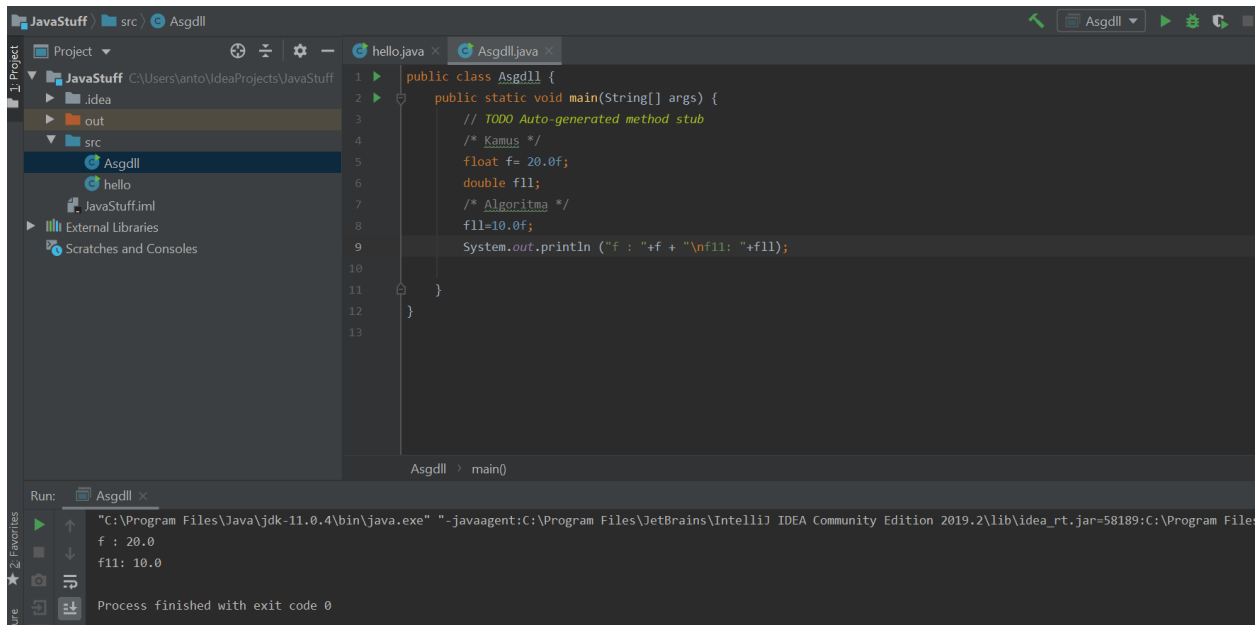


Program 1



```
1 public class Asgdll {
2     public static void main(String[] args) {
3         // TODO Auto-generated method stub
4         /* Kamus */
5         float f= 20.0f;
6         double f11;
7         /* Algoritma */
8         f11=10.0f;
9         System.out.println ("f : "+f + "\nf11: "+f11);
10    }
11 }
12
13
```

Run: Asgdll ×

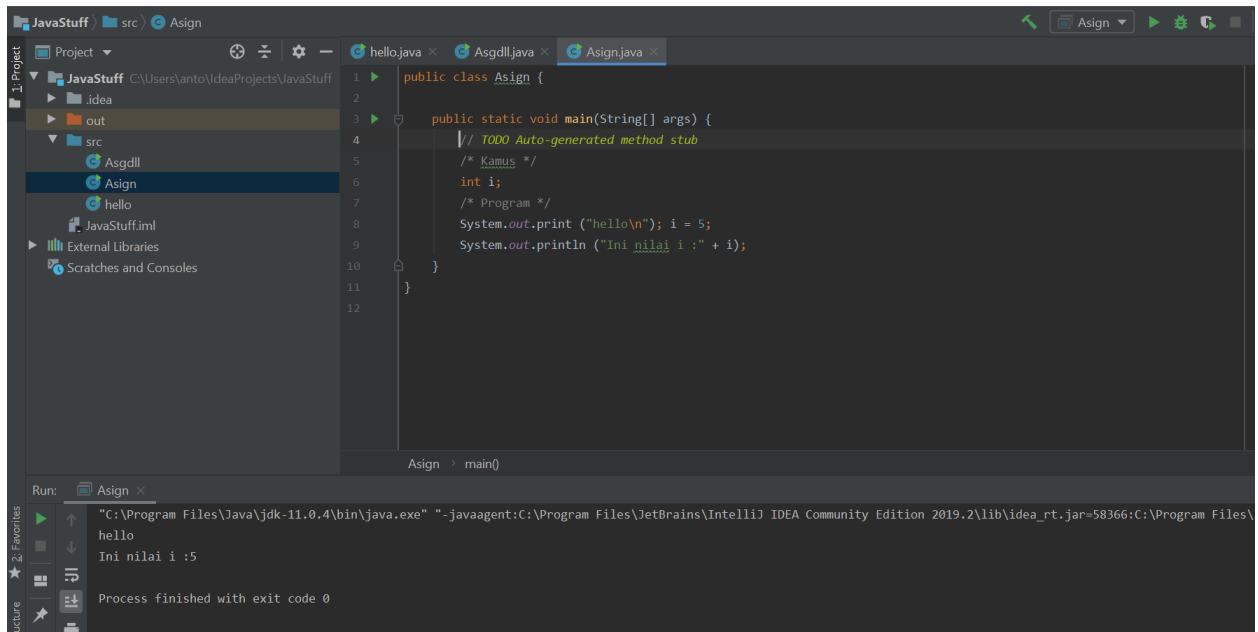
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58189:C:\Program Files\..."

f : 20.0
f11: 10.0

Process finished with exit code 0

Program ini berfungsi untuk menunjukkan 2 cara memberikan nilai terhadap variable yang telah di deklarasi.

