

Date: 20/07/2023



BY MANOJ T

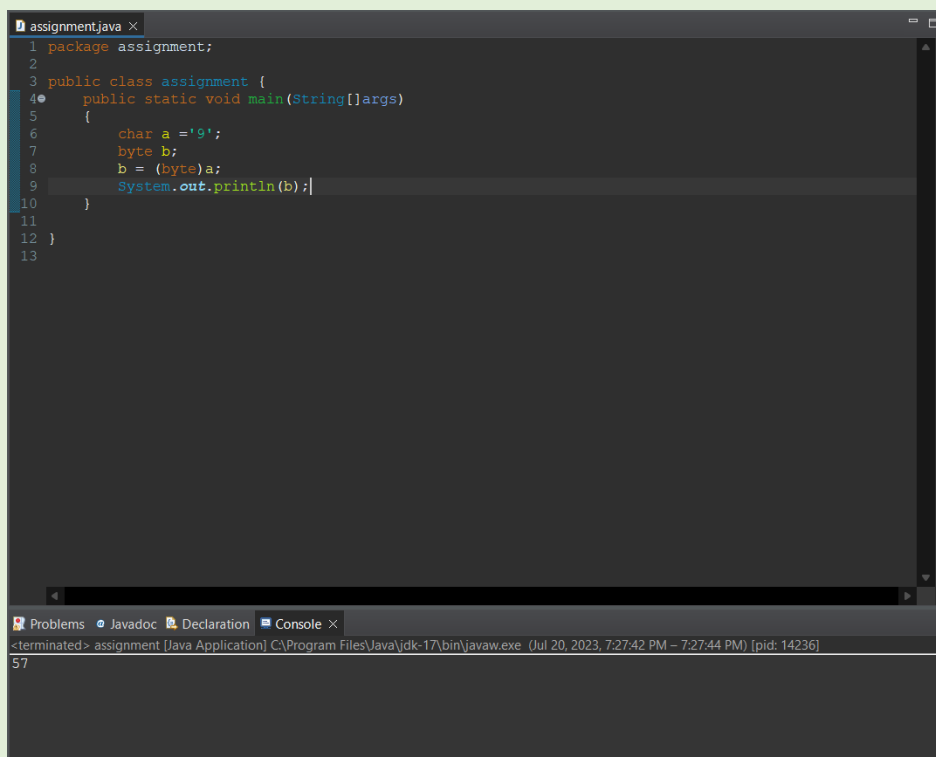
TYPE CASTING

In Java, type casting is the process of converting a variable of one data type to another data type. This can be useful when you need to perform operations on variables of different data types or when you want to store a value of one type into a variable of another type.

1. Converting char data type to char data type:

Conversion of character data type to character data type no conversion is required because both are of same data type

2. Converting char data type to byte data type:

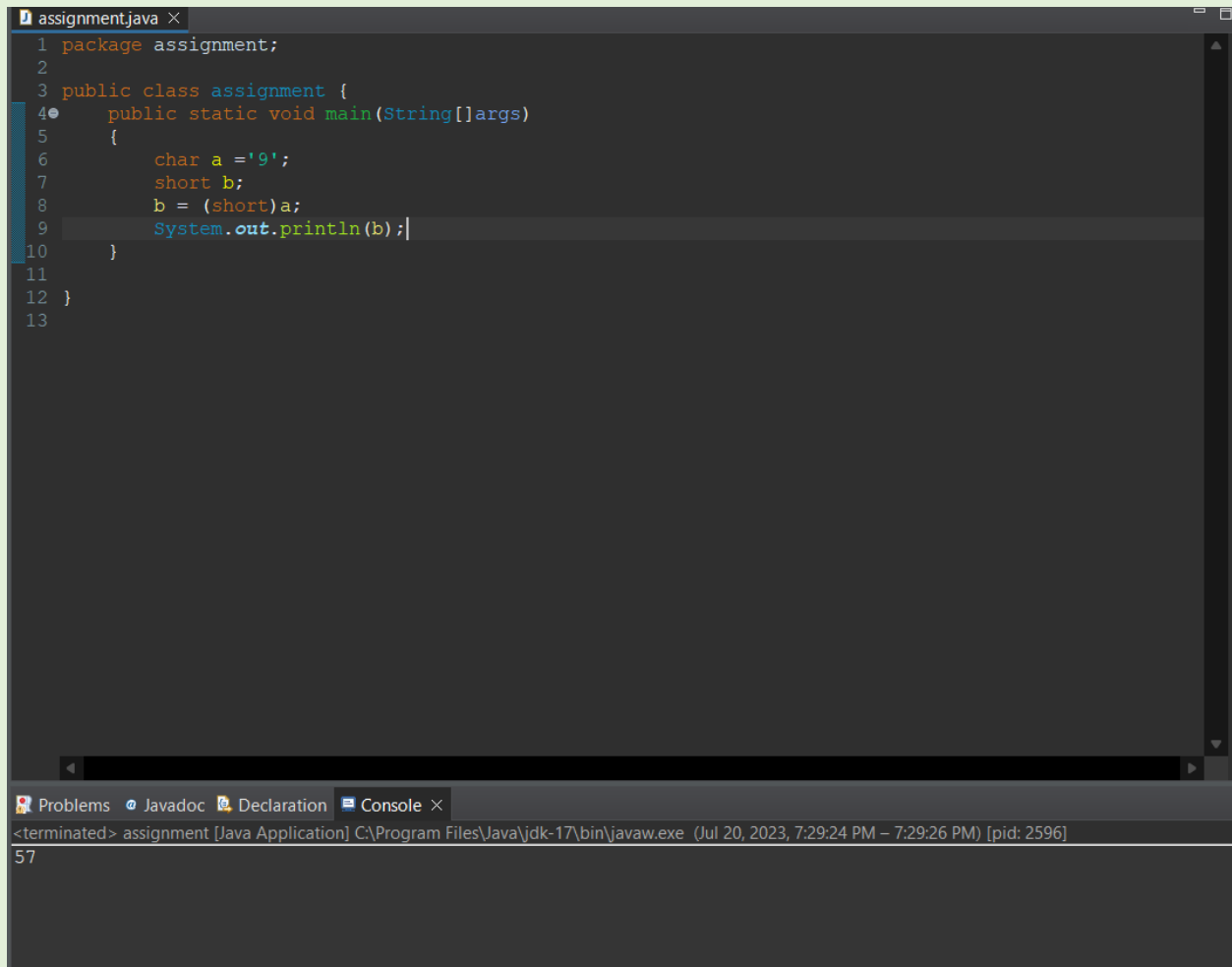


```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         char a = '9';
7         byte b;
8         b = (byte)a;
9         System.out.println(b);
10    }
11 }
12 }
13 }
```

The screenshot shows an IDE window titled 'assignment.java'. The code defines a package 'assignment' and a class 'assignment' with a 'main' method. Inside the 'main' method, a 'char' variable 'a' is assigned the value '9'. A 'byte' variable 'b' is then declared and assigned the value of 'a' after a cast to 'byte'. Finally, 'b' is printed using 'System.out.println(b);'. The IDE interface includes a 'Console' tab at the bottom, which shows the output of the program: '57'.

Char to byte data type conversion is an explicit type of conversion. Because char data type is larger data type (2 bytes) we converted it into smaller data type byte

Converting char data type to short data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         char a = '9';
7         short b;
8         b = (short)a;
9         System.out.println(b);|
10    }
11
12 }
13
```

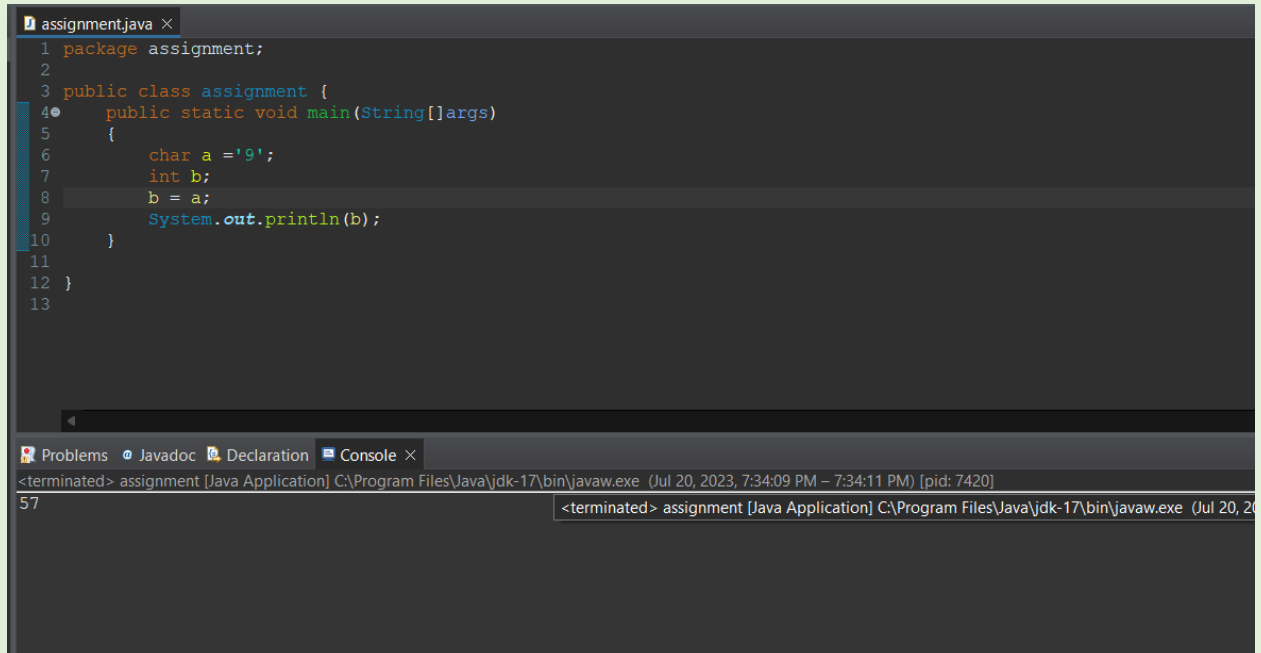
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 7:29:24 PM – 7:29:26 PM) [pid: 2596]

57

Char to short data type conversion is an explicit type of conversion. Because char data type is larger data type we converted it into smaller data type short

Converting char data type to int data type:



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

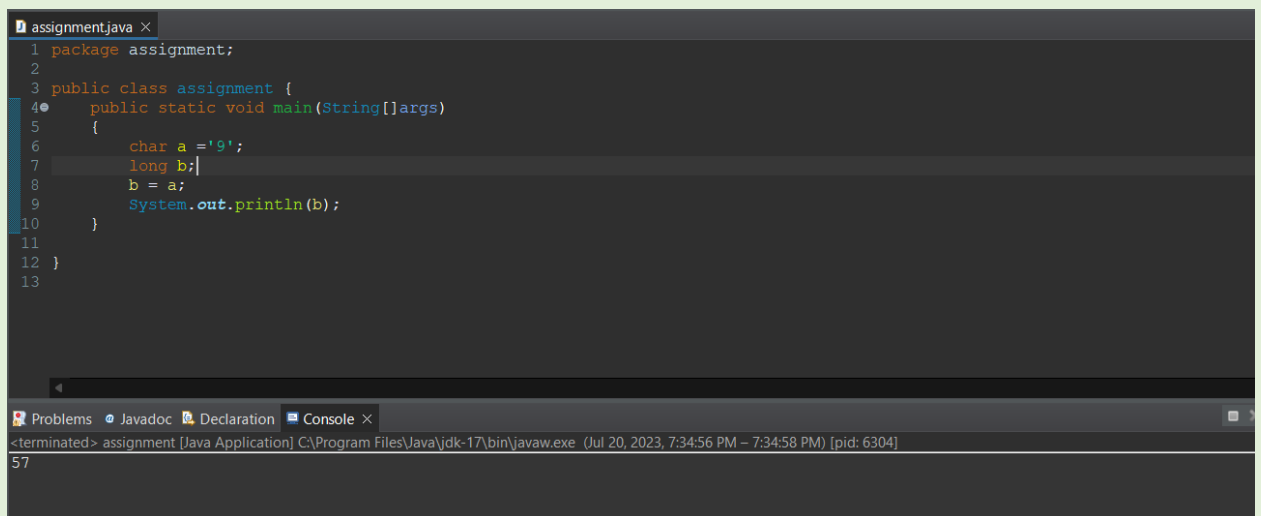
Problems Javadoc Declaration Console

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 7:34:09 PM – 7:34:11 PM) [pid: 7420]

57 <terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 7:34:11 PM) [pid: 7420]

Char to int data type conversion is an implicit type of conversion.

Converting char data type to long data type:



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

Problems Javadoc Declaration Console

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 7:34:56 PM – 7:34:58 PM) [pid: 6304]

57

Char to long data type conversion is an implicit type of conversion.

Converting char data type to float data type:

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

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 10:04:16 PM – 10:04:21 PM) [pid: 5616]
9.0

Char to float data type conversion is an implicit type of conversion.

Converting char data type to double data type:

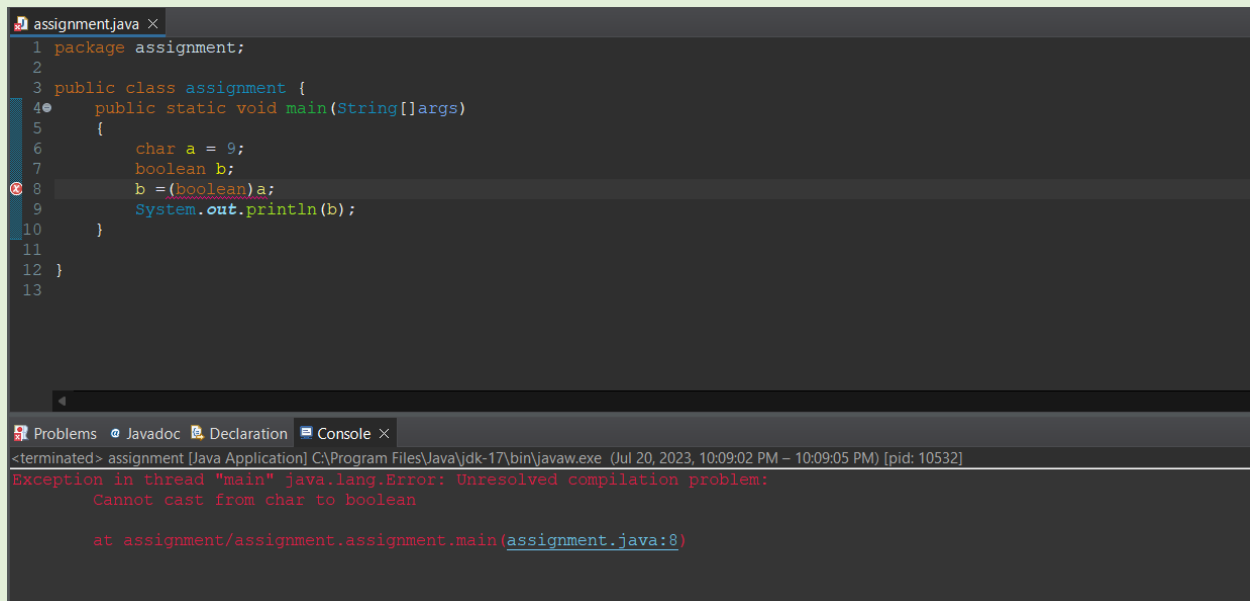
```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         char a = '9';
7         double b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12 }
13 }
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 7:36:43 PM – 7:36:45 PM) [pid: 8256]
57.0

Char to double data type conversion is an implicit type of conversion.

