



Java

Assignment-4

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Topic : Type casting

Table:

	char	byte	short	int	long	float	double	boolean
har	NC ✗	EC ✓	EC ✓	IC ✓	IC ✓	IC ✓	IC ✓	No ✗
byte	EC ✓	NC ✗	IC ✓	IC ✓	IC ✓	IC ✓	IC ✓	No ✗
short	EC ✓	EC ✓	NC ✗	IC ✓	IC ✓	IC ✓	IC ✓	No ✗
int	EC ✓	EC ✓	EC ✓	NC ✗	IC ✓	IC ✓	IC ✓	No ✗

[illegible]

Conversion on char datatype

Char to char:

```
*chartochar.java ×
1 package data.conversion;
2
3 public class chartochar {
4
5     public static void main(String[] args) {
6         char a = 'A';
7         char b;
8         b=a;
9         System.out.println(a);
10        System.out.println(b);
11    }
12
13 }
```

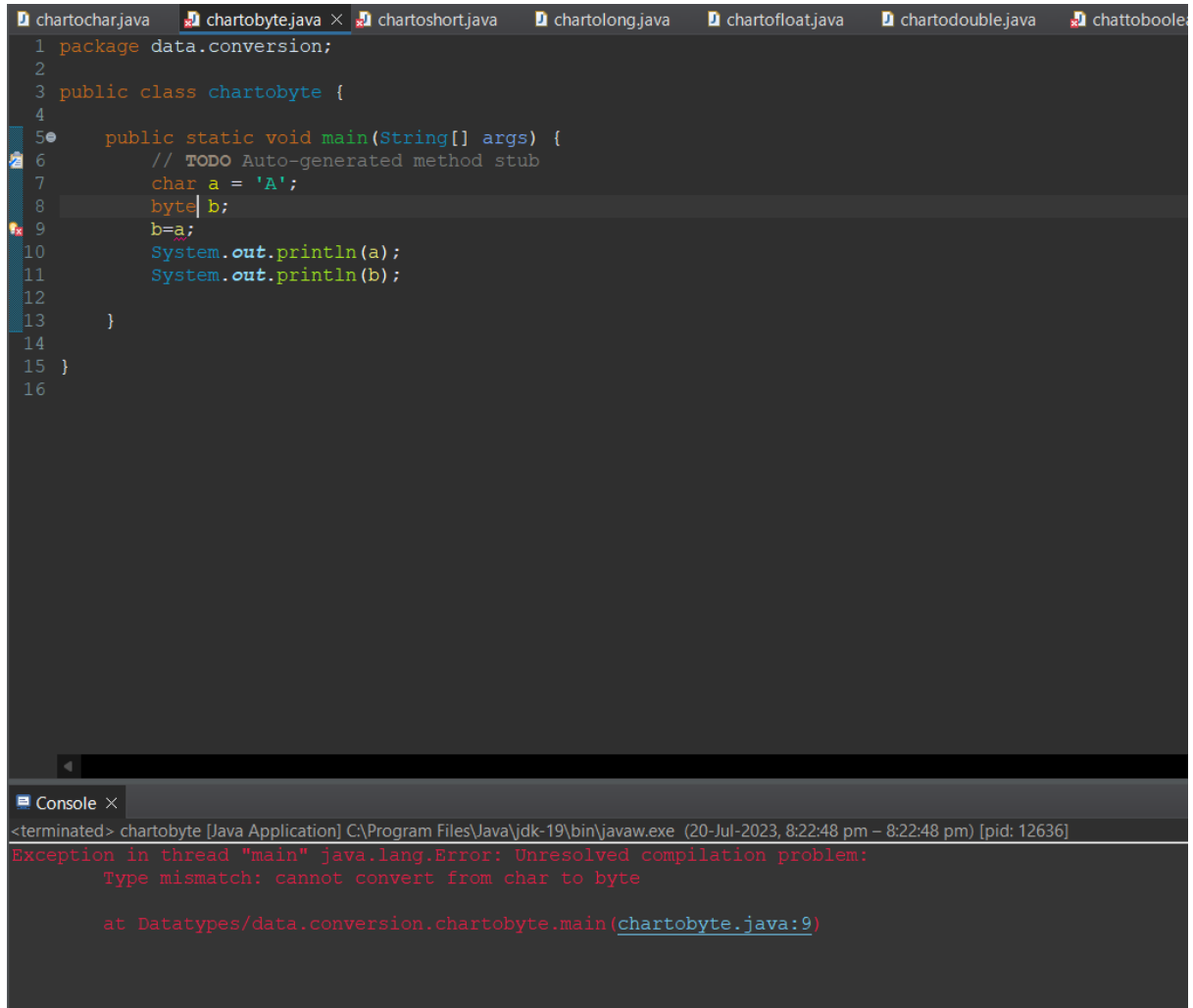
Output:

```
Console ×
<terminated> chartochar [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 4:51:00 pm – 4:51:00 pm) [pid: 14356]
A
A|
```

Conclusion:

There is no conversion occur in between char to char.

Char to byte:



```
1 package data.conversion;
2
3 public class chartobyte {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         char a = 'A';
8         byte b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console ×

```
<terminated> chartobyte [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 8:22:48 pm – 8:22:48 pm) [pid: 12636]
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from char to byte

    at Datatypes/data.conversion.chartobyte.main(chartobyte.java:9)
```

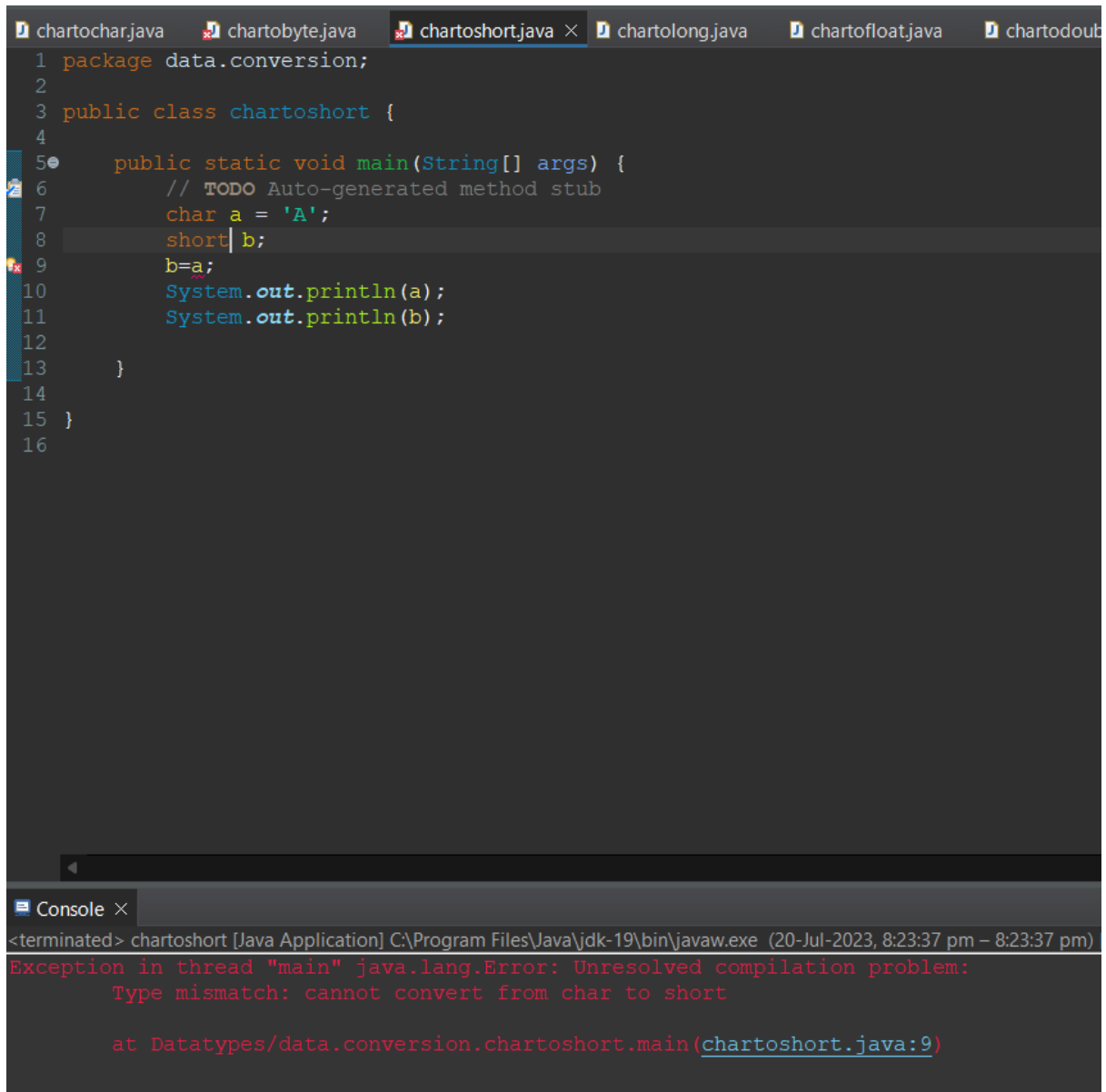
Conclusion:

Char can't cannot to byte, so it is explicit conversion;

To convert char to byte use the below one:

$$b = (\text{byte})a;$$

Char to short:



```
1 package data.conversion;
2
3 public class chartoshort {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         char a = 'A';
8         short b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

```
<terminated> chartoshort [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 8:23:37 pm – 8:23:37 pm)
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from char to short

    at Datatypes/data.conversion.chartoshort.main(chartoshort.java:9)
```

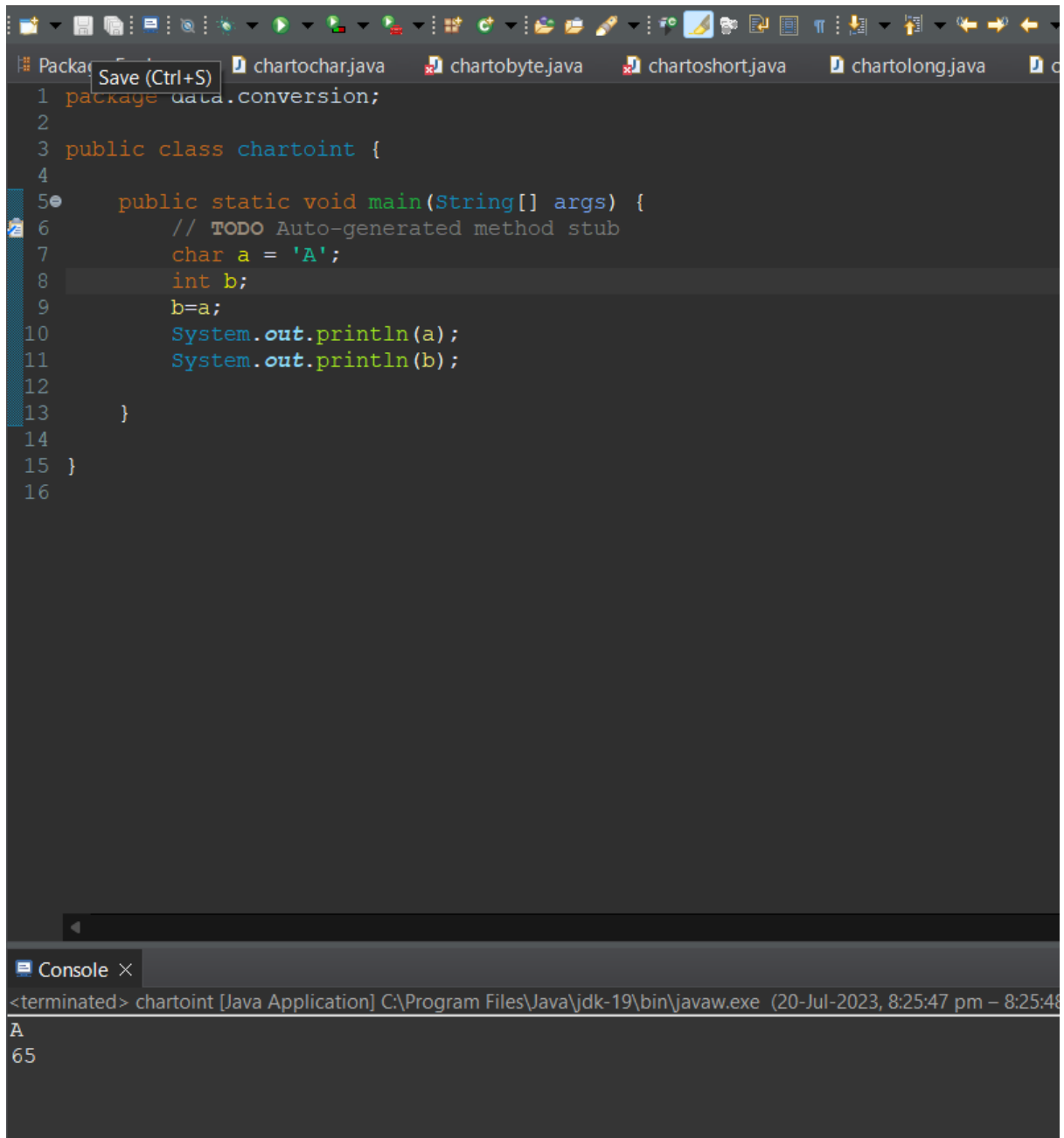
Conclusion:

Char can't cannot to short, so it is explicit conversion;

To convert char to short use the below one:

`b = (short)a;`

Char to int:



The screenshot shows an IDE with a Java file named `chartoint.java`. The code defines a package `data.conversion` and a public class `chartoint`. Inside the class, there is a `main` method that declares a `char` variable `a` with the value 'A', an `int` variable `b`, and assigns `b` the value of `a`. It then prints both `a` and `b` to the console. The console output shows 'A' followed by 65 on the next line. The IDE's toolbar at the top includes a 'Save (Ctrl+S)' button.

```
1 package data.conversion;
2
3 public class chartoint {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         char a = 'A';
8         int b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14 }
15
16
```

Console Output:

```
<terminated> chartoint [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 8:25:47 pm - 8:25:48)
A
65
```

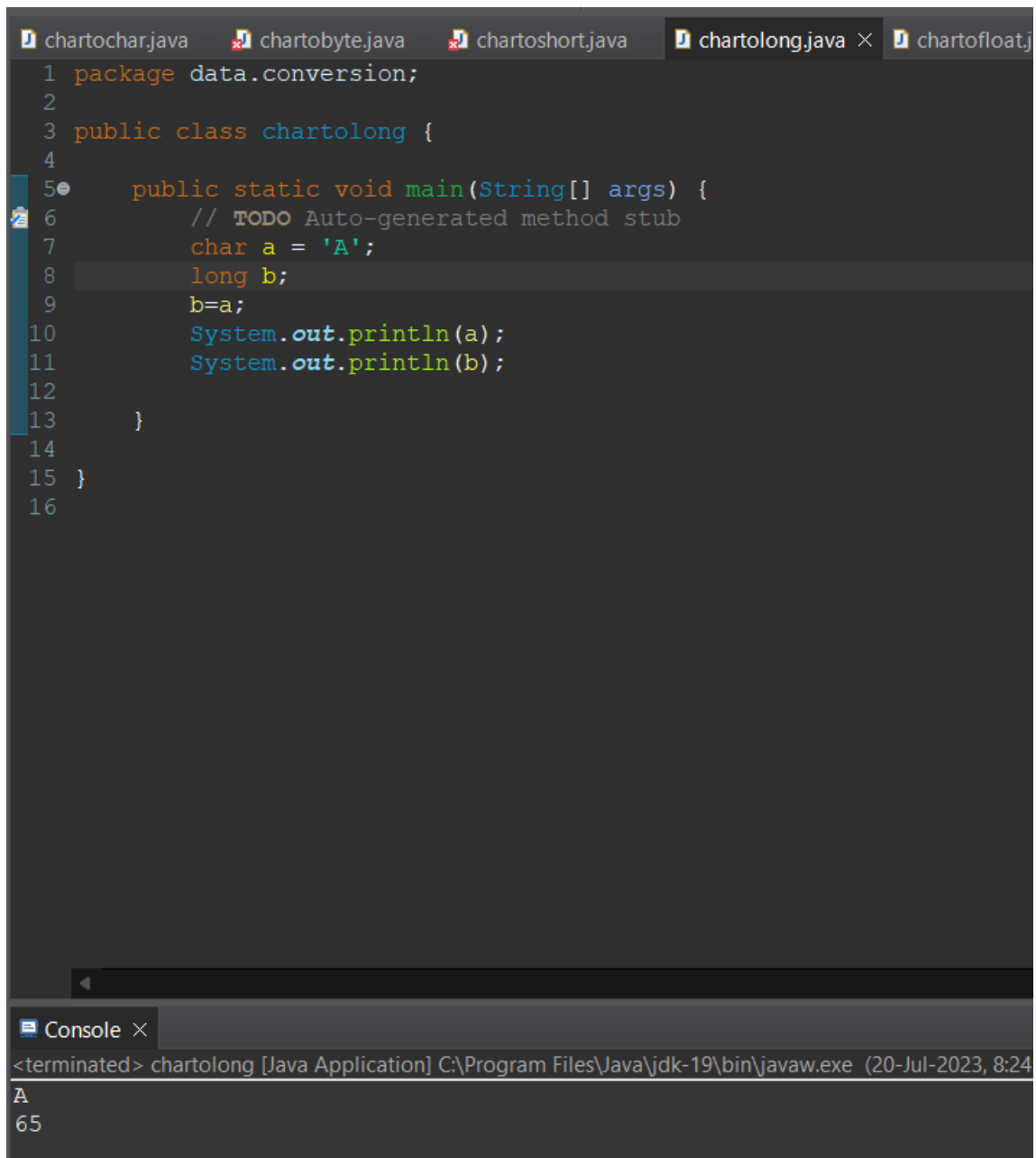
Conclusion:

Char converted into int, so it is Implicit conversion

We can convert char to int by using below one

```
b = (int) a;
```

Char to long:



```
1 package data.conversion;
2
3 public class chartolong {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         char a = 'A';
8         long b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console ×

<terminated> chartolong [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 8:24

A
65

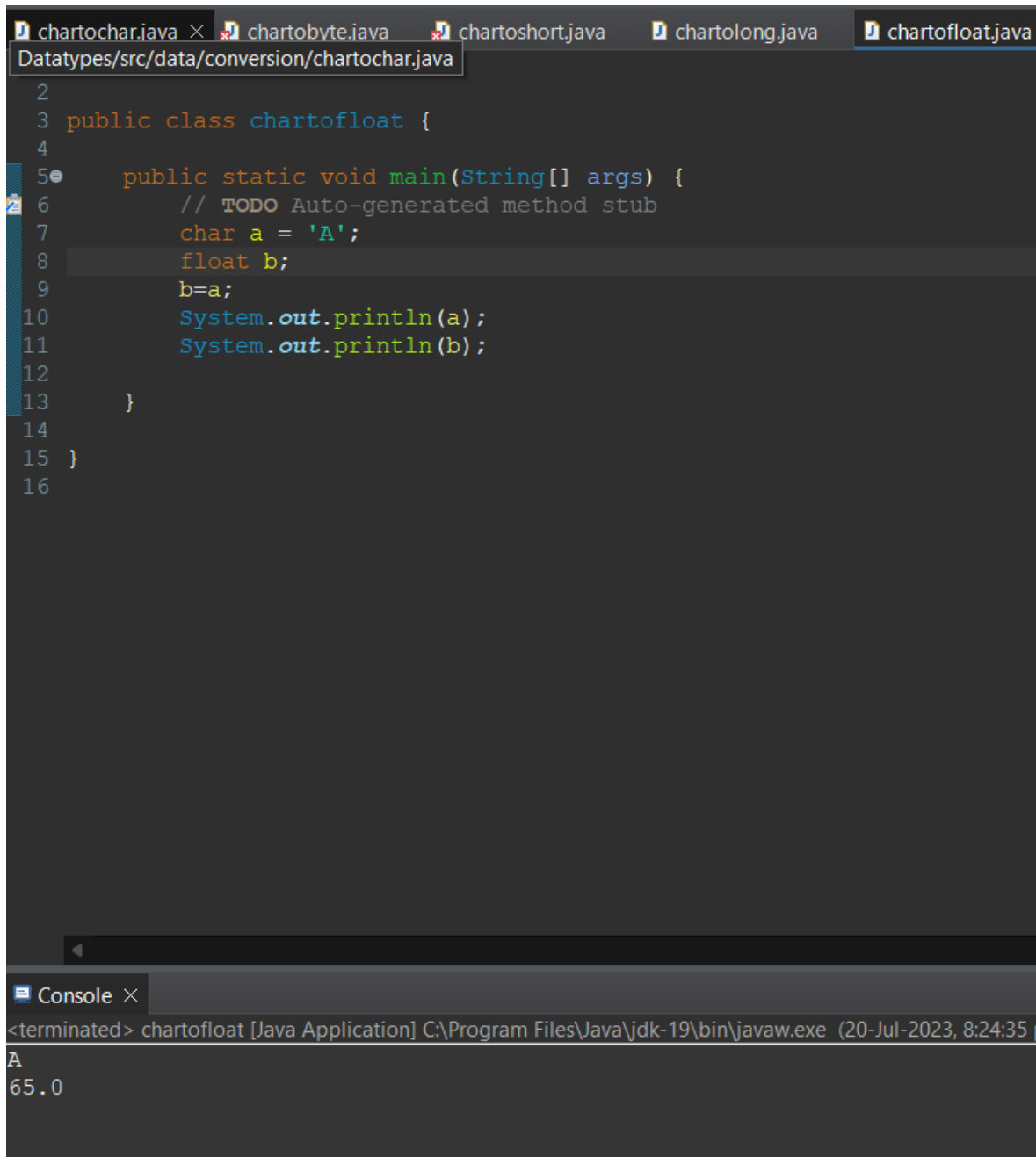
Conclusion:

Char converted into long, so it is Implicit conversion

We can convert char to long by using below one

$$b = (\text{long}) a;$$

Char to float:



The screenshot shows an IDE with several tabs: `chartochar.java`, `chartobyte.java`, `chartoshort.java`, `chartolong.java`, and `chartofloat.java`. The active tab is `chartofloat.java`, located at `Datatypes/src/data/conversion/chartochar.java`. The code defines a `chartofloat` class with a `main` method that takes `String[] args`. Inside `main`, a `char a` is initialized to `'A'`, a `float b` is declared, and `b` is assigned the value of `a`. Both `a` and `b` are printed to the console using `System.out.println`. The console output at the bottom shows the program terminated successfully, displaying the character `A` and the float value `65.0`.

```
2
3 public class chartofloat {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         char a = 'A';
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

<terminated> chartofloat [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 8:24:35)
A
65.0

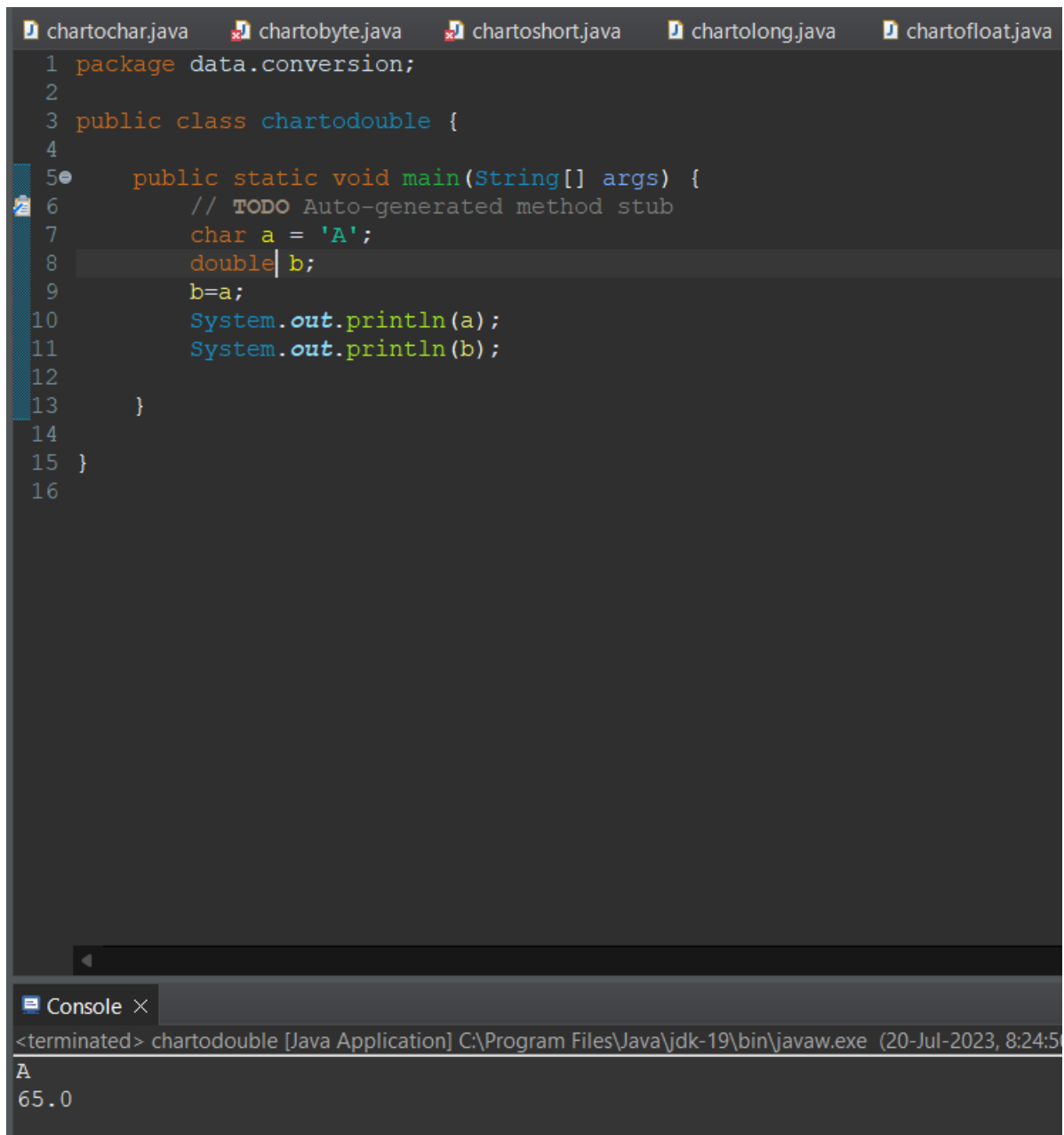
Conclusion:

Char converted into float, so it is Implicit conversion

We can convert char to float by using below one

$$b = (\text{float}) a;$$

char to double:



```
1 package data.conversion;
2
3 public class chartodouble {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         char a = 'A';
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

<terminated> chartodouble [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 8:24:5

A

65.0

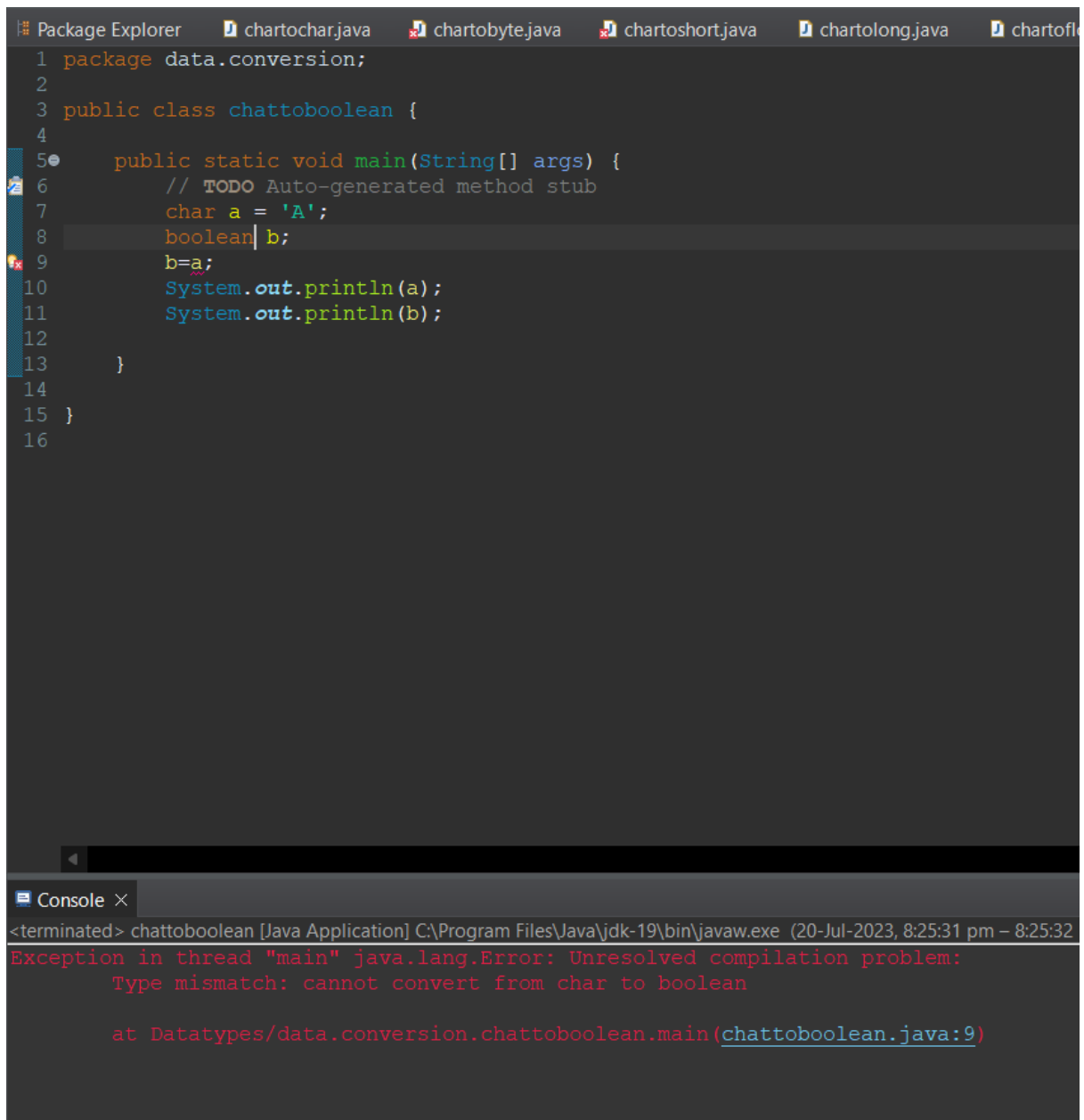
Conclusion:

Char converted into double, so it is Implicit conversion

We can convert char to double by using below one

$$b = (\text{double}) a;$$

char to boolean:



```
Package Explorer | chartochar.java | chartobyte.java | chartoshort.java | chartolong.java | chartofl...
1 package data.conversion;
2
3 public class chattoboollean {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         char a = 'A';
8         boolean b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

```
<terminated> chattoboollean [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 8:25:31 pm – 8:25:32)
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from char to boolean

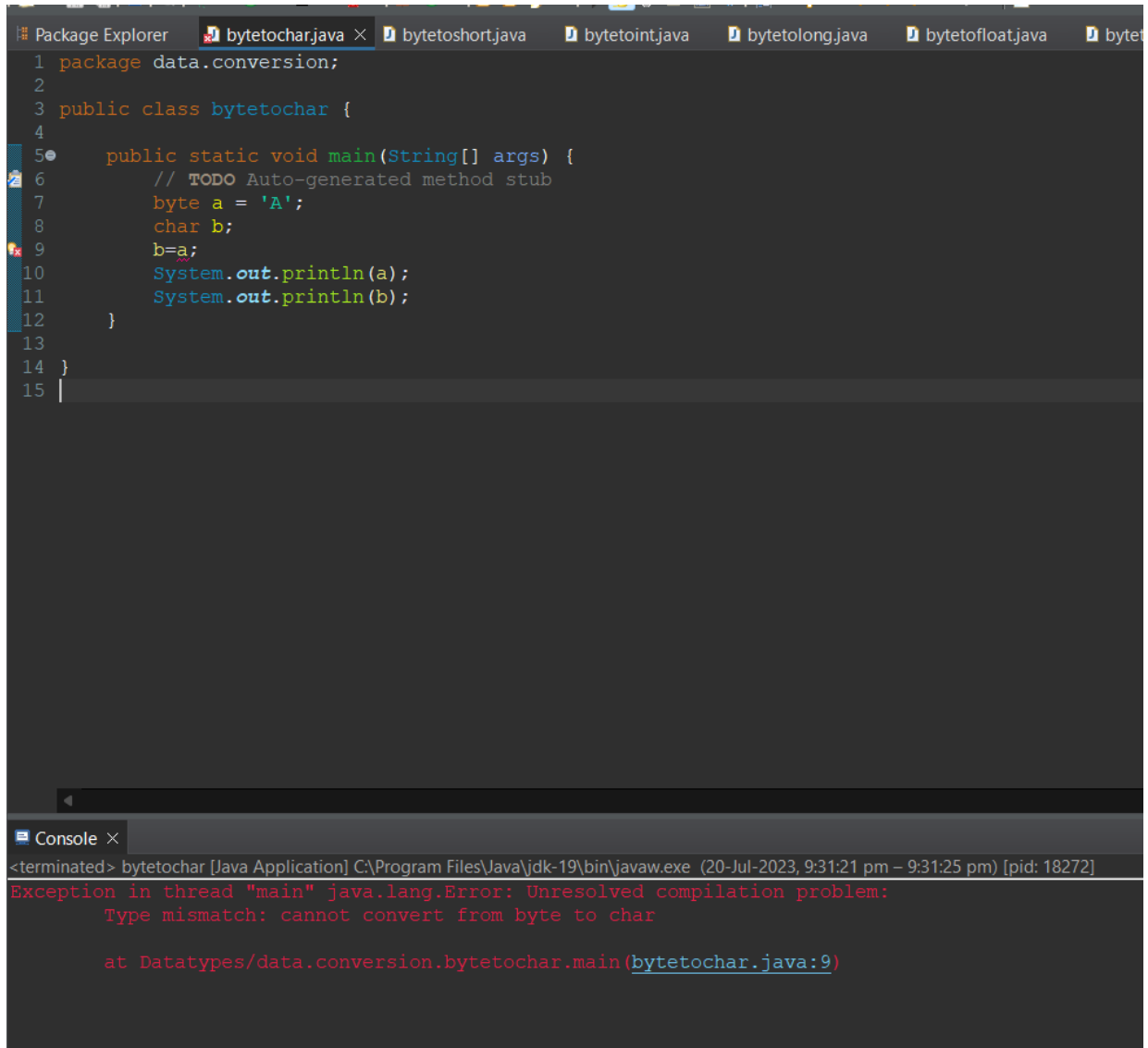
    at Datatypes/data.conversion.chattoboollean.main(chattoboollean.java:9)
```

Conclusion:

Char can't cannot to boolean, so it is explicit conversion;

Conversion on byte datatype

byte to char:



```
1 package data.conversion;
2
3 public class bytetochar {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         byte a = 'A';
8         char b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14 }
15 |
```

Console ×

```
<terminated> bytetochar [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 9:31:21 pm – 9:31:25 pm) [pid: 18272]
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from byte to char

    at Datatypes/data.conversion.bytetochar.main(bytetochar.java:9)
```

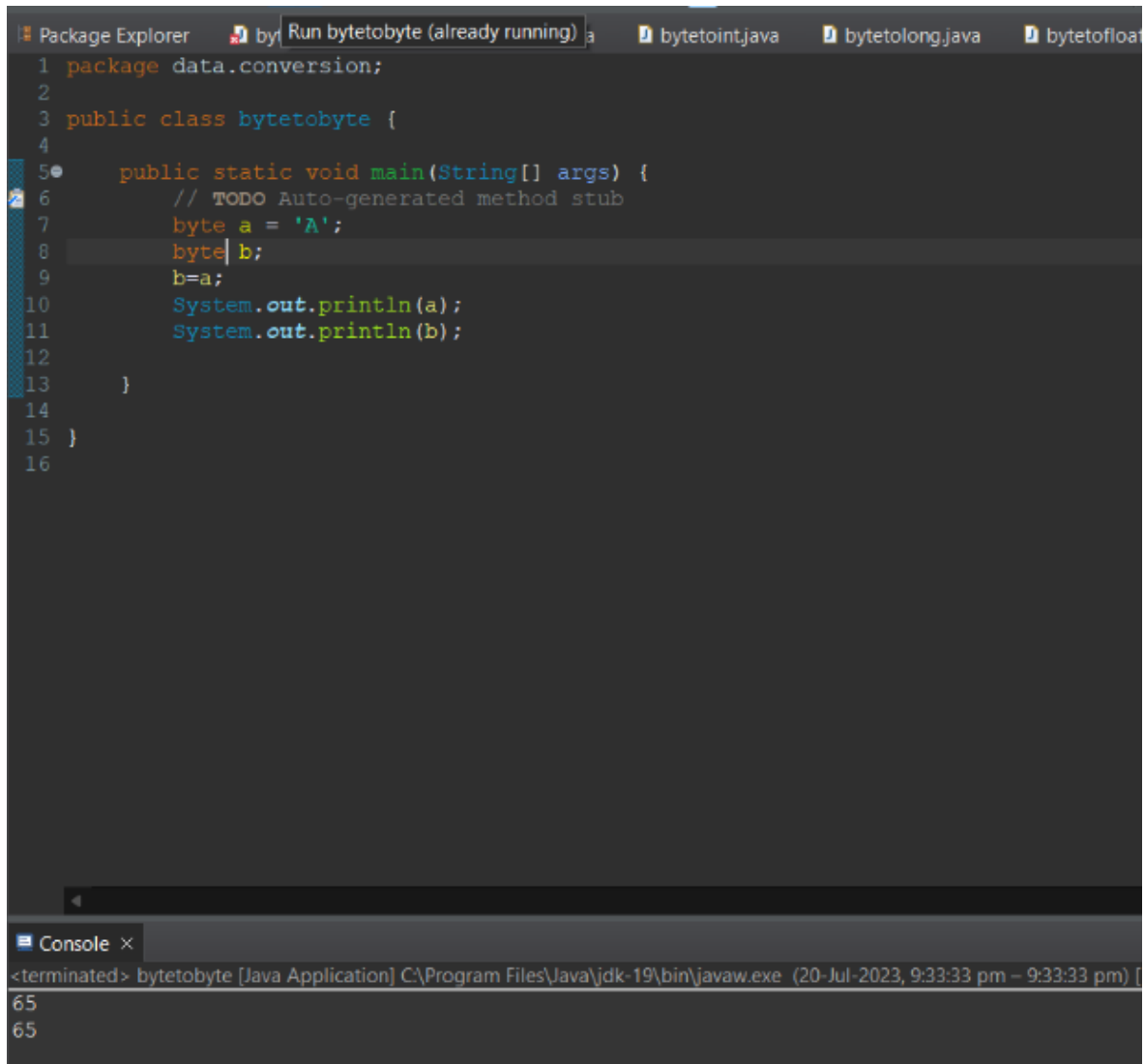
Conclusion:

Byte can't cannot to char, so it is Explicit conversion;

To convert byte to char use the below one:

`b = (char)a;`

byte to byte:



```
1 package data.conversion;
2
3 public class bytetobyte {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         byte a = 'A';
8         byte b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console ×

<terminated> bytetobyte [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 9:33:33 pm – 9:33:33 pm) [

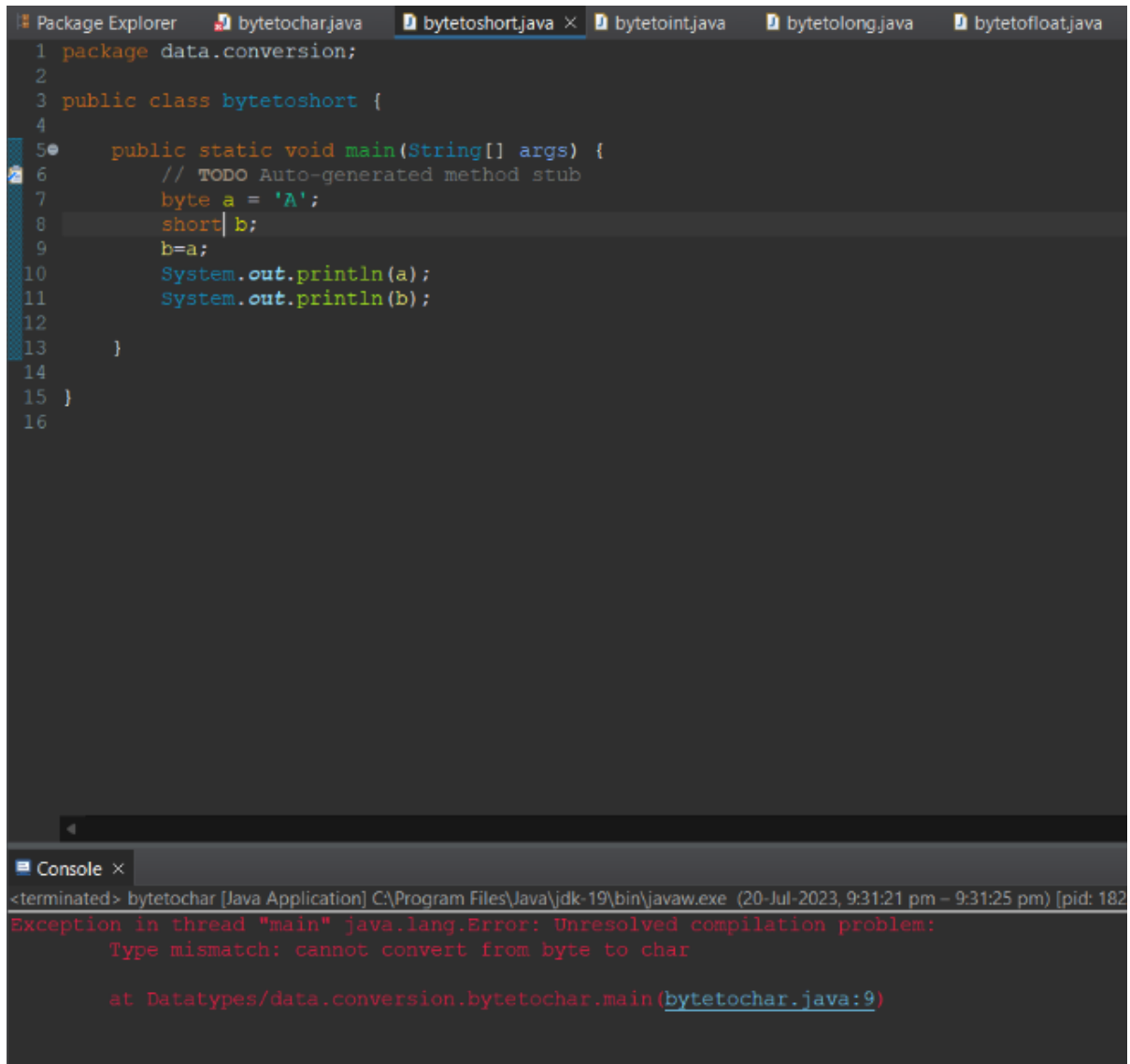
65

65

Conclusion:

There is no conversion occur in between byte to byte.

byte to short:



The screenshot shows an IDE with several tabs: Package Explorer, bytetochar.java, bytetoshort.java (active), bytetoint.java, bytetolong.java, and bytetofloat.java. The bytetoshort.java file contains the following code:

```
1 package data.conversion;
2
3 public class bytetoshort {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         byte a = 'A';
8         short b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

The Console window at the bottom shows the following output:

```
<terminated> bytetochar [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 9:31:21 pm - 9:31:25 pm) [pid: 182]
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from byte to char
    at Datatypes/data.conversion.bytetochar.main(bytetochar.java:9)
```

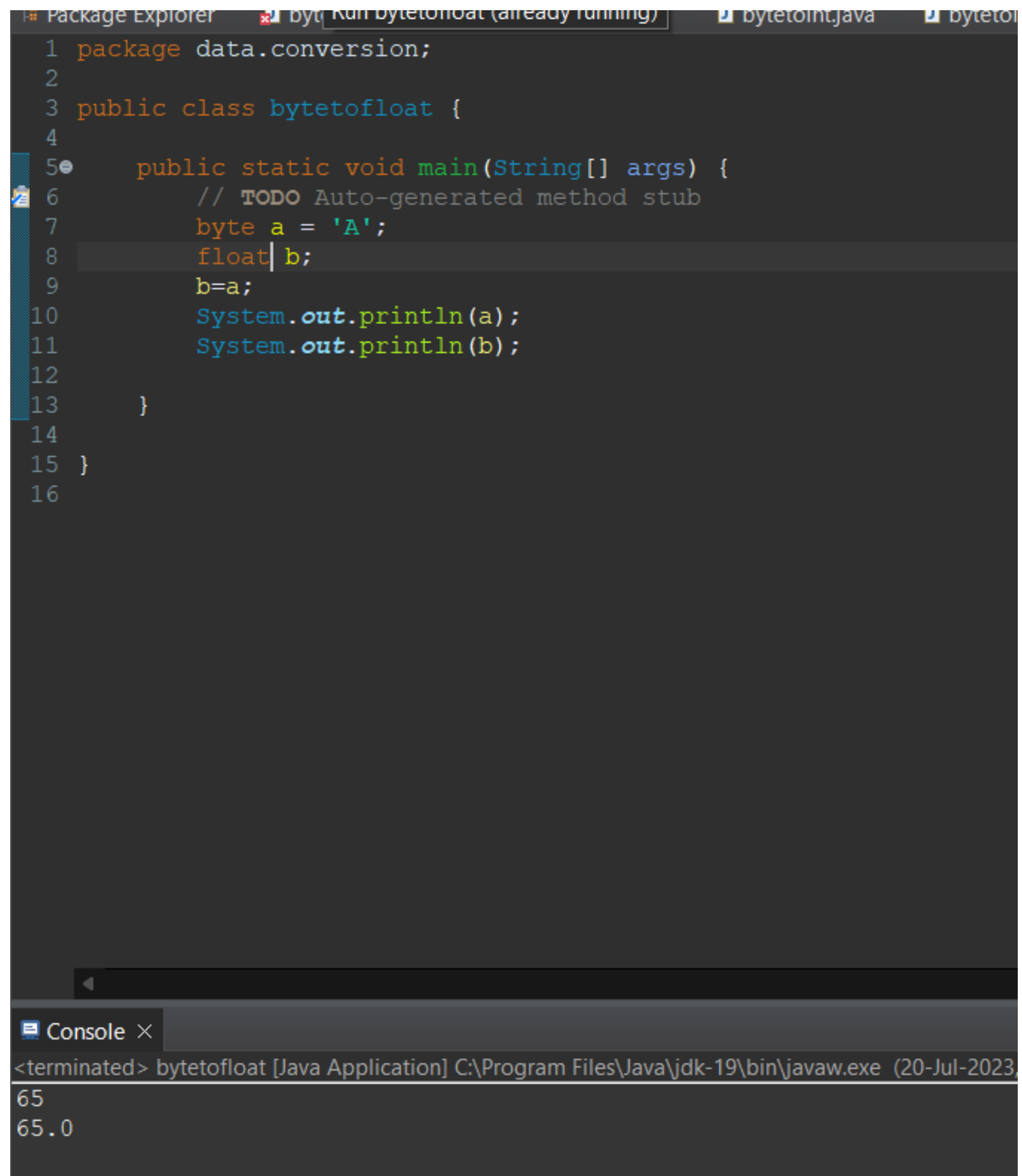
Conclusion:

Byte can't cannot to short, so it is Explicit conversion;

To convert byte to short use the below one:

$$b = (\text{short})a;$$

byte to int:



```
1 package data.conversion;
2
3 public class bytetofloat {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         byte a = 'A';
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console ×

```
<terminated> bytetofloat [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023)
65
65.0
```

Conclusion:

Byte converted into int, so it is Implicit conversion

We can convert byte to int by using below one also

$$b = (\text{int}) a;$$

byte to long:

```
1 package data.conversion;
2
3 public class bytetodouble {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         byte a = 'A';
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13
14
15 }
16
```

Console ×

<terminated> bytetodouble [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 9:33:17 pm – 9:33:17 pm) [pid: 1348]

65
65.0

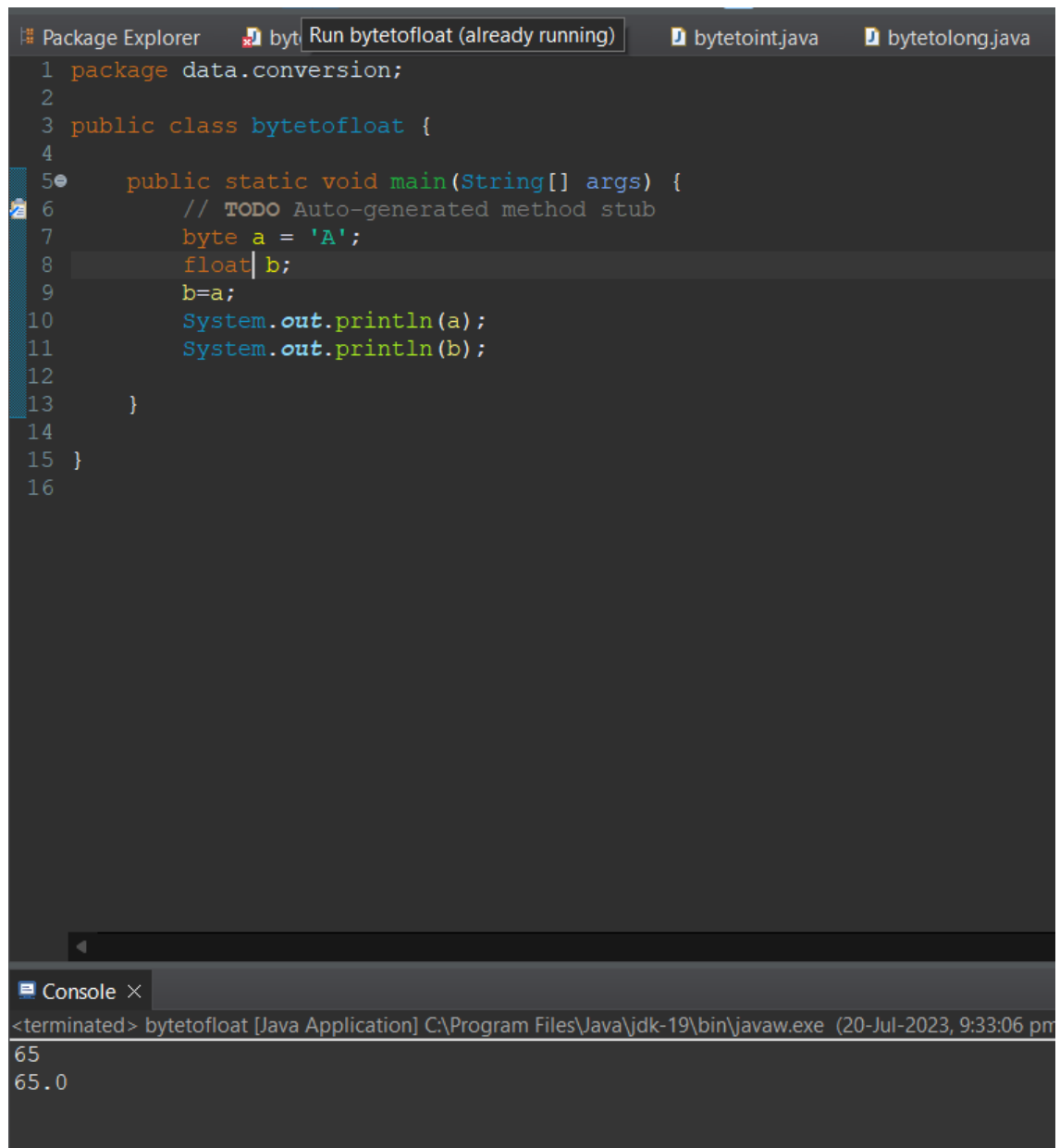
Conclusion:

Byte converted into long, so it is Implicit conversion

We can convert byte to long by using below one

`b = (long) a;`

byte to float:



```
Package Explorer  Run bytetofloat (already running)  bytetoint.java  bytetolong.java
1 package data.conversion;
2
3 public class bytetofloat {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         byte a = 'A';
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
<terminated> bytetofloat [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 9:33:06 pm)
65
65.0
```

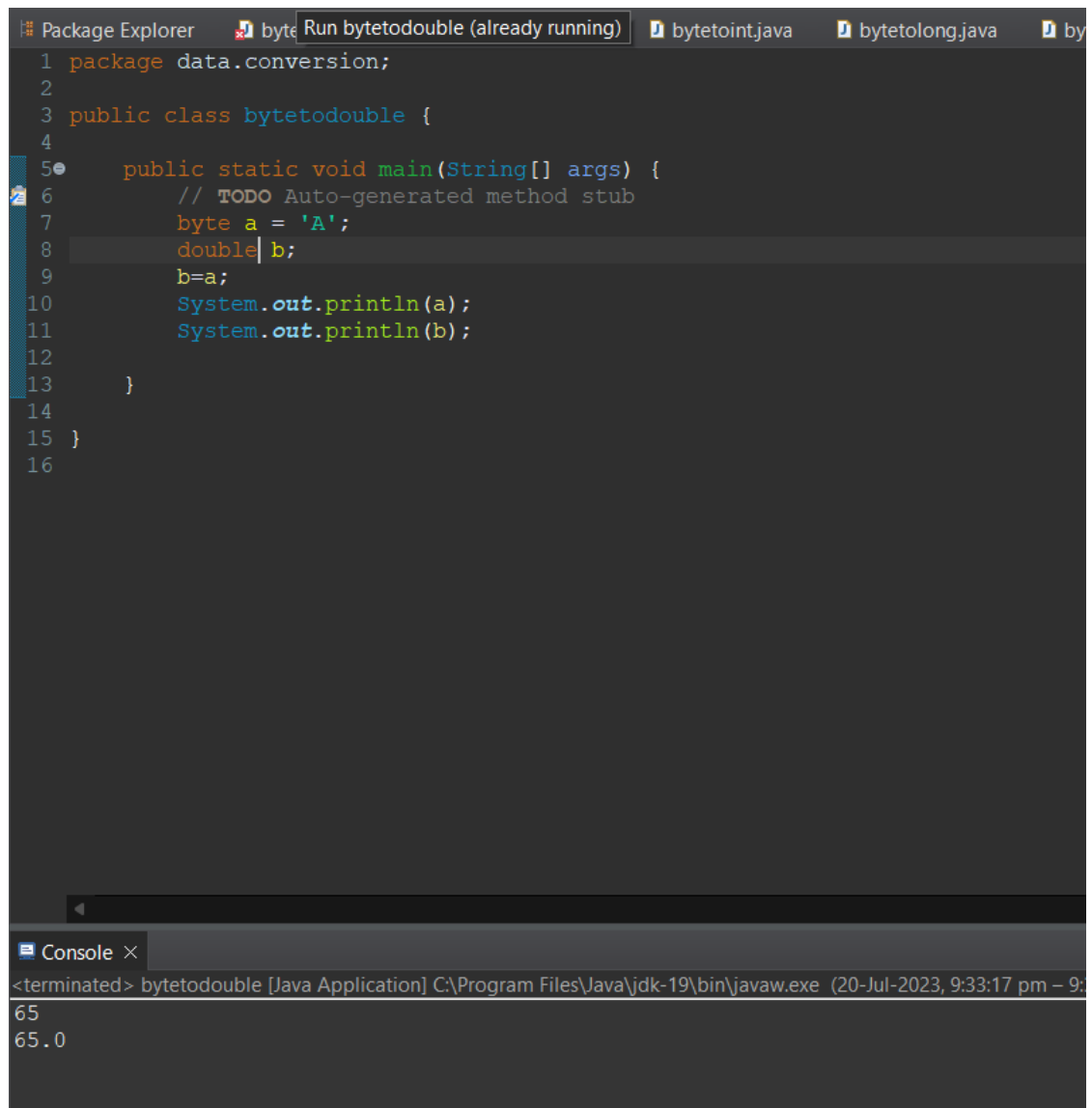
Conclusion:

Byte converted into float, so it is Implicit conversion

We can convert byte to float by using below one

$$b = (\text{float}) a;$$

byte to double:



```
Package Explorer  Run bytetodouble (already running)  bytetoint.java  bytetolong.java  by
1 package data.conversion;
2
3 public class bytetodouble {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         byte a = 'A';
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13
14
15 }
16
```

```
<terminated> bytetodouble [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 9:33:17 pm - 9:
65
65.0
```

Conclusion:

Byte converted into double, so it is Implicit conversion

We can convert byte to double by using below one

$$b = (\text{double}) a;$$

byte to boolean:

```
1 package data.conversion;
2
3 public class bytetoboolen {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         byte a = 'A';
8         boolean b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13
14 }
15
```

Console ×

<terminated> bytetoboolen [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 9:33:24 pm – 9:33:24 pm)

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Type mismatch: cannot convert from byte to boolean

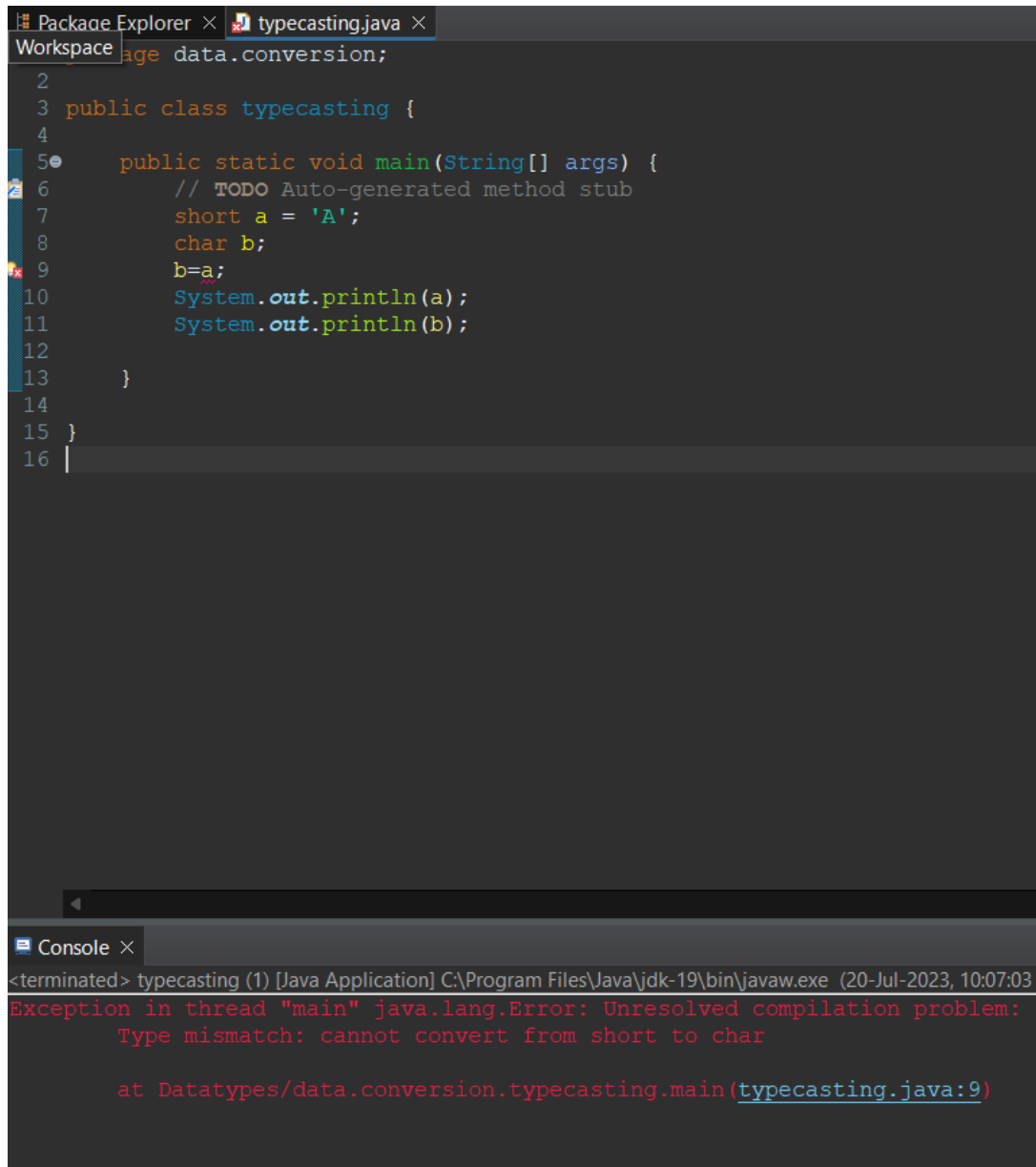
at Datatypes/data.conversion.bytetoboolen.main([bytetoboolen.java:9](#))

Conclusion:

Byte can't convert to boolean, so it is Explicit conversion;

Conversion on short datatype

short to char:



The screenshot shows an IDE with a package explorer on the left and a code editor on the right. The package explorer shows a workspace with a package named 'data.conversion'. The code editor shows a Java file named 'typecasting.java' with the following code:

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         short a = 'A';
8         char b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16 |
```

Below the code editor is a console window showing the output of the program. The console output is:

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 10:07:03)
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from short to char

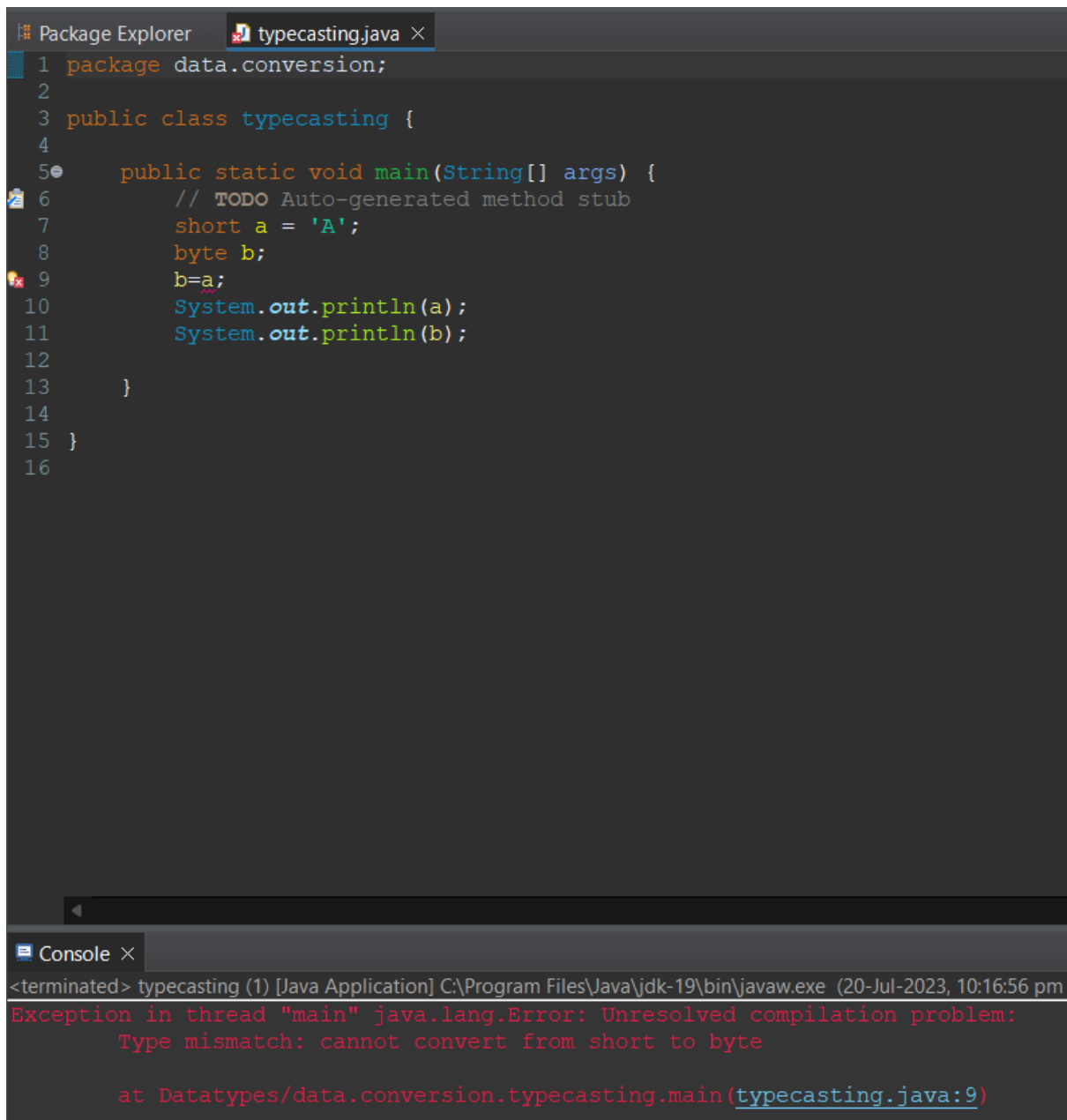
    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Short can't convert to char, so it is Explicit conversion;
To convert short to char use the below one:

`b = (short)a;`

short to byte:



```
Package Explorer  typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         short a = 'A';
8         byte b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console ×
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 10:16:56 pm)
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from short to byte

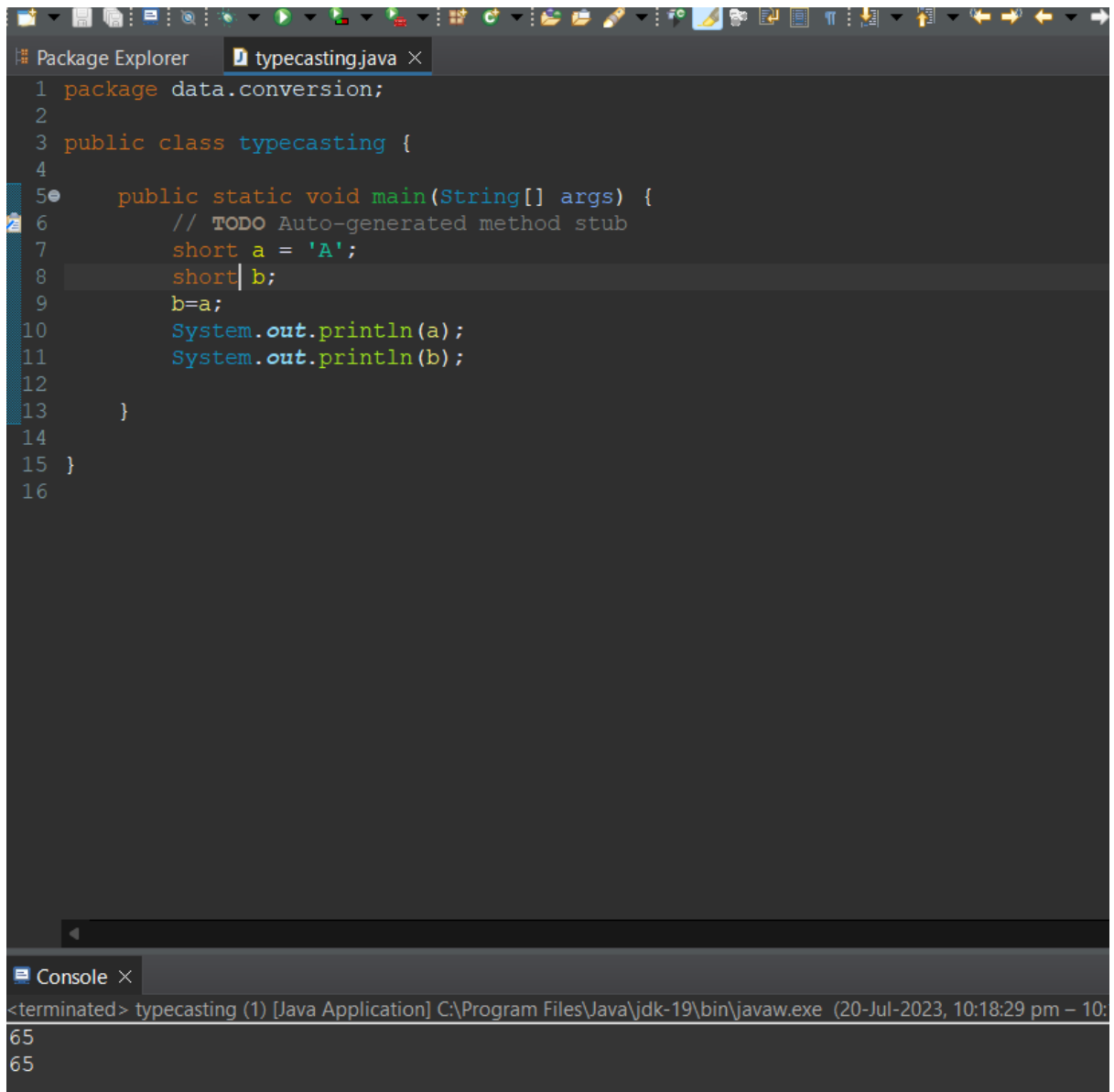
    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Short can't convert to byte, so it is Explicit conversion;
To convert byte to byte use the below one:

`b = (byte)a;`

short to short:



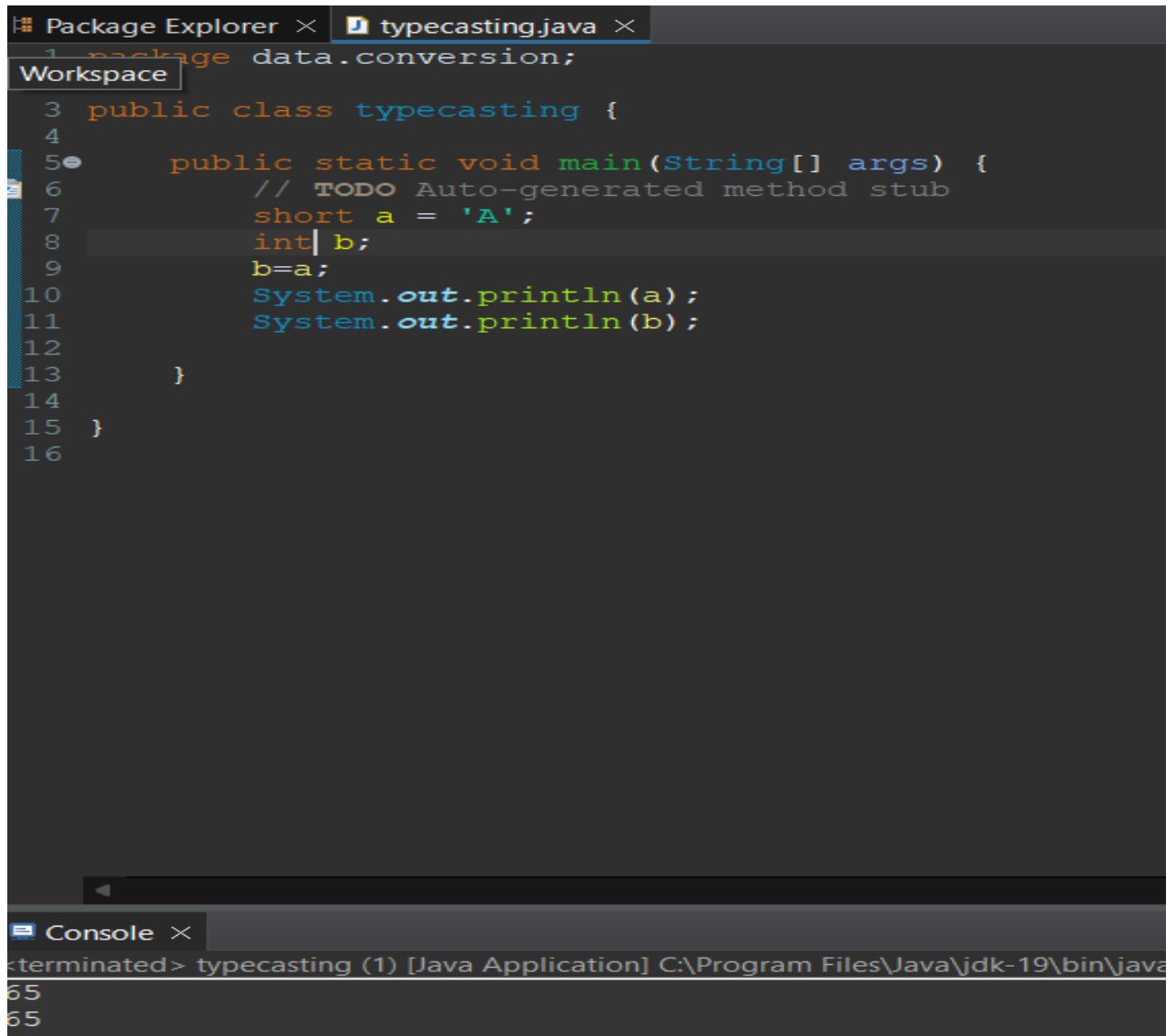
```
Package Explorer | typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         short a = 'A';
8         short b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console ×
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 10:18:29 pm - 10:
65
65
```

Conclusion:

There is no conversion occur in between byte to byte.

short to int:

A screenshot of an IDE window titled 'typecasting.java'. The code defines a package 'data.conversion' and a public class 'typecasting'. Inside the class, there is a 'main' method that declares a 'short' variable 'a' with the value 'A', an 'int' variable 'b', and assigns 'a' to 'b'. Both variables are printed to the console. The console output at the bottom shows the program terminated successfully, printing the value '65' for both 'a' and 'b'.

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         short a = 'A';
8         int b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console Output:

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\java
65
65
```

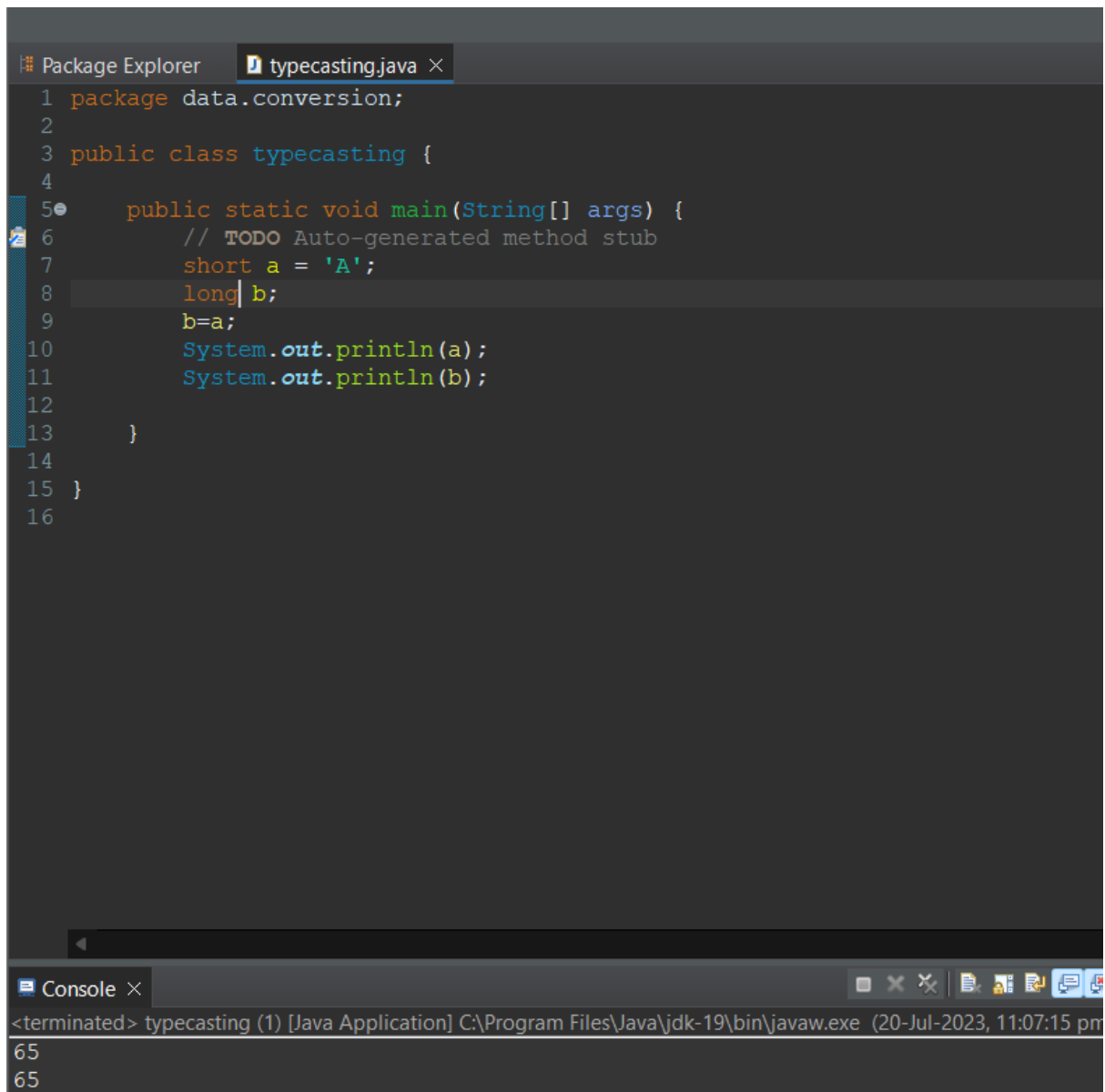
Conclusion:

Short converted into int, so it is Implicit conversion

We can convert short to int by using below one also

$$b = (\text{int}) a;$$

short to long:



```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         short a = 'A';
8         long b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 11:07:15 pm)

65

65

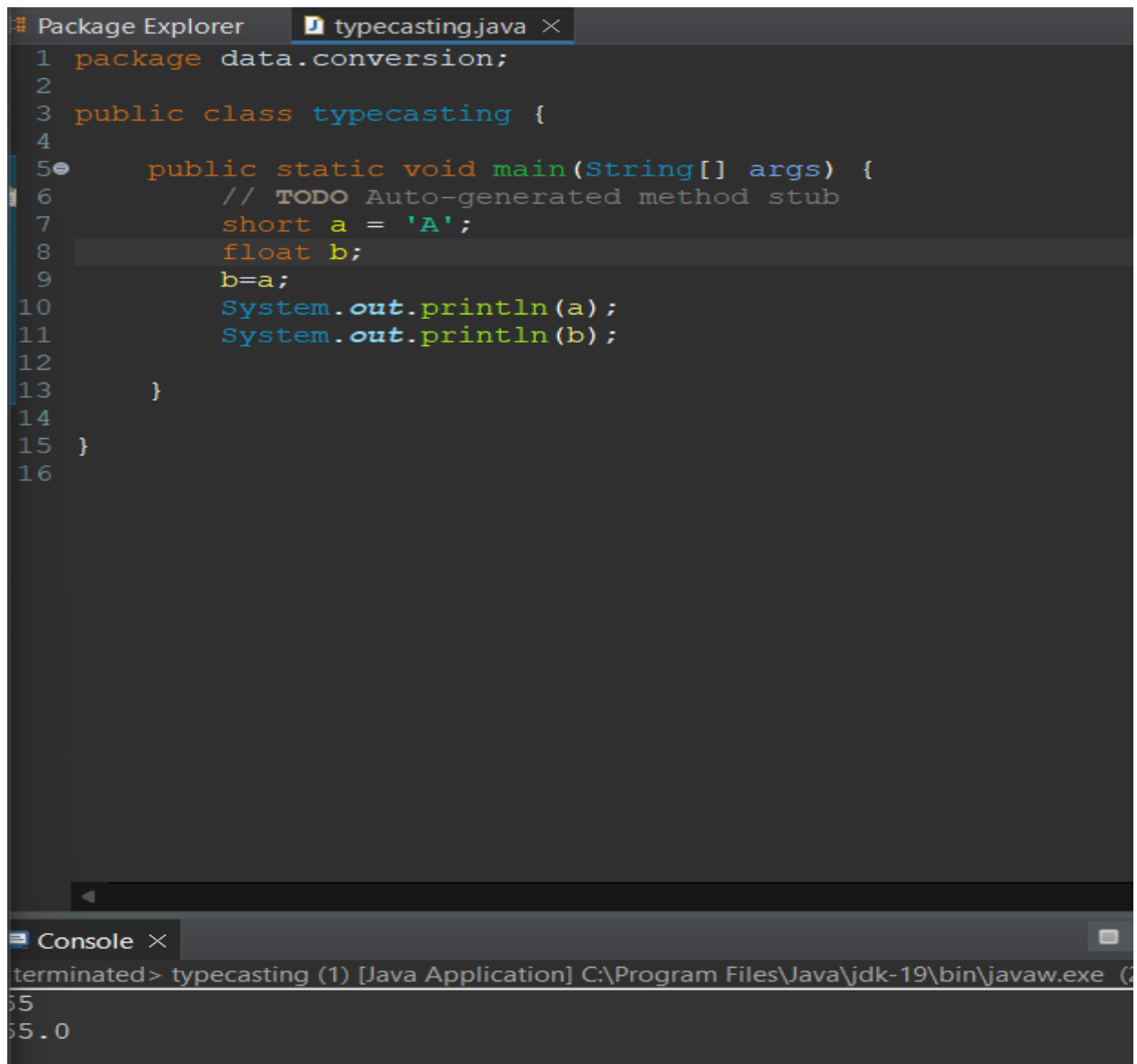
Conclusion:

Short converted into int, so it is Implicit conversion

We can convert short to int by using below one also

$$b = (\text{long}) a;$$

short to float:



```
Package Explorer  typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         short a = 'A';
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console ×
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (
55
55.0
```

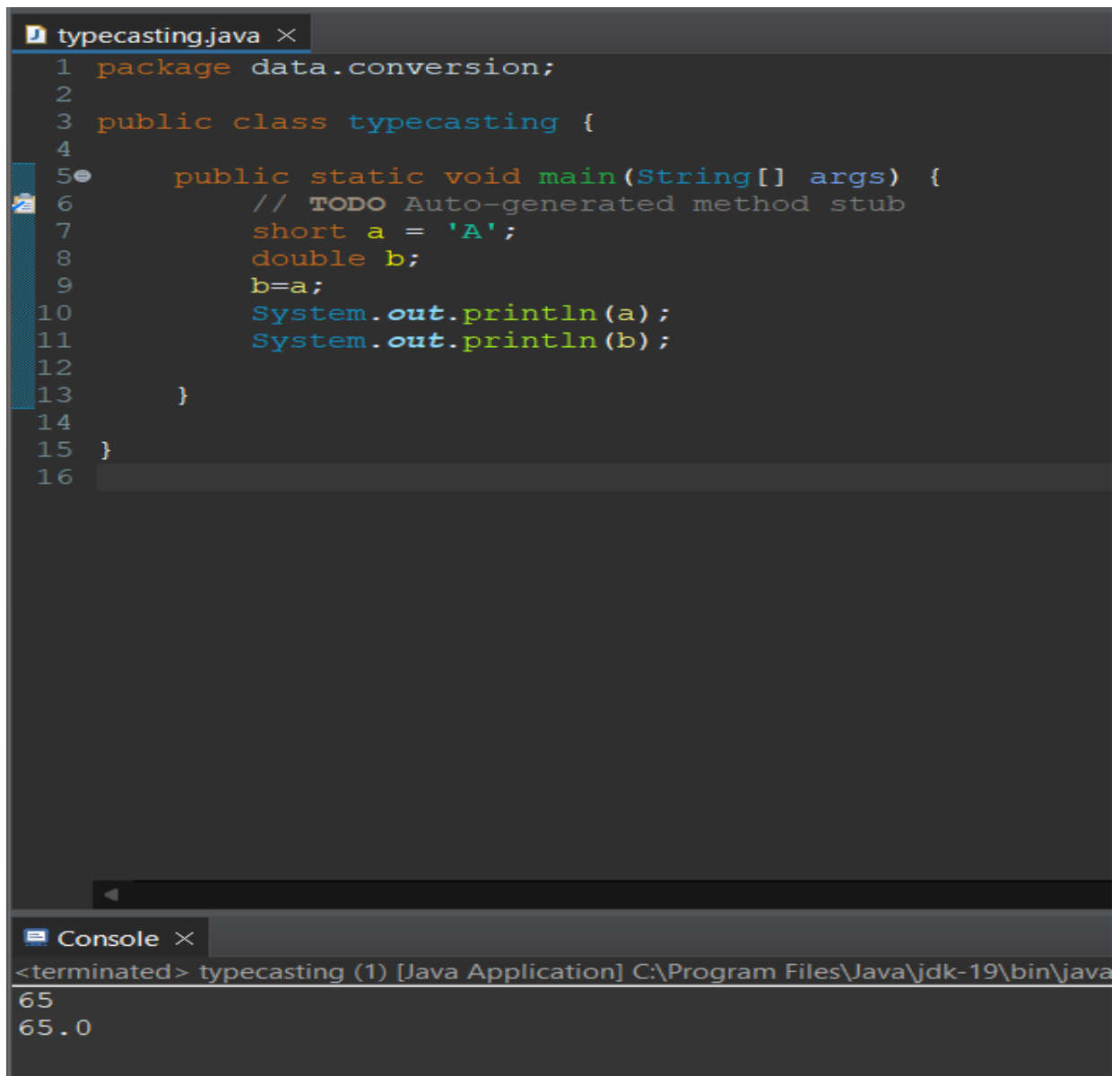
Conclusion:

Short converted into float, so it is Implicit conversion

We can convert float to int by using below one also

$$b = (\text{float}) a;$$

short to double:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         short a = 'A';
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console ×
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\java
65
65.0
```