Program 2



```
1 public class Assign {
2     public static void main(String[] args) {
3         // TODO Auto-generated method stub
4         /* Kamus */
5         int i;
6         /* Program */
7         System.out.print ("hello\n"); i = 5;
8         System.out.println ("Ini nilai i : " + i);
9     }
10 }
11
12
```

Run: Assign ×

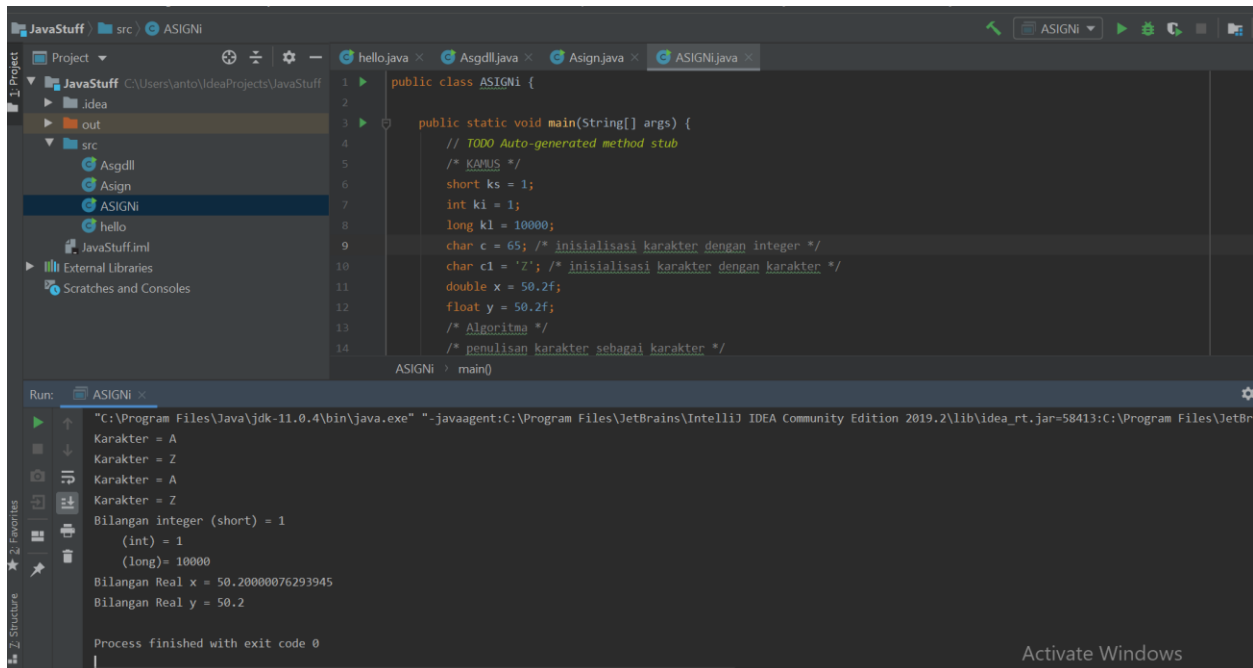
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58366:C:\Program Files\..."

hello
Ini nilai i :5

Process finished with exit code 0

Program ini menunjukkan cara memberi nilai terhadap variable yang telah di deklarasi tapi belum di isikan nilai.

Program 3



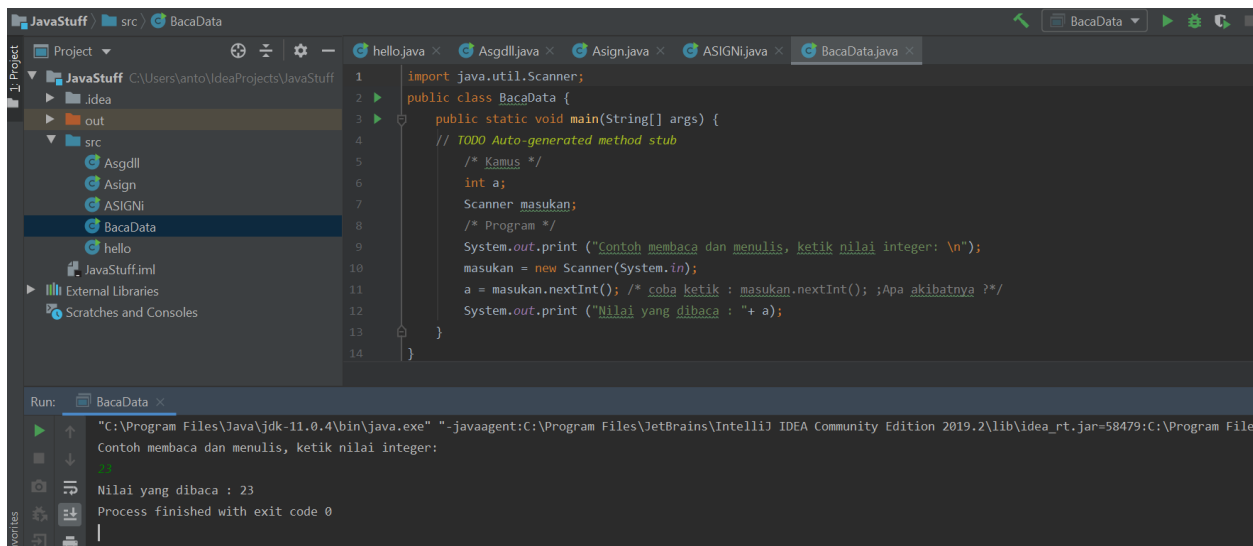
```
1 public class ASIGNi {
2
3     public static void main(String[] args) {
4         // TODO Auto-generated method stub
5         /* KAMUS */
6         short ks = 1;
7         int ki = 1;
8         long kl = 10000;
9         char c = 65; /* inisialisasi karakter dengan integer */
10        char c1 = 'Z'; /* inisialisasi karakter dengan karakter */
11        double x = 50.2f;
12        float y = 50.2f;
13        /* Algoritma */
14        /* penulisan karakter sebagai karakter */
15    }
16 }
```

Run: ASIGNi

```
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58413:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\config Karaker = A
Karaker = Z
Karaker = A
Karaker = Z
Bilangan integer (short) = 1
(int) = 1
(long)= 10000
Bilangan Real x = 50.20000076293945
Bilangan Real y = 50.2
Process finished with exit code 0
```

Program ini menunjukkan contoh sederhana pen-deklarasian variable bilangan bulat, karakter, dan bilangan riil.