Converting char data type to boolean data type:



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

Problems Javadoc Declaration Console ×

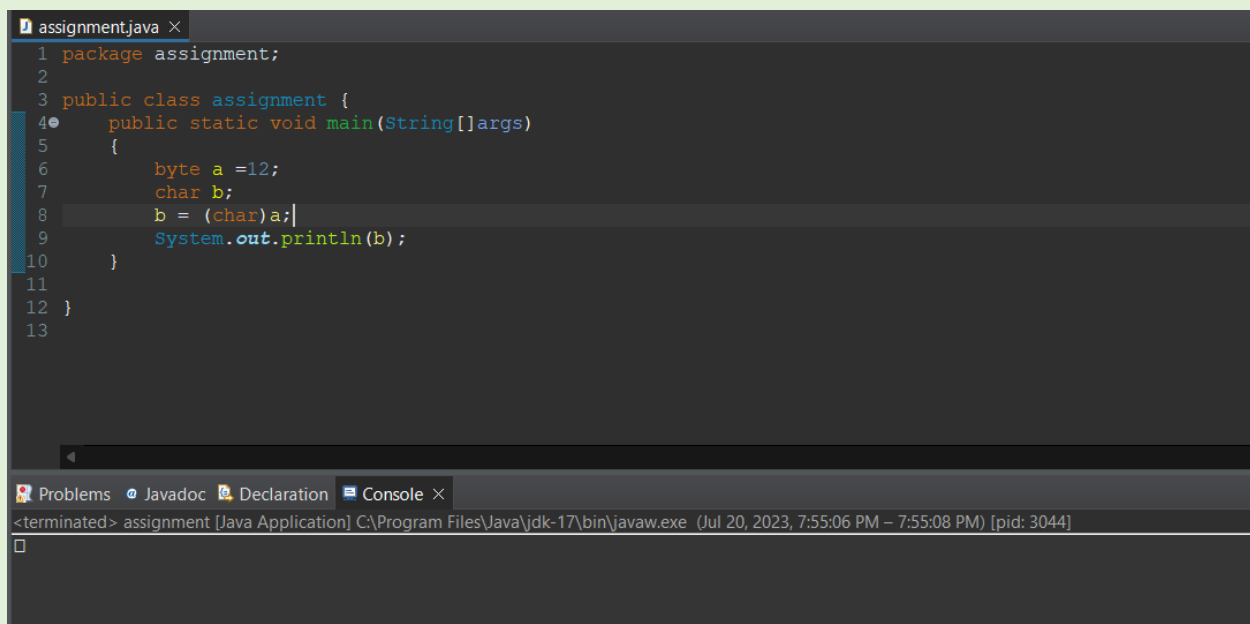
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 10:09:02 PM – 10:09:05 PM) [pid: 10532]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from char to boolean

at assignment/assignment.assignment.main(assignment.java:8)

Char to boolean data type conversion is not possible

Converting byte data type to char data type:



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

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 7:55:06 PM – 7:55:08 PM) [pid: 3044]

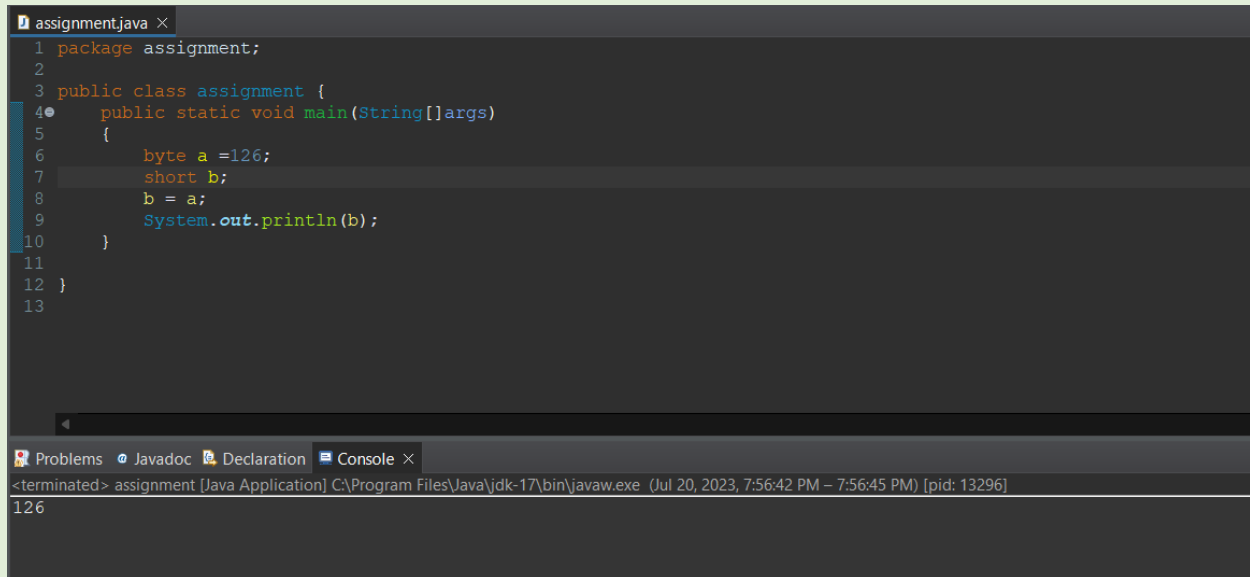
□

byte to char data type conversion is an explicit type of conversion.

Converting byte data type to byte data type:

Conversion of byte data type to byte data type no conversion is required because both are of same data type

Converting byte data type to short data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         byte a = 126;
7         short b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12
13
```

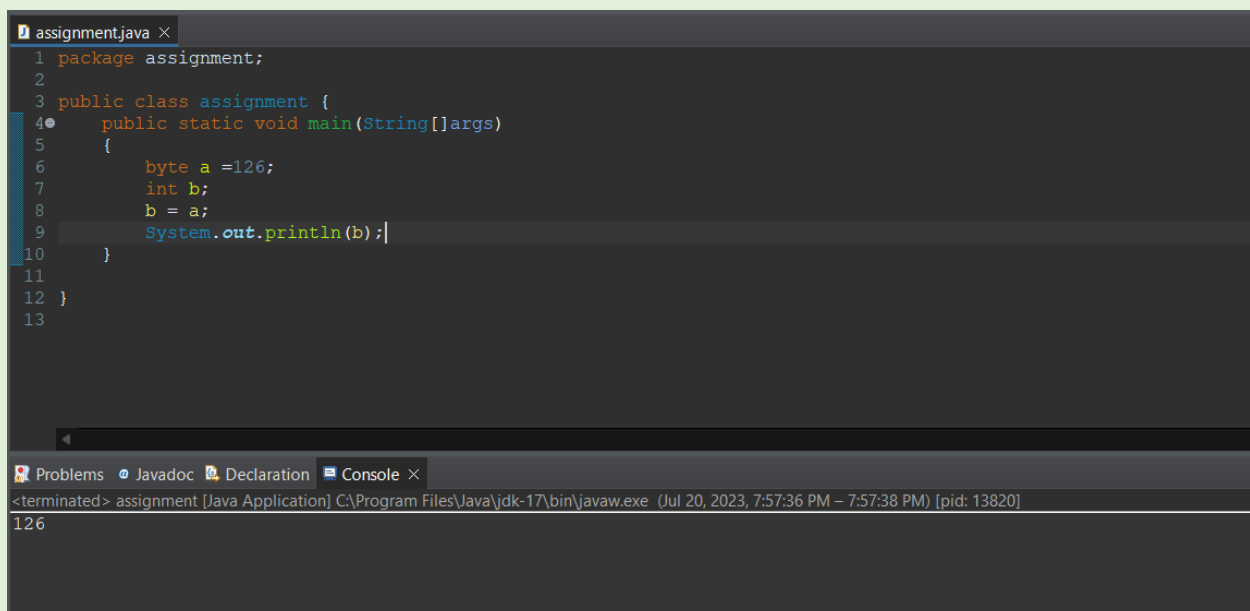
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 7:56:42 PM – 7:56:45 PM) [pid: 13296]

126

byte to short data type conversion is an implicit type of conversion.

Converting byte data type to int data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         byte a = 126;
7         int b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12
13
```

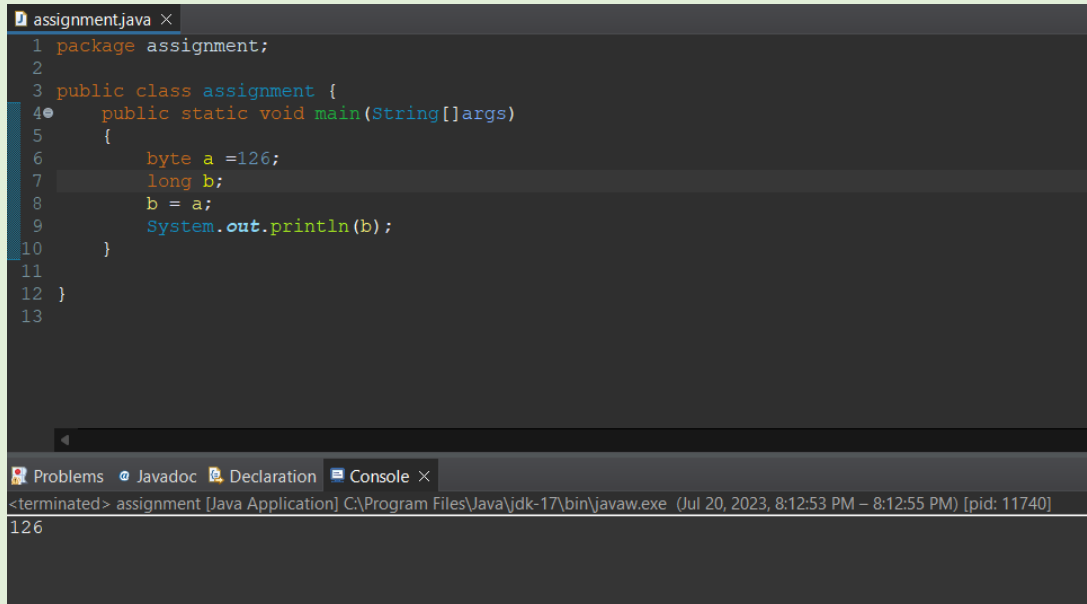
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 7:57:36 PM – 7:57:38 PM) [pid: 13820]

126

Byte data type to int data type conversion is an implicit type of conversion.

Converting byte data type to long data type:



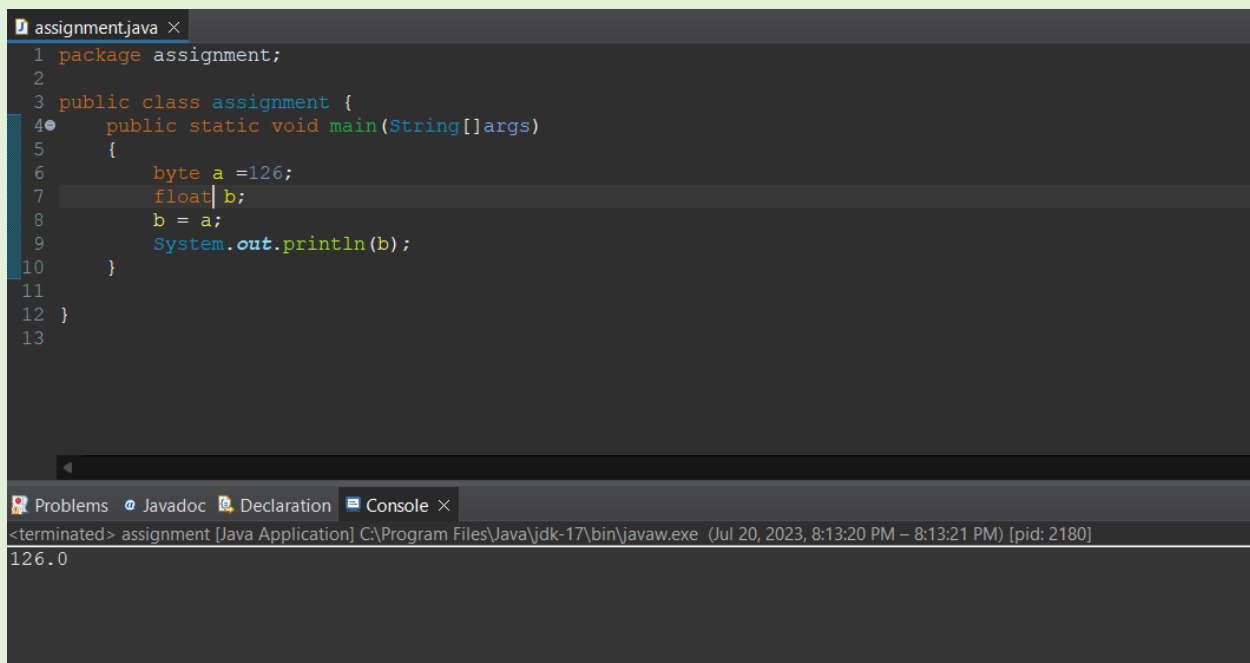
```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         byte a = 126;
7         long b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:12:53 PM – 8:12:55 PM) [pid: 11740]
126

Byte data type to long data type conversion is an implicit type of conversion.

Converting byte data type to float data type:



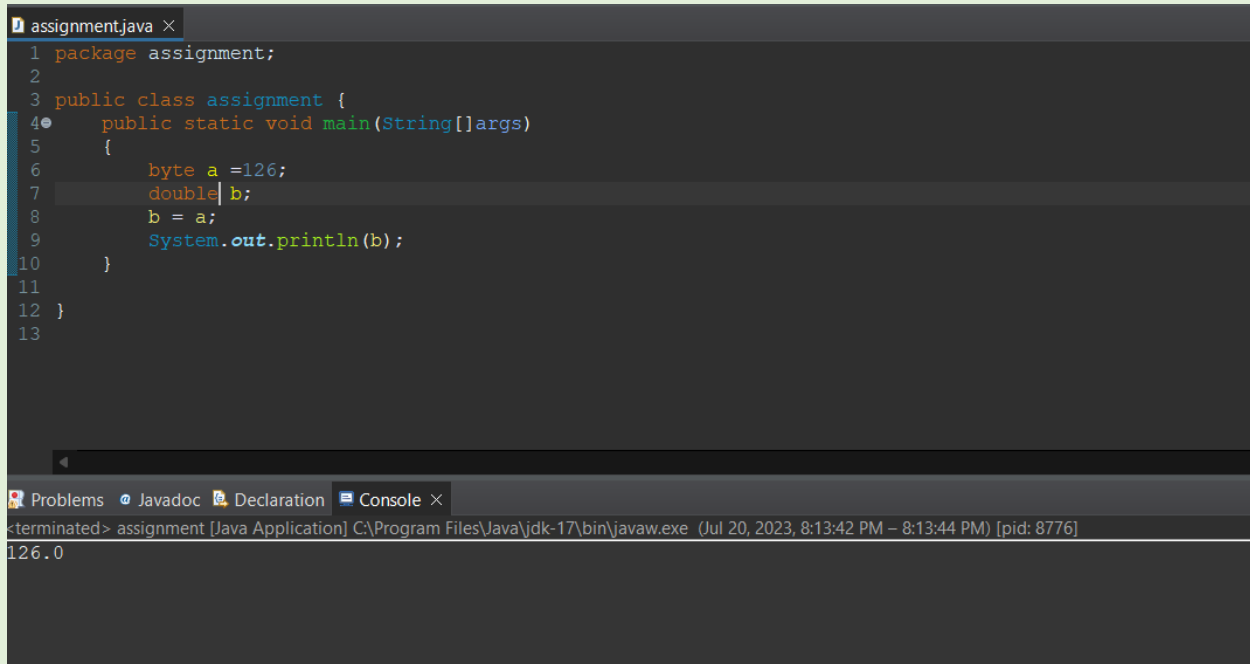
```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         byte a = 126;
7         float b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:13:20 PM – 8:13:21 PM) [pid: 2180]
126.0

Byte data type to float data type conversion is an implicit type of conversion.

Converting byte data type to double data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         byte a = 126;
7         double b;
8         b = a;
9         System.out.println(b);
10    }
11
12 }
13
```

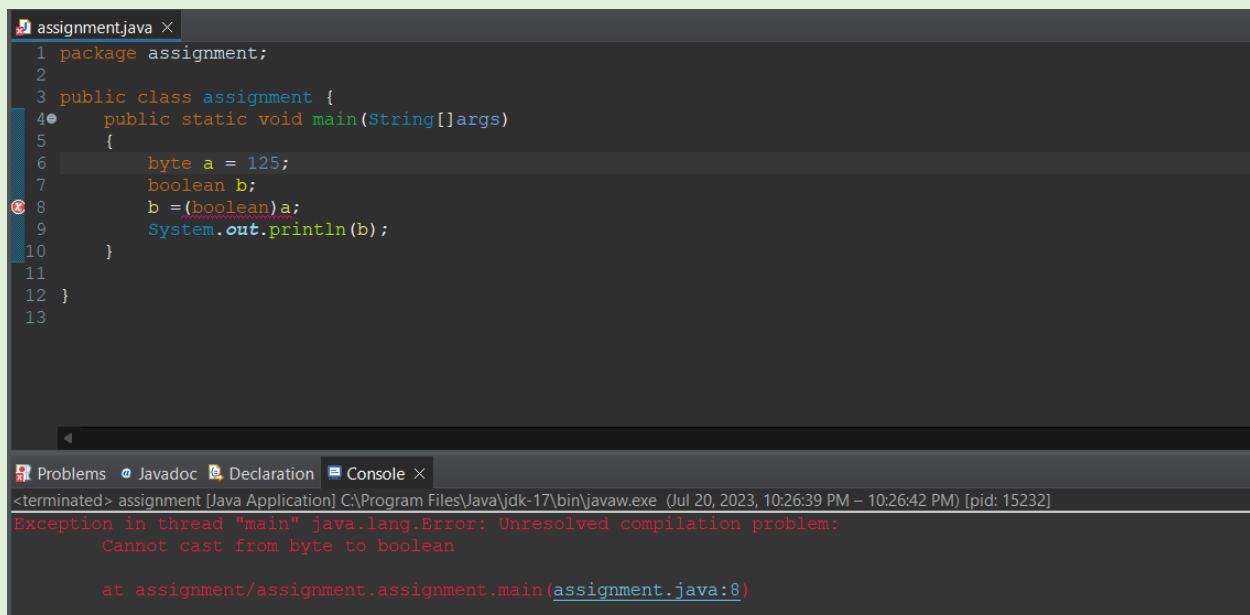
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:13:42 PM – 8:13:44 PM) [pid: 8776]

126.0

Byte data type to double data type conversion is an implicit type of conversion.

Converting byte data type to boolean data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         byte a = 125;
7         boolean b;
8         b = (boolean)a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

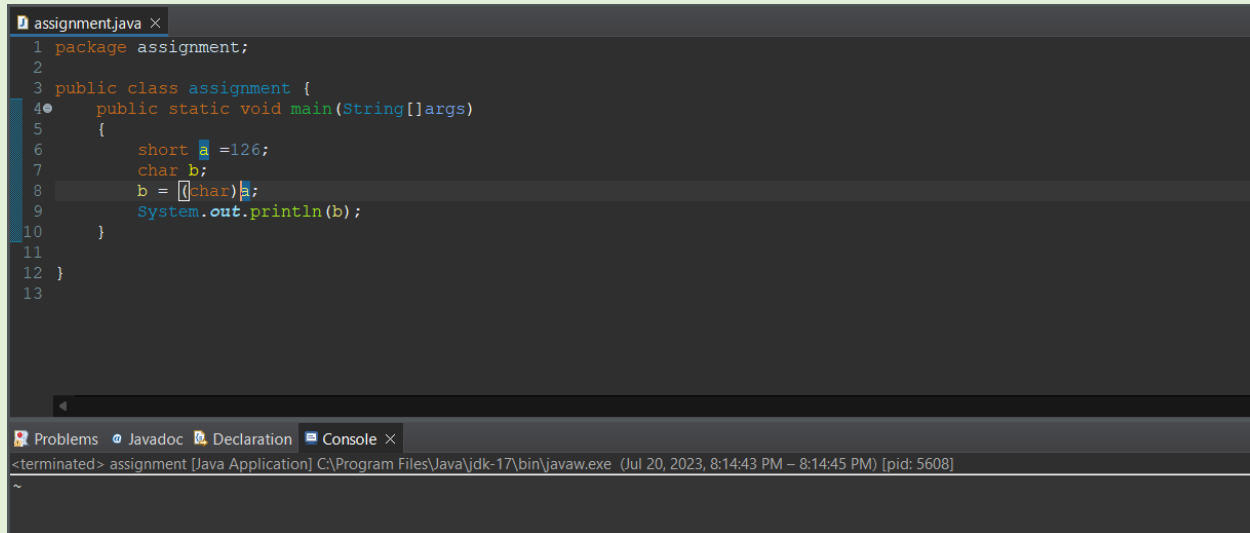
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 10:26:39 PM – 10:26:42 PM) [pid: 15232]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from byte to boolean

at assignment/assignment.assignment.main(assignment.java:8)

byte to boolean data type conversion is not possible.

Converting short data type to char data type:

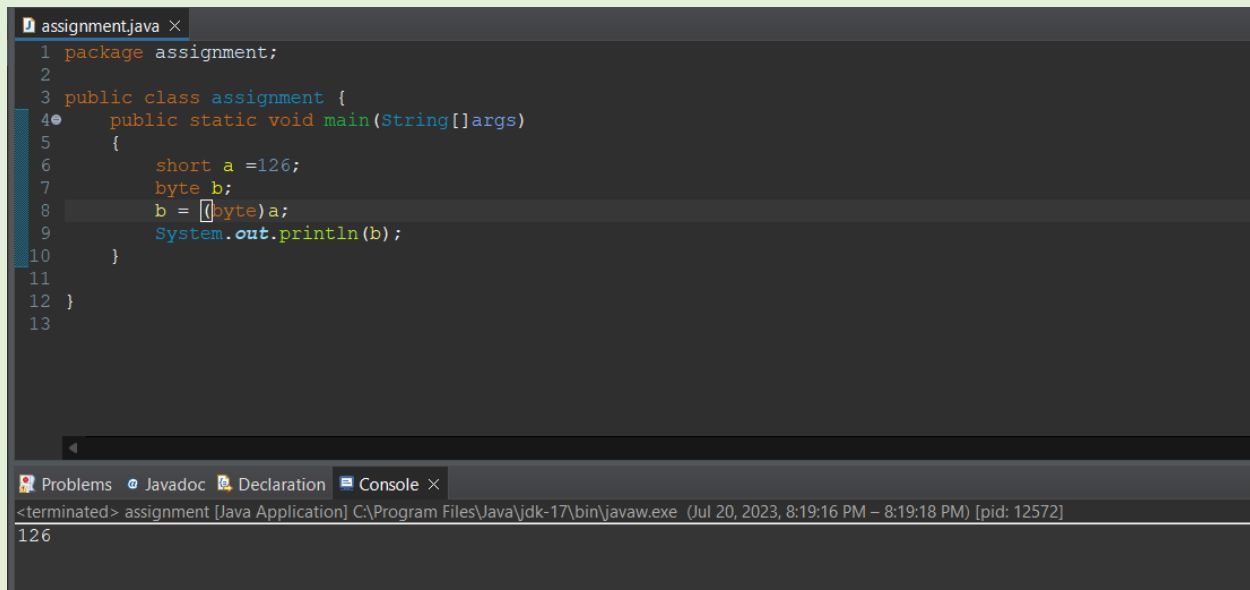


```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         short a =126;
7         char b;
8         b = (char)a;
9         System.out.println(b);
10    }
11 }
12 }
13 }
```

The screenshot shows an IDE window titled 'assignment.java'. The code defines a package 'assignment' and a class 'assignment' with a 'main' method. Inside the method, a 'short' variable 'a' is assigned the value 126, a 'char' variable 'b' is declared, and 'b' is assigned the value of 'a' cast to 'char'. The program then prints 'b'. The console output at the bottom shows the program terminated successfully, displaying the character 'z' (which is the ASCII character for 126).

short data type to char data type conversion is an explicit type of conversion.

Converting short data type to byte data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         short a =126;
7         byte b;
8         b = (byte)a;
9         System.out.println(b);
10    }
11 }
12 }
13 }
```

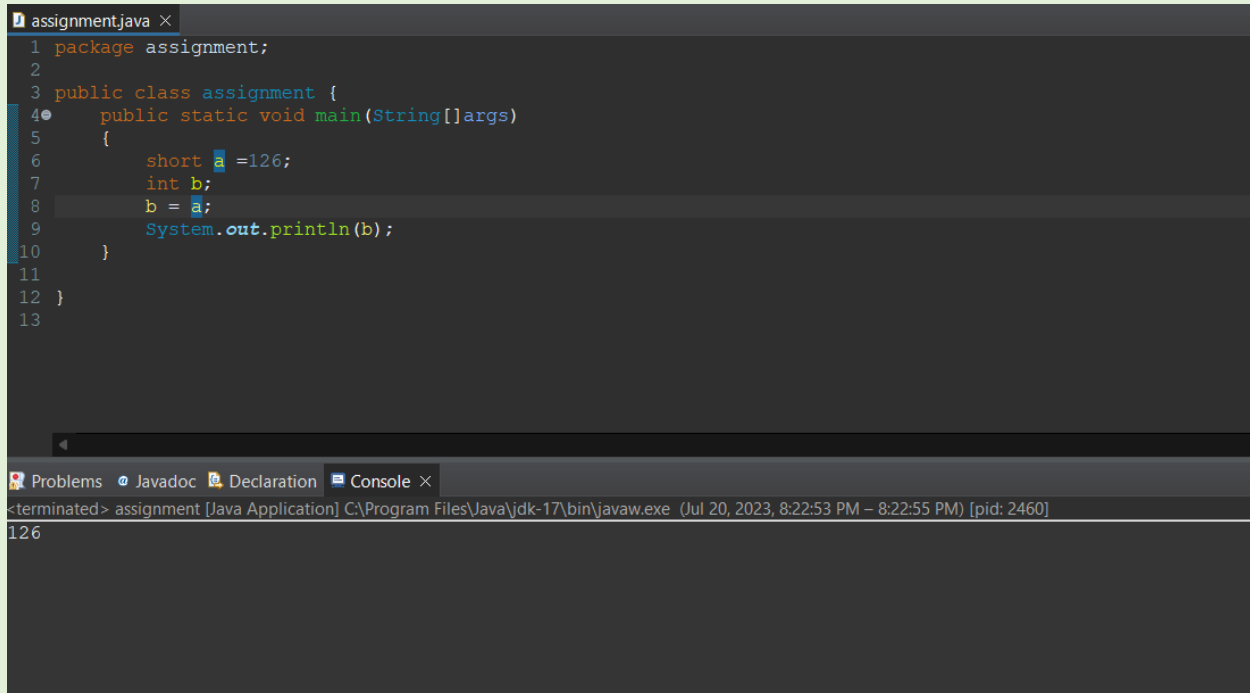
The screenshot shows an IDE window titled 'assignment.java'. The code defines a package 'assignment' and a class 'assignment' with a 'main' method. Inside the method, a 'short' variable 'a' is assigned the value 126, a 'byte' variable 'b' is declared, and 'b' is assigned the value of 'a' cast to 'byte'. The program then prints 'b'. The console output at the bottom shows the program terminated successfully, displaying the value '126'.

short data type to byte data type conversion is an explicit type of conversion.

