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VENKAT

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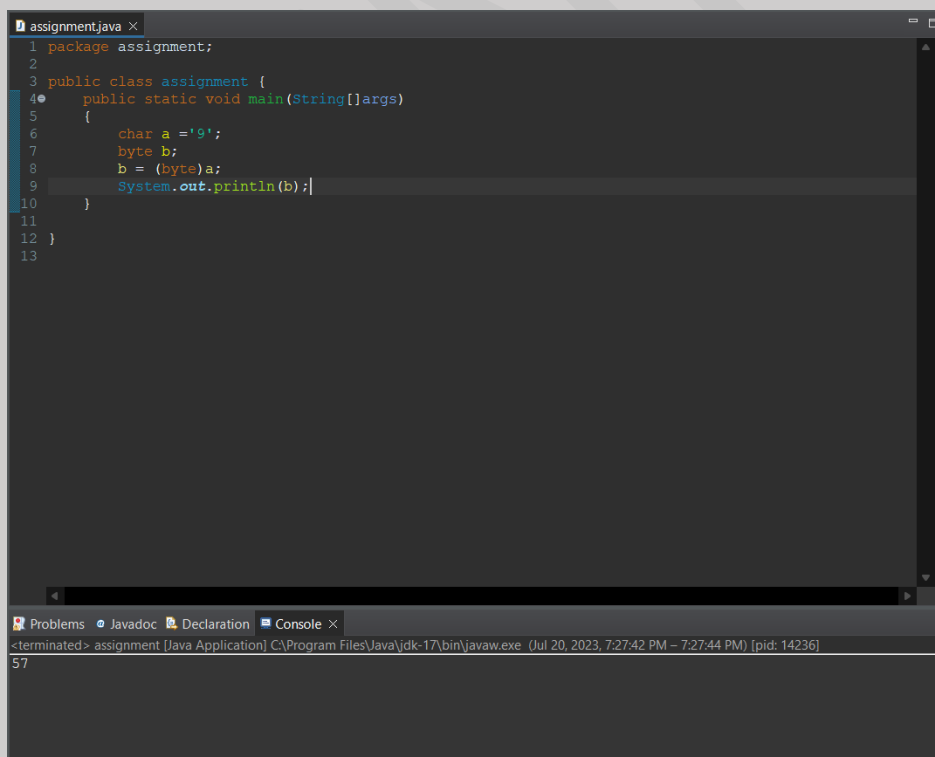
# TYPE CASTING

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:

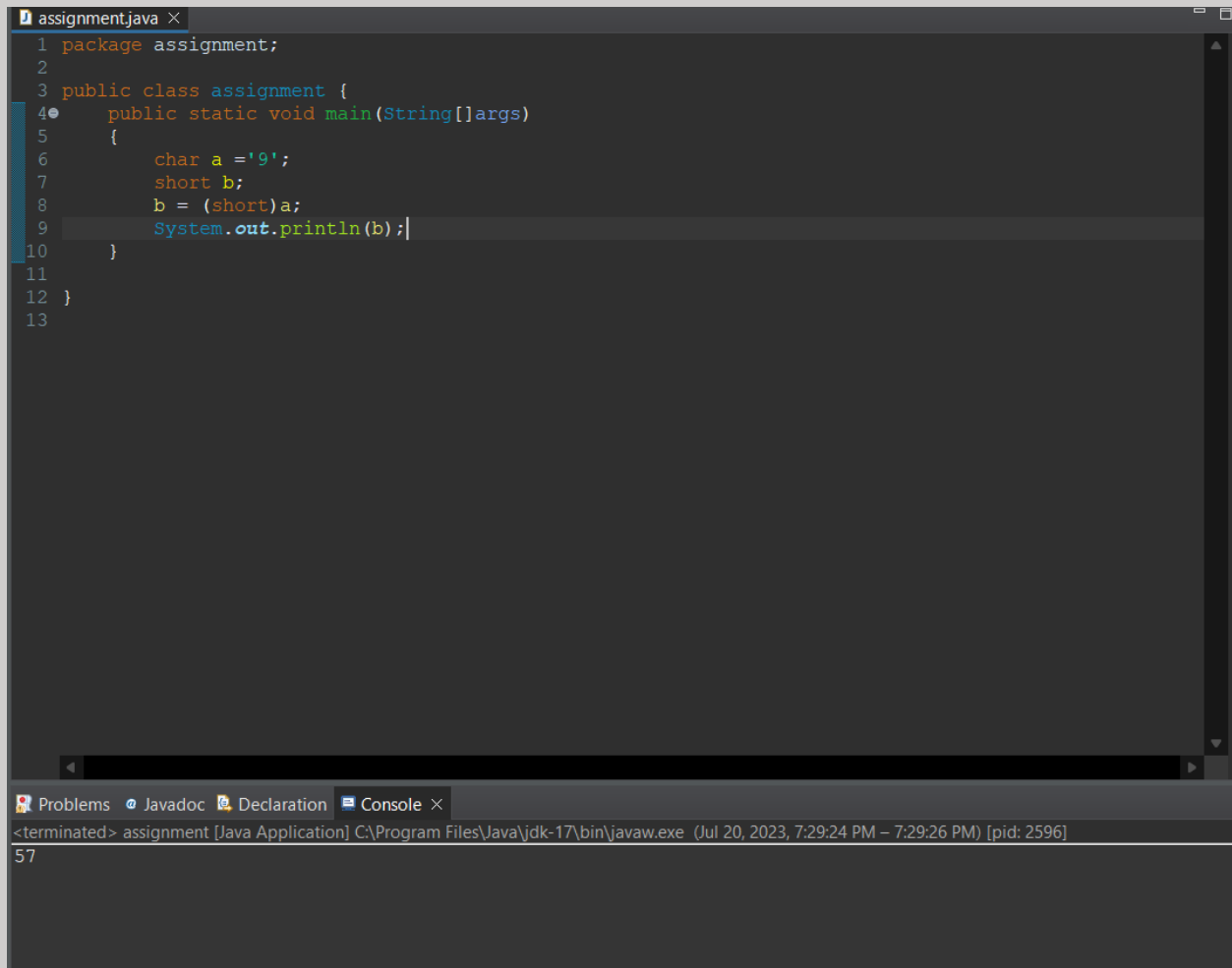


```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         char a = '9';
7         byte b;
8         b = (byte)a;
9         System.out.println(b);
10    }
11 }
12
13
```

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 bottom of the IDE shows a 'Console' tab with the output '57' and a status bar indicating the program was terminated.

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:

A screenshot of an IDE window titled 'assignment.java'. The code defines a package 'assignment', a class 'assignment', and a main method. Inside the main method, a char variable 'a' is assigned the value '9', a short variable 'b' is declared, 'b' is assigned the value of 'a' after a short cast '(short)', and 'b' is printed. The IDE interface includes a 'Console' tab at the bottom showing the execution output '57'.

```
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 }
```