Program 4



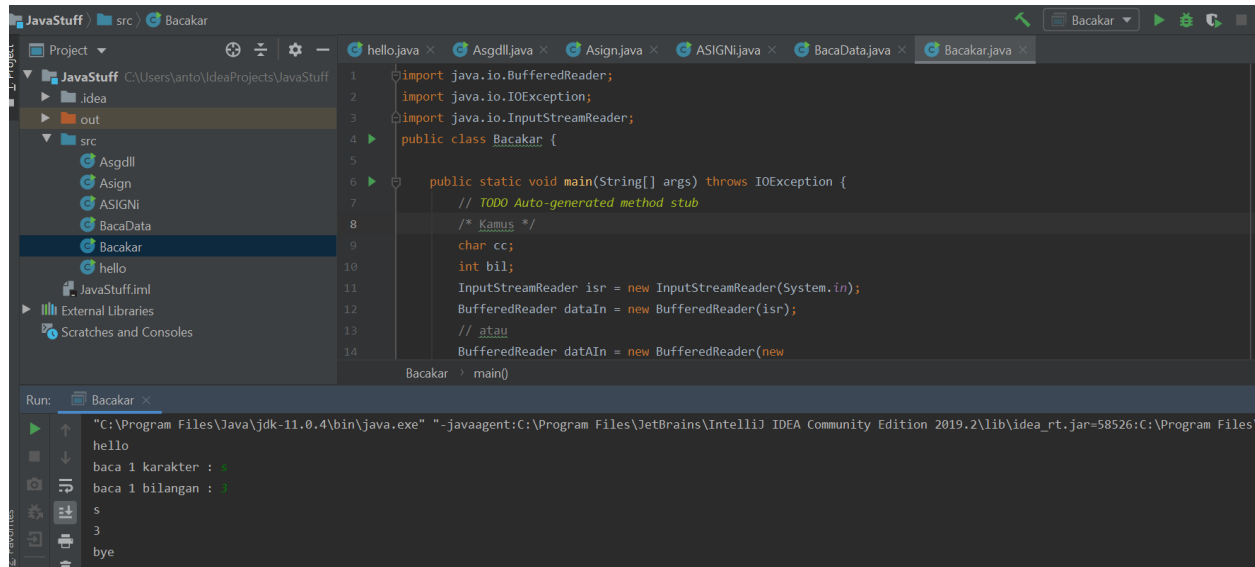
```
1 import java.util.Scanner;
2 public class BacaData {
3     public static void main(String[] args) {
4         // TODO Auto-generated method stub
5         /* KAMUS */
6         int a;
7         Scanner masukan;
8         /* Program */
9         System.out.print ("Contoh membaca dan menulis, ketik nilai integer: \n");
10        masukan = new Scanner(System.in);
11        a = masukan.nextInt(); /* coba ketik : masukan.nextInt(); ;Apa akibatnya ?*/
12        System.out.print ("Nilai yang dibaca : "+ a);
13    }
14 }
```

Run: BacaData

```
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58479:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\config Contoh membaca dan menulis, ketik nilai integer:
23
Nilai yang dibaca : 23
Process finished with exit code 0
```

Program ini menunjukkan cara meng-input dari keyboard.

Program 5



The screenshot shows the IntelliJ IDEA interface with a project named 'JavaStuff'. The 'src' directory contains several files, including 'Bacakar.java'. The code in 'Bacakar.java' is as follows:

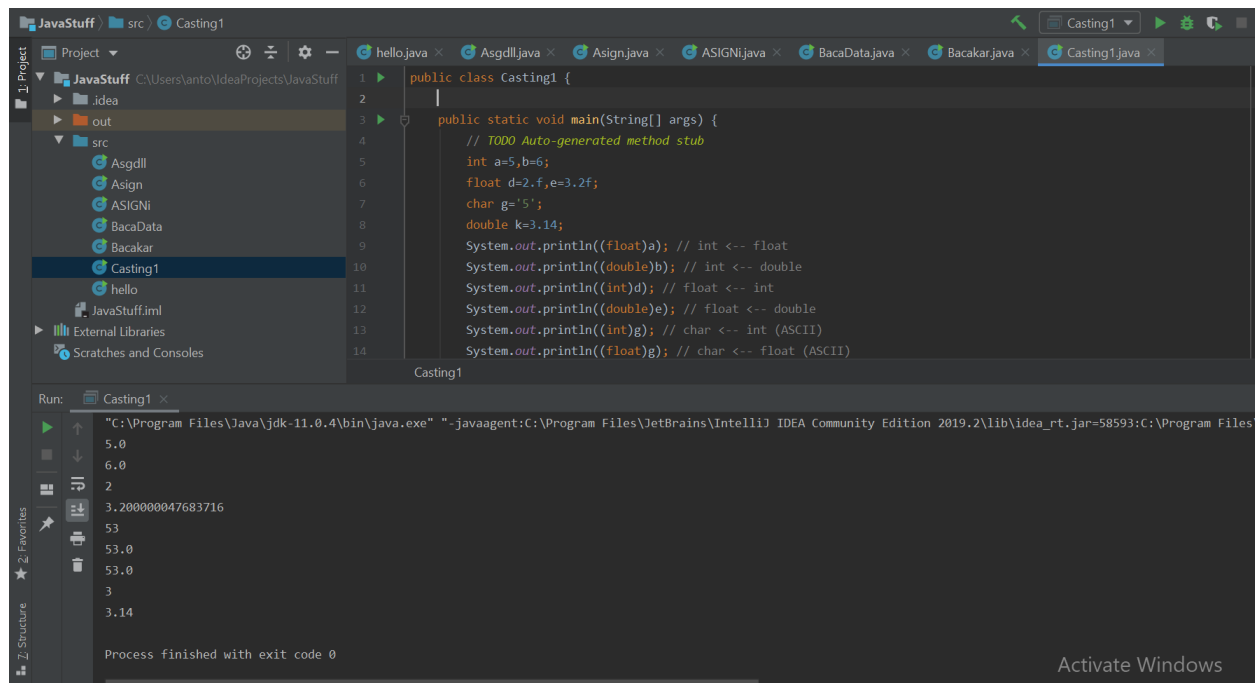
```
1 import java.io.BufferedReader;
2 import java.io.IOException;
3 import java.io.InputStreamReader;
4 public class Bacakar {
5
6     public static void main(String[] args) throws IOException {
7         // TODO Auto-generated method stub
8         /* Kamus */
9         char cc;
10        int bil;
11        InputStreamReader isr = new InputStreamReader(System.in);
12        BufferedReader dataIn = new BufferedReader(isr);
13        // atau
14        BufferedReader dataIn = new BufferedReader(new
```

The Run window shows the output of the program:

```
Run: Bacakar
"\"C:\Program Files\Java\jdk-11.0.4\bin\java.exe\" \"-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58526:C:\Program Files\
hello
baca 1 karakter :
baca 1 bilangan :
s
3
bye
```

Program ini menunjukkan penggunaan metode pendeteksi input keyboard selain scanner.