Converting short data type to short data type:

Conversion of short data type to short data type no conversion is required because both are of same data type

Converting short data type to int data type:

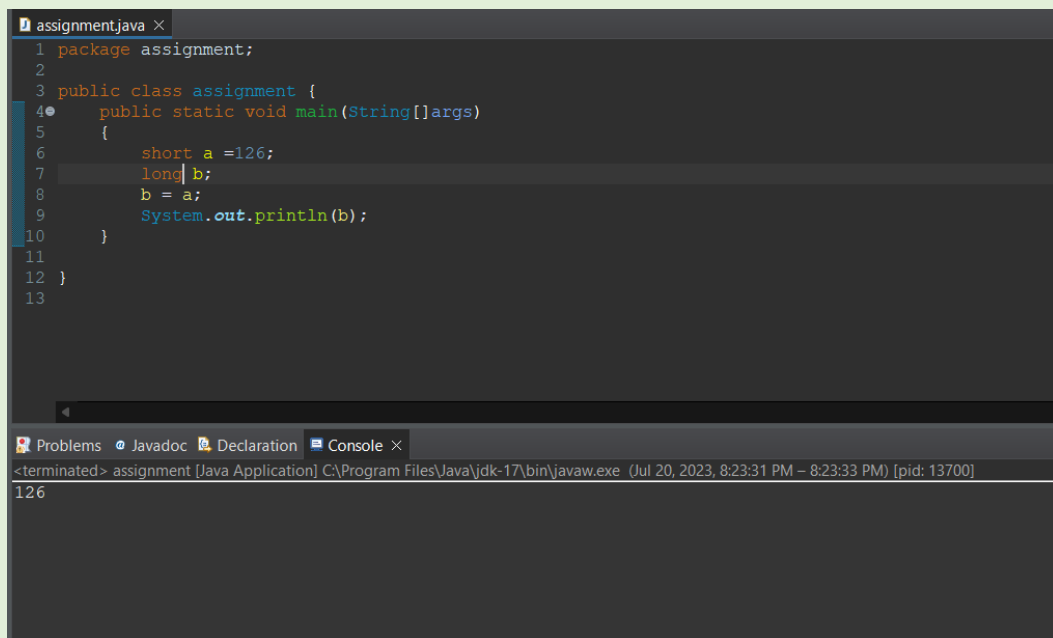


```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         short a = 126;
7         int b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12
13
```

The console output shows the value 126, indicating a successful implicit conversion from short to int.

short data type to int data type conversion is an implicit type of conversion.

Converting short data type to long data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         short a = 126;
7         long b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12
13
```

The console output shows the value 126, indicating a successful implicit conversion from short to long.

short data type to long data type conversion is an implicit type of conversion.

Converting short data type to float data type:



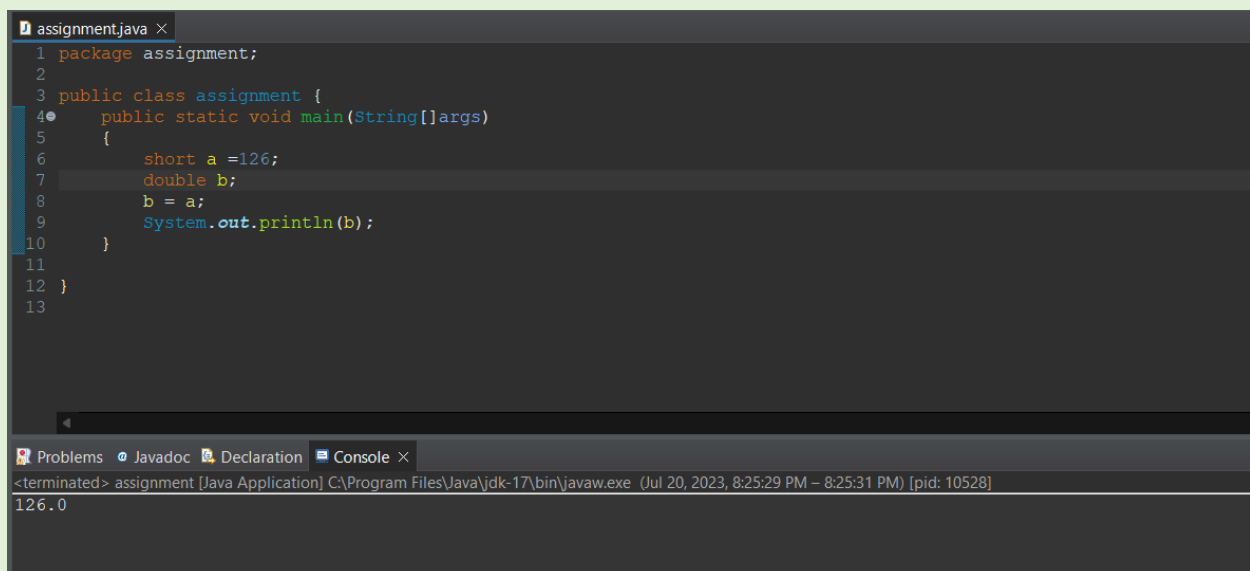
The screenshot shows an IDE window titled 'assignment.java'. The code is as follows:

```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         short a = 126;
7         float b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12 }
13
```

Below the code editor, the 'Console' tab is active, displaying the output: '126.0'. The console also shows the execution path: 'C:\Program Files\Java\jdk-17\bin\javaw.exe' and the PID: 6820.

short data type to float data type conversion is an implicit type of conversion.

Converting short data type to double data type:



The screenshot shows an IDE window titled 'assignment.java'. The code is as follows:

```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         short a = 126;
7         double b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12 }
13
```

Below the code editor, the 'Console' tab is active, displaying the output: '126.0'. The console also shows the execution path: 'C:\Program Files\Java\jdk-17\bin\javaw.exe' and the PID: 10528.

short data type to double data type conversion is an implicit type of conversion.

Converting short data type to boolean data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         short a = 126;
7         boolean b;
8         b = a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:27:25 PM – 8:27:31 PM) [pid: 2040]

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

at assignment/assignment.assignment.main(assignment.java:8)

short to boolean data type conversion is not possible.

Converting int data type to char data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         int a = 126;
7         char b;
8         b = (char) a;
9         System.out.println(b);
10    }
11
12 }
13
```

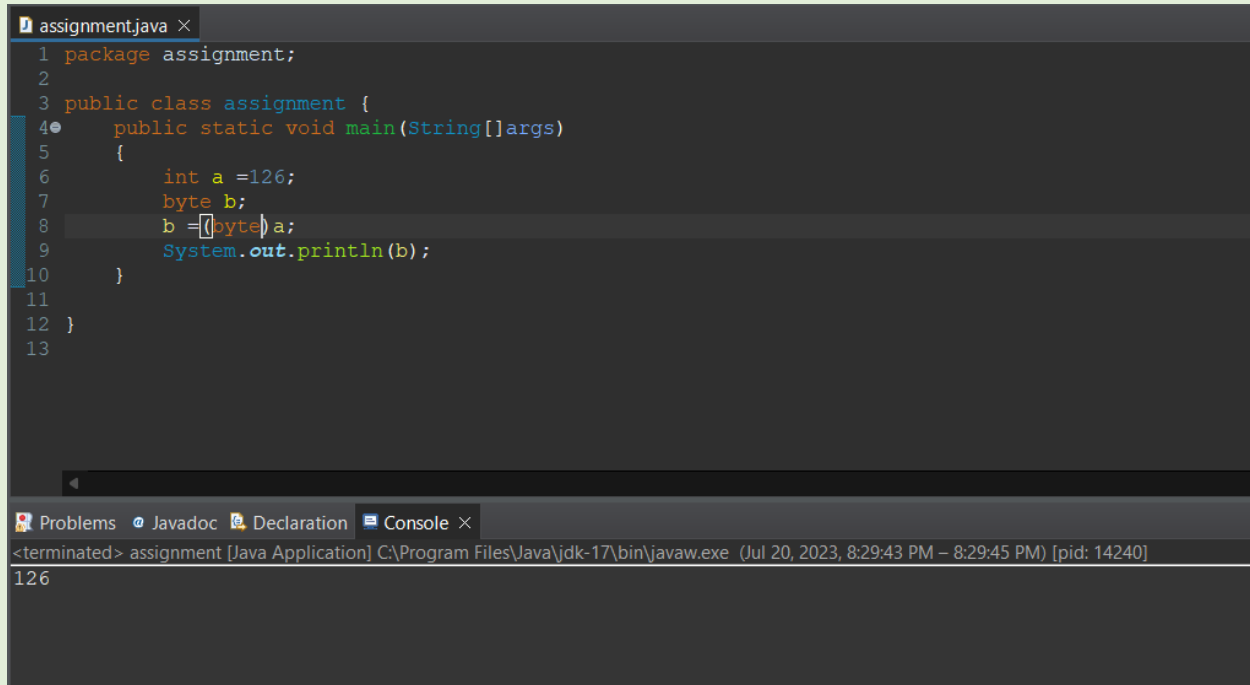
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:28:47 PM – 8:29:05 PM) [pid: 3184]

~

int data type to char data type conversion is an explicit type of conversion.

Converting int data type to byte data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         int a = 126;
7         byte b;
8         b = (byte) a;
9         System.out.println(b);
10    }
11
12 }
13
```

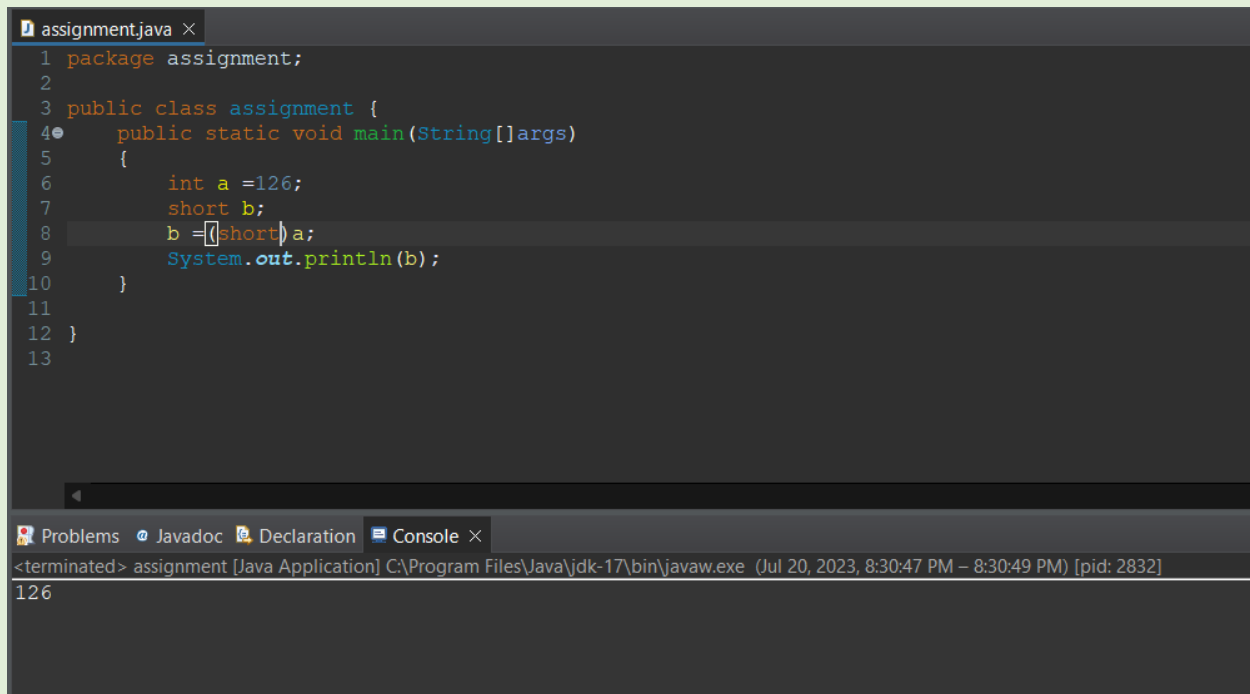
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:29:43 PM – 8:29:45 PM) [pid: 14240]

126

int data type to byte data type conversion is an explicit type of conversion.

Converting int data type to short data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         int a = 126;
7         short b;
8         b = (short) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:30:47 PM – 8:30:49 PM) [pid: 2832]

126

int data type to short data type conversion is an explicit type of conversion.

Converting int data type to int data type:

Conversion of int data type to int data type no conversion is required because both are of same data type

Converting int data type to long data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         int a =126;
7         long b;
8         b =a;
9         System.out.println(b);
10    }
11
12 }
13
```

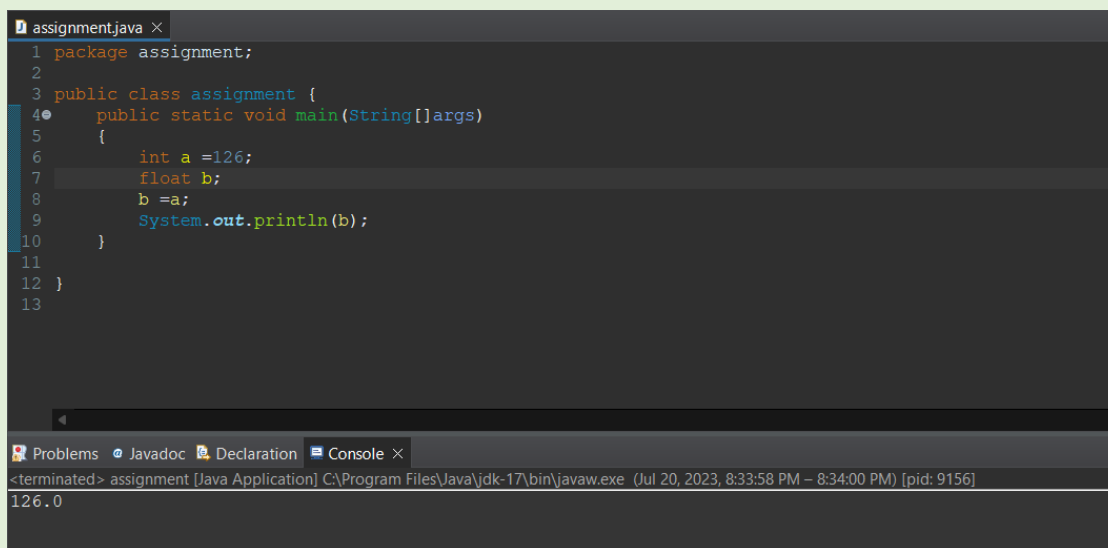
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:32:09 PM – 8:32:11 PM) [pid: 3332]

126

int data type to long data type conversion is an implicit type of conversion.

