati
BUILD SUCCESSFUL (total time: 3 minutes 15 seconds)

```

BAB10 - NetBeans IDE 8.2

```

    1 package pkginterface;
    2
    3 * To change this license header, choose License Headers in Project Properties.
    4 * To change this template file, choose Tools | Templates
    5 * and open the template in the editor.
    6
    7 package pkginterface;
    8
    9 /**
    10 * Author: LABRFL-40
    11 */
    12 class lampu {
    13
    14 }
    15

```

Output: BAB10 (run-single)

```

ant -f C:\Users\Ibra\Documents\NetBeansProjects\BAB10 -Djavac.includes=pkginterface\AplikasiLampu.java -Dob.internal.action.name=run.single -Drun.class=pkginterface.AplikasiLampu run-single
Deleting: C:\Users\Ibra\Documents\NetBeansProjects\BAB10\build\built-jar.properties
Updating property file: C:\Users\Ibra\Documents\NetBeansProjects\BAB10\build\built-jar.properties
Compiling 1 source file to C:\Users\Ibra\Documents\NetBeansProjects\BAB10\build\classes
compile-single:
run-single:
statusLampu == 0
Ketikkan
1 untuk menyala lampu
0 untuk mematikan lampu
Lampu sudah dalam kondisi mati
BUILD SUCCESSFUL (total time: 3 minutes 15 seconds)

```

11. Modul 11

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

- NestedClass.java:** Contains nested classes NestedClass, StaticNestedClass, and InnerClass, each with printName() methods. It also contains a main() method for the NestedClass class.
- wad.java:** Contains a main() method for the NestedClass class.

The Output window shows the following run results:

```
run:
Faisal Hadi Dewanto : L200180046
Jurusan: Informatika
BUILD SUCCESSFUL (total time: 1 second)
```

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

- NestedClass.java:** Contains nested classes NestedClass, StaticNestedClass, and InnerClass, each with printName() methods. It also contains a main() method for the NestedClass class.
- wad.java:** Contains a main() method for the NestedClass class.

The Output window shows the following run results:

```
run:
Faisal Hadi Dewanto : L200180046
Jurusan: Informatika
BUILD SUCCESSFUL (total time: 1 second)
```

12. Modul 12

• Button

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

- Project:** BAB12 - NetBeans IDE 8.2
- Source Editor:** DemRadioButton.java (selected)
- Code:** Java code for a radio button application. It creates a frame with a panel containing four radio buttons labeled "Sangat tidak setuju", "Tidak setuju", "Kurang setuju", and "Sangat setuju".
- Output:** Shows the application running in a window titled "Belajar mengenal GUI". The window displays the text "Modul Praktikum Pemrograman Berorientasi Objek jelas dan mudah." and contains four radio buttons.
- Output Tab:** Output - BAB12 (run) shows "BUILD SUCCESSFUL (total time: 1 minute 37 seconds)"
- Bottom:** Windows taskbar and system tray

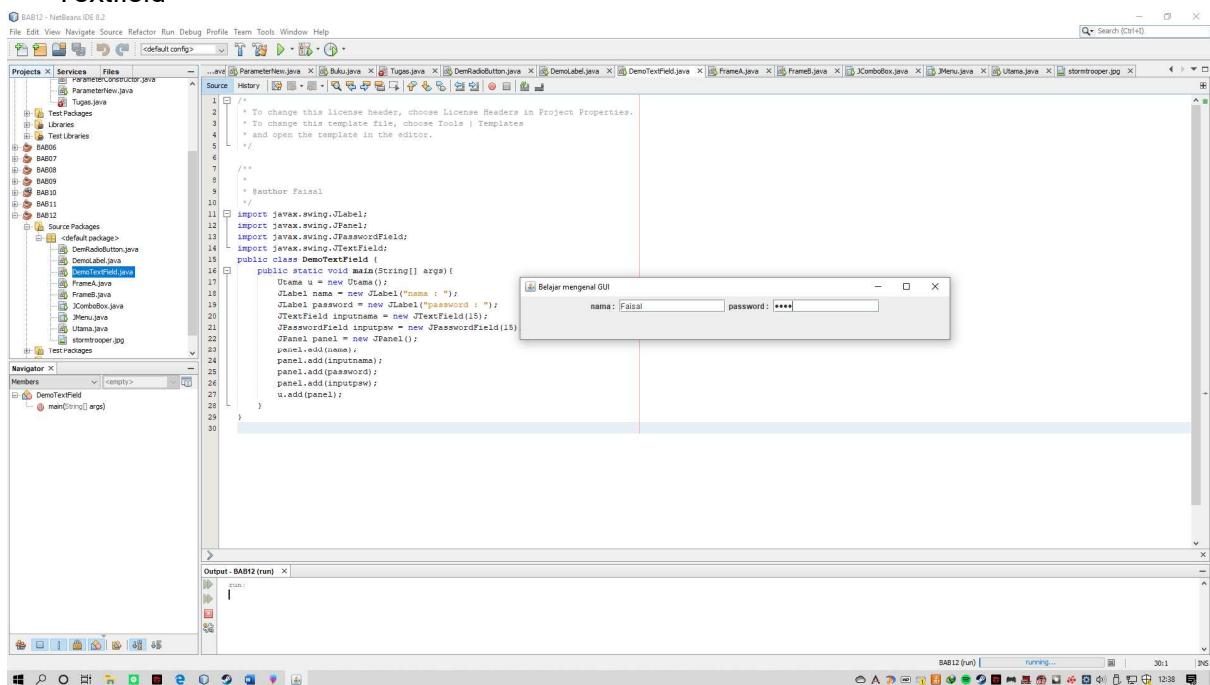
• Label

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

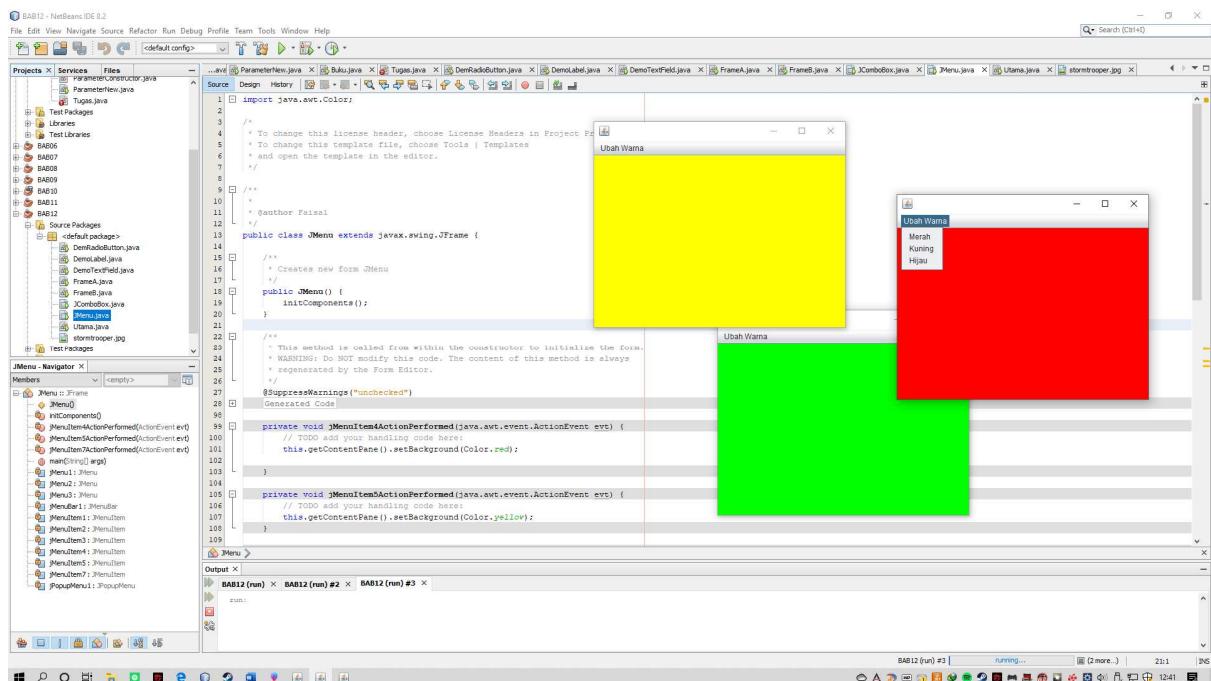
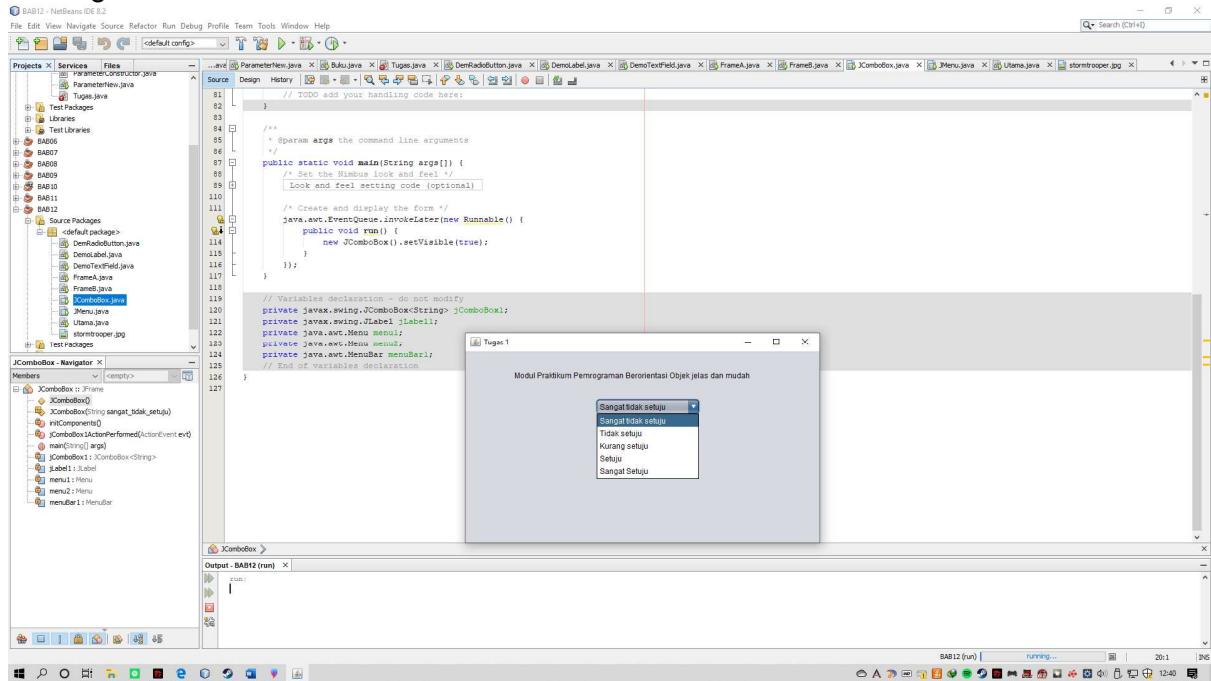
- Project:** BAB12 - NetBeans IDE 8.2
- Source Editor:** DemLabel.java (selected)
- Code:** Java code for a label application. It creates a frame with a panel containing a label that displays an image from the class's resource path.
- Output:** Shows the application running in a window titled "Belajar mengenal GUI". The window displays a large image of a stormtrooper.
- Output Tab:** Output - BAB12 (run) shows "BUILD SUCCESSFUL (total time: 1 minute 37 seconds)"
- Bottom:** Windows taskbar and system tray



• Textfield



● Tugas



12.1.1. Frame

a. Lengkapi pengertian implementasi class JFrame pada tabel berikut ini!

Konstruktor	Keterangan