Program 6



The screenshot shows the IntelliJ IDEA interface with a project named 'JavaStuff'. The 'src' directory contains several files, including 'Casting1.java'. The code in 'Casting1.java' is as follows:

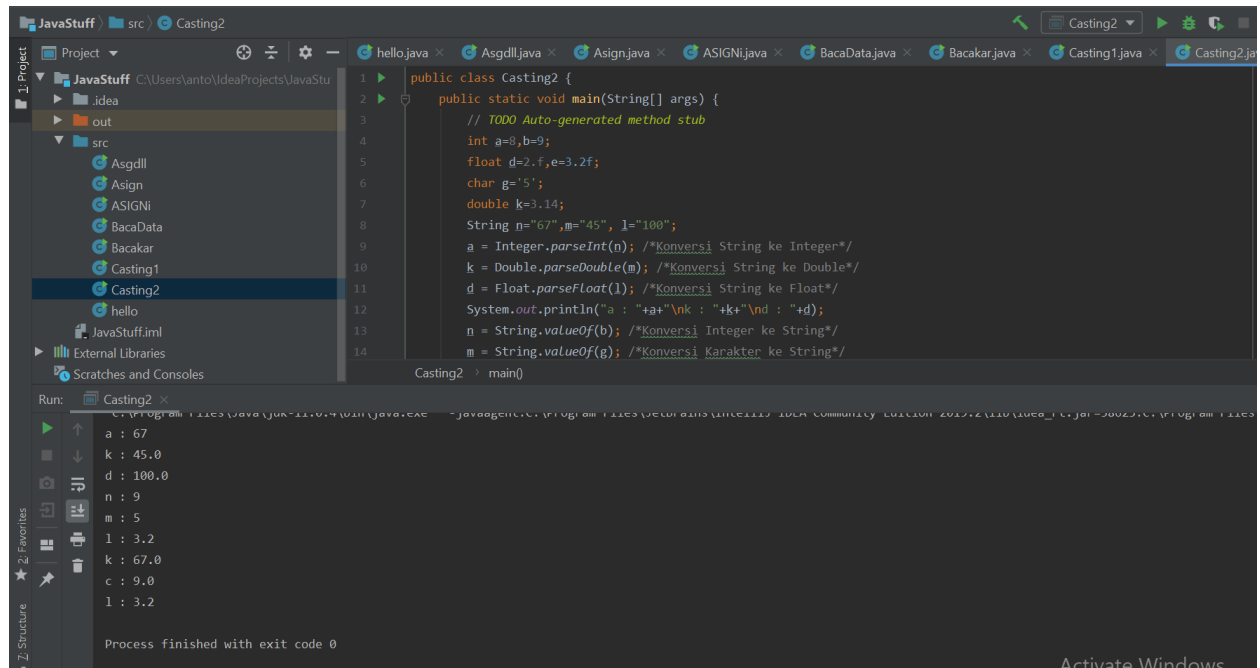
```
1 public class Casting1 {
2
3     public static void main(String[] args) {
4         // TODO Auto-generated method stub
5         int a=5,b=6;
6         float d=2.5f,e=3.2f;
7         char g='5';
8         double k=3.14;
9         System.out.println((float)a); // int <-- float
10        System.out.println((double)b); // int <-- double
11        System.out.println((int)d); // float <-- int
12        System.out.println((double)e); // float <-- double
13        System.out.println((int)g); // char <-- int (ASCII)
14        System.out.println((float)g); // char <-- float (ASCII)
```

The Run window shows the output of the program:

```
Run: Casting1
"\"C:\Program Files\Java\jdk-11.0.4\bin\java.exe\" \"-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58593:C:\Program Files\
5.0
6.0
2
3.200000047683716
53
53.0
53.0
3
3.14
Process finished with exit code 0
```

Program ini menunjukkan cara melakukan casting menggunakan tipe data primitif.

Program 7



```
1 public class Casting2 {
2     public static void main(String[] args) {
3         // TODO Auto-generated method stub
4         int a=8,b=9;
5         float d=2.f,e=3.2f;
6         char g='5';
7         double k=3.14;
8         String n="67",m="45", l="100";
9         a = Integer.parseInt(n); /*Konversi String ke Integer*/
10        k = Double.parseDouble(m); /*Konversi String ke Double*/
11        d = Float.parseFloat(l); /*Konversi String ke Float*/
12        System.out.println("a : "+a+"\nk : "+k+"\nd : "+d);
13        n = String.valueOf(b); /*Konversi Integer ke String*/
14        m = String.valueOf(g); /*Konversi Karakter ke String*/
15    }
16 }
```

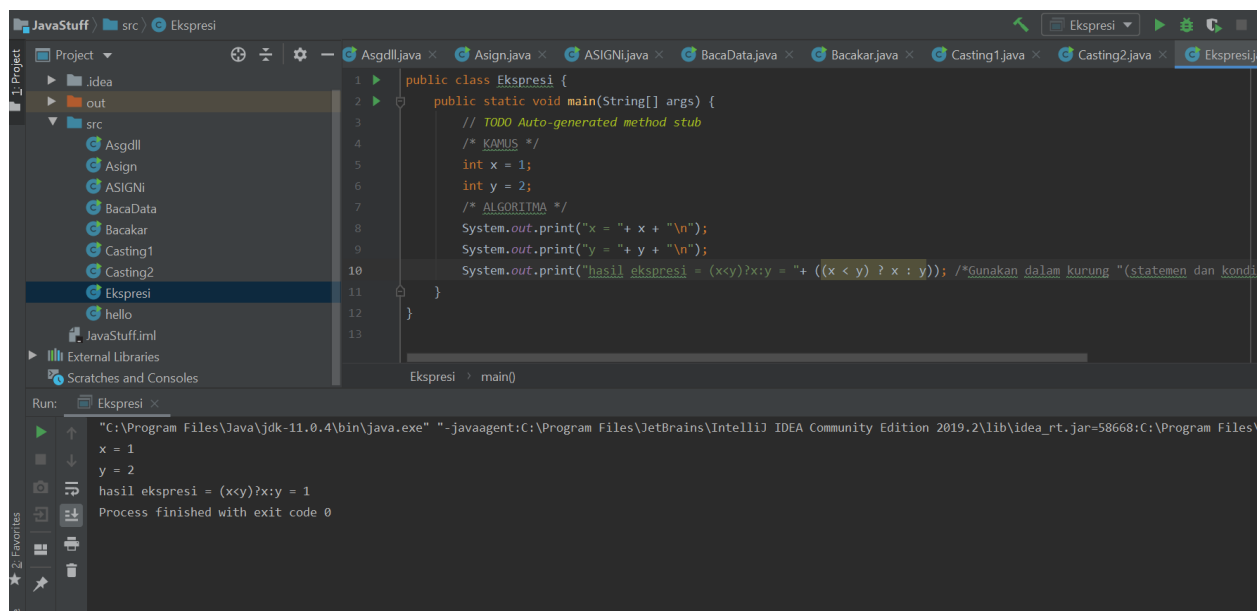
Run: Casting2

```
a : 67
k : 45.0
d : 100.0
n : 9
m : 5
l : 3.2
k : 67.0
c : 9.0
l : 3.2

Process finished with exit code 0
```

Program ini menunjukkan cara melakukan casting menggunakan tipe data class.