Converting int data type to float data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         int a =126;
7         float b;
8         b =a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:33:58 PM – 8:34:00 PM) [pid: 9156]

126.0

int data type to float data type conversion is an implicit type of conversion.

Converting int data type to double data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         int a = 126;
7         double b;
8         b = a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:34:21 PM – 8:34:23 PM) [pid: 7004]

126.0

int data type to double data type conversion is an implicit type of conversion.

Converting int data type to boolean data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         int a = 125;
7         boolean b;
8         b = (boolean) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 10:54:26 PM – 10:54:30 PM) [pid: 11076]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from int to boolean

at assignment/assignment.assignment.main(assignment.java:8)

int to boolean data type conversion is not possible.

Converting long data type to char data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         long a = 123;
7         char b;
8         b = (char) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:38:12 PM – 8:38:14 PM) [pid: 14320]

{

Long data type to char data type conversion is an explicit type of conversion.

Converting long data type to byte data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         long a = 123;
7         byte b;
8         b = (byte) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:38:57 PM – 8:39:00 PM) [pid: 13192]

123

Long data type to byte data type conversion is an explicit type of conversion.

Converting long data type to short data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         long a = 123;
7         short b;
8         b = (short) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:39:29 PM – 8:39:31 PM) [pid: 9452]

123

Long data type to short data type conversion is an explicit type of conversion.

Converting long data type to integer data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         long a = 1231;
7         int b;
8         b = (int) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:42:04 PM – 8:42:06 PM) [pid: 10032]

123

Long data type to int data type conversion is an explicit type of conversion.

Converting long data type to long data type:

Conversion of long data type to long data type no conversion is required because both are of same data type

Converting long data type to float data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         long a = 1231;
7         float b;
8         b = a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:43:11 PM – 8:43:13 PM) [pid: 8884]

123.0

Long data type to float data type conversion is an implicit type of conversion.

Converting long data type to double data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         long a = 1231;
7         double b;
8         b = a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:44:40 PM – 8:44:42 PM) [pid: 920]

123.0

Long data type to double data type conversion is an implicit type of conversion.

Converting long data type to Boolean data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         long a = 1251;
7         boolean b;
8         b = (boolean)a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 11:10:43 PM – 11:10:47 PM) [pid: 8164]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from long to boolean
at assignment/assignment.assignment.main (assignment.java:8)

Long data type to Boolean data type conversion is not possible.

Converting float data type to char data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         float a = 12.3f;
7         char b;
8         b = (char)a;
9         System.out.println(b);
10    }
11
12 }
13
```

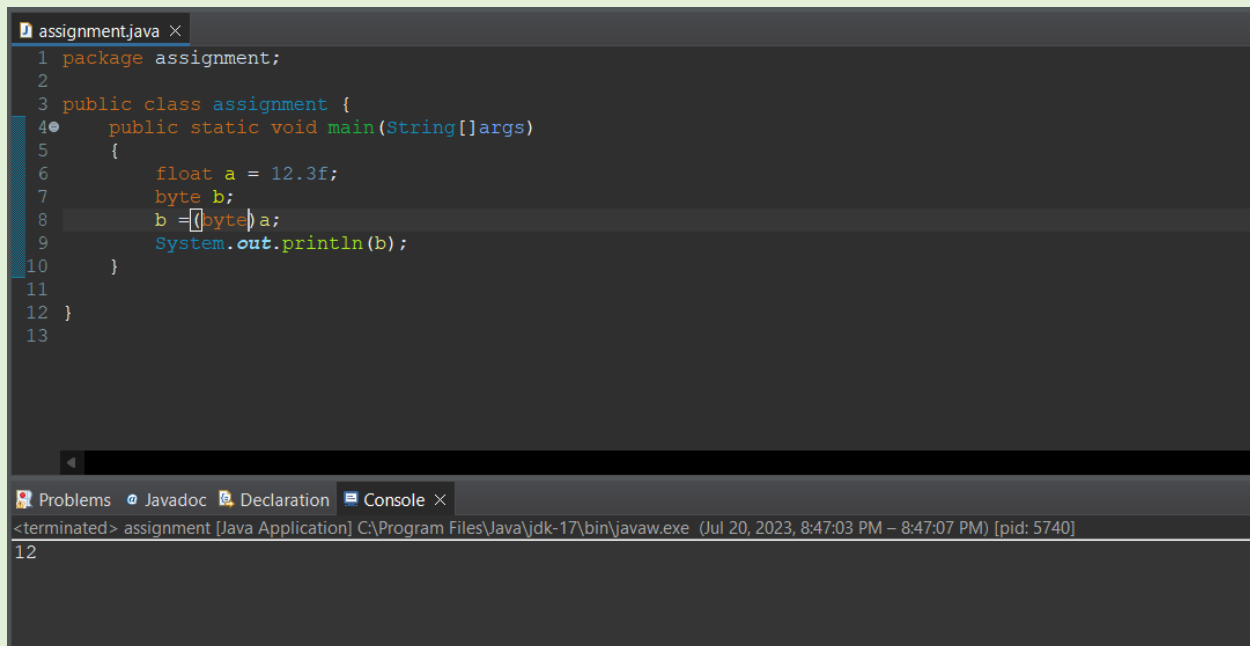
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:46:18 PM – 8:46:19 PM) [pid: 1848]

□

Float data type to char data type conversion is an explicit type of conversion.

Converting float data type to byte data type:



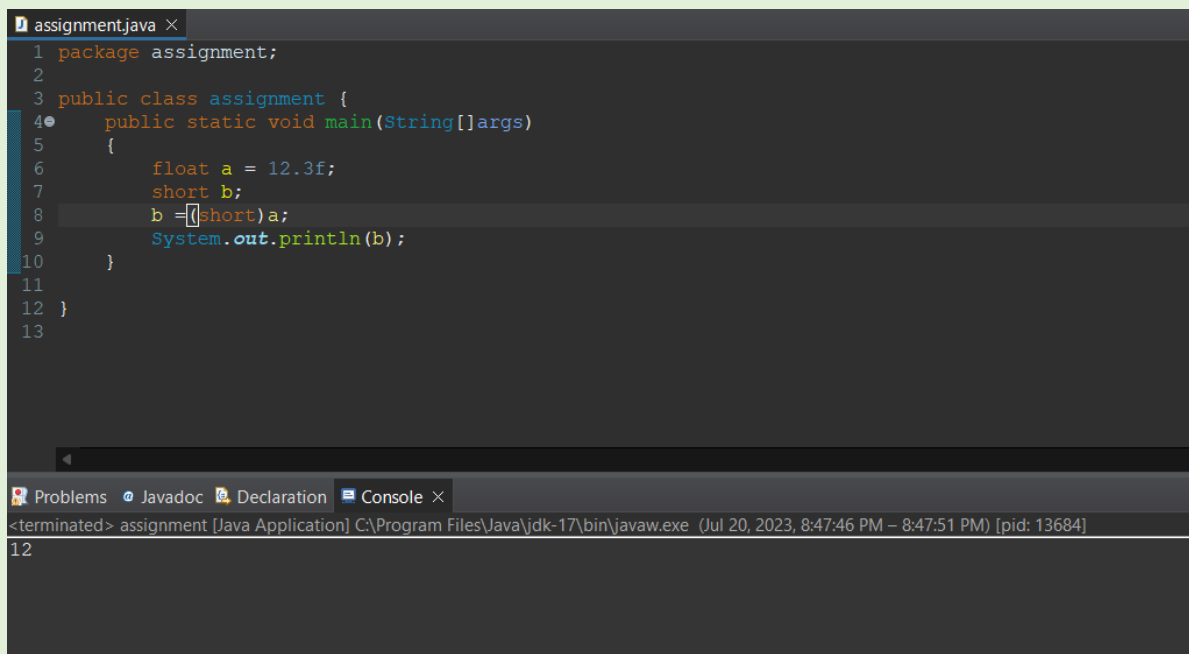
The screenshot shows an IDE with a file named `assignment.java`. The code is as follows:

```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         float a = 12.3f;
7         byte b;
8         b = (byte) a;
9         System.out.println(b);
10    }
11 }
12 }
```

The console output shows the number 12, which is the integer value of the byte 12.3f.

Float data type to byte data type conversion is an explicit type of conversion.

Converting float data type to short data type:



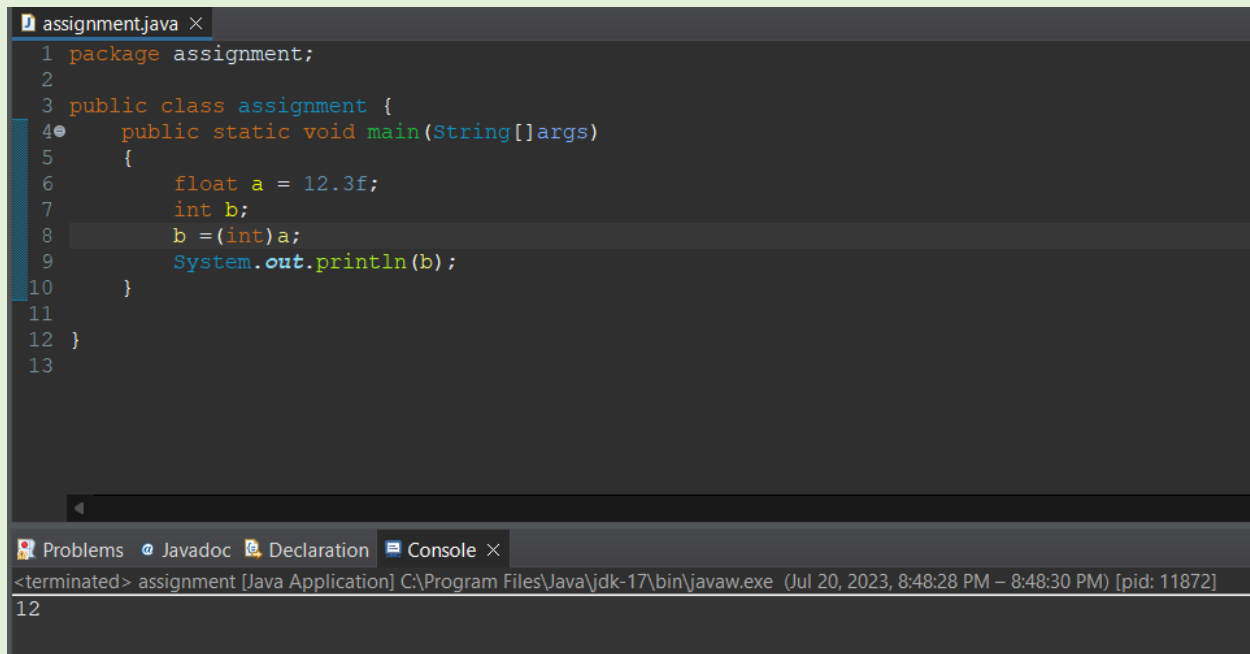
The screenshot shows an IDE with a file named `assignment.java`. The code is as follows:

```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         float a = 12.3f;
7         short b;
8         b = (short) a;
9         System.out.println(b);
10    }
11 }
12 }
```

The console output shows the number 12, which is the integer value of the short 12.3f.

Float data type to short data type conversion is an explicit type of conversion.

Converting float data type to int data type:

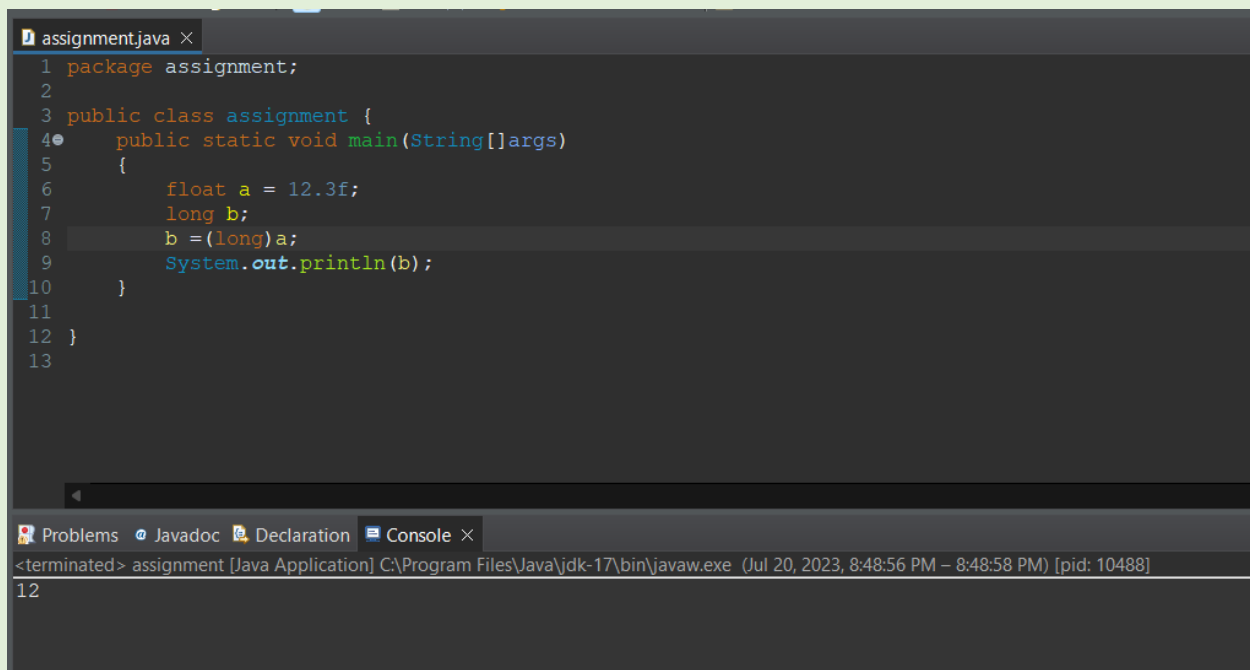