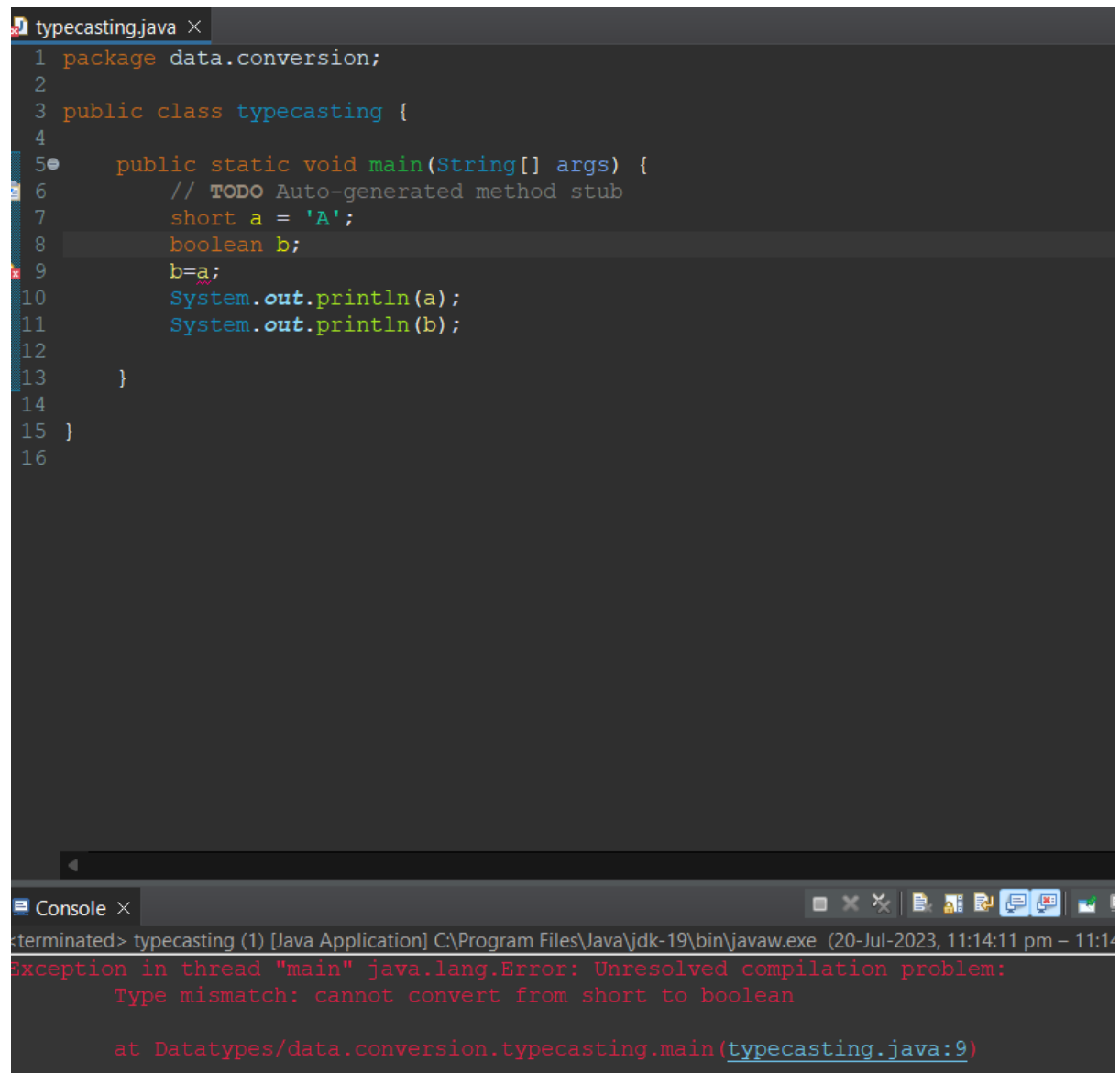
Conclusion:

Short converted into double, so it is Implicit conversion

We can convert short to double by using below one also

$$b = (\text{double}) a;$$

short to boolean:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         short a = 'A';
8         boolean b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

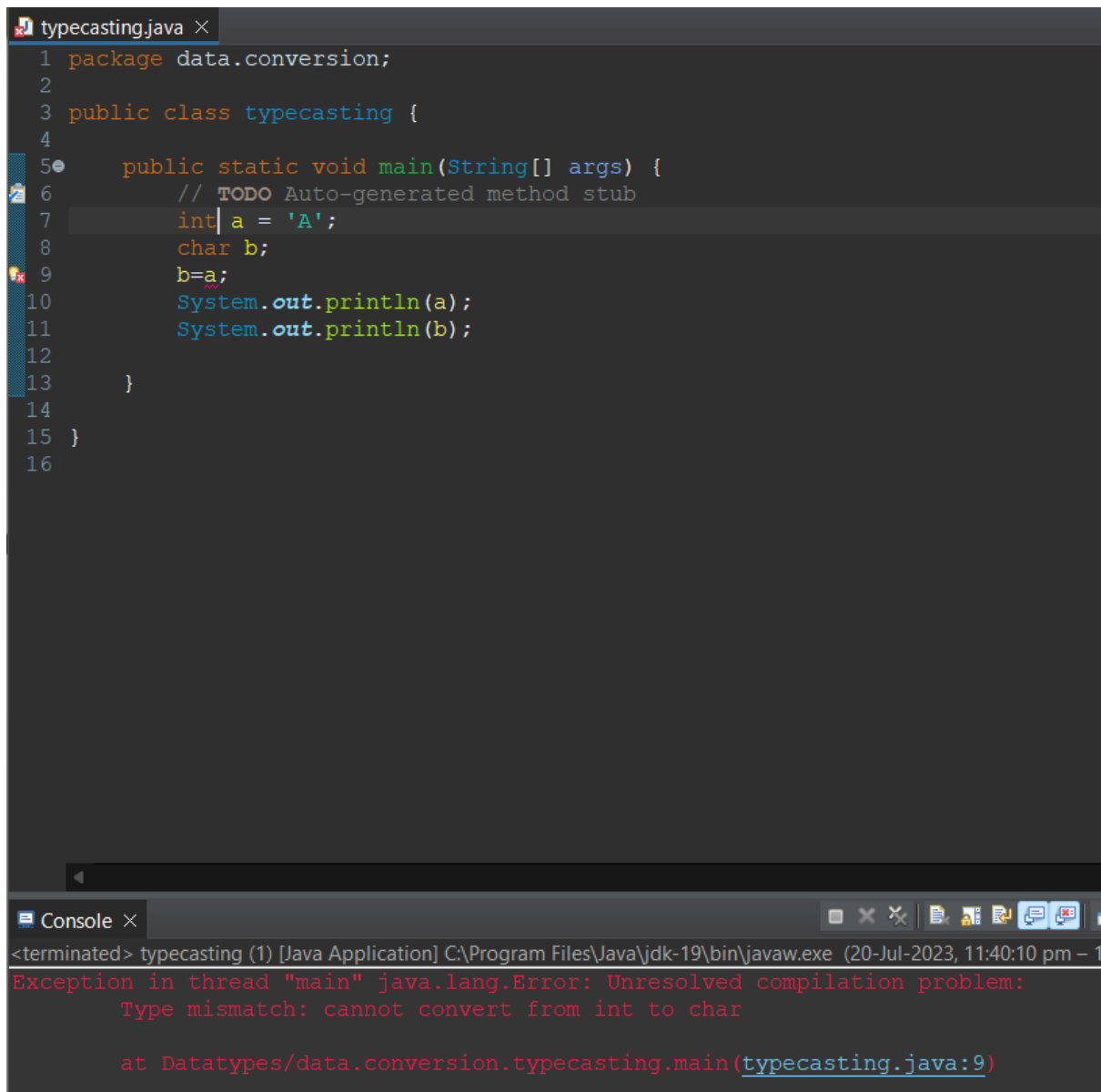
```
Console x
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 11:14:11 pm - 11:14:11 pm)
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from short to boolean

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Short can't convert to boolean, so it is Explicit conversion

Int to char:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int a = 'A';
8         char b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console x

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 11:40:10 pm - 1
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from int to char

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

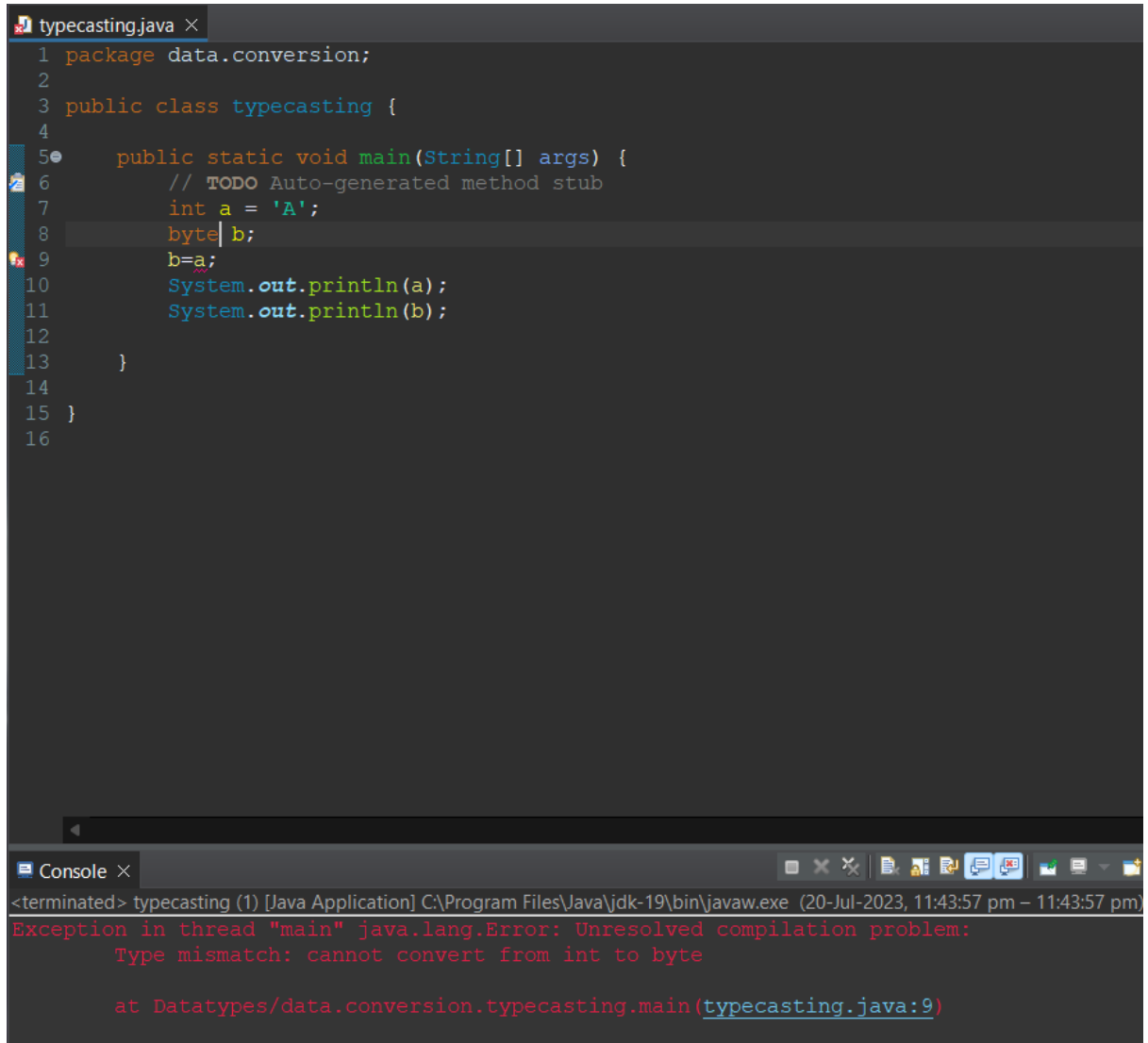
Conclusion:

Int can't convert to char, so it is Explicit conversion;

To convert int to char use the below one:

`b = (char)a;`

Int to byte:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int a = 'A';
8         byte b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console ×
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 11:43:57 pm – 11:43:57 pm)
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from int to byte

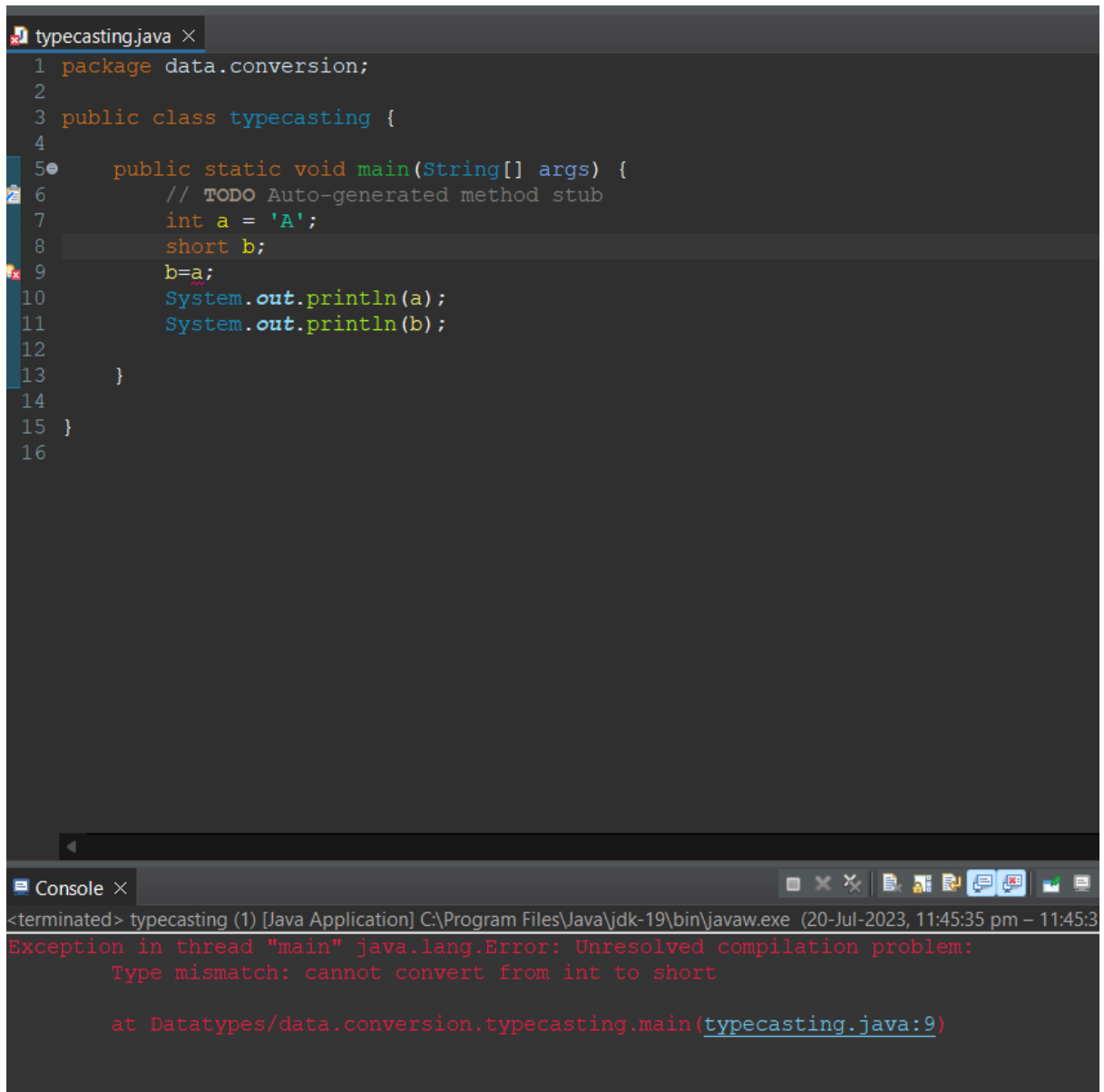
    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Int can't convert to byte so it is Explicit conversion;
To convert int to byte use the below one:

`b = (byte)a;`

Int to short:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int a = 'A';
8         short b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

```
Console ×
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 11:45:35 pm – 11:45:3
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Type mismatch: cannot convert from int to short

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

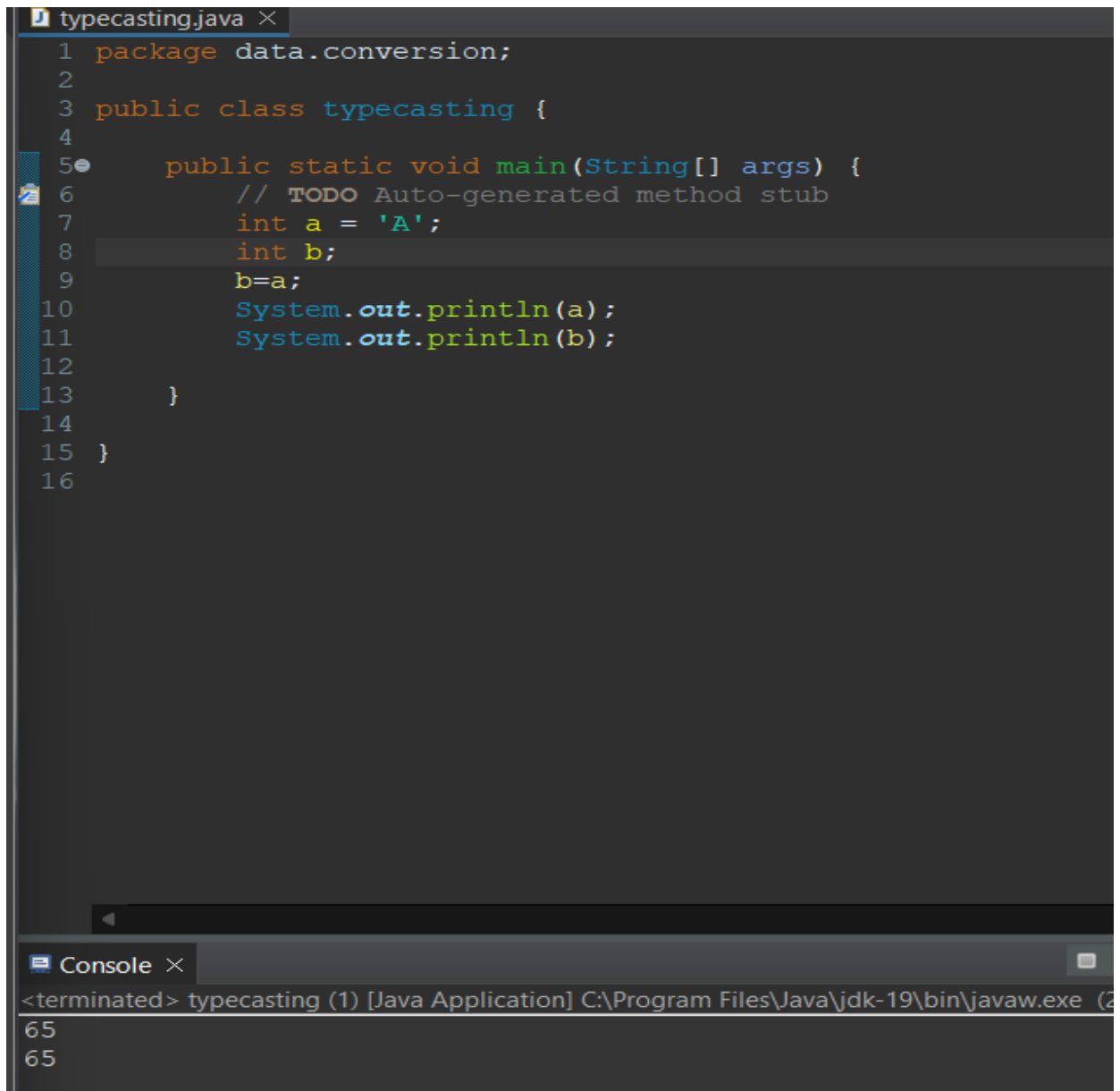
Conclusion:

Int can't convert to short so it is Explicit conversion.

To convert int to short use the below one:

$$b = (\text{short})a;$$

Int to int:



The screenshot shows an IDE with a file named `typecasting.java`. The code defines a package `data.conversion` and a public class `typecasting`. Inside the class, there is a `main` method that declares two `int` variables, `a` and `b`. Variable `a` is assigned the character `'A'`, and variable `b` is assigned the value of `a`. Both variables are then printed to the console using `System.out.println`. The console output at the bottom shows the text `<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (2` followed by the value `65` on two separate lines.

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int a = 'A';
8         int b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

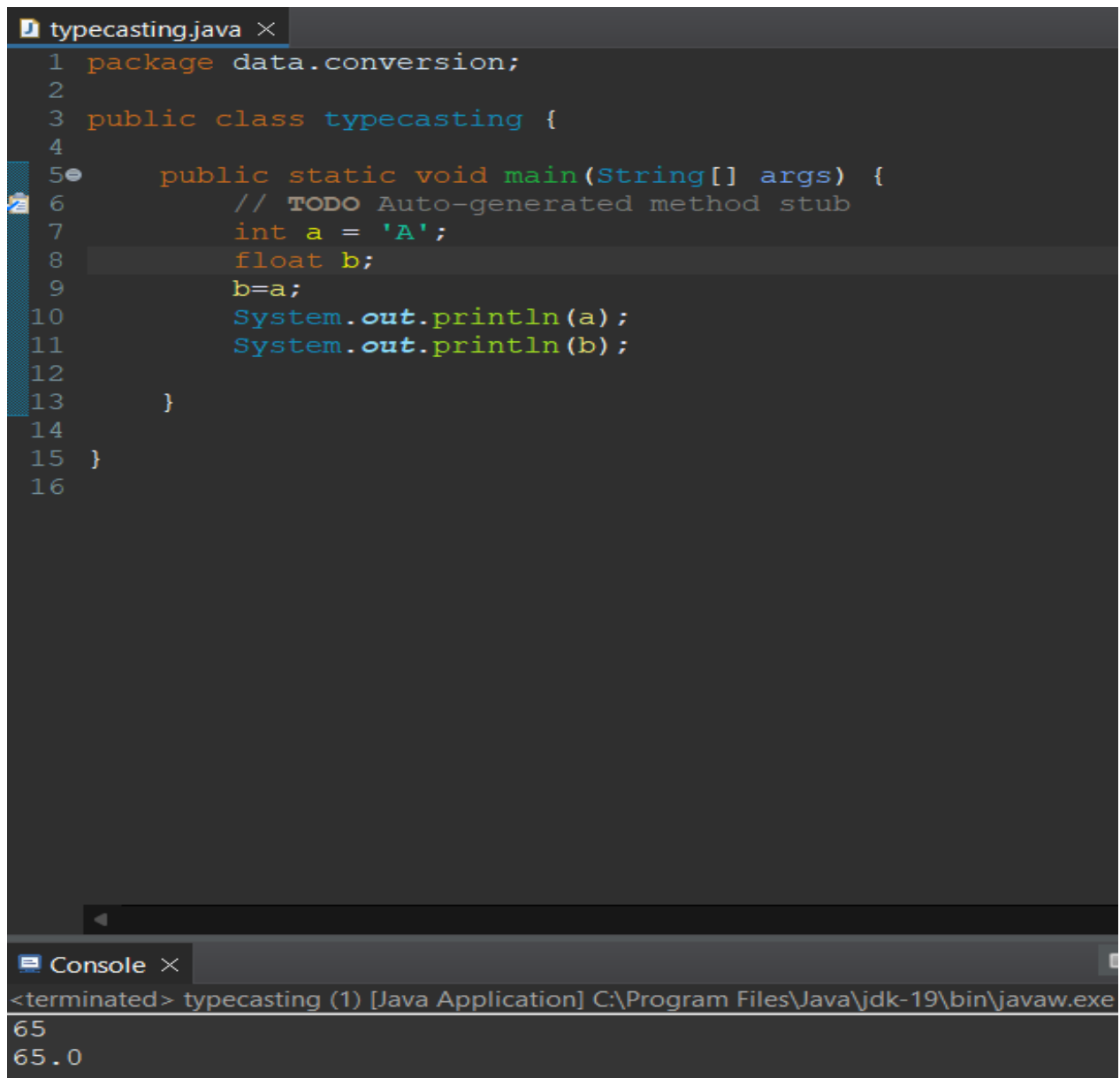
Console Output:

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (2
65
65
```

Conclusion:

No conversion occur from int to int.

Int to float:



The screenshot shows an IDE with a file named `typecasting.java`. The code defines a package `data.conversion` and a public class `typecasting`. Inside the class, there is a `main` method that takes a `String[] args` array. The code initializes an `int a` with the value 'A', declares a `float b`, and then assigns `b = a;`. Finally, it prints the values of `a` and `b` using `System.out.println`. The console output at the bottom shows the program execution, displaying `65` for `a` and `65.0` for `b`, demonstrating implicit conversion.

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int a = 'A';
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console Output:

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe
65
65.0
```