Program 8



```
1 public class Ekspresi {
2     public static void main(String[] args) {
3         // TODO Auto-generated method stub
4         /* KAMUS */
5         int x = 1;
6         int y = 2;
7         /* ALGORITMA */
8         System.out.print("x = " + x + "\n");
9         System.out.print("y = " + y + "\n");
10        System.out.print("hasil ekspresi = (x<y)?x:y = " + ((x < y) ? x : y)); /*Gunakan dalam kurung "(statemen dan kondisi)"*/
11    }
12 }
13 }
```

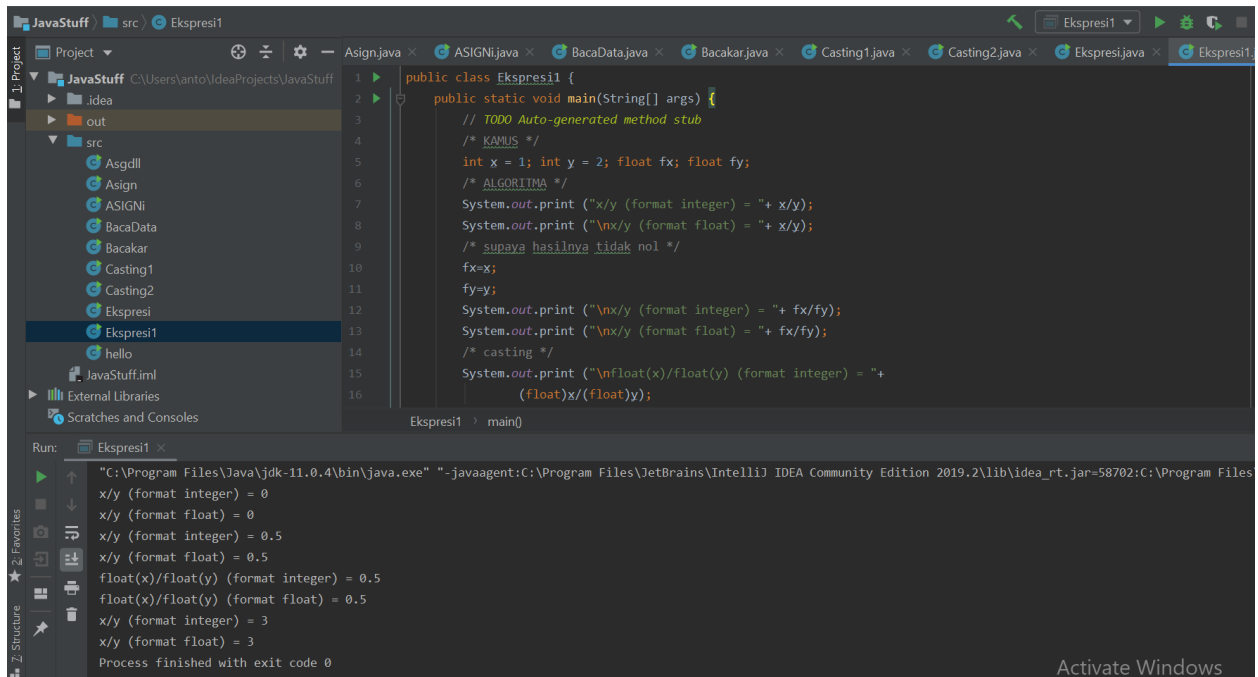
Run: Ekspresi

```
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58668:C:\Program Files\Java\jdk-11.0.4\bin" java
x = 1
y = 2
hasil ekspresi = (x<y)?x:y = 1

Process finished with exit code 0
```

Program ini menunjukkan cara menggunakan operator kondisional.

Program 9



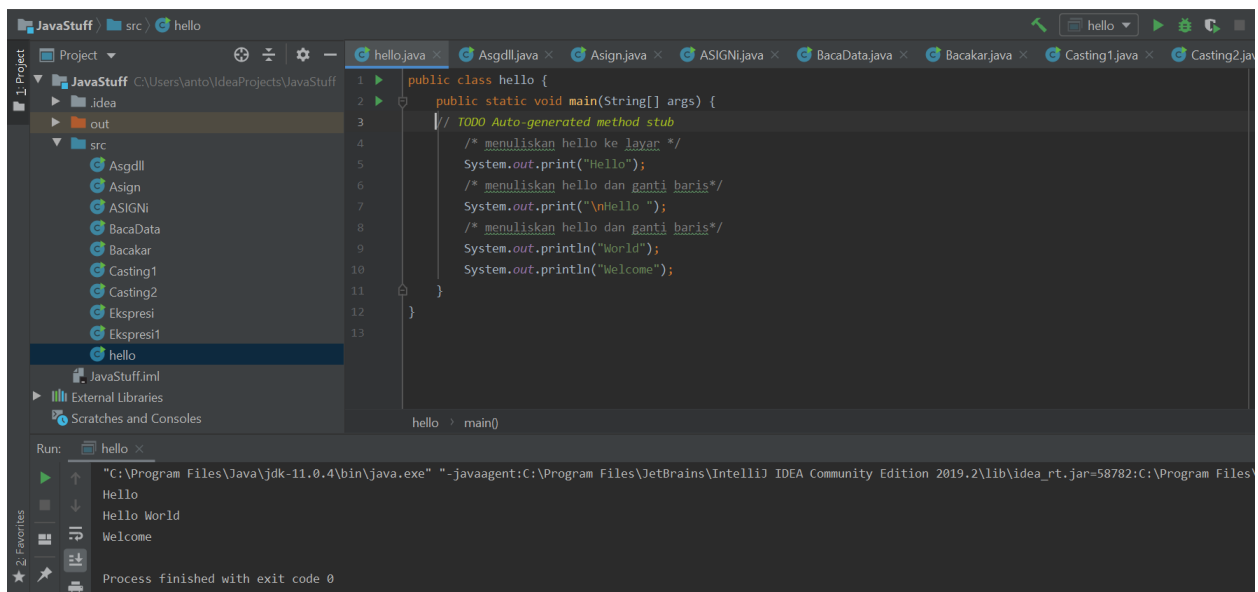
```
public class Ekspres1 {
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        /* KAMUS */
        int x = 1; int y = 2; float fx; float fy;
        /* ALGORITMA */
        System.out.print ("x/y (format integer) = " + x/y);
        System.out.print ("\nx/y (format float) = " + x/y);
        /* supaya hasilnya tidak nol */
        fx=x;
        fy=y;
        System.out.print ("\nx/y (format integer) = " + fx/fy);
        System.out.print ("\nx/y (format float) = " + fx/fy);
        /* casting */
        System.out.print ("\nfloat(x)/float(y) (format integer) = " +
            (float)x/(float)y);
    }
}
```