```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         float a = 12.3f;
7         int b;
8         b = (int)a;
9         System.out.println(b);
10    }
11 }
12 }
```

The screenshot shows an IDE window titled 'assignment.java'. The code defines a package 'assignment', a public class 'assignment', and a main method. Inside the main method, a float variable 'a' is assigned the value 12.3f, an int variable 'b' is declared, 'a' is cast to an int and assigned to 'b', and 'b' is printed. The console output shows '12'. The bottom status bar indicates the application was terminated at 8:48:30 PM with PID 11872.

Float data type to int data type conversion is an explicit type of conversion.

Converting float data type to long data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         float a = 12.3f;
7         long b;
8         b = (long)a;
9         System.out.println(b);
10    }
11 }
12 }
```

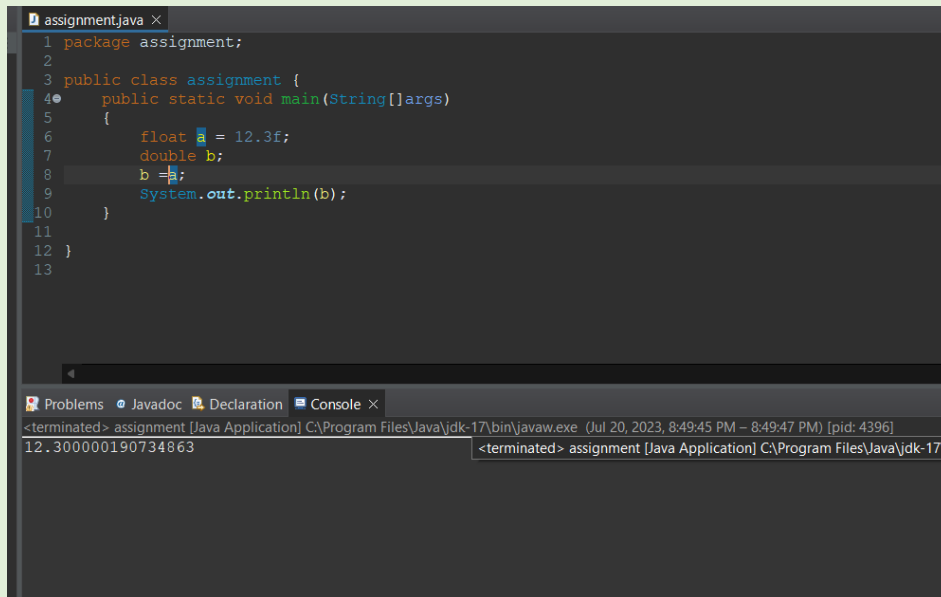
The screenshot shows an IDE window titled 'assignment.java'. The code defines a package 'assignment', a public class 'assignment', and a main method. Inside the main method, a float variable 'a' is assigned the value 12.3f, a long variable 'b' is declared, 'a' is cast to a long and assigned to 'b', and 'b' is printed. The console output shows '12'. The bottom status bar indicates the application was terminated at 8:48:58 PM with PID 10488.

Float data type to long data type conversion is an explicit type of conversion.

Converting float data type to float data type:

Conversion of float data type to float data type no conversion is required because both are of same data type.

Converting float data type to double data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         float a = 12.3f;
7         double b;
8         b = a;
9         System.out.println(b);
10    }
11
12 }
13
```

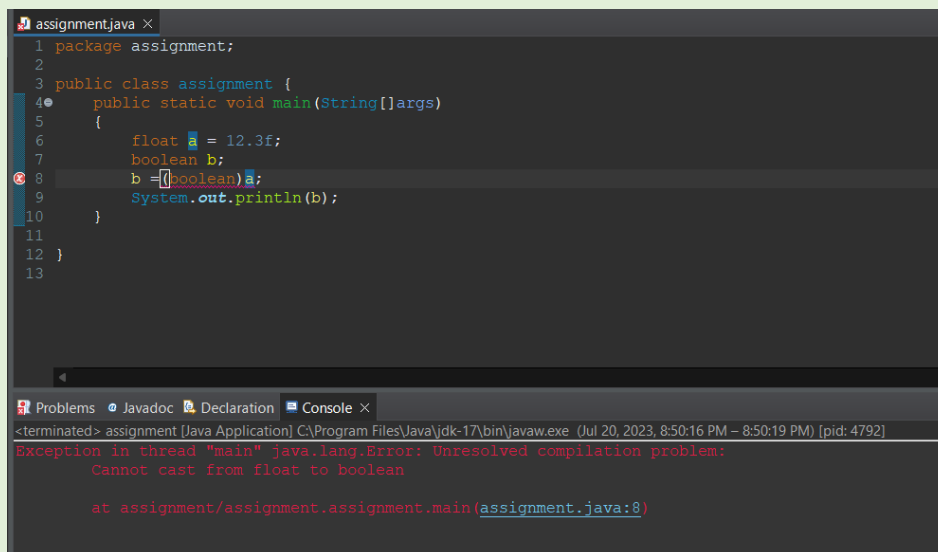
Problems Javadoc Declaration Console X

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:49:45 PM – 8:49:47 PM) [pid: 4396]

12.300000190734863 <terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:49:45 PM – 8:49:47 PM) [pid: 4396]

Float data type to double data type conversion is an implicit type of conversion.

Converting float data type to boolean data type:



```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         float a = 12.3f;
7         boolean b;
8         b = (boolean) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console X

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:50:16 PM – 8:50:19 PM) [pid: 4792]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from float to boolean

at assignment/assignment.assignment.main(assignment.java:8)

Float data type to boolean data type conversion is not possible.

Converting double data type to char data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         double a = 12.3f;
7         char b;
8         b = (char) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:52:41 PM – 8:52:42 PM) [pid: 7164]

double data type to char data type conversion is an explicit type of conversion.

Converting double data type to byte data type:

```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         double a = 12.3f;
7         byte b;
8         b = (byte) a;
9         System.out.println(b);
10    }
11
12 }
13
```

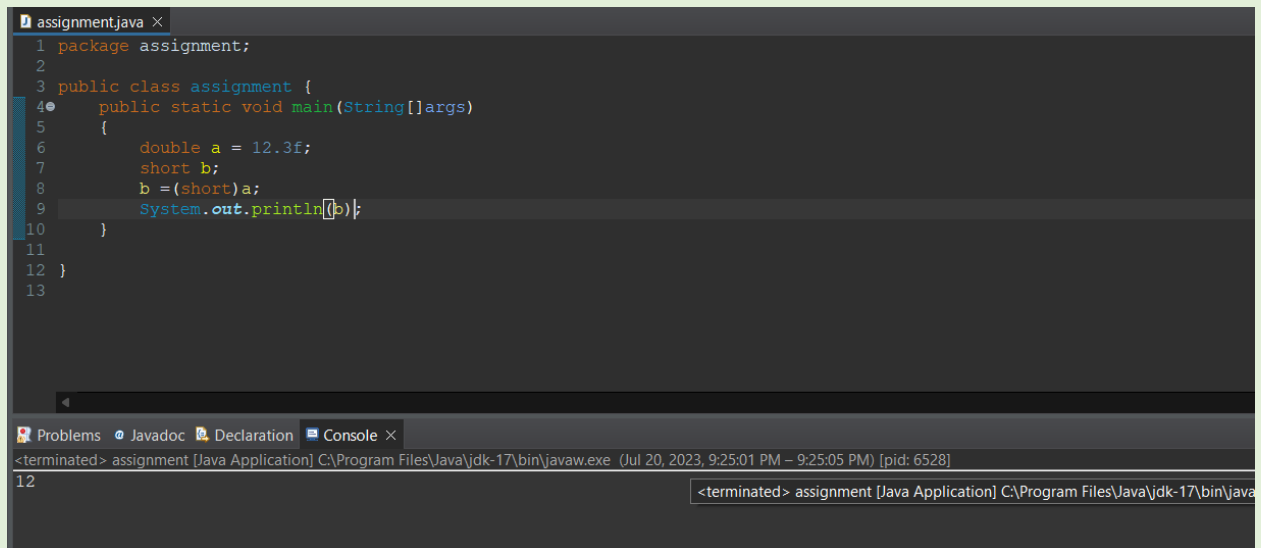
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:23:44 PM – 9:23:46 PM) [pid: 3048]

12

double data type to byte data type conversion is an explicit type of conversion.

Converting double data type to short data type:

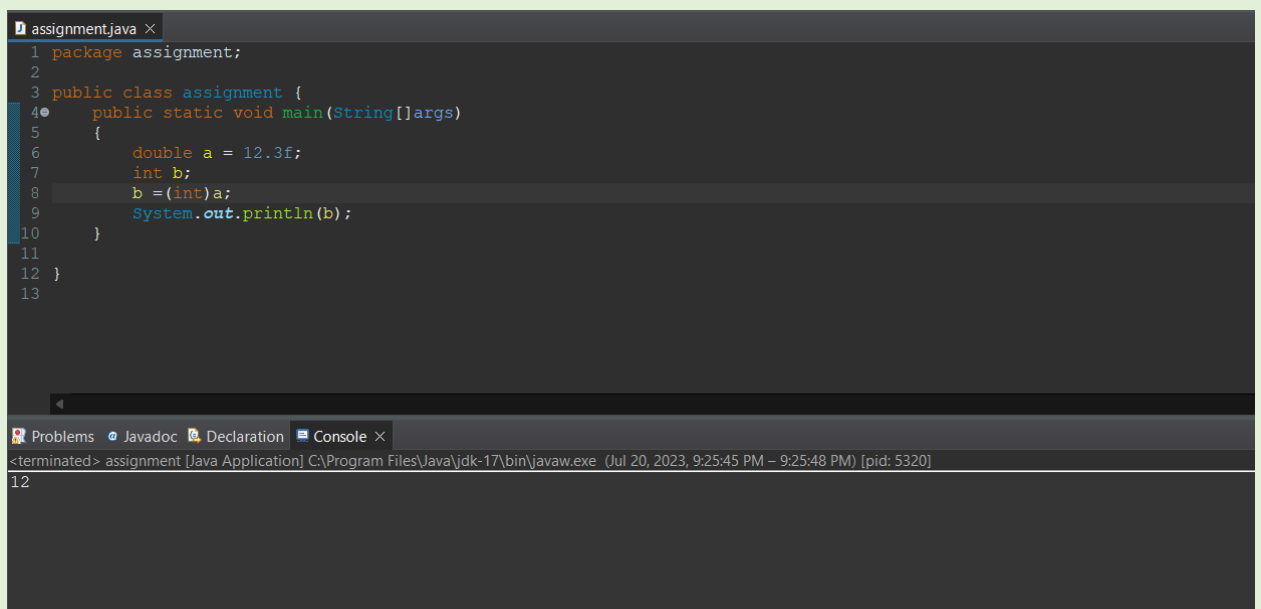


```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         double a = 12.3f;
7         short b;
8         b = (short)a;
9         System.out.println(b);
10    }
11 }
12
13
```

The screenshot shows an IDE window titled 'assignment.java'. The code defines a package 'assignment' and a class 'assignment' with a 'main' method. Inside the method, a double variable 'a' is assigned the value 12.3f, a short variable 'b' is declared, 'a' is cast to a short and assigned to 'b', and 'b' is printed. The console output shows '12'. The status bar at the bottom indicates the program was terminated successfully.

double data type to short data type conversion is an explicit type of conversion.

Converting double data type to int data type:

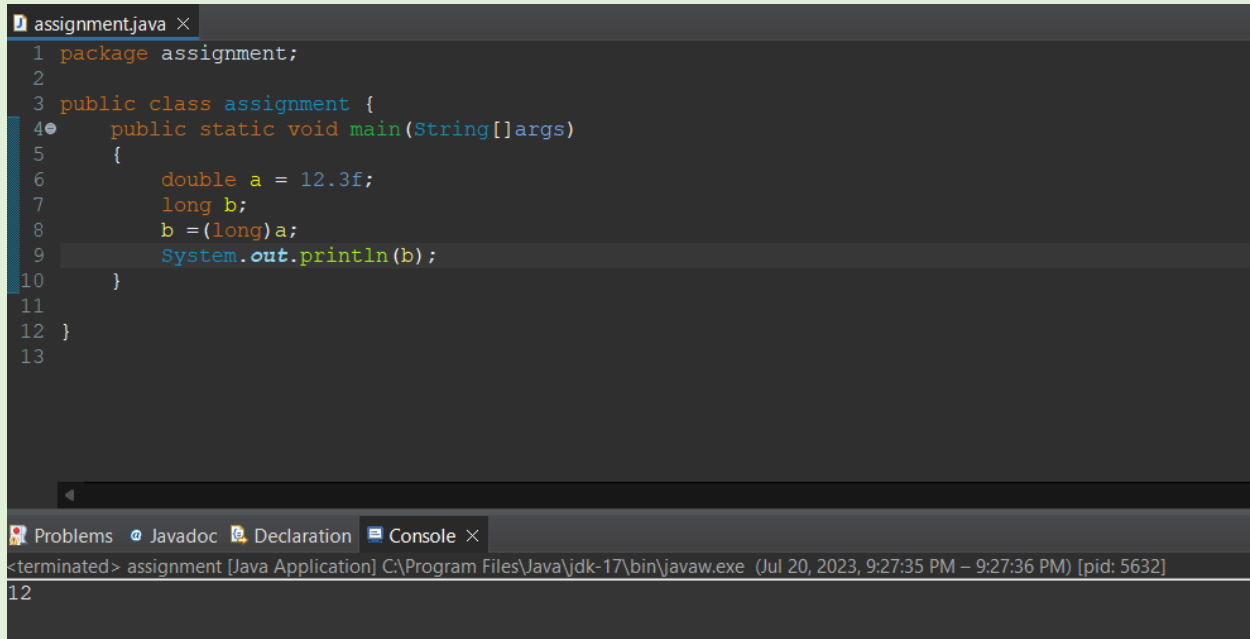


```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         double a = 12.3f;
7         int b;
8         b = (int)a;
9         System.out.println(b);
10    }
11 }
12
13
```

The screenshot shows an IDE window titled 'assignment.java'. The code defines a package 'assignment' and a class 'assignment' with a 'main' method. Inside the method, a double variable 'a' is assigned the value 12.3f, an int variable 'b' is declared, 'a' is cast to an int and assigned to 'b', and 'b' is printed. The console output shows '12'. The status bar at the bottom indicates the program was terminated successfully.

double data type to int data type conversion is an explicit type of conversion.