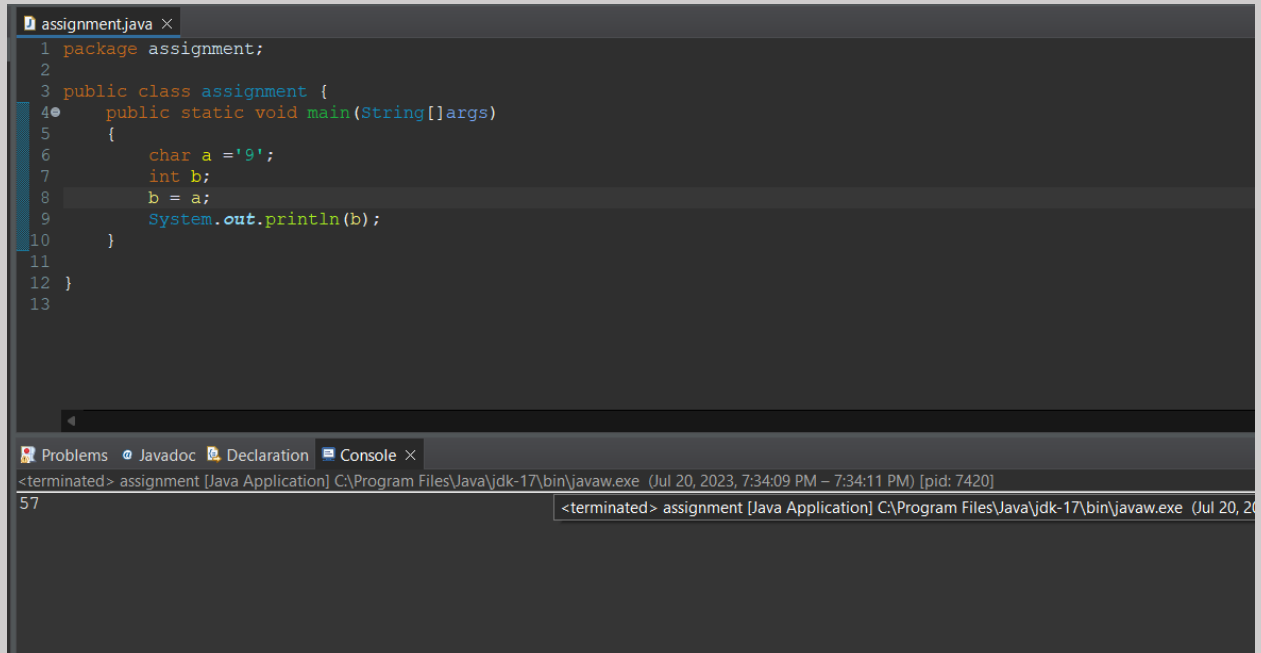
Problems Javadoc Declaration Console ×

<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
```

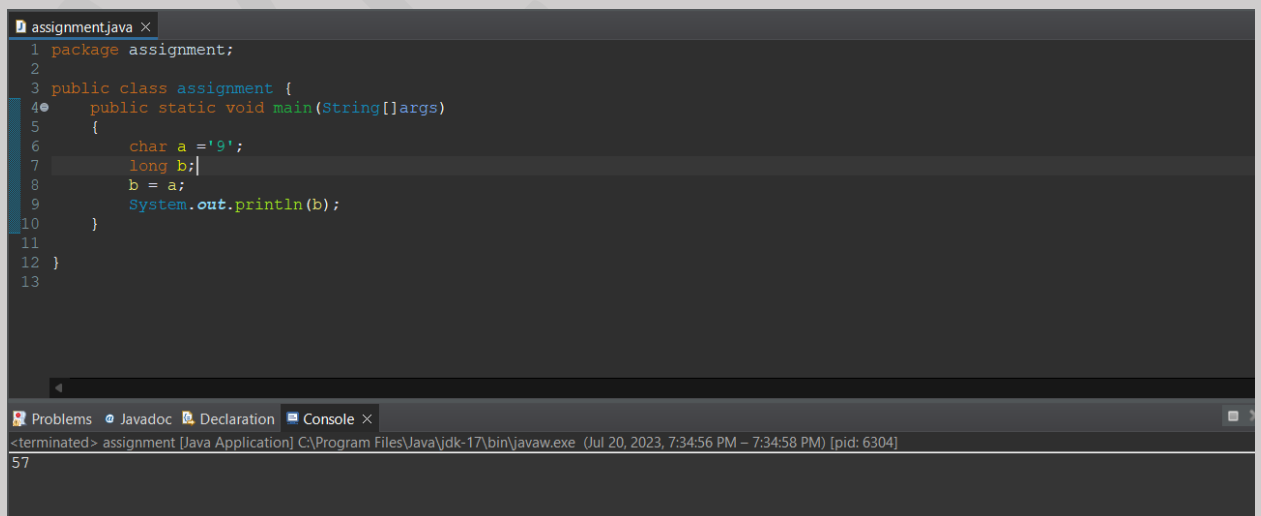
Problems Javadoc Declaration Console

<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]

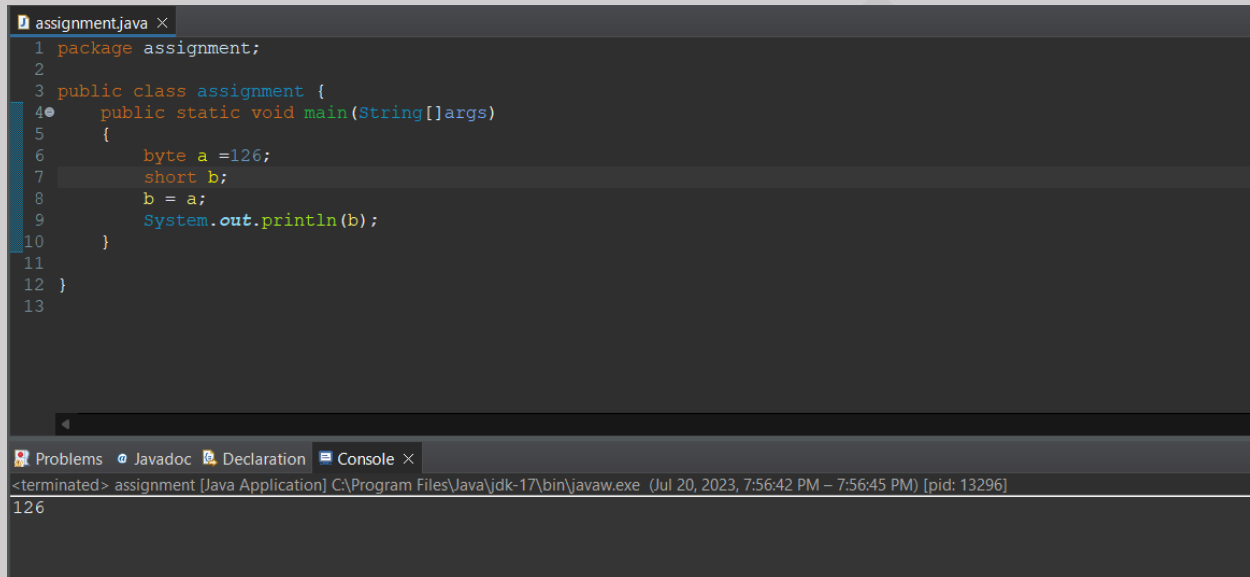
□

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
```