Run: Ekspres1 x

```
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58702:C:\Program Files\Java\jdk-11.0.4\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\config x/y (format integer) = 0
x/y (format float) = 0
x/y (format integer) = 0.5
x/y (format float) = 0.5
float(x)/float(y) (format integer) = 0.5
float(x)/float(y) (format float) = 0.5
x/y (format integer) = 3
x/y (format float) = 3
Process finished with exit code 0
```

Program ini menunjukkan contoh pembagian integer dan casting.

Program 10



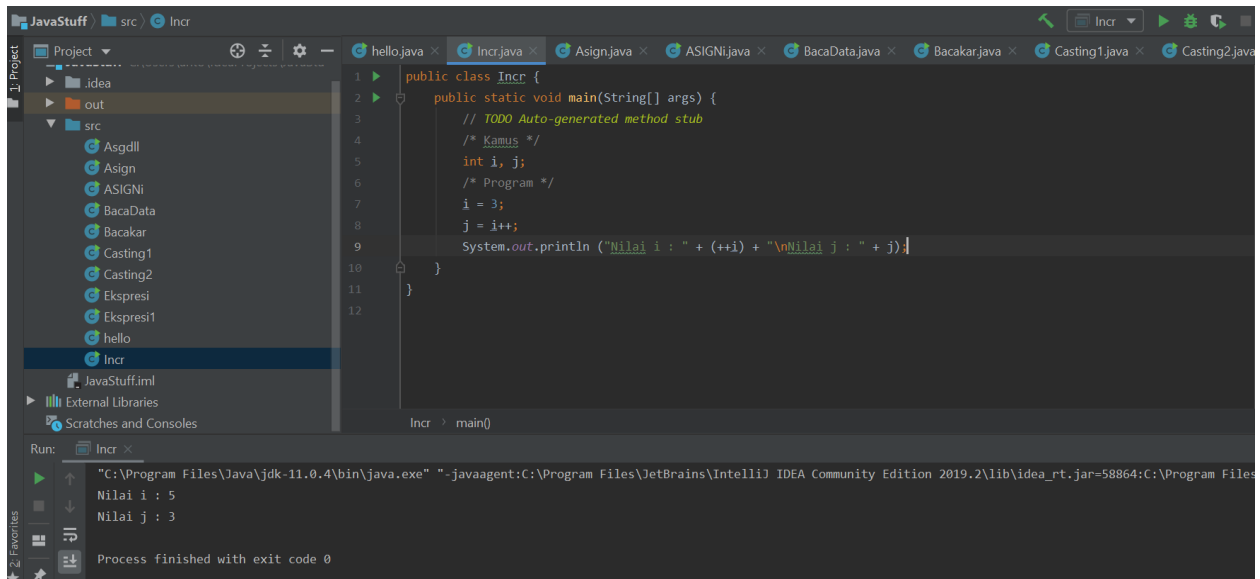
```
public class hello {
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        /* menuliskan hello ke layar */
        System.out.print("Hello");
        /* menuliskan hello dan ganti baris*/
        System.out.print("\nHello ");
        /* menuliskan hello dan ganti baris*/
        System.out.println("World");
        System.out.println("Welcome");
    }
}
```

Run: hello x

```
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58782:C:\Program Files\Java\jdk-11.0.4\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\config Hello
Hello World
Welcome
Process finished with exit code 0
```

Program ini merupakan contoh program paling sederhana yaitu output ke terminal.

Program 11



```
1 public class Incr {
2     public static void main(String[] args) {
3         // TODO Auto-generated method stub
4         /* Kamus */
5         int i, j;
6         /* Program */
7         i = 3;
8         j = i++;
9         System.out.println ("Nilai i : " + (++i) + "\nNilai j : " + j);
10    }
11 }
12
```

Run: Incr ×

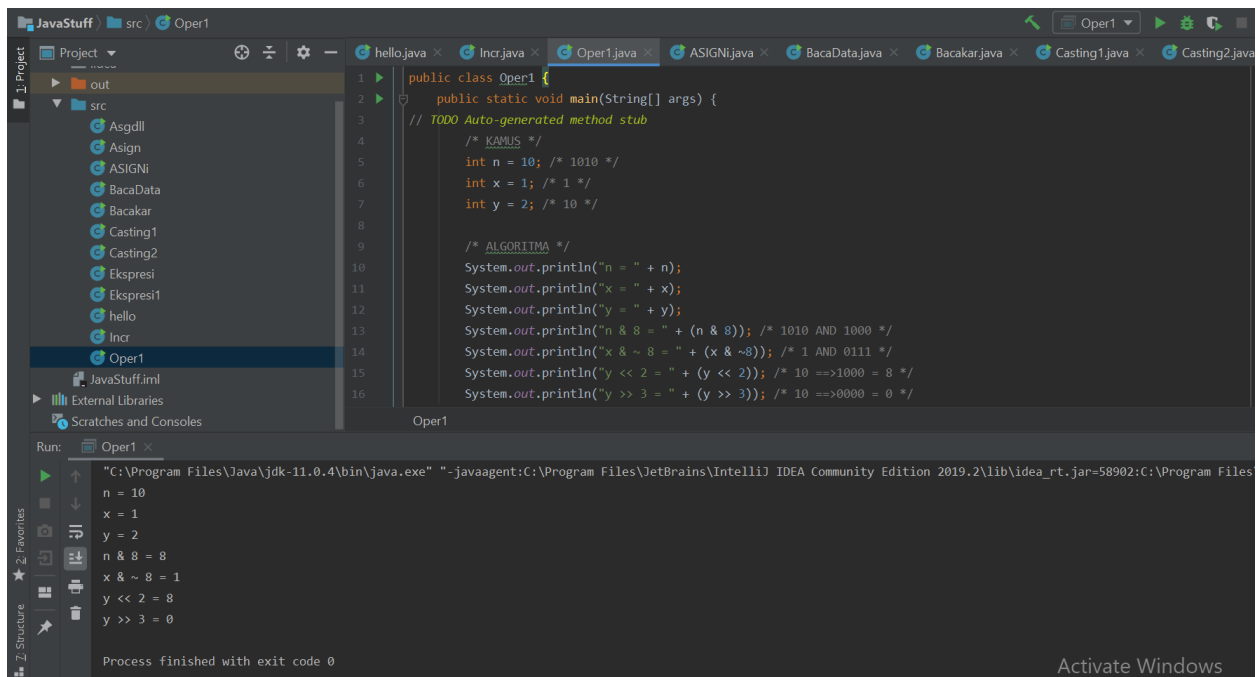
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58864:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\conf -Didea.copyright.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\copyright -Didea.home.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin -Didea.platform.prefix=JDK -Didea.vendor.id=JetBrains -Didea.version=2019.2 -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin\idea_rt.jar=58864:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin

Nilai i : 5
Nilai j : 3

Process finished with exit code 0

Program ini menunjukkan penggunaan operator increment (++).

Program 12



```
1 public class Oper1 {
2     public static void main(String[] args) {
3         // TODO Auto-generated method stub
4         /* KAMUS */
5         int n = 10; /* 1010 */
6         int x = 1; /* 1 */
7         int y = 2; /* 10 */
8
9         /* ALGORITMA */
10        System.out.println("n = " + n);
11        System.out.println("x = " + x);
12        System.out.println("y = " + y);
13        System.out.println("n & 8 = " + (n & 8)); /* 1010 AND 1000 */
14        System.out.println("x & ~ 8 = " + (x & ~8)); /* 1 AND 0111 */
15        System.out.println("y << 2 = " + (y << 2)); /* 10 ==> 100 = 4 */
16        System.out.println("y >> 3 = " + (y >> 3)); /* 10 ==> 0000 = 0 */
17    }
18 }
```

Run: Oper1 ×

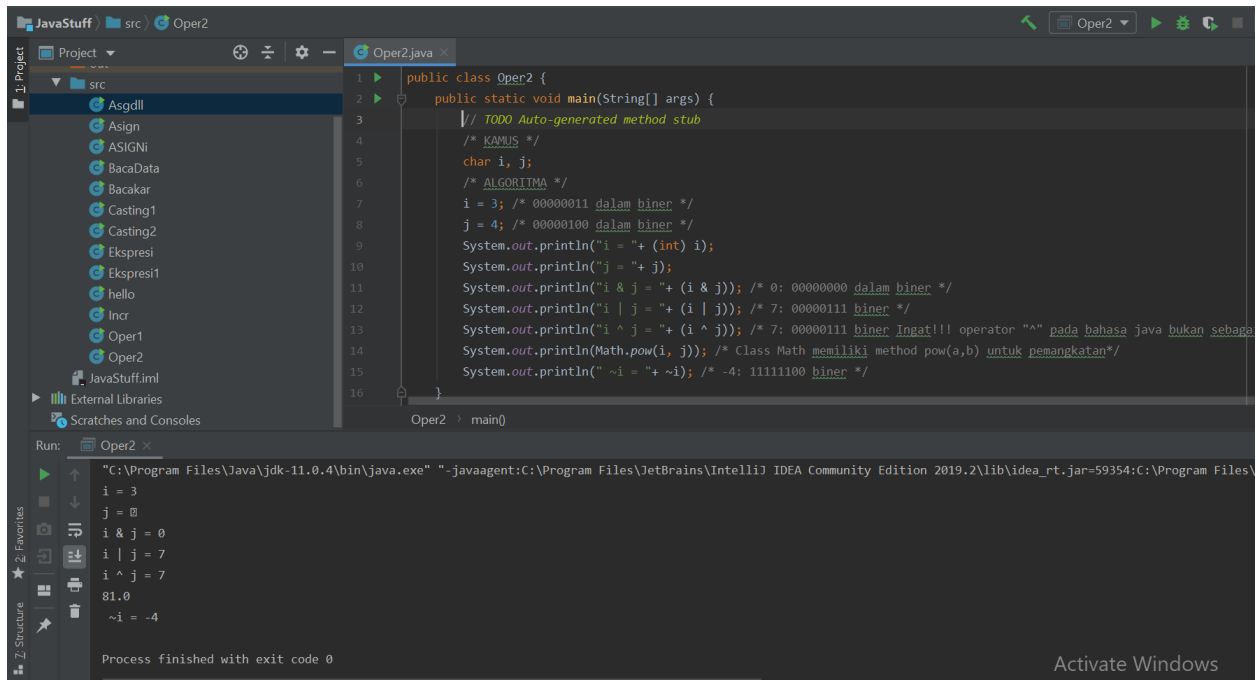
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=58902:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\conf -Didea.copyright.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\copyright -Didea.home.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin -Didea.platform.prefix=JDK -Didea.vendor.id=JetBrains -Didea.version=2019.2 -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin\idea_rt.jar=58902:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\bin

n = 10
x = 1
y = 2
n & 8 = 8
x & ~ 8 = 1
y << 2 = 4
y >> 3 = 0

Process finished with exit code 0

Program ini menunjukkan penggunaan operator terhadap bit.