Converting double data type to long data type:



```
assignment.java X
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         double a = 12.3f;
7         long b;
8         b = (long) a;
9         System.out.println(b);
10    }
11
12 }
13
```

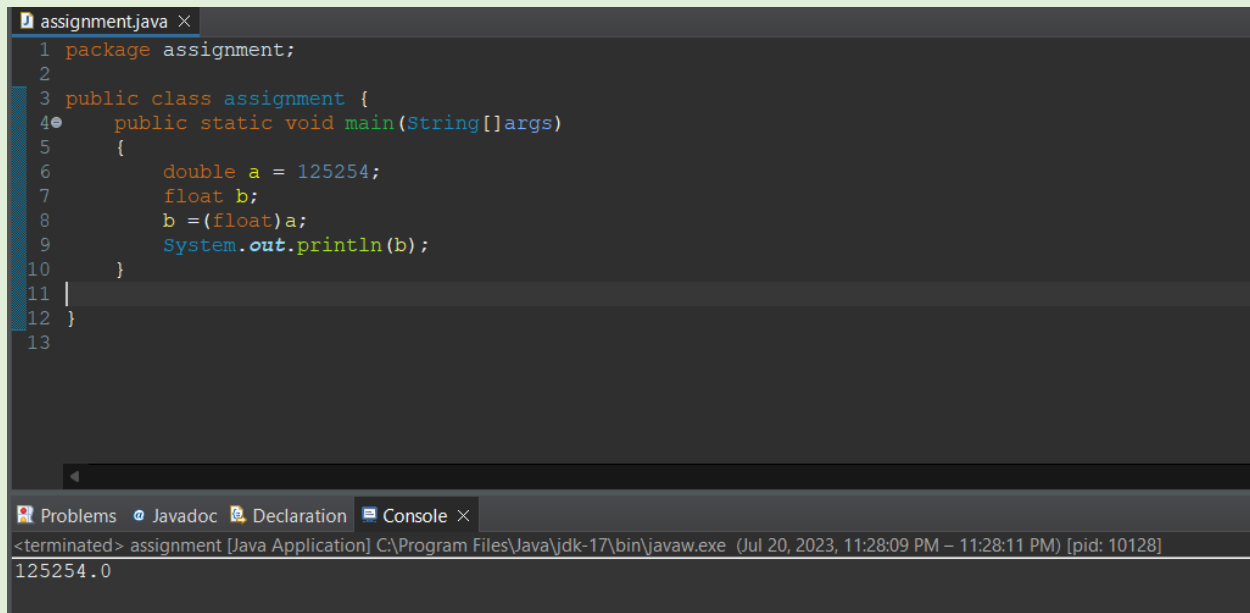
Problems Javadoc Declaration Console X

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:27:35 PM – 9:27:36 PM) [pid: 5632]

12

double data type to long data type conversion is an explicit type of conversion.

Converting double data type to float data type:



```
assignment.java X
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         double a = 125254;
7         float b;
8         b = (float) a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console X

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 11:28:09 PM – 11:28:11 PM) [pid: 10128]

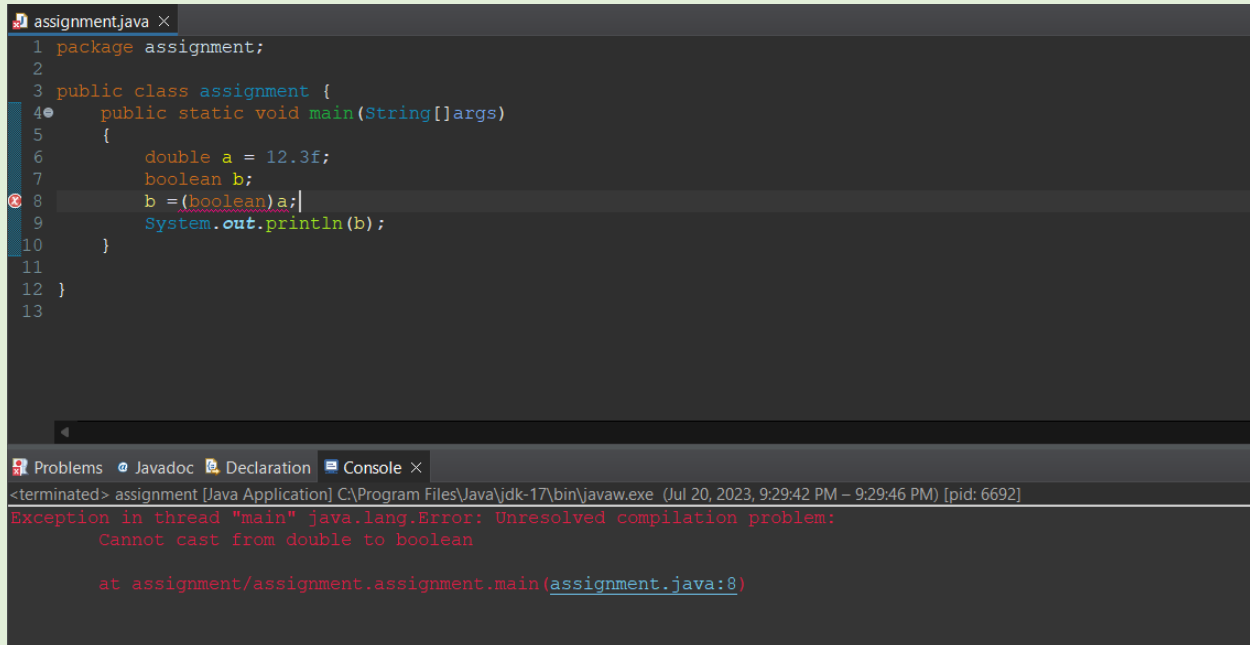
125254.0

double data type to float data type conversion is an explicit type of conversion.

Converting double data type to double data type:

Conversion of double data type to double data type no conversion is required because both are of same data type

Converting double data type to boolean data type:



```
assignment.java x
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         double a = 12.3f;
7         boolean b;
8         b = (boolean)a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console x

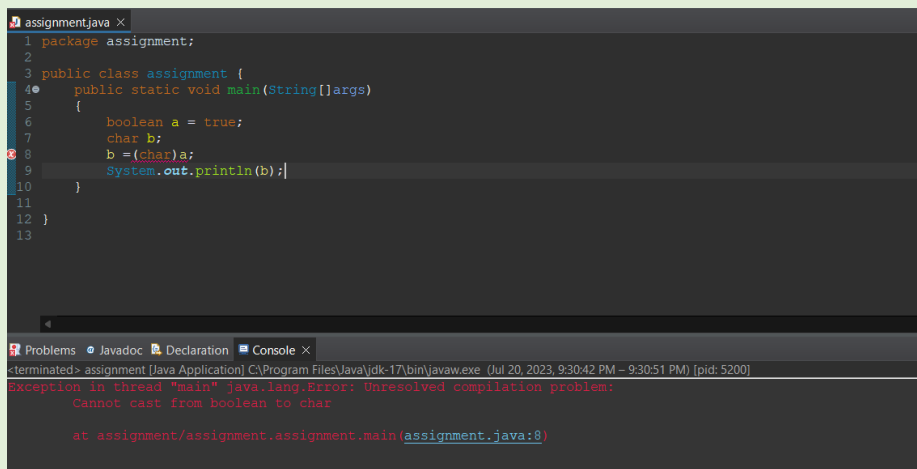
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:29:42 PM – 9:29:46 PM) [pid: 6692]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from double to boolean

at assignment/assignment.assignment.main(assignment.java:8)

double data type to Boolean data type conversion is not possible.

Converting Boolean data type to char data type:



```
assignment.java x
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         boolean a = true;
7         char b;
8         b = (char)a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console x

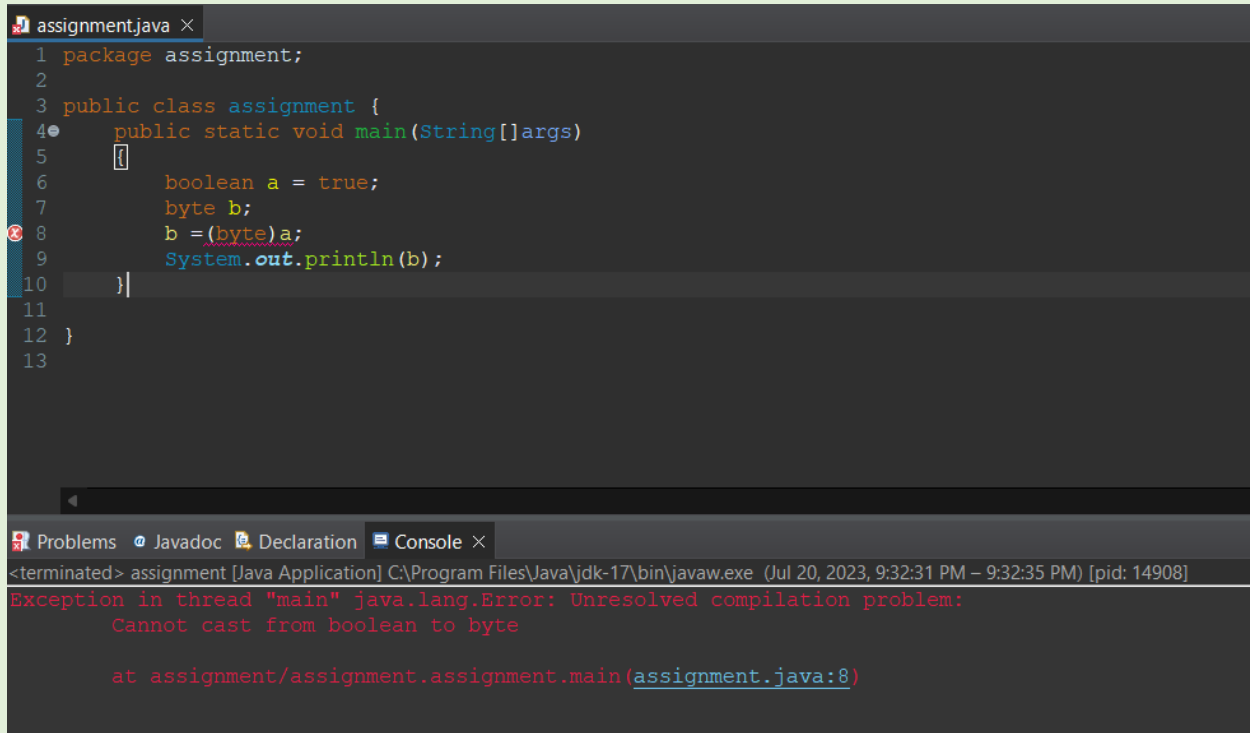
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:30:42 PM – 9:30:51 PM) [pid: 5200]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to char

at assignment/assignment.assignment.main(assignment.java:8)

boolean data type to char data type conversion is not possible.

Converting Boolean data type to byte data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         boolean a = true;
7         byte b;
8         b = (byte)a;
9         System.out.println(b);
10    }
11 }
12
13
```

Problems Javadoc Declaration Console ×

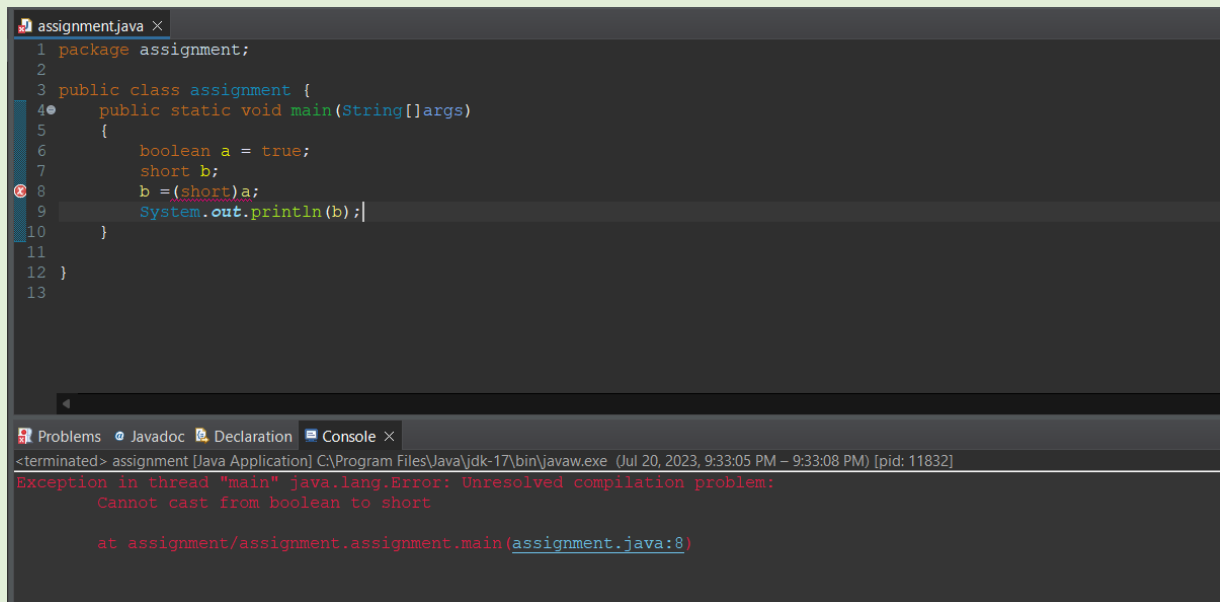
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:32:31 PM – 9:32:35 PM) [pid: 14908]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to byte

at assignment/assignment.assignment.main(assignment.java:8)

boolean data type to byte data type conversion is not possible.