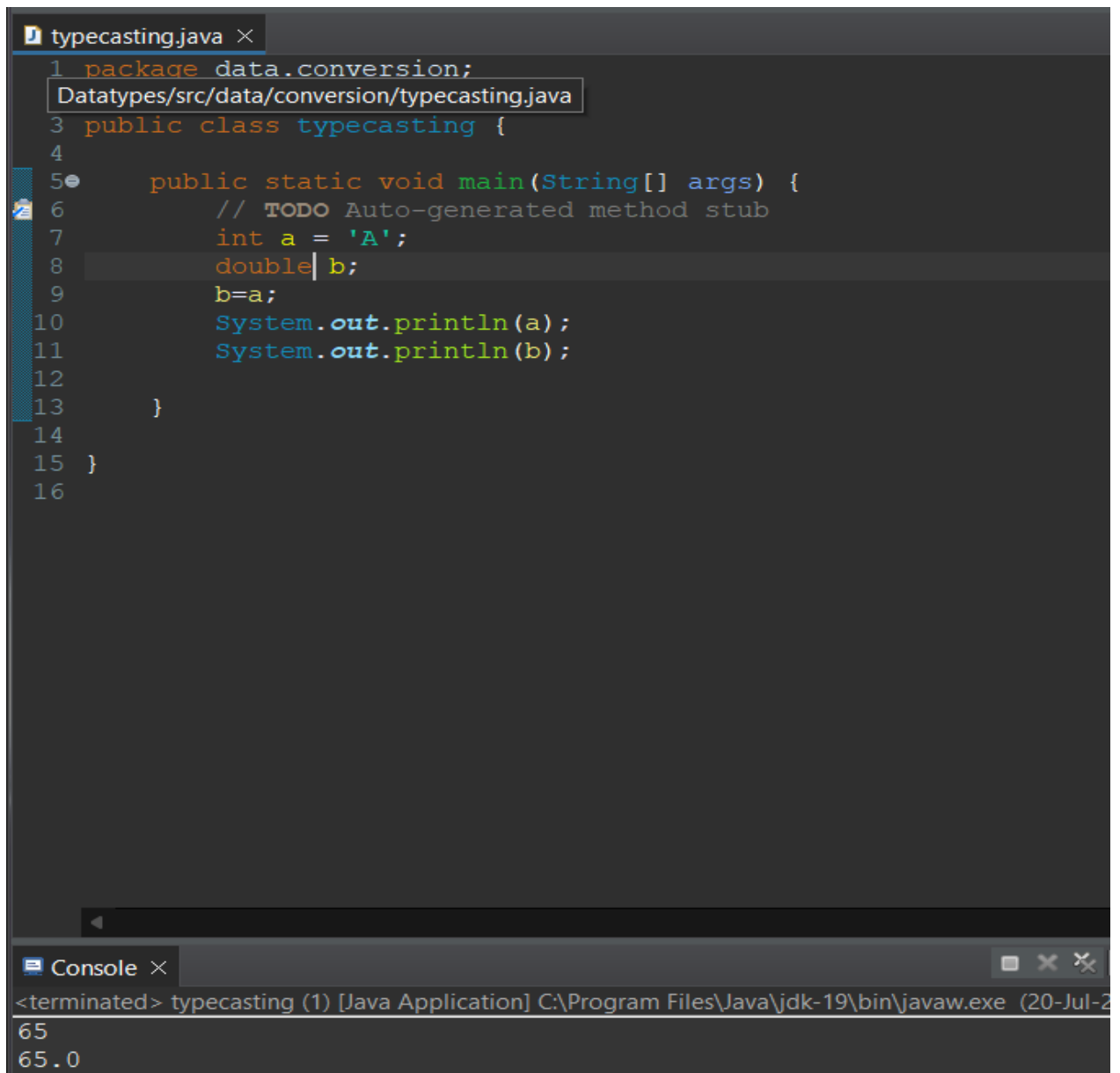
Conclusion:

Int converted into float, so it is Implicit conversion

We can convert int to float by using below one also

$$b = (\text{float}) a;$$

Int to double:



The screenshot shows an IDE with a file named `typecasting.java`. The code defines a package `data.conversion` and a class `typecasting` with a `main` method. Inside `main`, an `int` variable `a` is assigned the value `'A'`, and a `double` variable `b` is assigned the value of `a`. Both `a` and `b` are printed to the console. The console output shows `65` for `a` and `65.0` for `b`, demonstrating implicit conversion.

```
1 package data.conversion;
2 Datatypes/src/data/conversion/typecasting.java
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int a = 'A';
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console Output:

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2
65
65.0
```

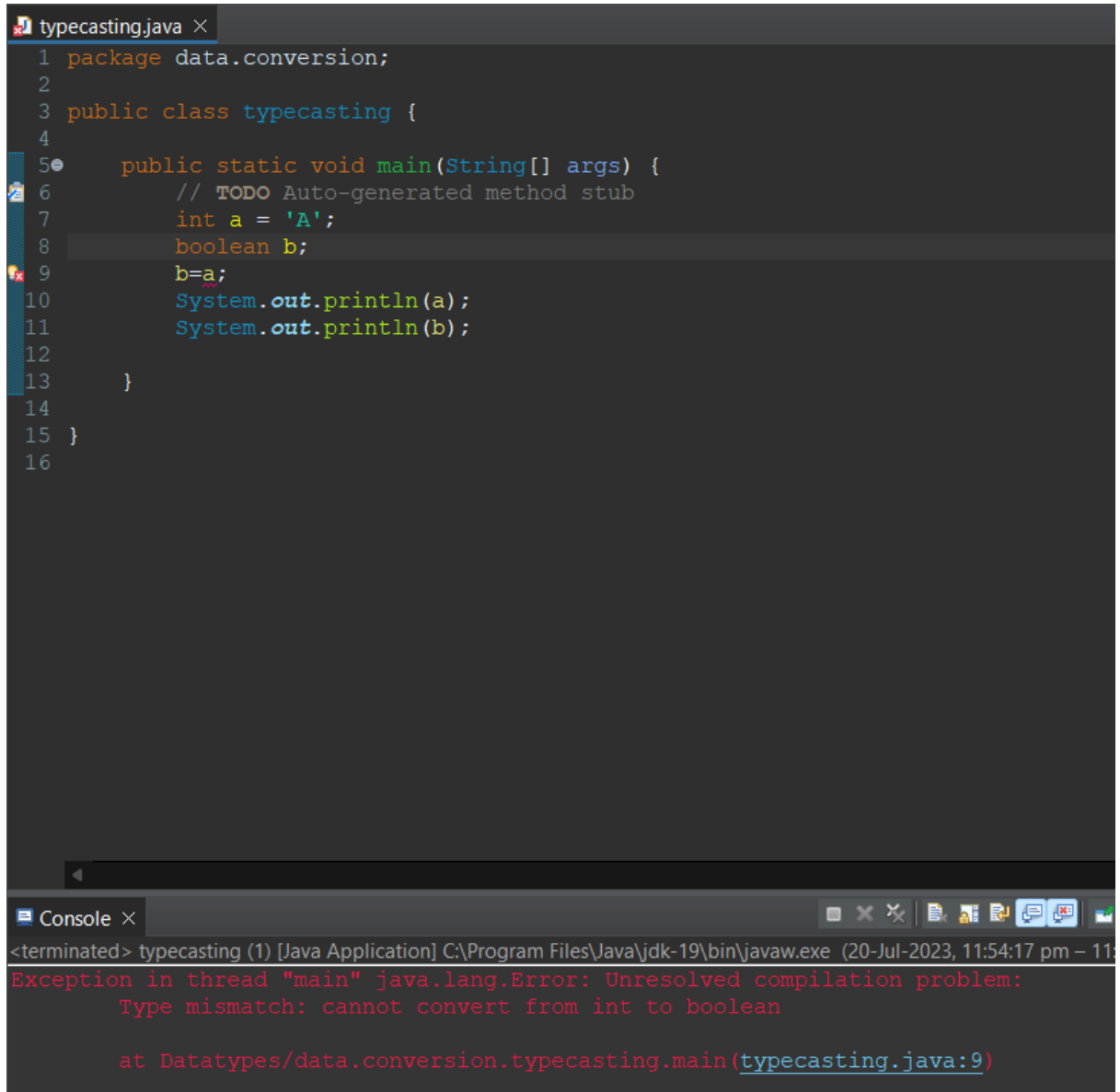
Conclusion:

Int converted into double, so it is Implicit conversion

We can convert int to double by using below one also

`b = (double) a;`

Int to boolean:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int a = 'A';
8         boolean b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console x

<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (20-Jul-2023, 11:54:17 pm - 11:54:17 pm)

Exception in thread "main" java.lang.Error: Unresolved compilation problem:

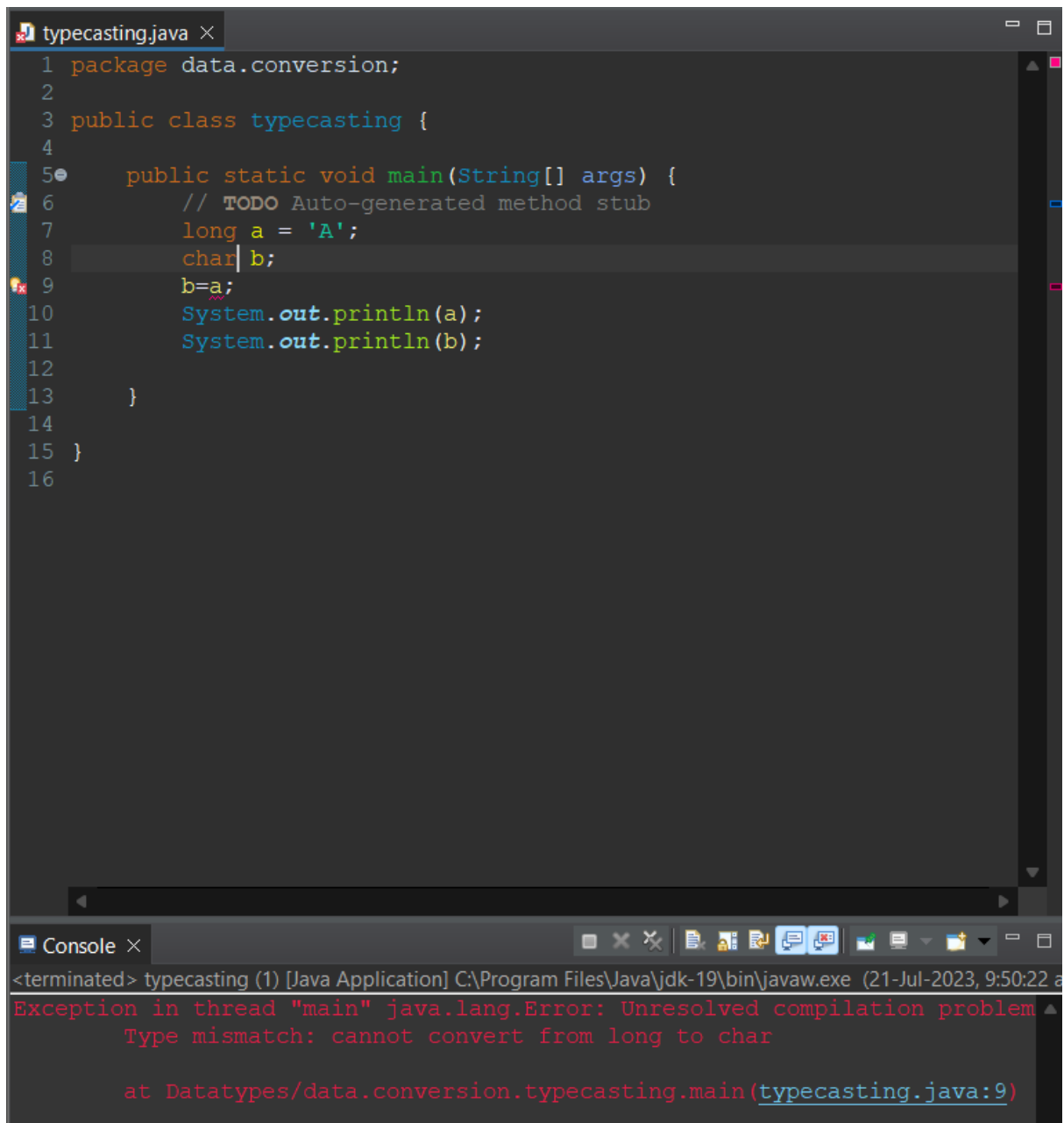
Type mismatch: cannot convert from int to boolean

at Datatypes/data.conversion.typecasting.main(typecasting.java:9)

Conclusion:

Int can't convert to boolean so it is Explicit conversion.

Long to char:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         long a = 'A';
8         char b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:50:22 a
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from long to char

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

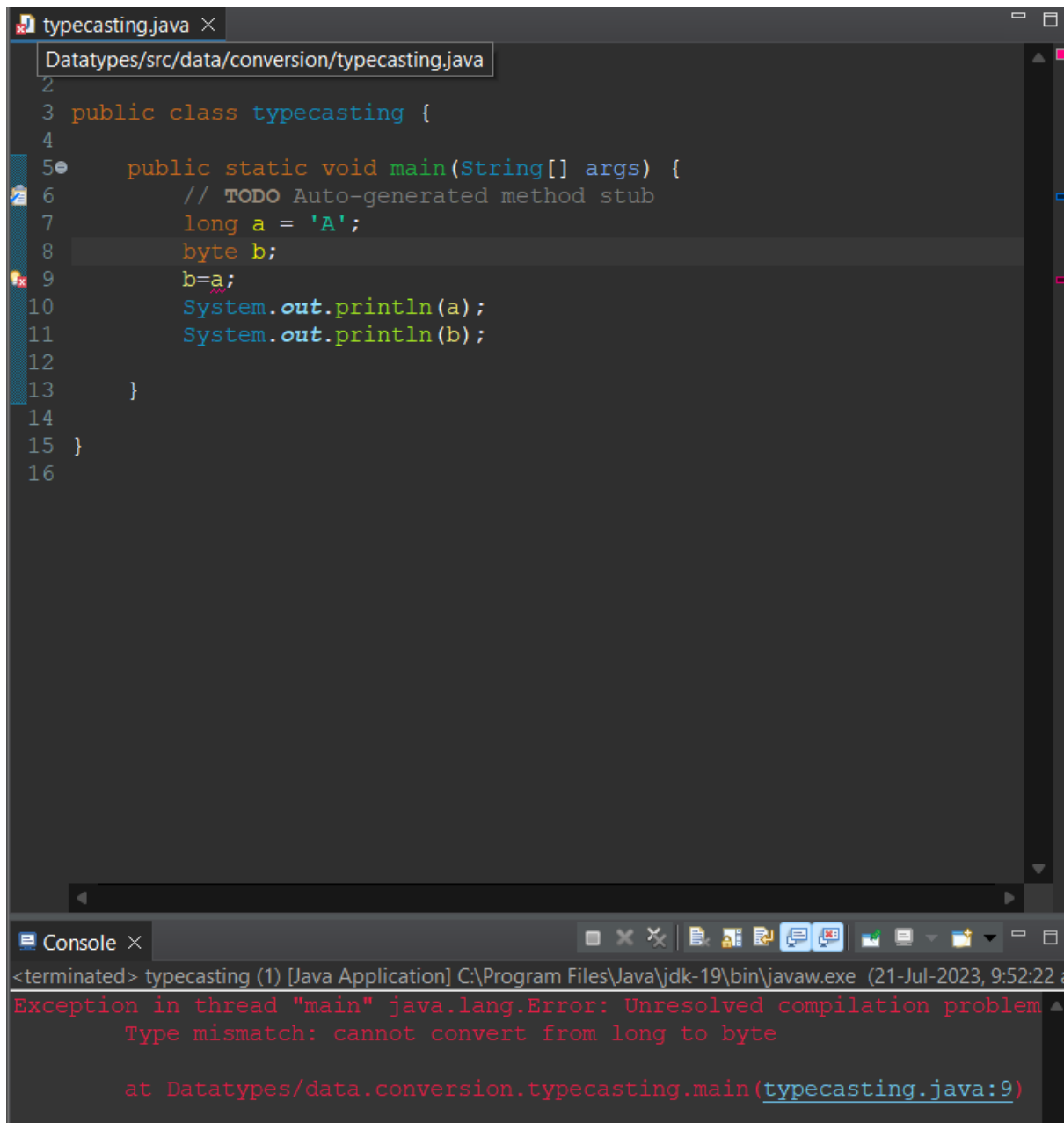
Conclusion:

Long can't convert to char so it is Explicit conversion.

To convert long to char use the below one:

`b = (char)a;`

Long to byte:



```
Datatypes/src/data/conversion/typecasting.java
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         long a = 'A';
8         byte b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:52:22 a
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from long to byte

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

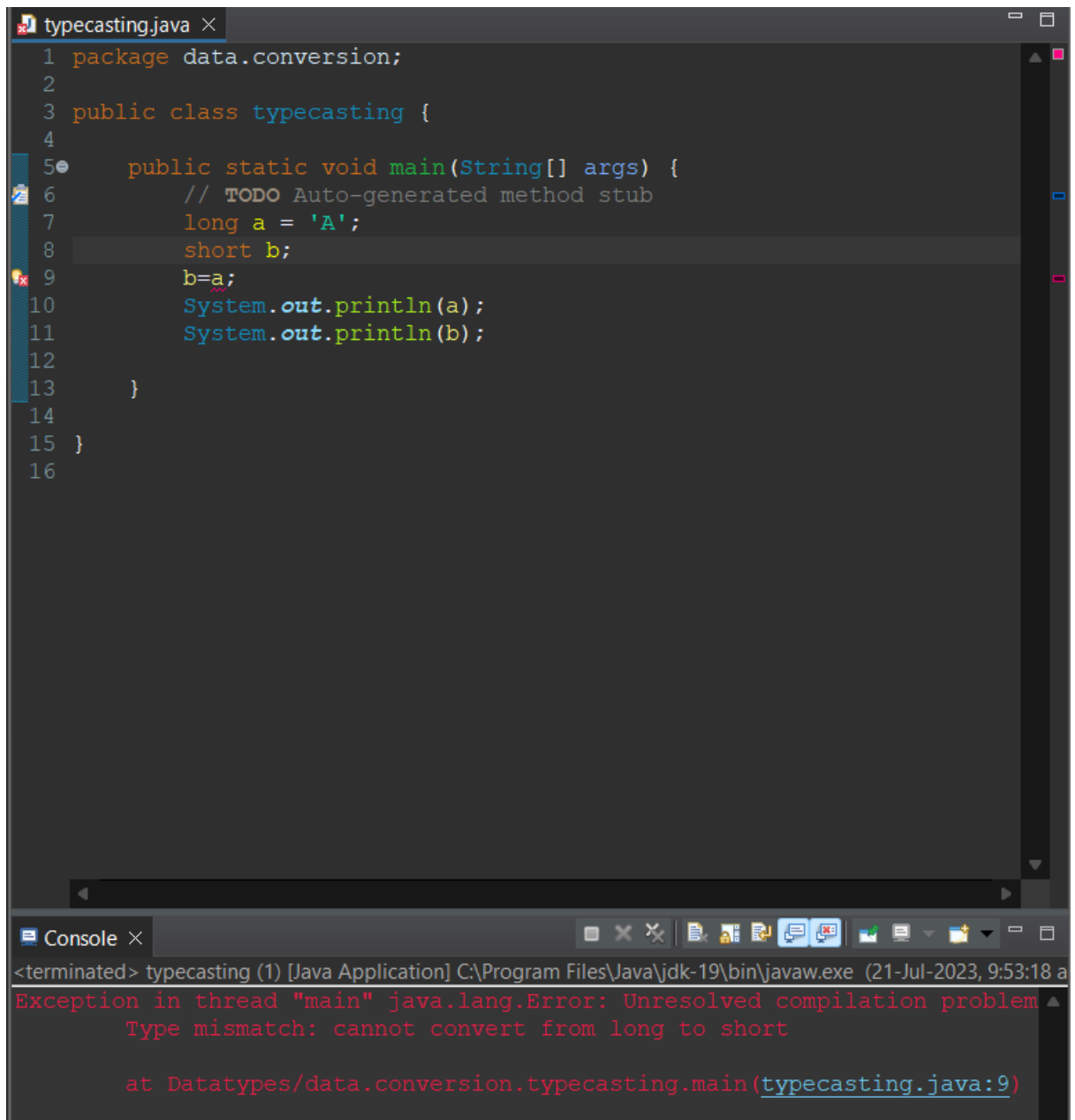
Conclusion:

Long can't convert to byte so it is Explicit conversion.

To convert long to byte use the below one:

$$b = (\text{byte})a;$$

Long to short:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         long a = 'A';
8         short b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console x
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:53:18 a
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from long to short

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

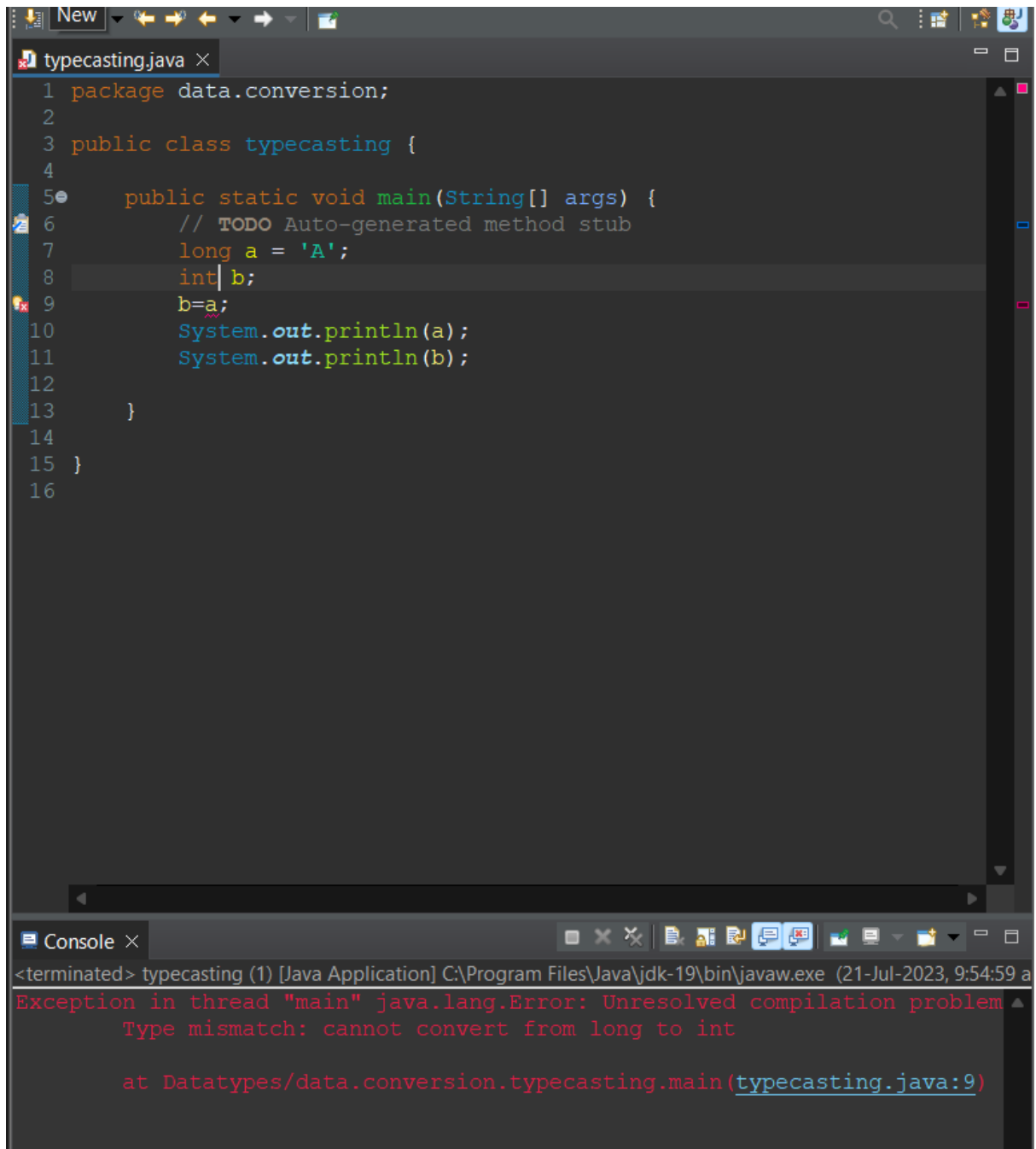
Conclusion:

Long can't convert to short so it is Explicit conversion.

To convert long to short use the below one:

$$b = (\text{short})a;$$

Long to int:



```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         long a = 'A';
8         int b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console ×

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:54:59 a
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from long to int

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

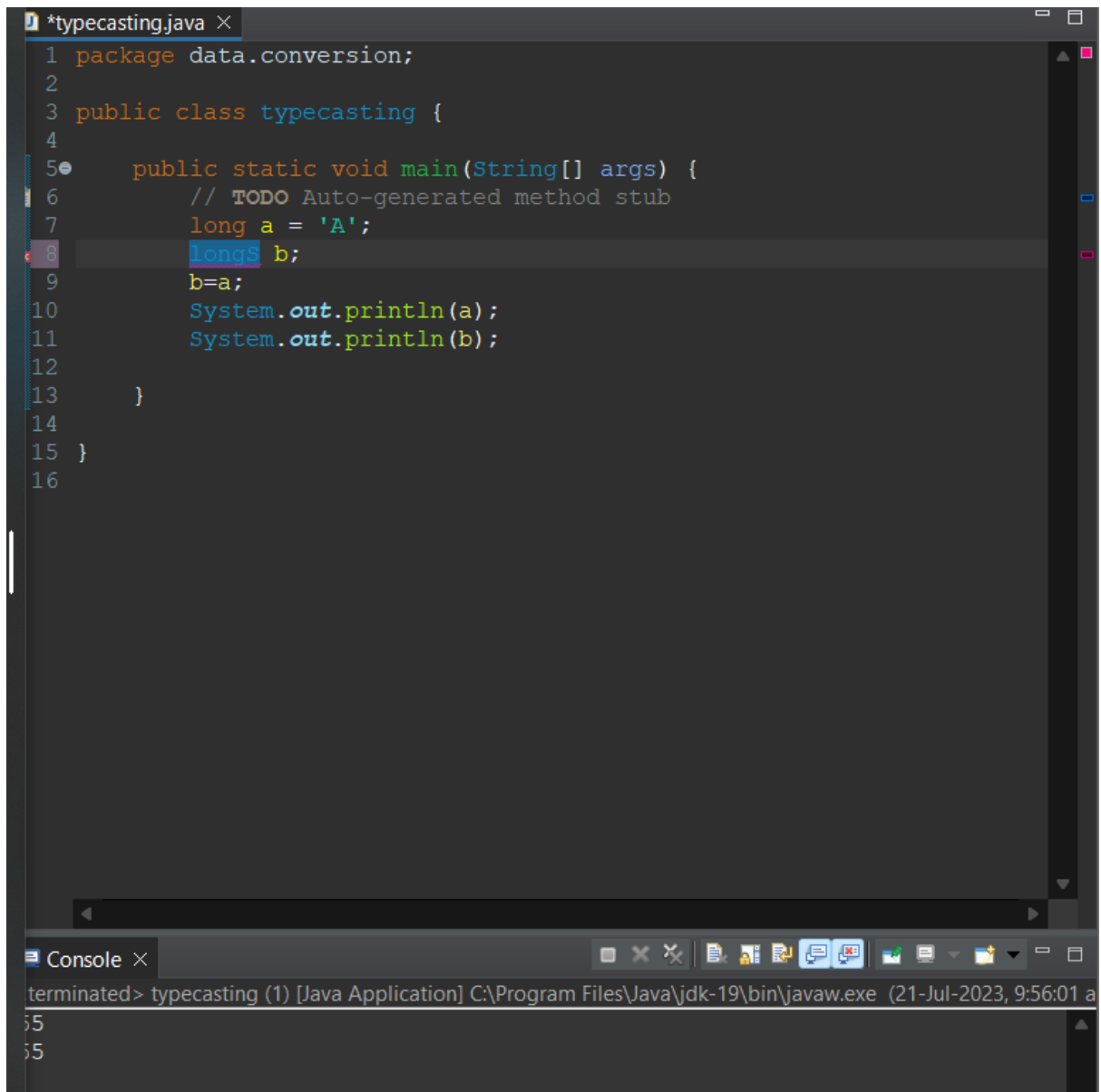
Conclusion:

Long can't convert to int so it is Explicit conversion.