Program 13



```
1 public class Oper2 {
2     public static void main(String[] args) {
3         // TODO Auto-generated method stub
4         /* KAMUS */
5         char i, j;
6         /* ALGORITMA */
7         i = 3; /* 00000011 dalam biner */
8         j = 4; /* 00000100 dalam biner */
9         System.out.println("i = " + (int) i);
10        System.out.println("j = " + j);
11        System.out.println("i & j = " + (i & j)); /* 0: 00000000 dalam biner */
12        System.out.println("i | j = " + (i | j)); /* 7: 00000111 biner Ingat!!! operator "^" pada bahasa java bukan sebagai
13        System.out.println("i ^ j = " + (i ^ j)); /* 7: 00000111 biner Ingat!!! operator "^" pada bahasa java bukan sebagai
14        System.out.println(Math.pow(i, j)); /* Class Math memiliki method pow(a,b) untuk pemangkatan*/
15        System.out.println("~i = " + ~i); /* -4: 11111100 biner */
16    }
17 }
```

Run: Oper2

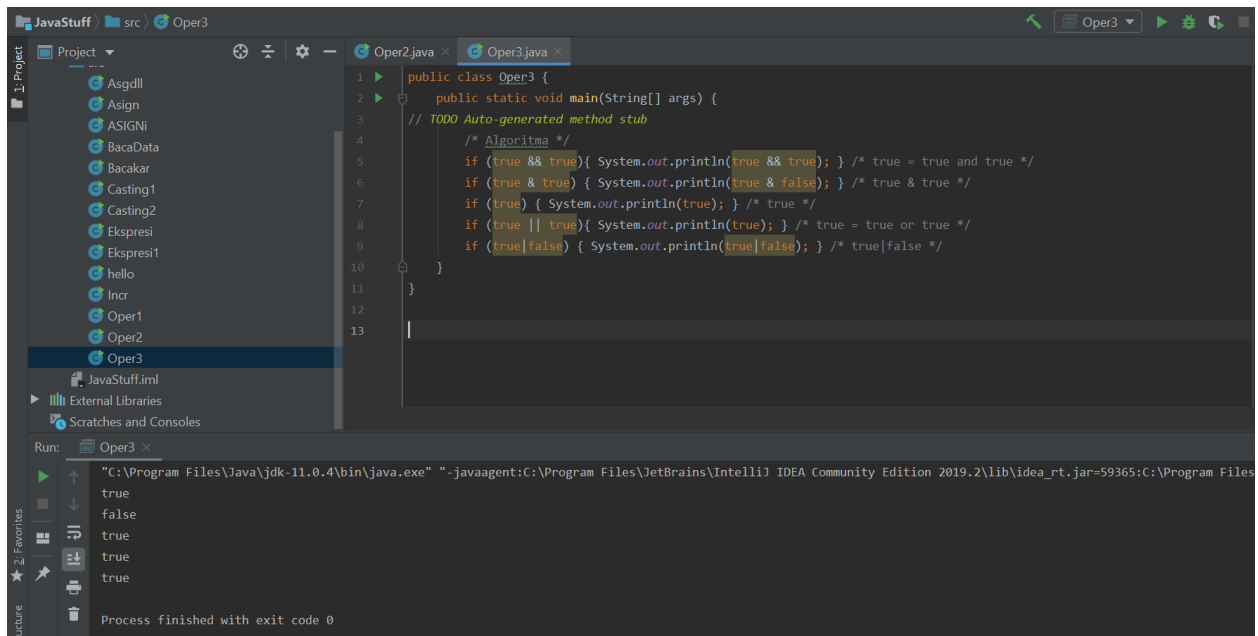
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=59354:C:\Program Files\Java\jdk-11.0.4\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\config -Didea.system.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar -Didea.version=2019.2

i = 3
j = 4
i & j = 0
i | j = 7
i ^ j = 7
81.0
~i = -4

Process finished with exit code 0

Program ini menunjukkan penggunaan operator terhadap relational dan bit.

Program 14



```
1 public class Oper3 {
2     public static void main(String[] args) {
3         // TODO Auto-generated method stub
4         /* Algoritma */
5         if (true && true) { System.out.println(true && true); } /* true = true and true */
6         if (true & true) { System.out.println(true & false); } /* true & true */
7         if (true) { System.out.println(true); } /* true */
8         if (true || true) { System.out.println(true); } /* true = true or true */
9         if (true|false) { System.out.println(true|false); } /* true|false */
10    }
11 }
12
13 |
```

Run: Oper3

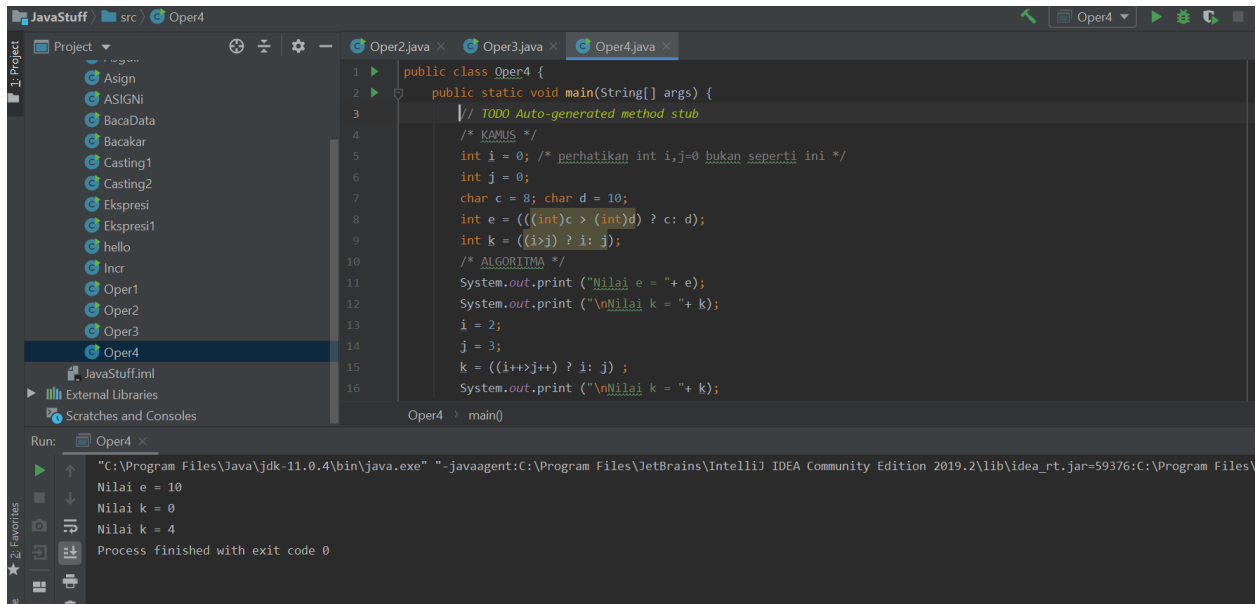
"C:\Program Files\Java\jdk-11.0.4\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar=59365:C:\Program Files\Java\jdk-11.0.4\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\config -Didea.system.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.2\lib\idea_rt.jar -Didea.version=2019.2

true
false
true
true
true

Process finished with exit code 0

Program ini menunjukkan penggunaan operator dan Boolean.

Program 15



Program ini menunjukkan operasi terner.

Program 16