Converting Boolean data type to short data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         boolean a = true;
7         short b;
8         b = (short)a;
9         System.out.println(b);
10    }
11 }
12
13
```

Problems Javadoc Declaration Console ×

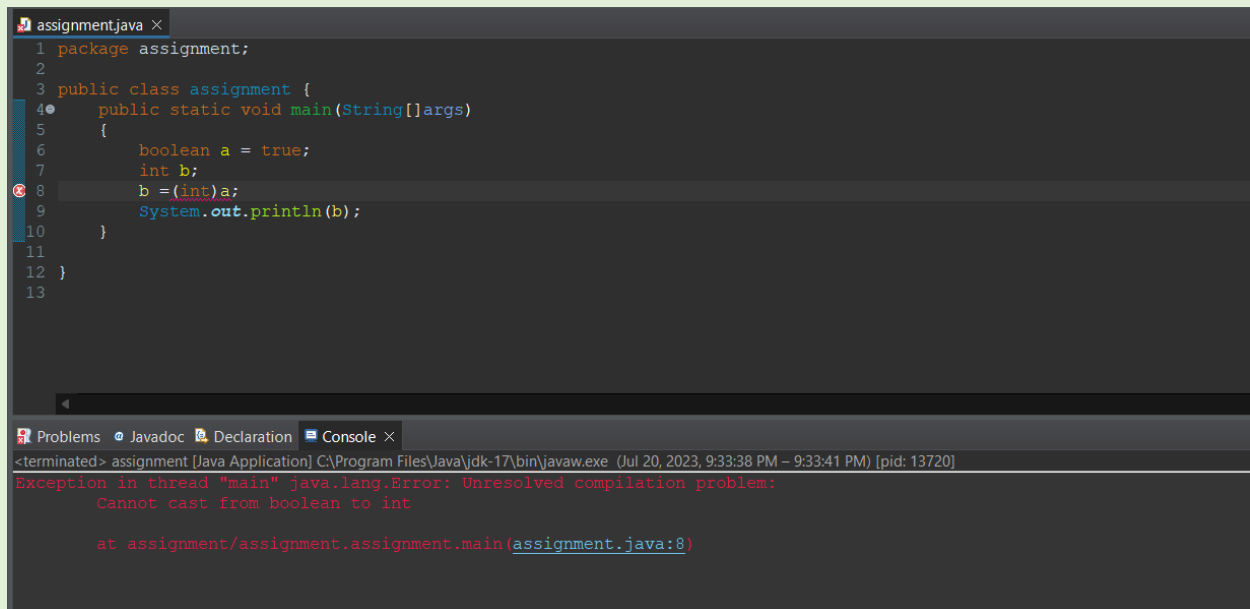
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:33:05 PM – 9:33:08 PM) [pid: 11832]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to short

at assignment/assignment.assignment.main(assignment.java:8)

boolean data type to short data type conversion is not possible.

Converting Boolean data type to integer data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         boolean a = true;
7         int b;
8         b = (int)a;
9         System.out.println(b);
10    }
11 }
12 }
13 }
```

Problems Javadoc Declaration Console ×

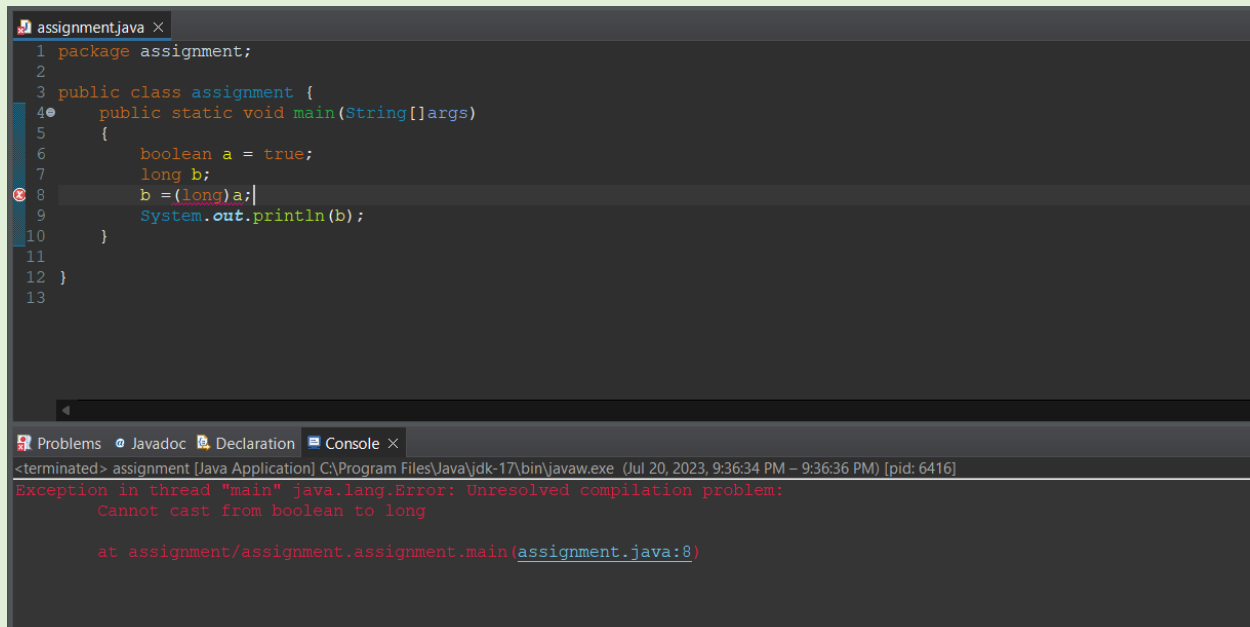
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:33:38 PM – 9:33:41 PM) [pid: 13720]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to int

at assignment/assignment.assignment.main(assignment.java:8)

boolean data type to integer data type conversion is not possible.

Converting Boolean data type to long data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         boolean a = true;
7         long b;
8         b = (long)a;
9         System.out.println(b);
10    }
11 }
12 }
13 }
```

Problems Javadoc Declaration Console ×

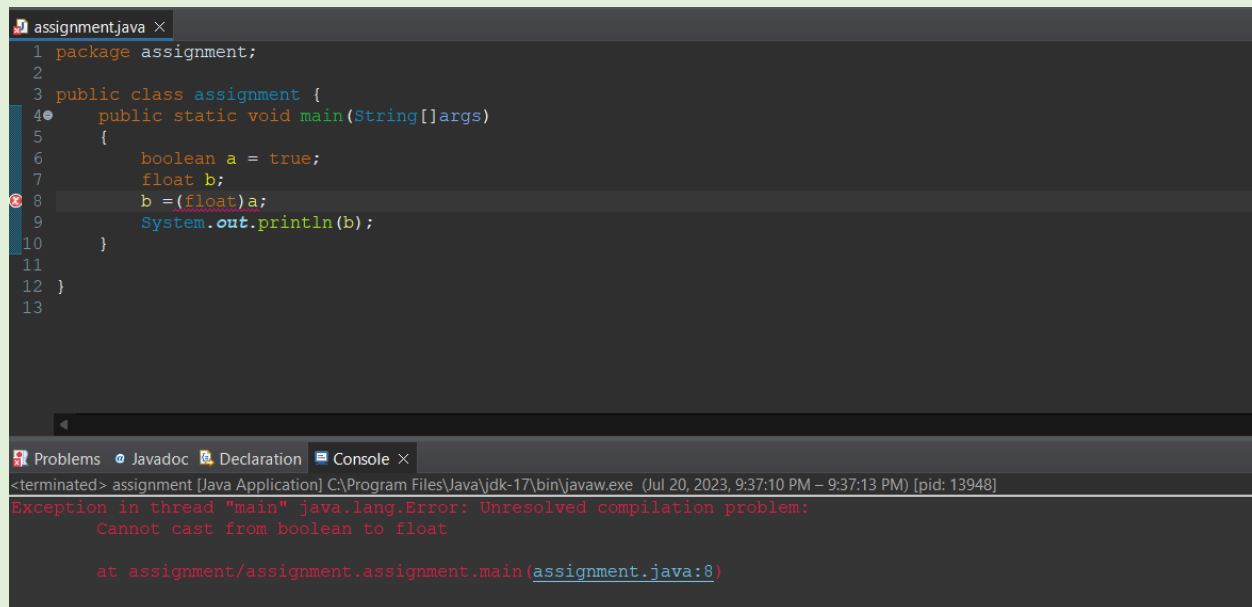
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:36:34 PM – 9:36:36 PM) [pid: 6416]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to long

at assignment/assignment.assignment.main(assignment.java:8)

boolean data type to long data type conversion is not possible.

Converting Boolean data type to float data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         boolean a = true;
7         float b;
8         b = (float)a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

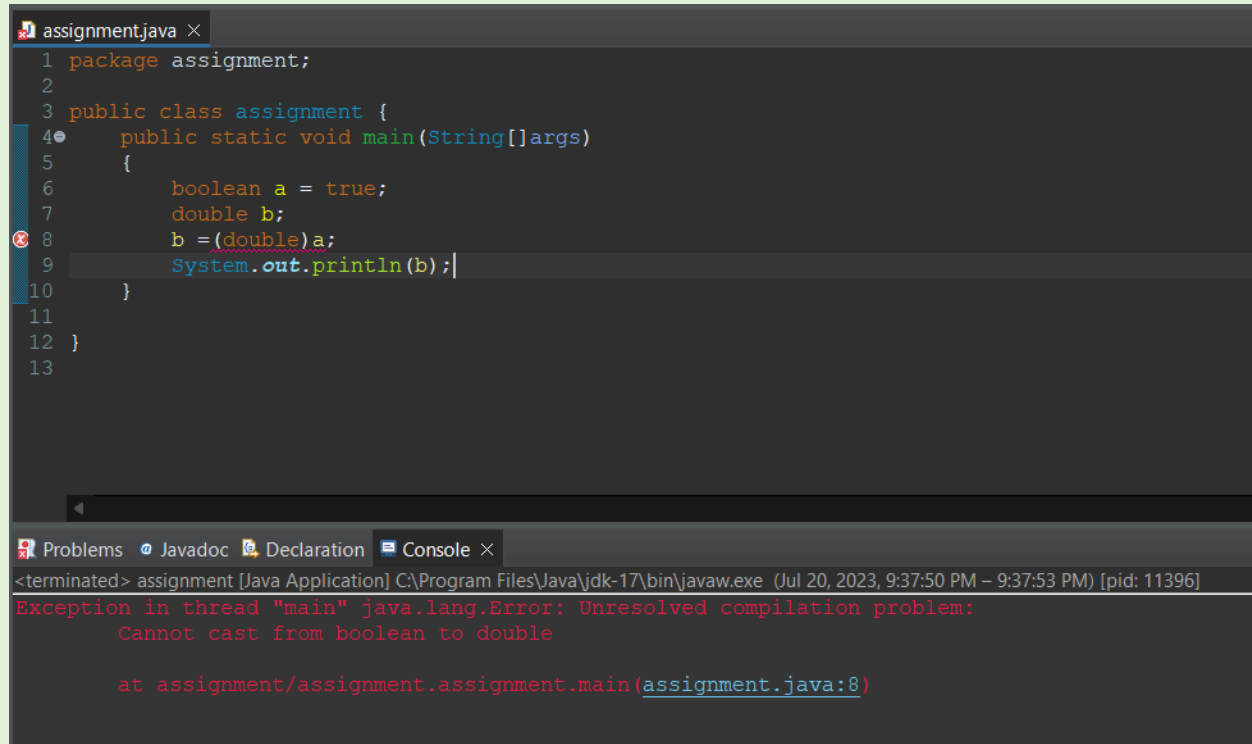
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:37:10 PM – 9:37:13 PM) [pid: 13948]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to float

at assignment/assignment.assignment.main(assignment.java:8)

boolean data type to float data type conversion is not possible.

Converting Boolean data type to double data type:



```
assignment.java ×
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         boolean a = true;
7         double b;
8         b = (double)a;
9         System.out.println(b);
10    }
11
12 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:37:50 PM – 9:37:53 PM) [pid: 11396]

Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to double

at assignment/assignment.assignment.main(assignment.java:8)

boolean data type to double data type conversion is not possible.

Converting Boolean data type to boolean data type:

Conversion of boolean data type to boolean data type no conversion is required because both are of same data type.

TABLE OF CASTING

	Char	Byte	Short	Int	Long	Float	Double	boolean
char	NCR	✓ EC	✓ EC	✓ IC	✓ IC	✓ IC	✓ IC	✗ CNP
byte	✓ EC	NCR	✓ IC	✓ IC	✓ IC	✓ IC	✓ IC	✗ CNP
short	✓ EC	✓ EC	NCR	✓ IC	✓ IC	✓ IC	✓ IC	✗ CNP
int	✓ EC	✓ EC	✓ EC	NCR	✓ IC	✓ IC	✓ IC	✗ CNP
long	✓ EC	✓ EC	✓ EC	✓ EC	NCR	✓ IC	✓ IC	✗ CNP
float	✓ EC	✓ EC	✓ EC	✓ EC	✓ EC	NCR	✓ IC	✗ CNP
double	✓ EC	✓ EC	✓ EC	✓ EC	✓ EC	✓ EC	NCR	✗ CNP
boolean	✗ CNP	✗ CNP	✗ CNP	✗ CNP	✗ CNP	✗ CNP	✗CNP	✗NCR

TYPE CASTING GRAPH