JFrame()	Membuat JFrame tanpa judul
JFrame(String Judul)	Membuat JFrame dengan judul

Metode	Keterangan
void setSize(int lebar, int	Menentukan ukuran frame
void setLocation(int x, int y)	Menentukan lokasi frame dihitung dari kiri atas
void setVisible(Boolean)	Menentukan JFrame ditampilkan atau tidak
void setLocationRelativeTo(Component)	Menentukan letak JFrame relative

12.1.2. Button

a. Lengkapi pengertian implementasi class JButton pada tabel berikut ini!

Konstruktor	Keterangan
JButton()	Membuat JButton tanpa teks maupun icon
JButton(String teks)	Membuat JButton dengan teks
JButton(Icon icon)	Membuat JButton dengan icon
JButton(String teks, Icon icon)	Membuat JButton dengan teks dan icon

12.1.3. Label

a. Lengkapi pengertian implementasi class JLabel pada tabel berikut ini

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

12.1.4. TextField dan Password Field

a. Lengkapi pengertian implementasi class JTextField pada tabel di bawah ini.

Konstruktor	Keterangan
JLabel (String teks)	Label dengan teks
JTextField ()	Text field kosong tanpa tulisan
JTextField(int i)	Text field dengan panjang yang ditentukan
JTextField (String i)	Text field dengan teks yang sudah ditentukan
JTextField(String teks, int i)	Text field dengan teks dan Panjang kolom yang sudah ditentukan

Parameter dalam class	Penjelasan
String Text	Teksi dalam Text field
Boolean Editable	Menentukan bisa tidaknya teks dalam Text field untuk diedit
Int columns	Jumlah kolom pada Text field
Int horizontalAlignment	Perataan horizontal pada Text field

12.1.5. Radio Button dan CheckBox

a. Lengkapi pengertian implementasi class JCheckBox pada table berikut ini

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