To convert long to int use the below one:

`b = (int)a;`

Long to long:



```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         long a = 'A';
8         long b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

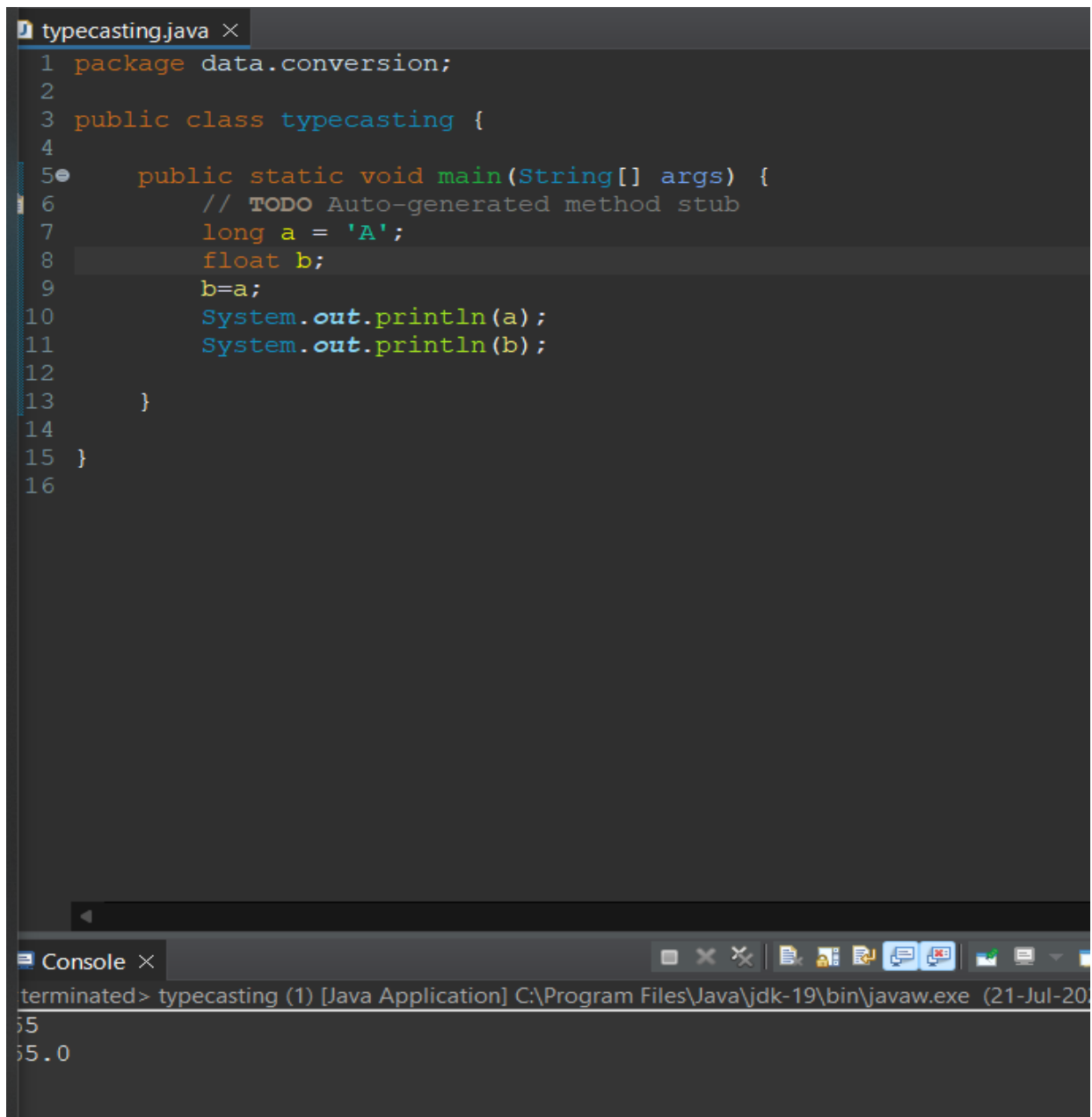
Console ×

terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:56:01 a
55
55

Conclusion:

No conversion occur in between long and long. So,the conversion is no need.

Long to float:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         long a = 'A';
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console ×
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-20
$5
$5.0
```

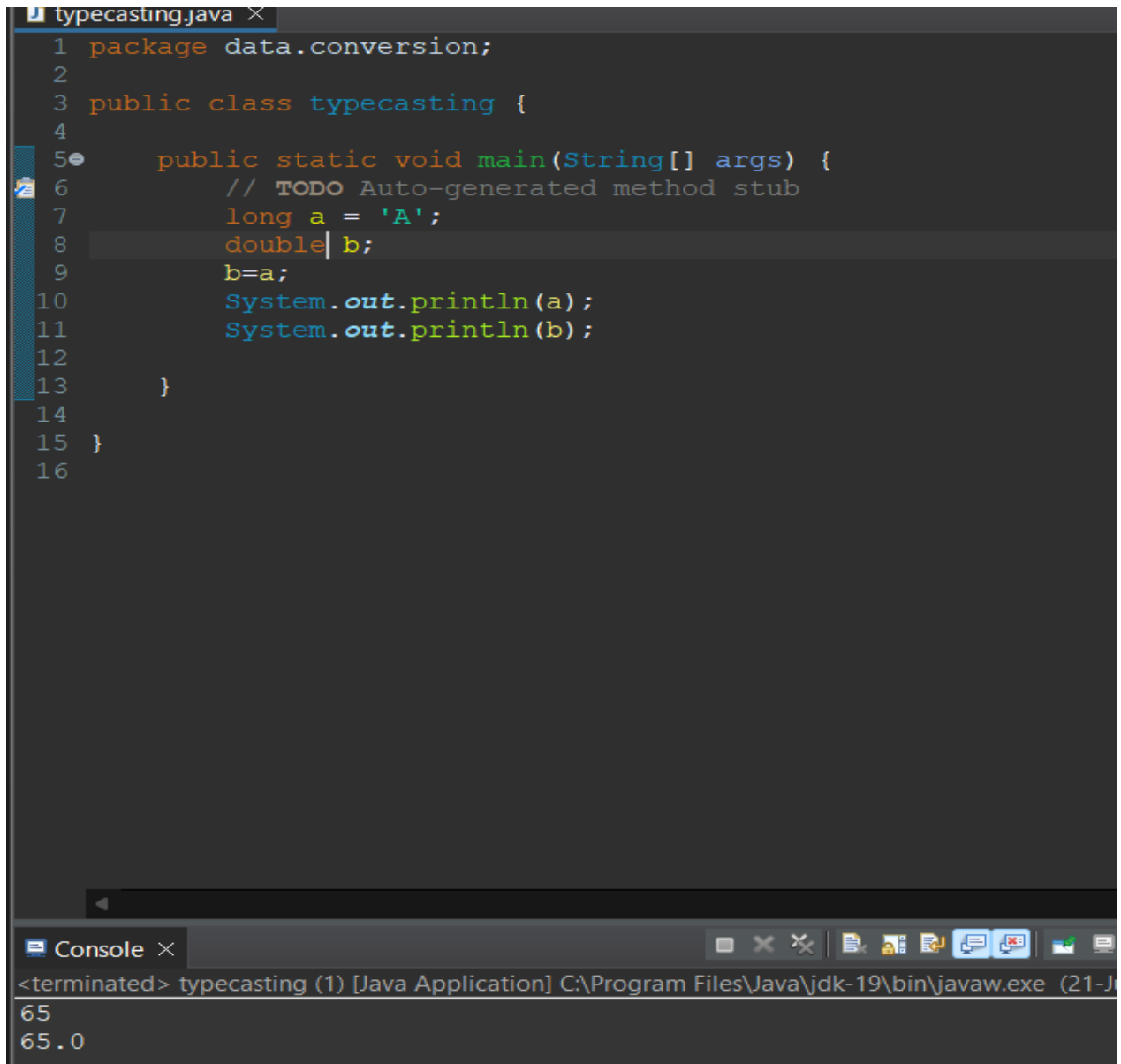
Conclusion:

Long converted into float, so it is Implicit conversion

We can convert long to float by using below one also

$$b = (\text{float}) a;$$

Long to double:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         long a = 'A';
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-J

65

65.0

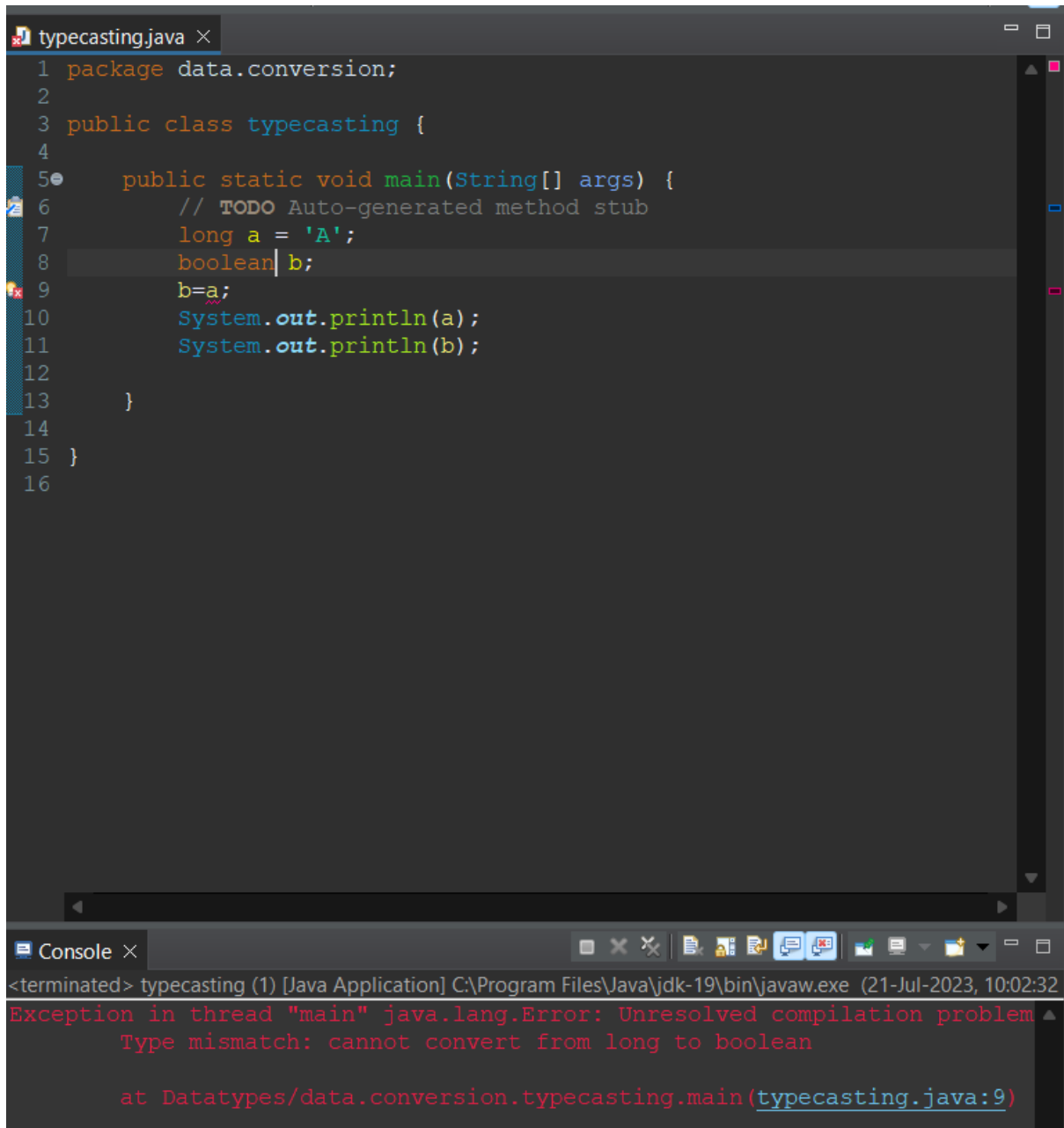
Conclusion:

Long converted into double, so it is Implicit conversion

We can convert long to double by using below one also

$$b = (\text{double}) a;$$

Long to boolean:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         long a = 'A';
8         boolean b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

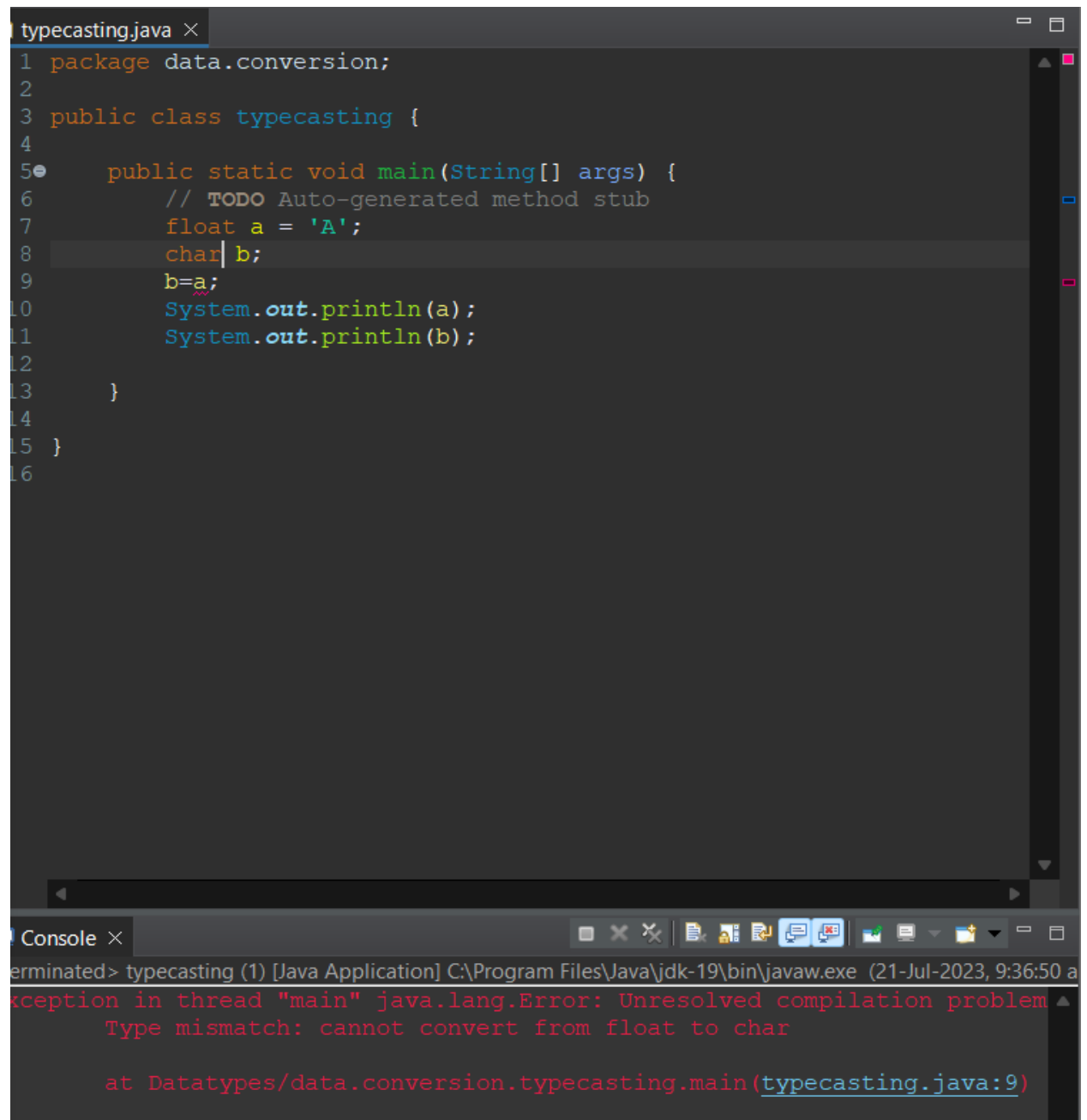
```
Console ×
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:02:32)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from long to boolean

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

No conversion occur in between long to Boolean. So, the conversion is no need.

Float to char:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         float a = 'A';
8         char b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console x
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:36:50 a
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from float to char

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

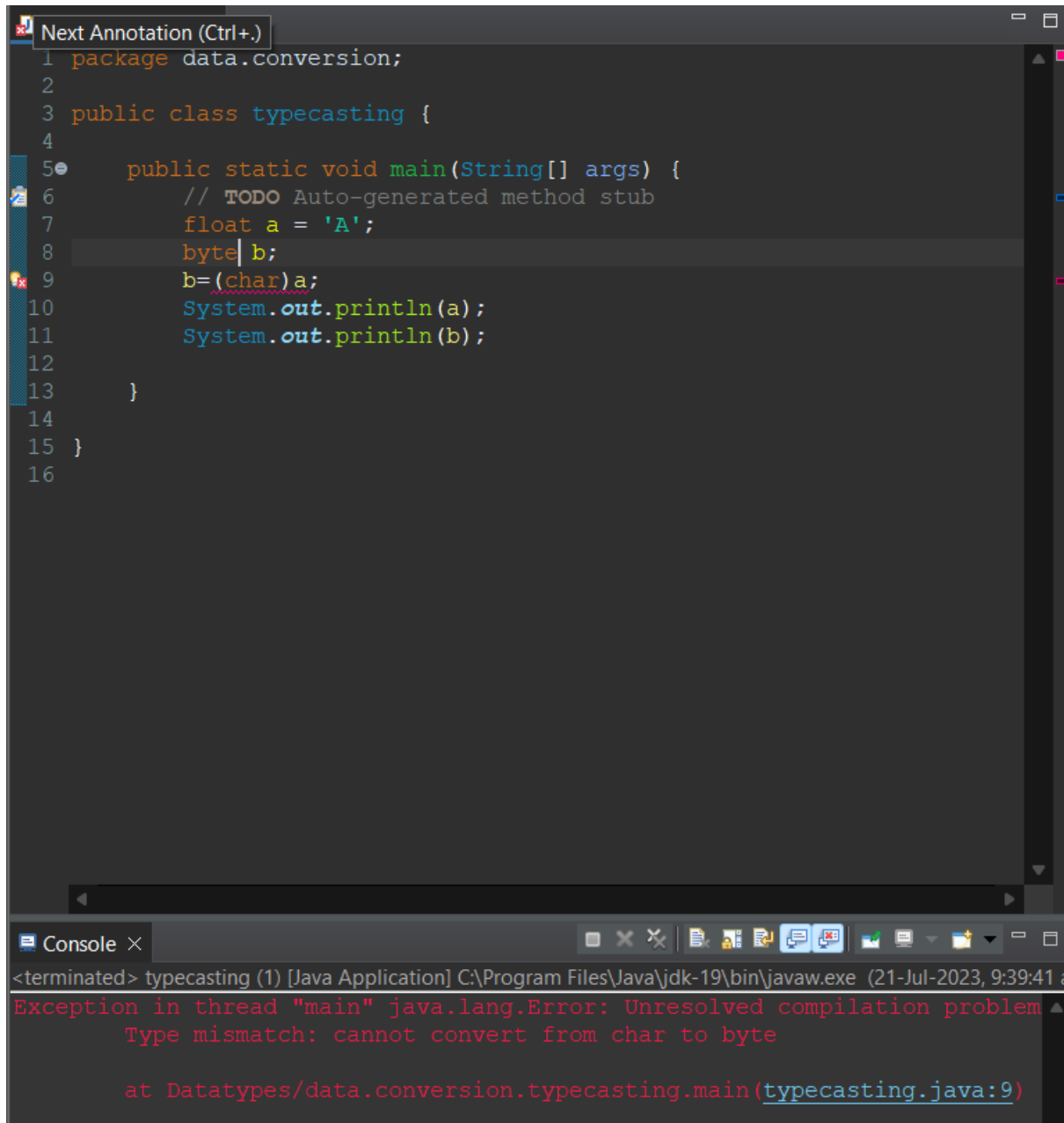
Conclusion:

Float can't convert to char so it is Explicit conversion.

To convert float to char use the below one:

$$b = (\text{char})a;$$

Float to byte:



The screenshot shows an IDE window titled "Next Annotation (Ctrl+.)" containing a Java file named "typecasting.java". The code is as follows:

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         float a = 'A';
8         byte b;
9         b=(char)a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Below the code editor is a console window titled "Console ×" showing the following output:

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:39:41 a
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from char to byte

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

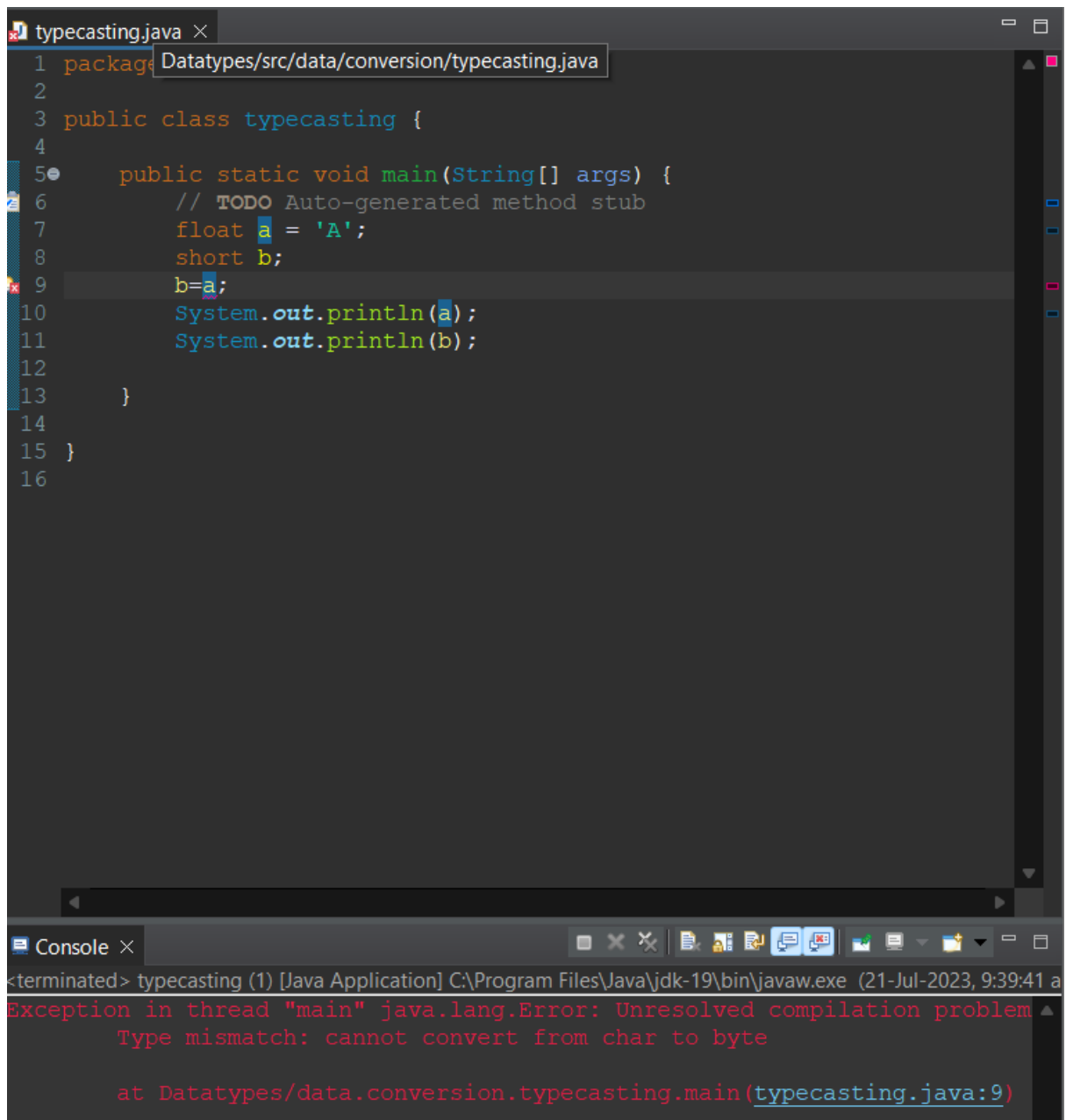
Conclusion:

Float can't convert to byte so it is Explicit conversion.

To convert float to byte use the below one:

$$b = (\text{byte})a;$$

Float to short:



```
1 package Datatypes/src/data/conversion/typecasting.java
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         float a = 'A';
8         short b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console ×

<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:39:41 a

Exception in thread "main" java.lang.Error: Unresolved compilation problem

Type mismatch: cannot convert from char to byte

at Datatypes/data.conversion.typecasting.main(typecasting.java:9)

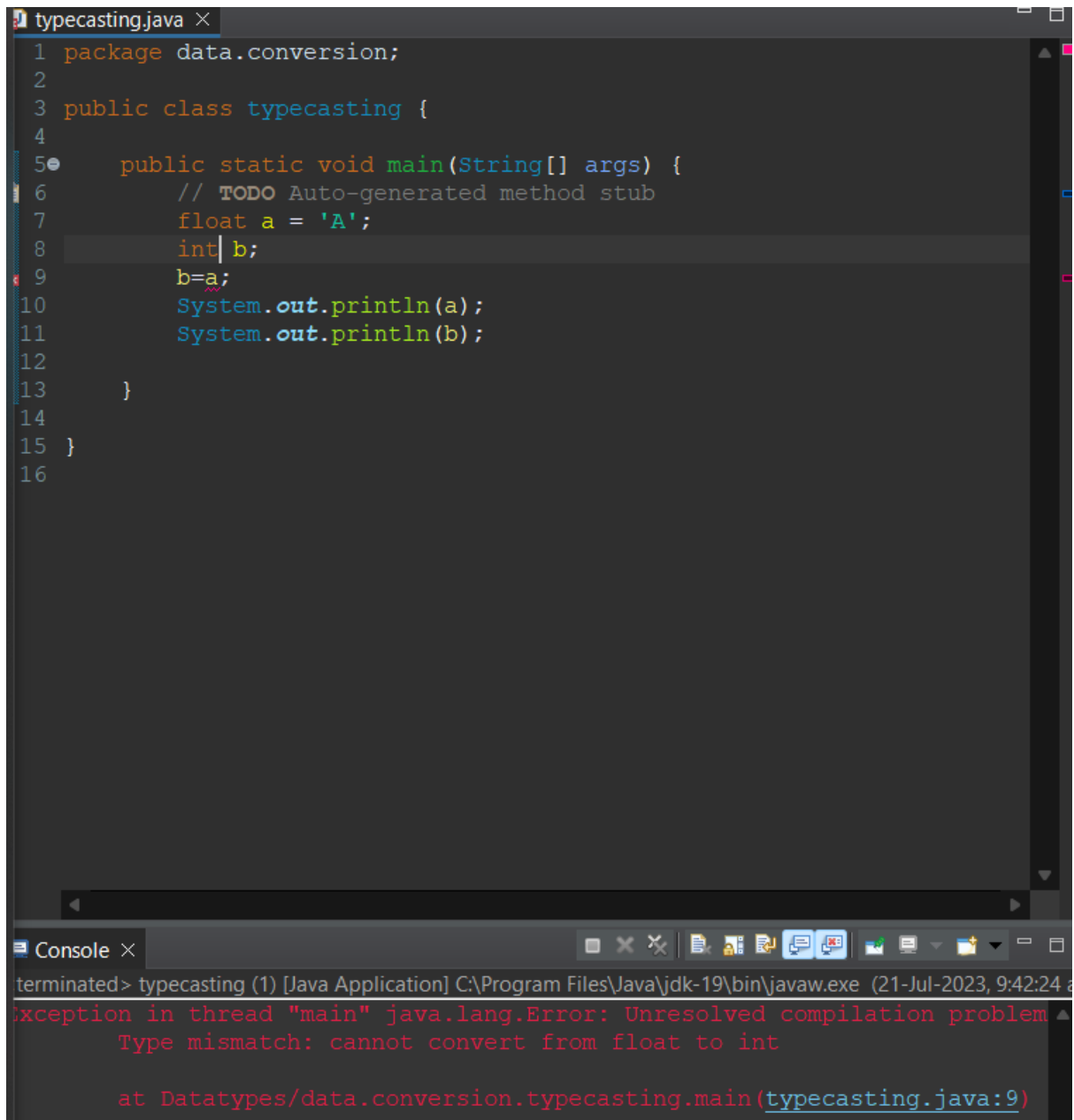
Conclusion:

Float can't convert to short so it is Explicit conversion.

To convert float to short use the below one:

$$b = (\text{short})a;$$

Float to int:



```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         float a = 'A';
8         int b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

```
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:42:24 a
Exception in thread "main" java.lang.Error: Unresolved compilation problem
Type mismatch: cannot convert from float to int

at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

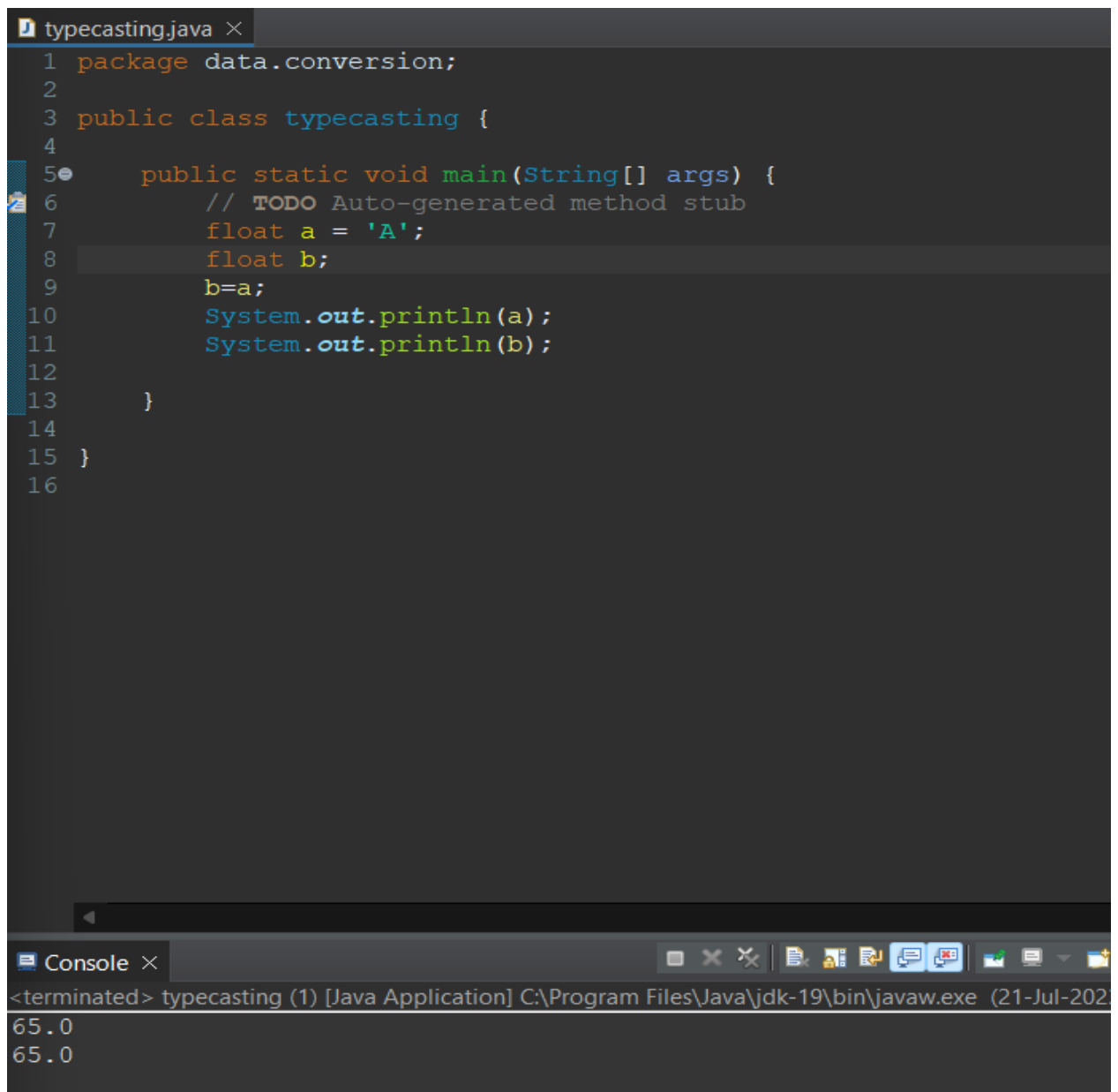
Conclusion:

Float can't convert to int so it is Explicit conversion.

To convert float to int use the below one:

`b = (int)a;`

Float to float:



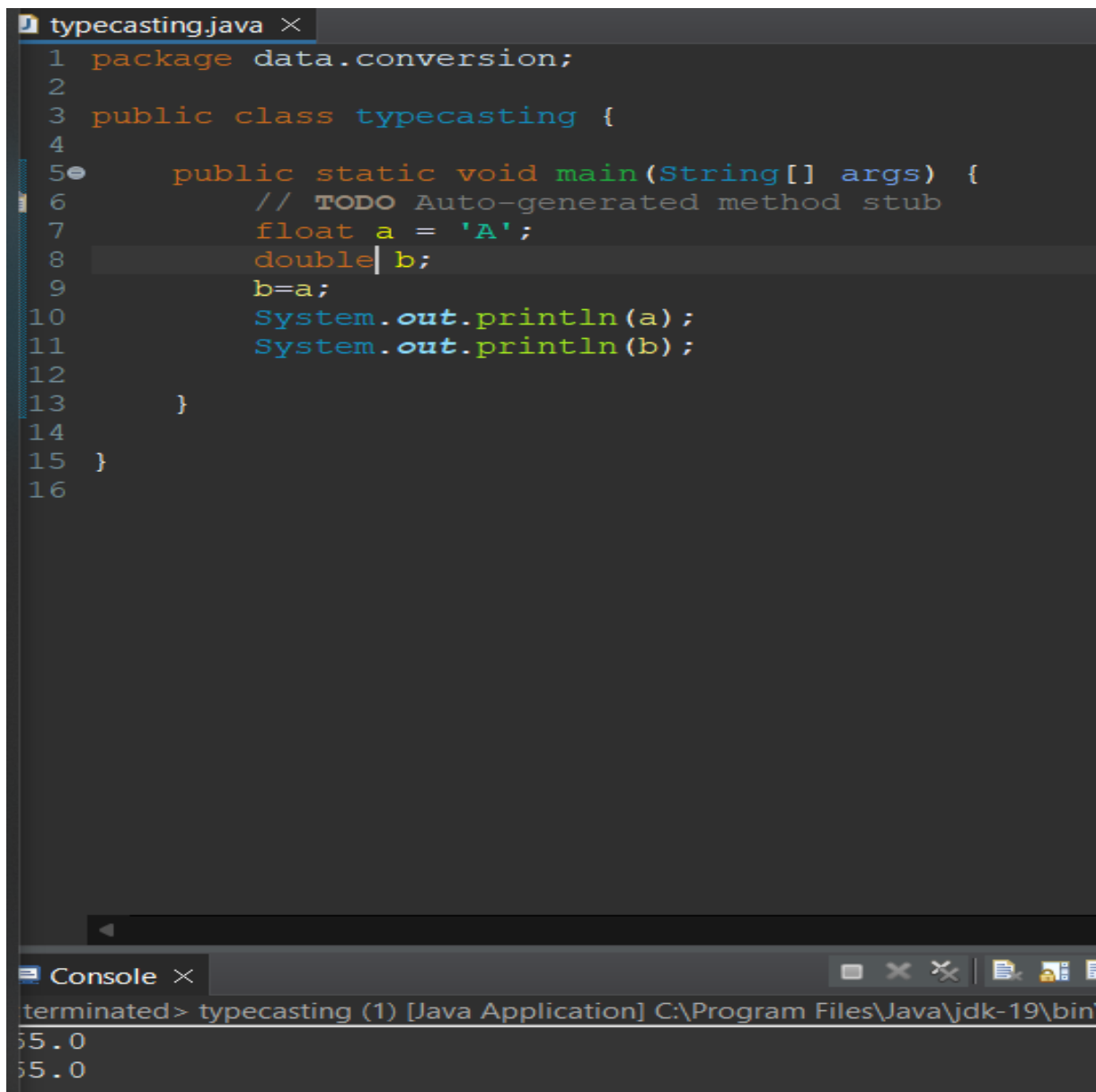
```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         float a = 'A';
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console ×
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-202
65.0
65.0
```

Conclusion:

No conversion occur in between float to float. This conversion is no need.

Float to double:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         float a = 'A';
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

```
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin
55.0
55.0
```

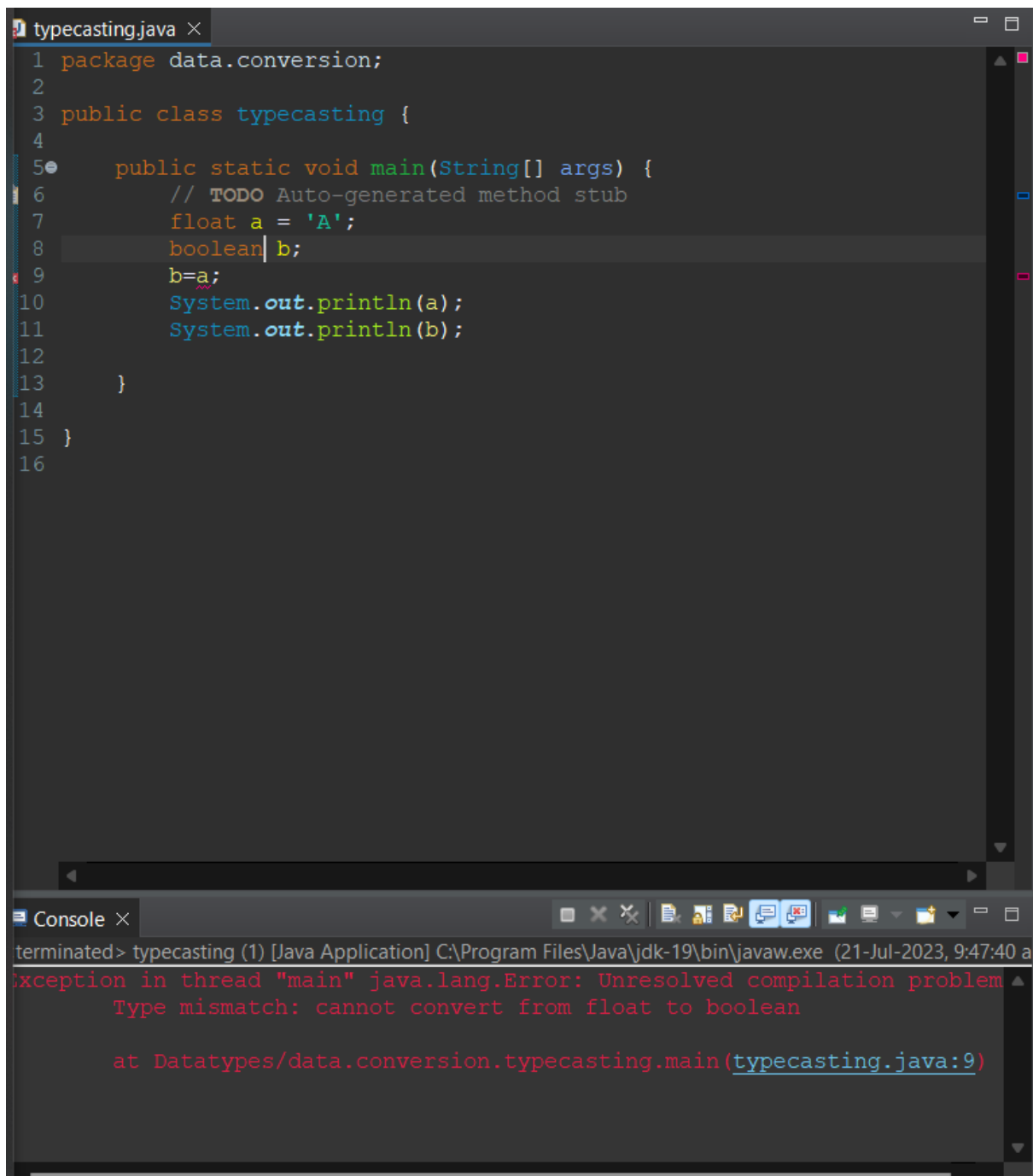
Conclusion:

Float converted into double, so it is Implicit conversion

We can convert Float to double by using below one also

`b = (double) a;`

Float to boolean:



The screenshot shows an IDE with a file named `typecasting.java`. The code defines a package `data.conversion` and a class `typecasting` with a `main` method. Inside `main`, a `float` variable `a` is assigned the value `'A'`, and a `boolean` variable `b` is assigned the value of `a`. The program prints both values. The console output shows a `java.lang.Error: Unresolved compilation problem` with the message `Type mismatch: cannot convert from float to boolean`, indicating that the code does not compile due to the invalid assignment of a float to a boolean variable.

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         float a = 'A';
8         boolean b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console Output:

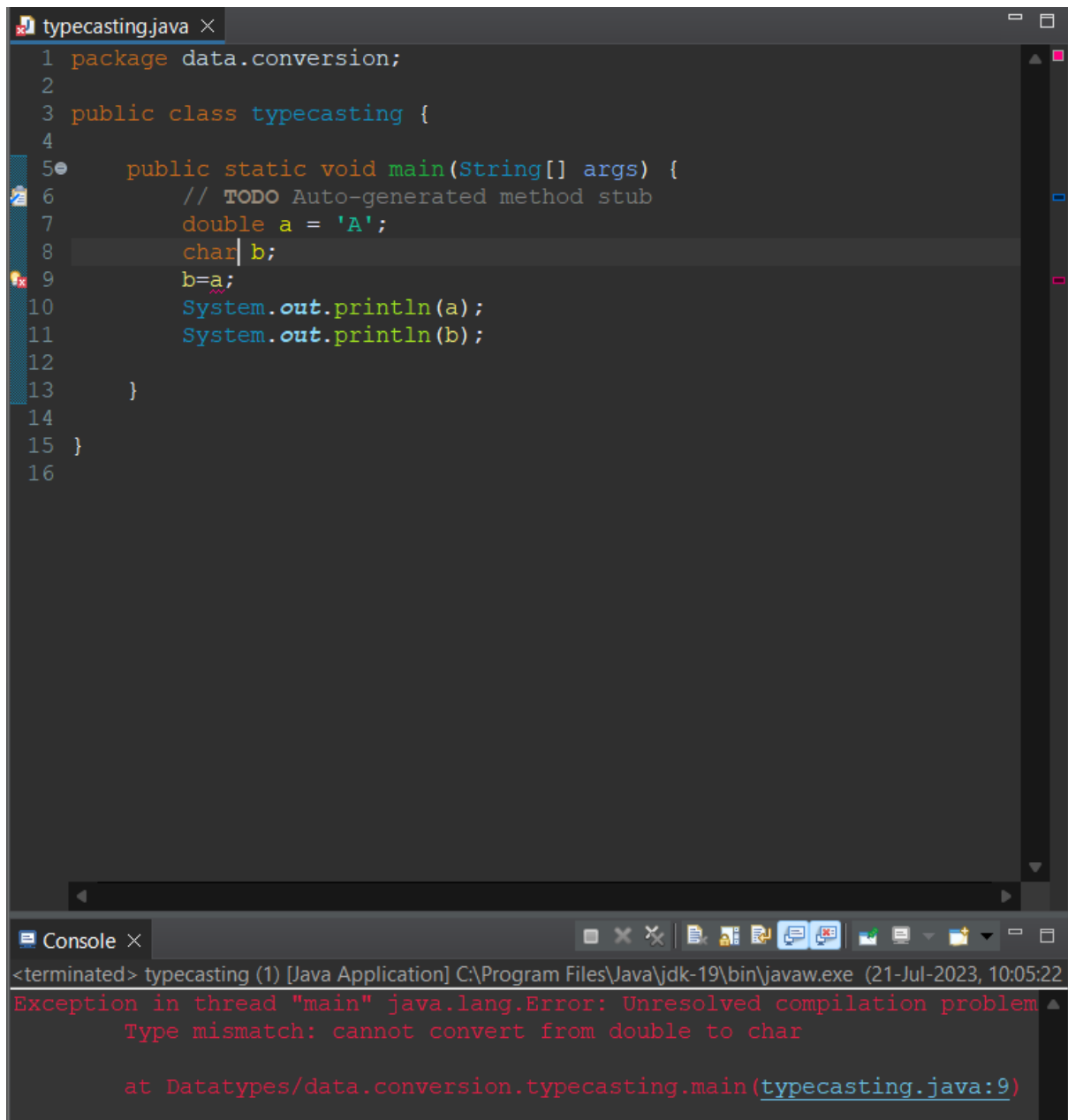
```
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 9:47:40 a
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from float to boolean

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Float can't convert to Boolean so it is Explicit conversion.

Double to char:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         double a = 'A';
8         char b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:05:22)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from double to char

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

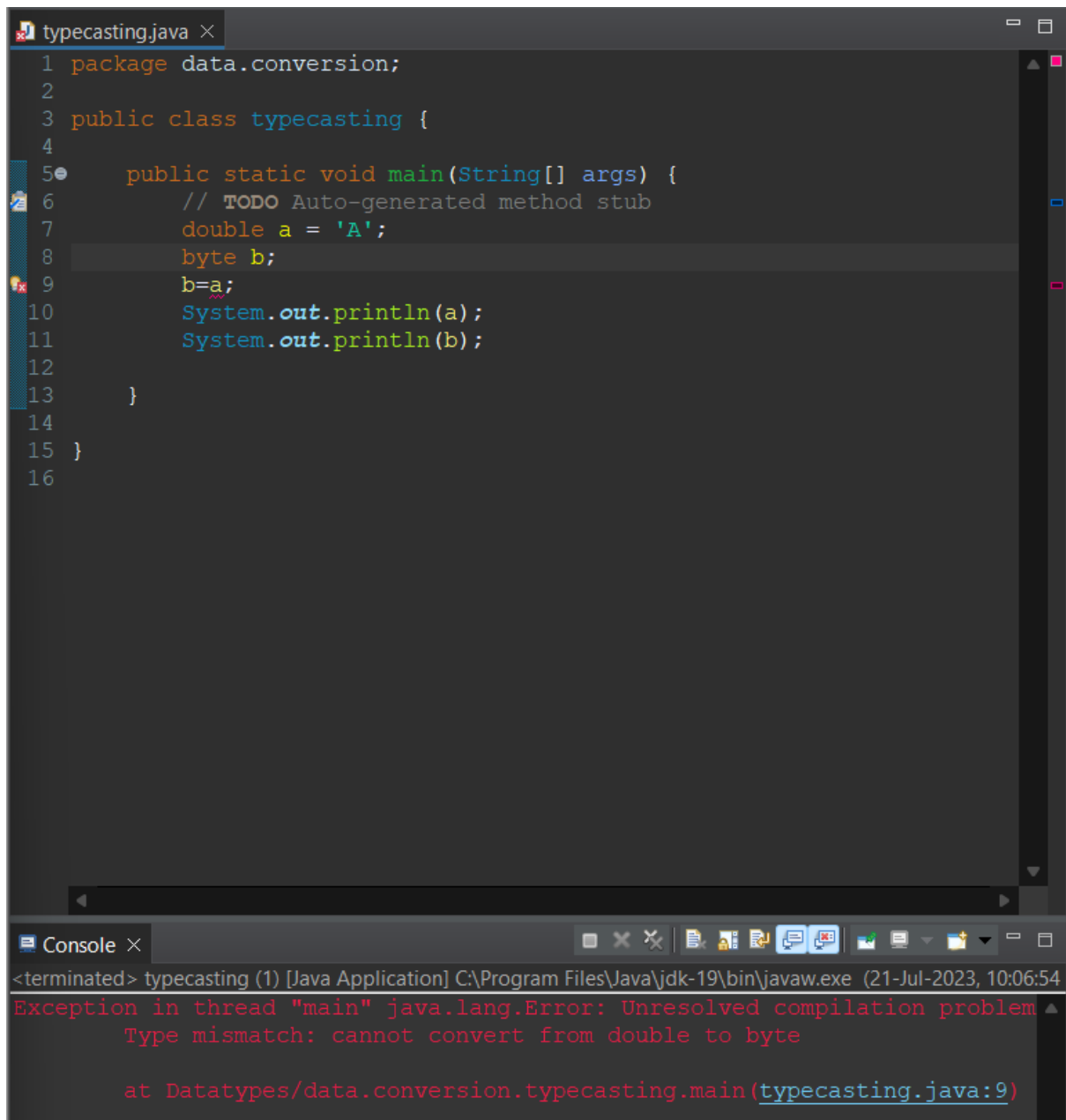
Conclusion:

Double can't convert to char so it is Explicit conversion.

To convert double to char use the below one:

`b = (char)a;`

Double to byte:



```
typecasting.java ×
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         double a = 'A';
8         byte b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console ×
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:06:54)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from double to byte

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

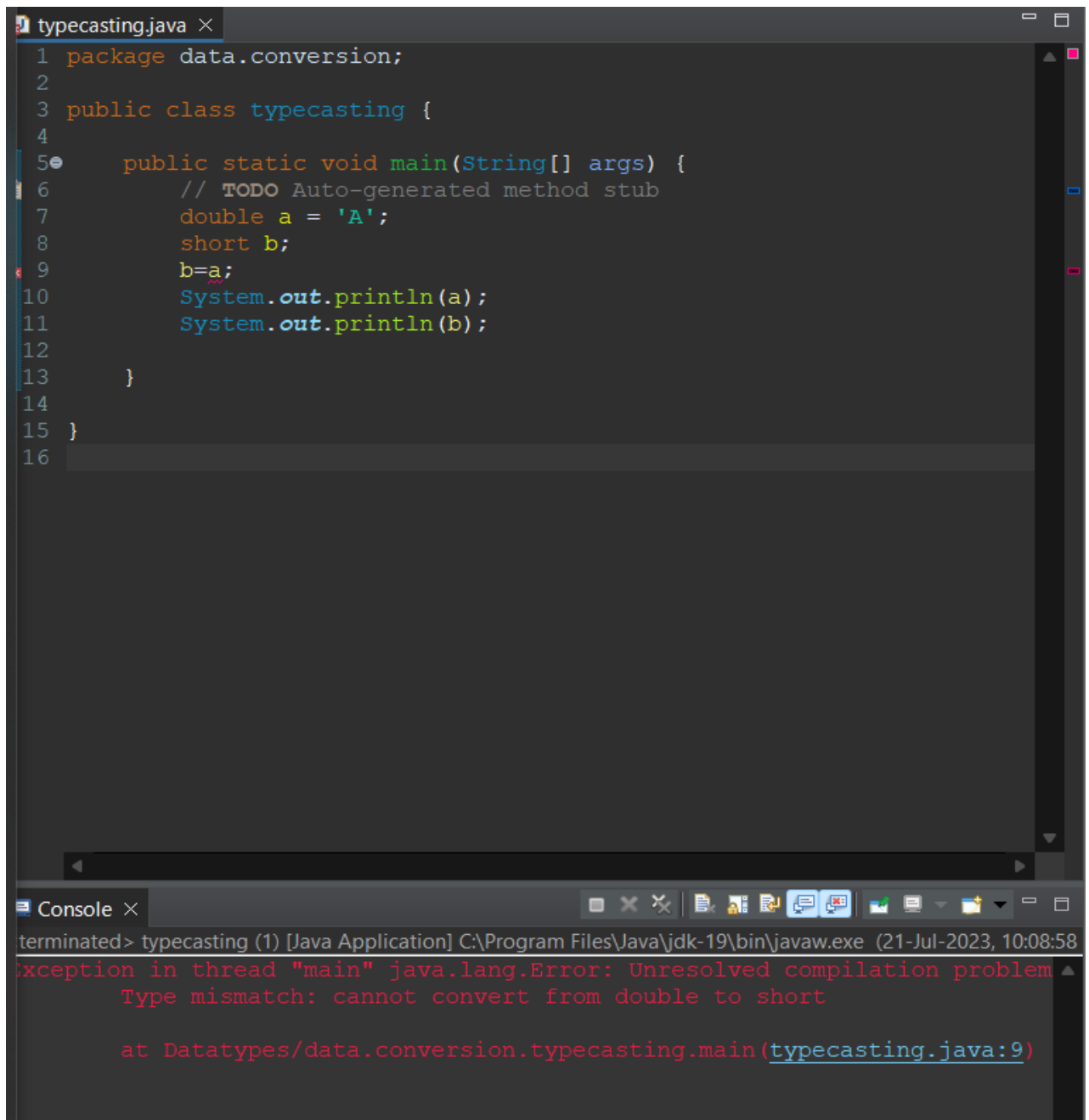
Conclusion:

Double can't convert to byte so it is Explicit conversion.

To convert double to byte use the below one:

`b = (byte)a;`

Double to short:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         double a = 'A';
8         short b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

```
Console x
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:08:58)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
Type mismatch: cannot convert from double to short

at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

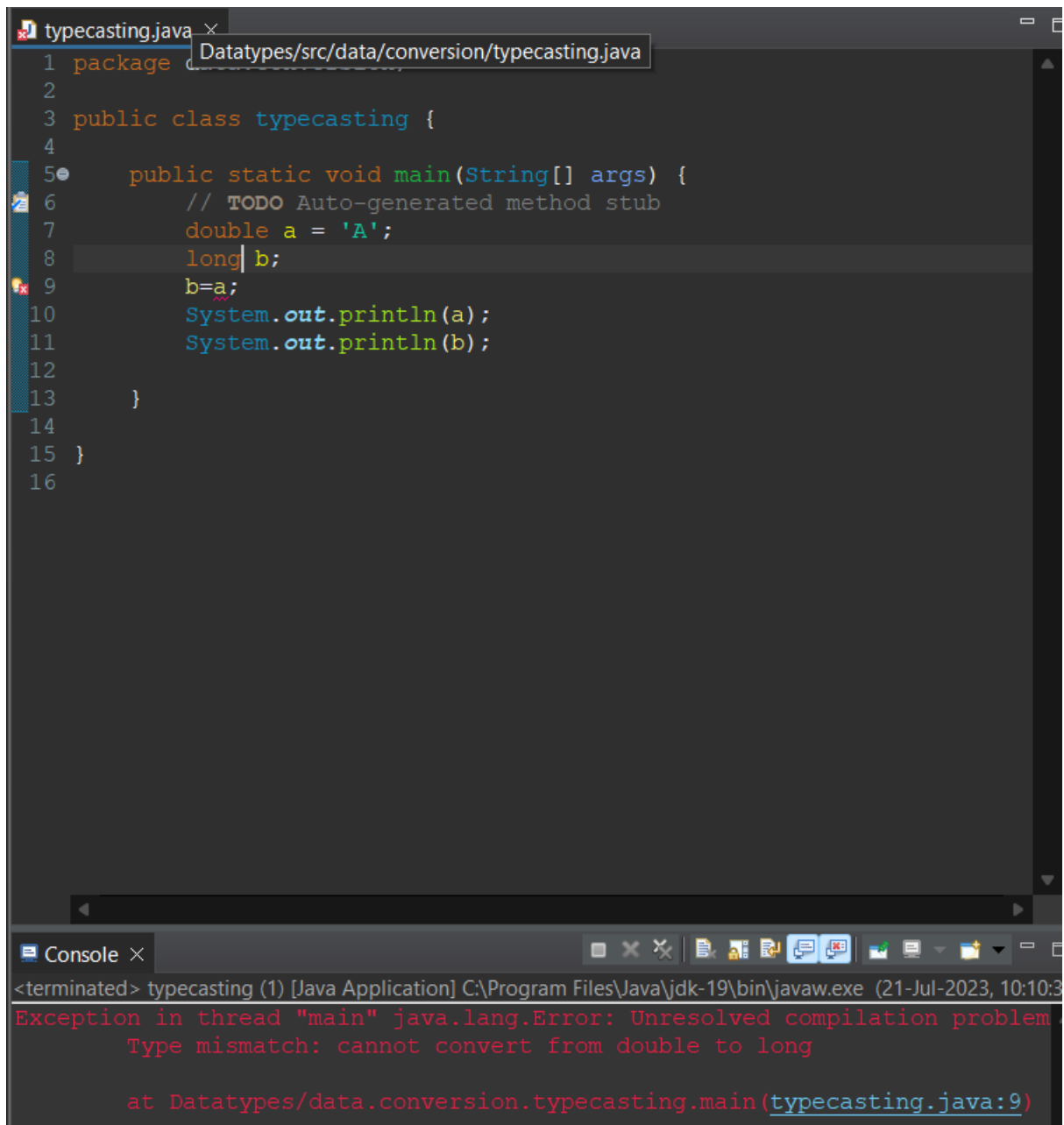
Conclusion:

Double can't convert to short so it is Explicit conversion.

To convert double to short use the below one:

`b = (short)a;`

Double to long:



```
1 package Datatypes/src/data/conversion/typecasting.java
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         double a = 'A';
8         long b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12    }
13 }
14
15 }
16
```

Console ×

<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:10:3

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Type mismatch: cannot convert from double to long

at Datatypes/data.conversion.typecasting.main(typecasting.java:9)

Conclusion:

Double can't convert to long so it is Explicit conversion.

To convert double to long use the below one:

$$b = (\text{long})a;$$

Double to int:

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         double a = 'A';
8         int b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:12:17)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
Type mismatch: cannot convert from double to int

at Datatypes/data.conversion.typecasting.main(typecasting.java:9)

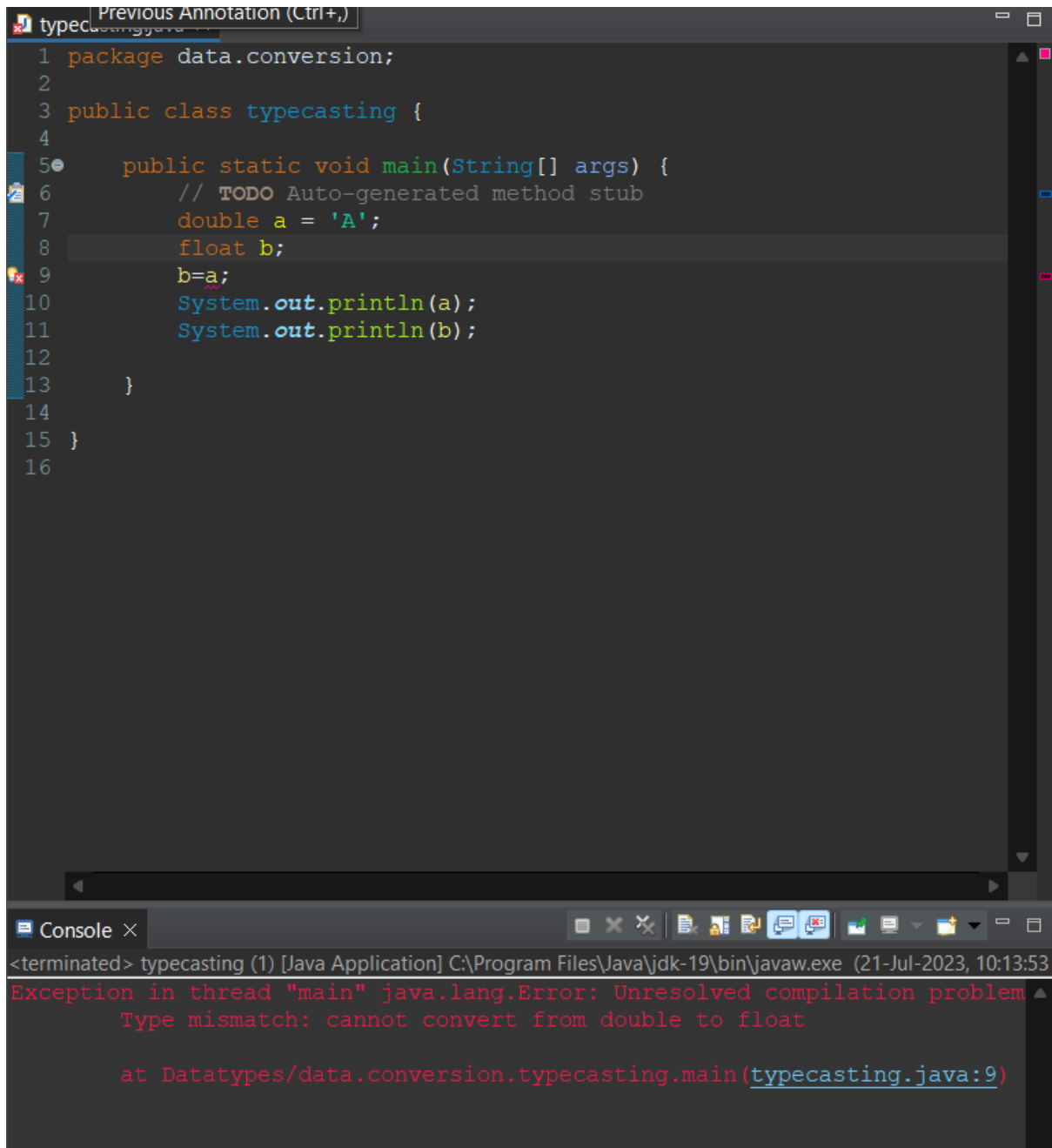
Conclusion:

Double can't convert to int so it is Explicit conversion.

To convert double to int use the below one:

`b = (int)a;`

Double to float:



```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         double a = 'A';
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:13:53)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from double to float

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

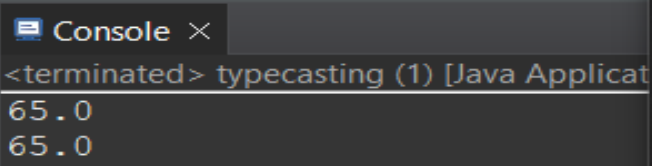
Double can't convert to float so it is Explicit conversion.

To convert double to float use the below one:

`b=(float)a;`

Double to double:

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         double a = 'A';
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14 }
15
16
```



The screenshot shows a Java IDE with a console window at the bottom. The console window has a title bar that says "Console x". Below the title bar, the text "<terminated> typecasting (1) [Java Applicat" is visible. The console output shows two lines: "65.0" and "65.0".

Conclusion:

No conversion occur in between double to double. So, conversion is no need.

Double to boolean:

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         double a = 'A';
8         boolean b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

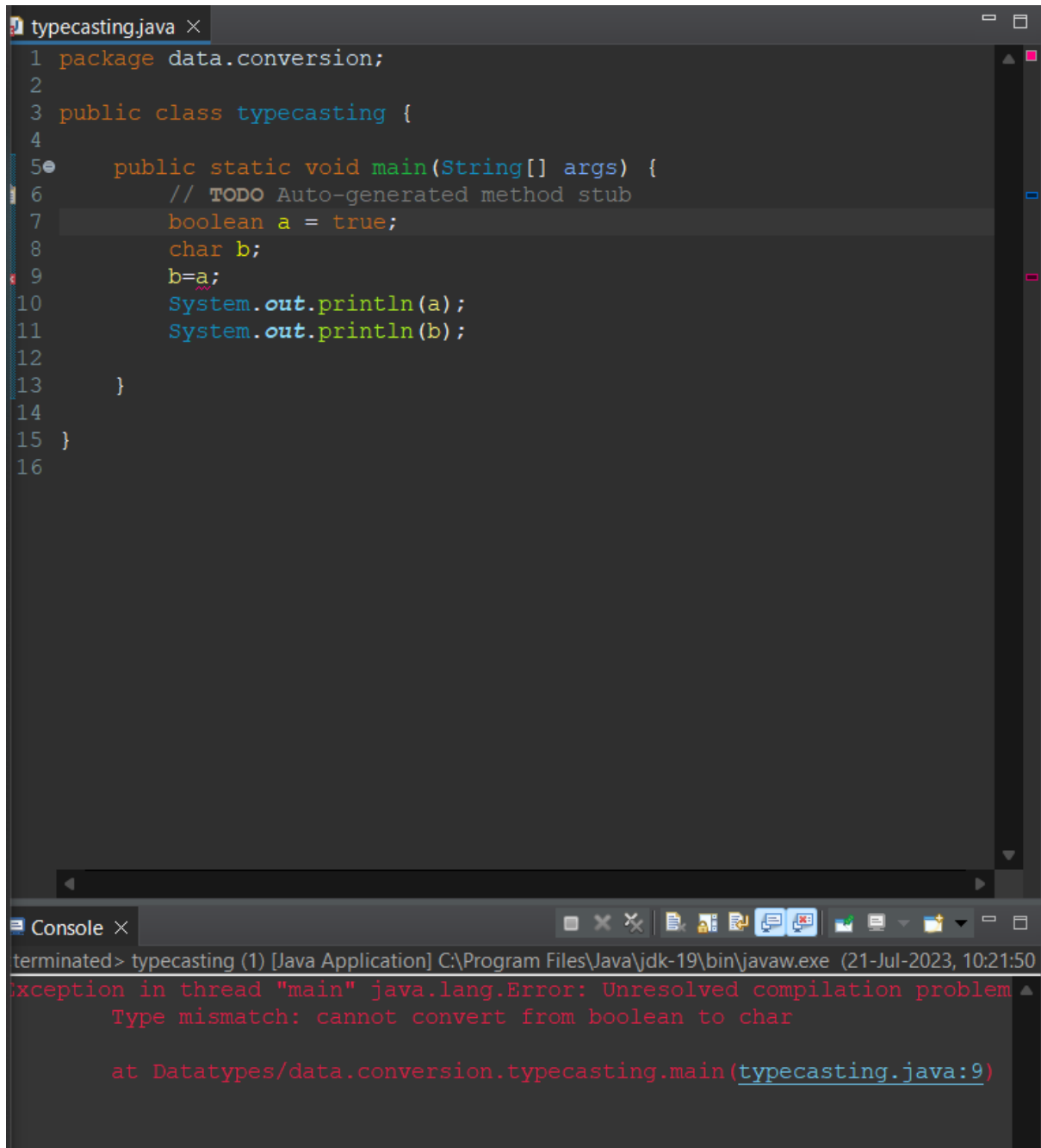
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:18:59)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
Type mismatch: cannot convert from double to boolean

at Datatypes/data.conversion.typecasting.main(typecasting.java:9)

Conclusion:

Double can't converted to Boolean, There is no implicit or Explicit conversion.

Boolean to char:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         boolean a = true;
8         char b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

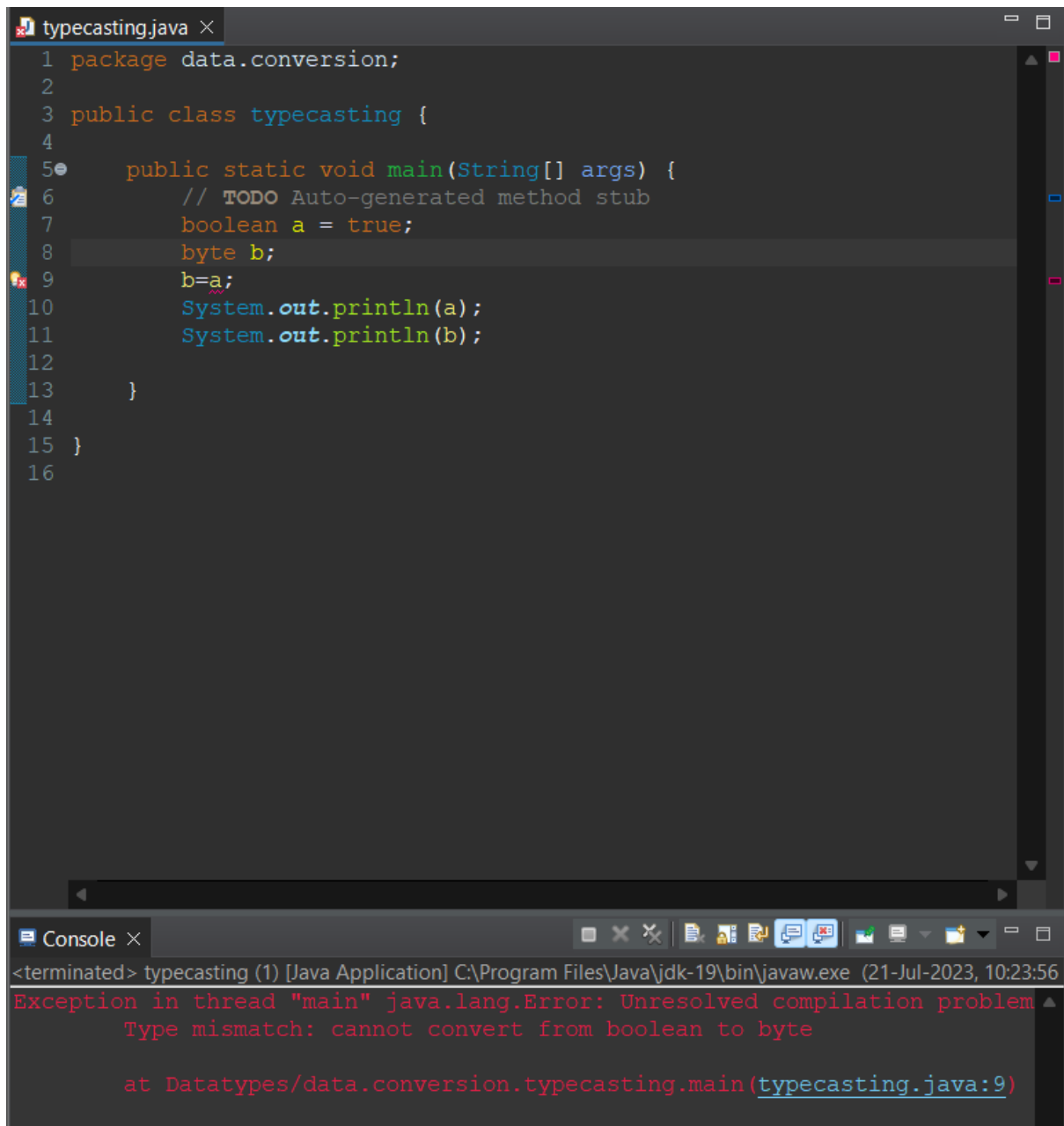
Console x

```
terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:21:50)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from boolean to char
    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Boolean can't converted to char, There is no implicit or Explicit conversion.

Boolean to byte:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         boolean a = true;
8         byte b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

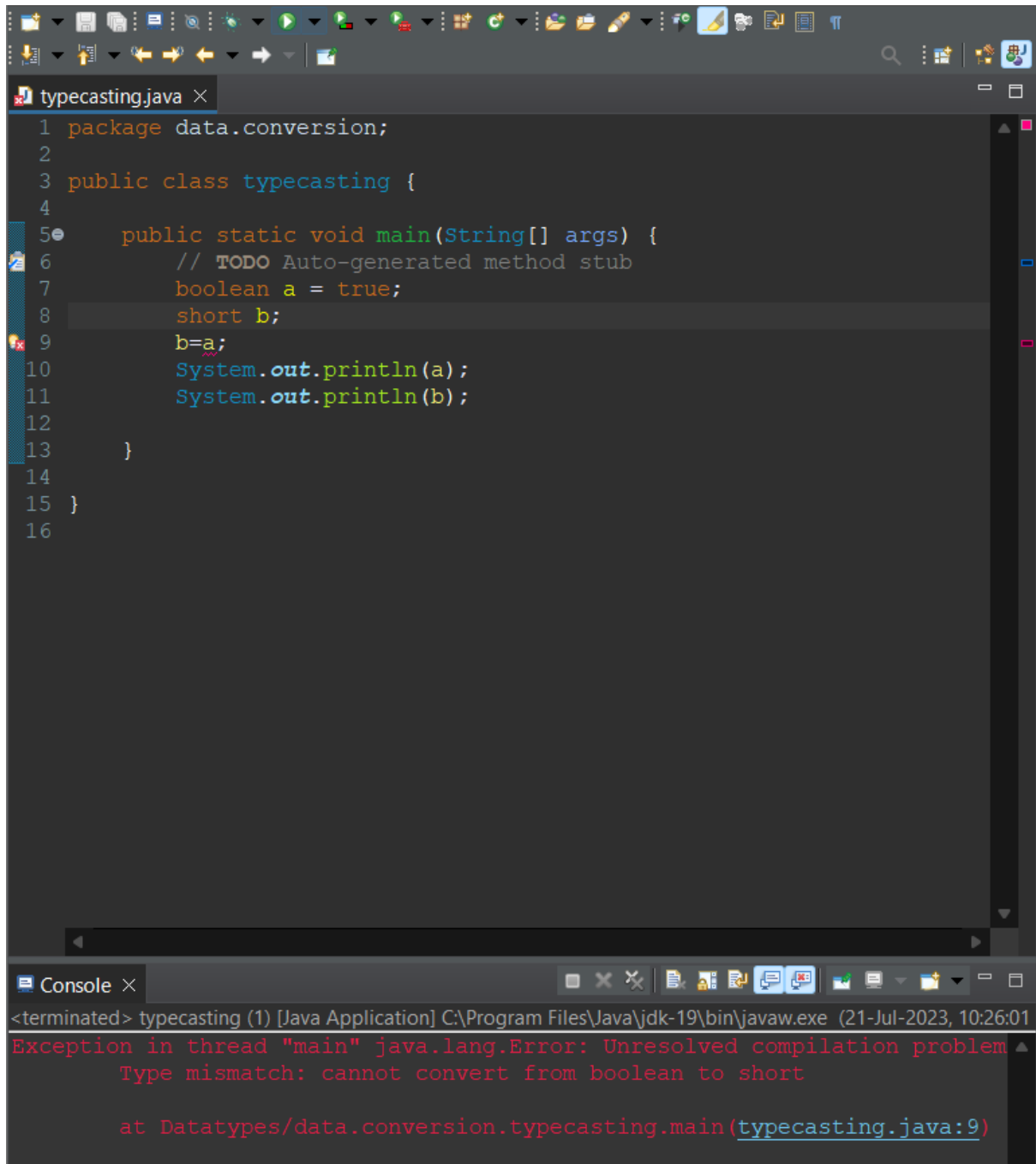
```
Console x
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:23:56)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from boolean to byte

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Boolean can't converted to byte, There is no implicit or Explicit conversion.

Boolean to short:



```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         boolean a = true;
8         short b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:26:01)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from boolean to short
    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Boolean can't converted to short, There is no implicit or Explicit conversion.

Boolean to int:

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         boolean a = true;
8         int b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:26:58)

Exception in thread "main" java.lang.Error: Unresolved compilation problem

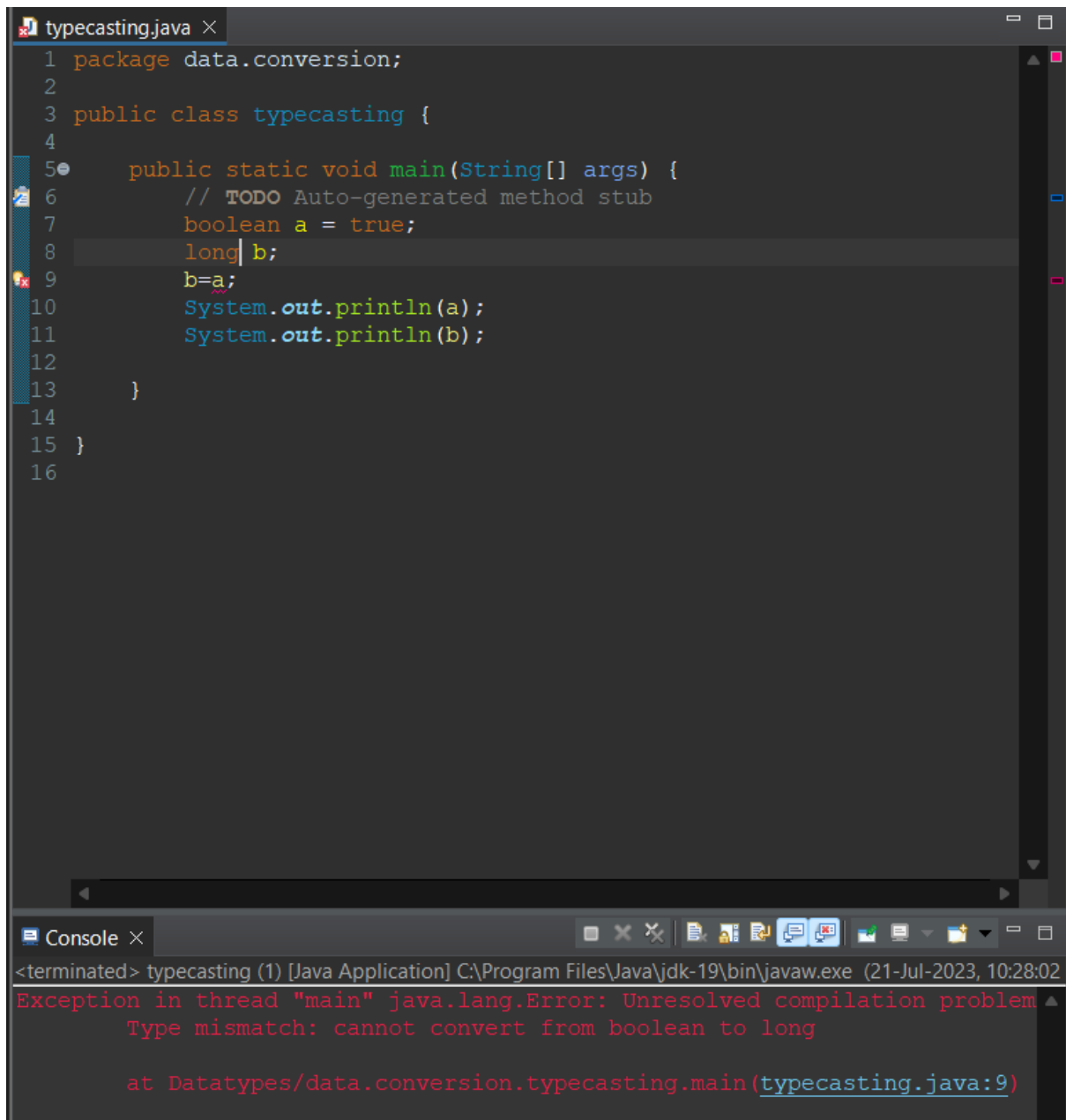
Type mismatch: cannot convert from boolean to int

at Datatypes/data.conversion.typecasting.main([typecasting.java:9](#))

Conclusion:

Boolean can't converted to int, There is no implicit or Explicit conversion.

Boolean to long:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         boolean a = true;
8         long b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

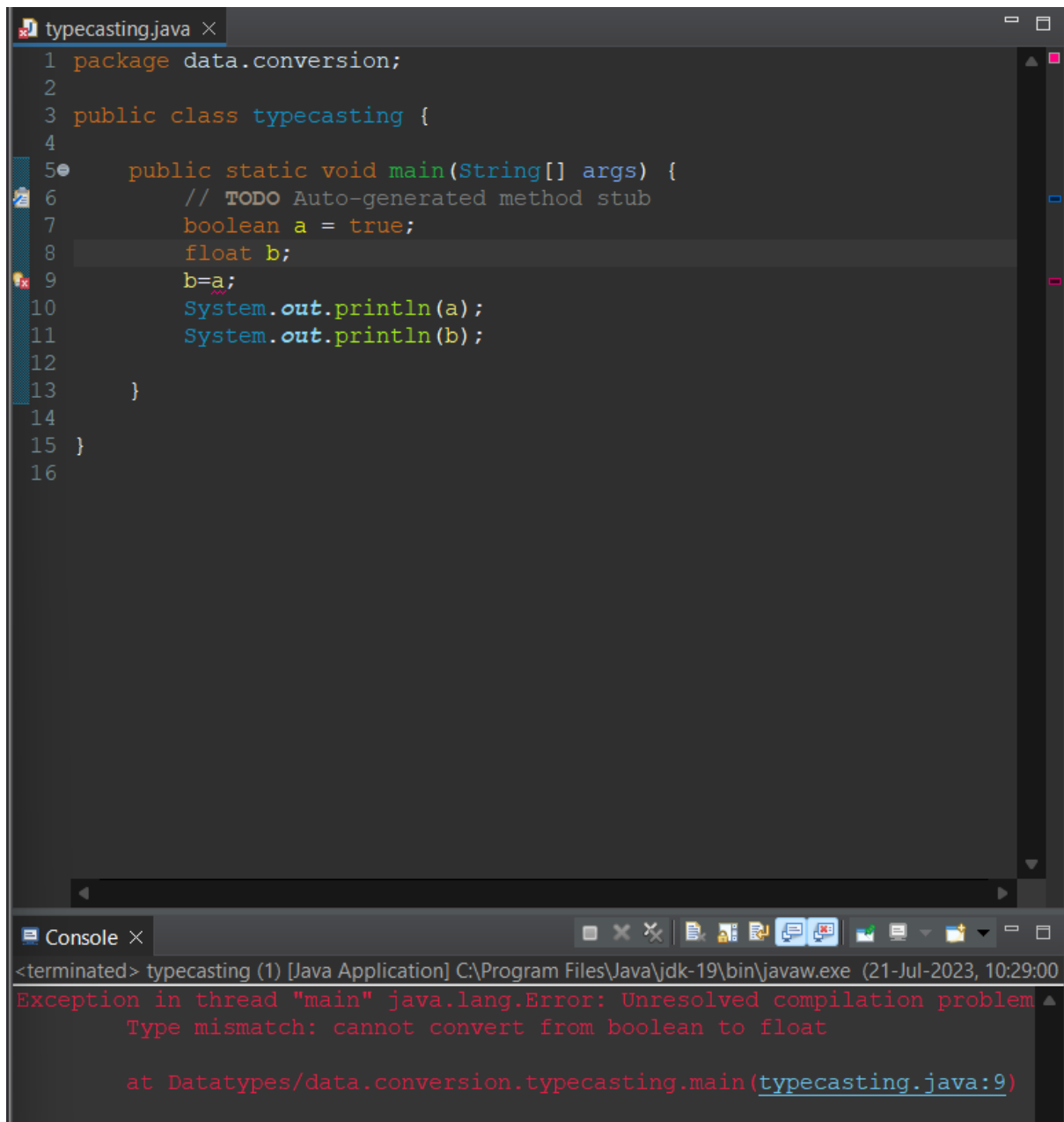
```
Console x
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:28:02)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from boolean to long

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Boolean can't converted to long, There is no implicit or Explicit conversion.

Boolean to float:



```
typecasting.java x
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         boolean a = true;
8         float b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console x

```
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:29:00)
Exception in thread "main" java.lang.Error: Unresolved compilation problem
    Type mismatch: cannot convert from boolean to float

    at Datatypes/data.conversion.typecasting.main(typecasting.java:9)
```

Conclusion:

Boolean can't converted to float, There is no implicit or Explicit conversion.

Boolean to double:

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         boolean a = true;
8         double b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-Jul-2023, 10:30:23)
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Type mismatch: cannot convert from boolean to double

at Datatypes/data.conversion.typecasting.main(typecasting.java:9)

Conclusion:

Boolean can't be converted to double, There is no implicit or Explicit conversion.

Boolean to boolean:

```
1 package data.conversion;
2
3 public class typecasting {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         boolean a = true;
8         boolean b;
9         b=a;
10        System.out.println(a);
11        System.out.println(b);
12
13    }
14
15 }
16
```

Console ×

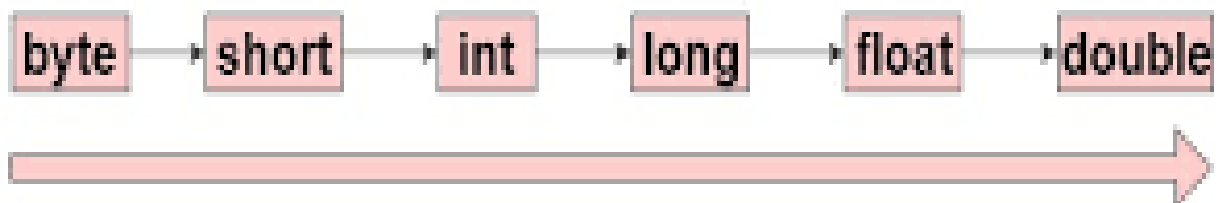
<terminated> typecasting (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (21-true
true

Conclusion:

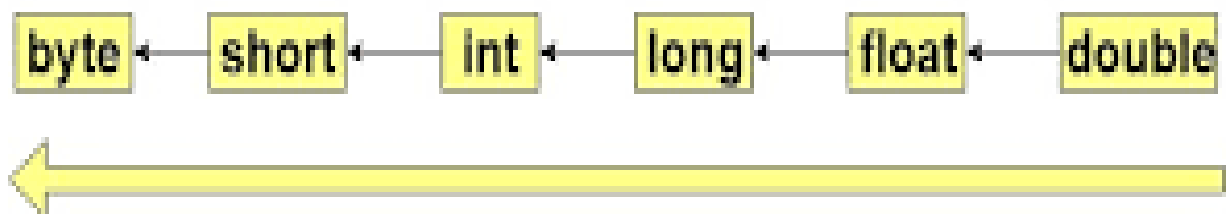
No conversion between Boolean to Boolean.

Flow chart:

Automatic Type Conversion (Widening - implicit)



Narrowing (explicit)



User input for char:

Syntax:

```
next().charAt(0);
```