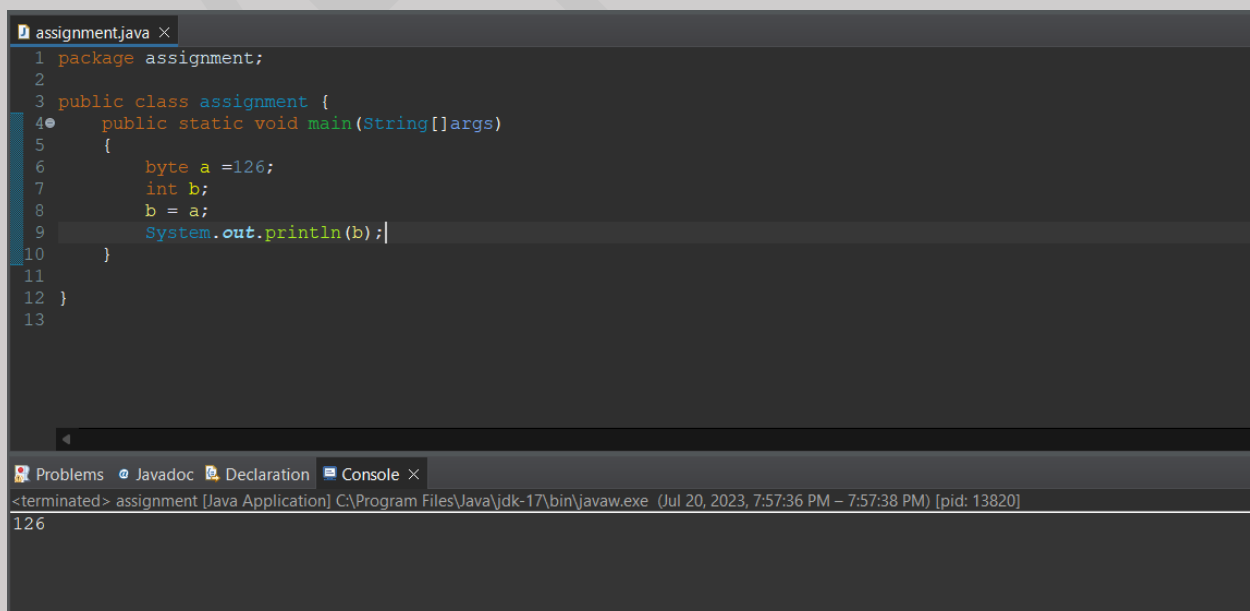
Problems Javadoc Declaration Console ×

<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
```

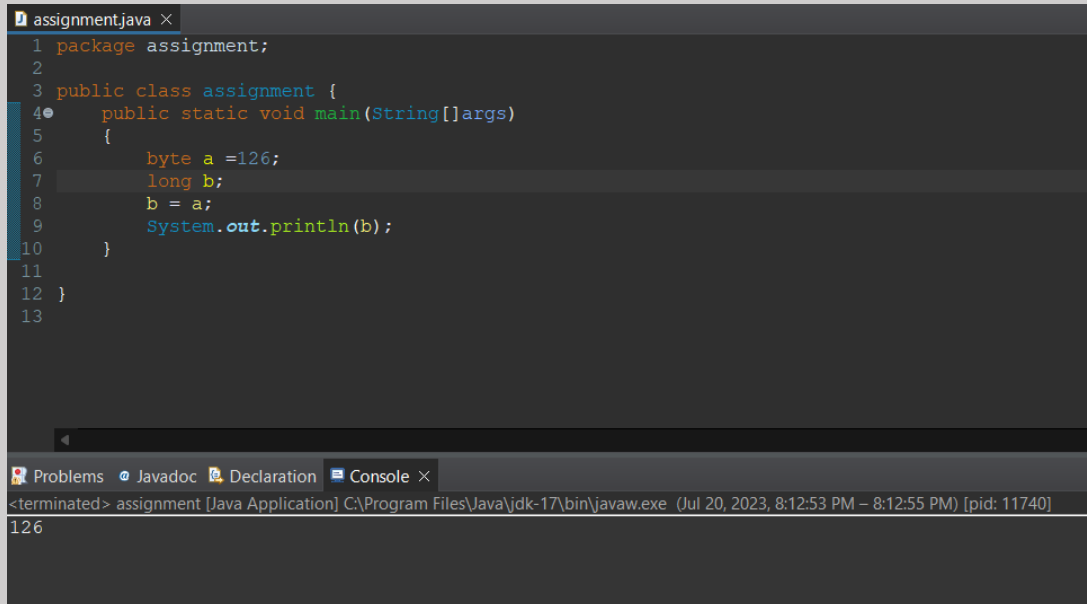
Problems Javadoc Declaration Console ×

<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:



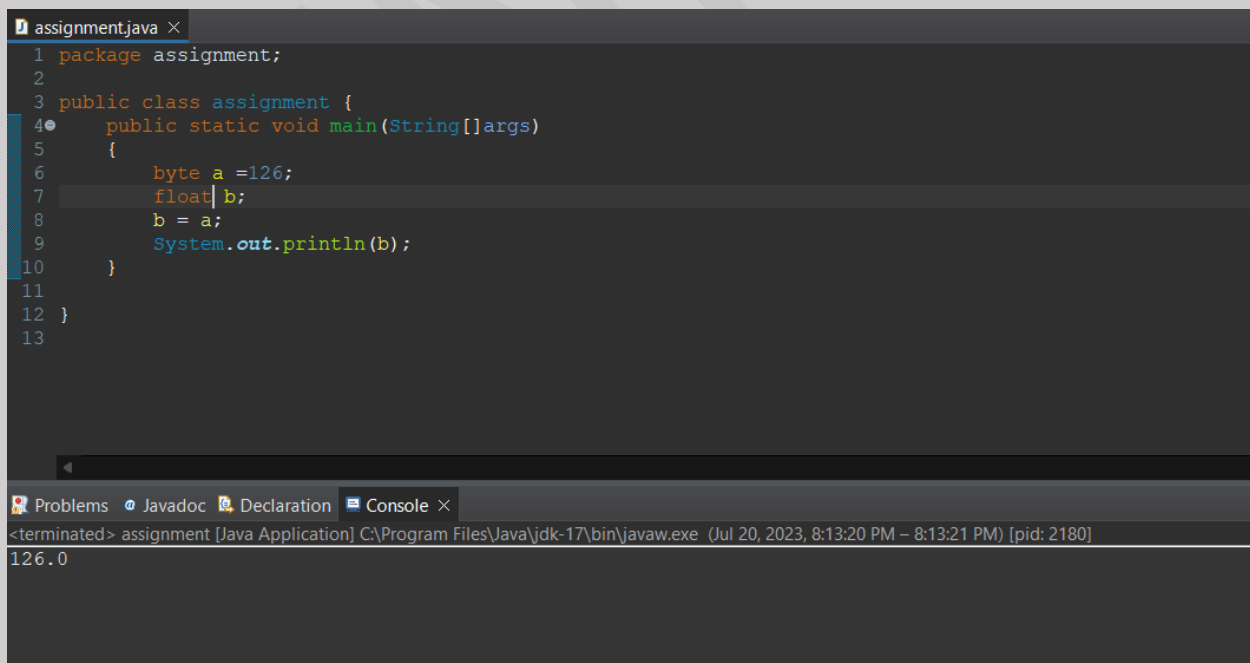
```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         byte a = 126;
7         long b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12
13
```

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:

```
assignment.java X
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 X

<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:

```
assignment.java X
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 X

<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:

```
assignment.java ×
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 }
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:14:43 PM – 8:14:45 PM) [pid: 5608]

~

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

## Converting short 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         short 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, 8:19:16 PM – 8:19:18 PM) [pid: 12572]

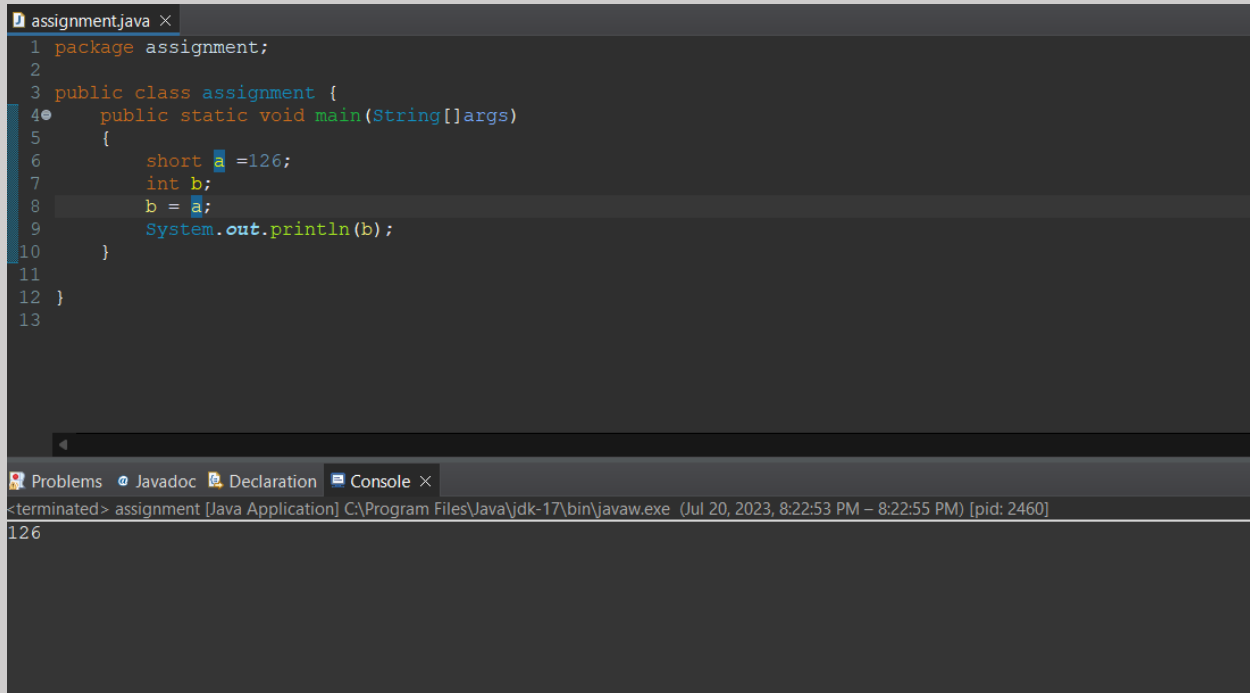
126

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:

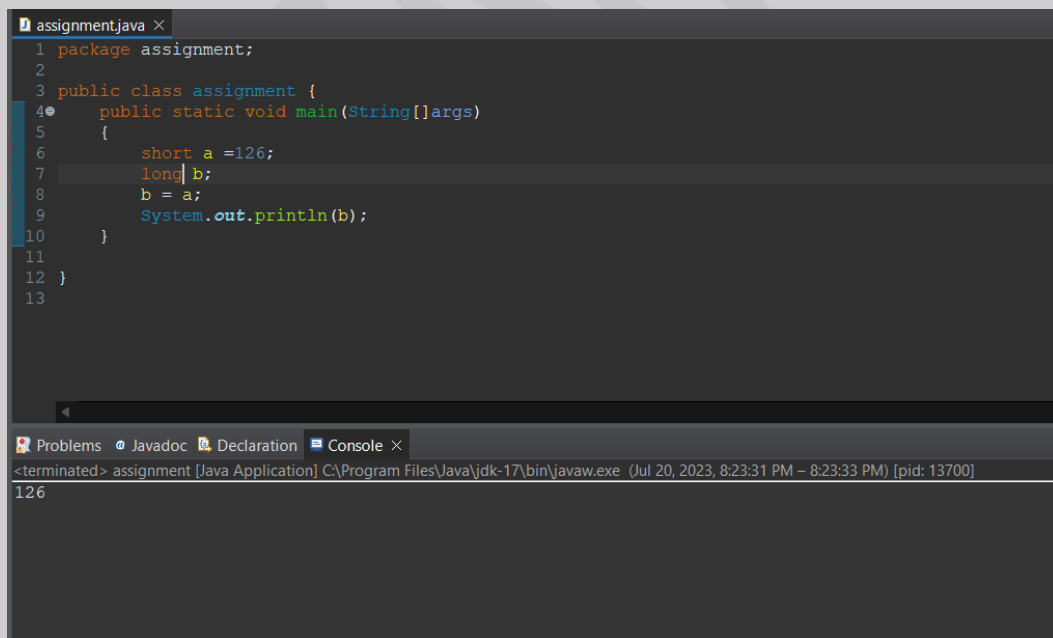


```
1 package assignment;
2
3 public class assignment {
4     public static void main(String[] args)
5     {
6         short a = 126;
7         int b;
8         b = a;
9         System.out.println(b);
10    }
11 }
12
13
```

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:

```
assignment.java ×
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
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:24:45 PM – 8:24:47 PM) [pid: 6820]  
126.0

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

## Converting short 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         short 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, 8:25:29 PM – 8:25:31 PM) [pid: 10528]  
126.0

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
```

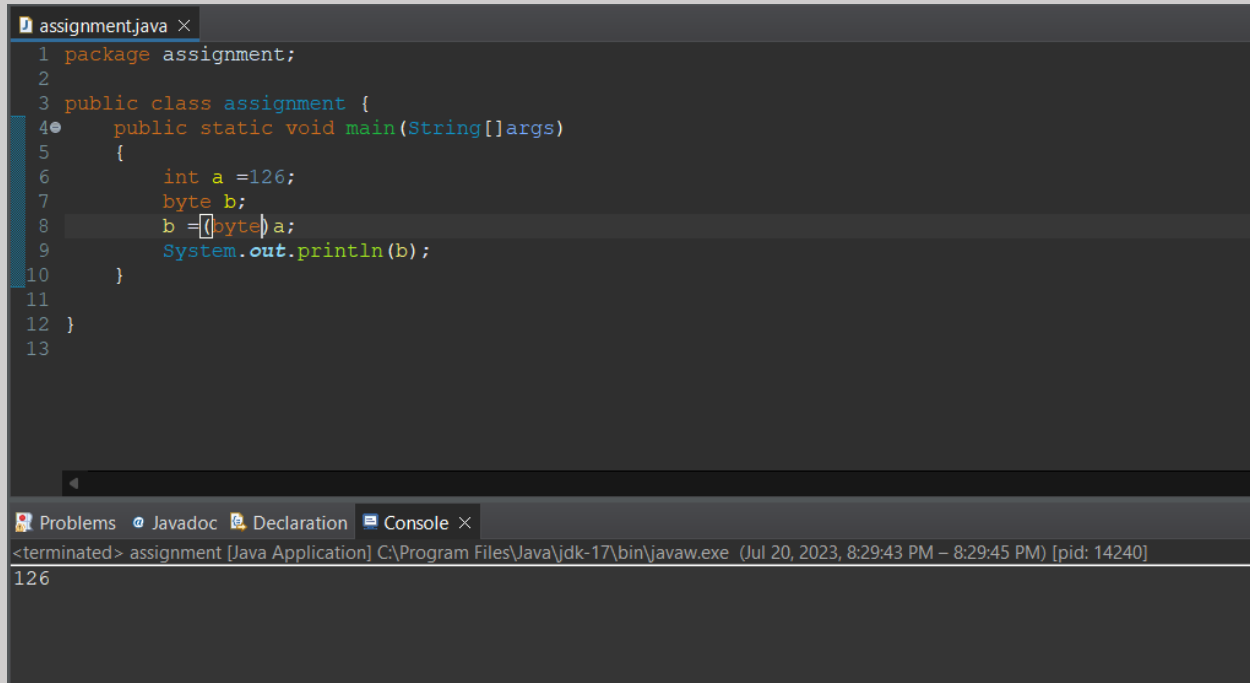
Problems Javadoc Declaration Console ×

<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:



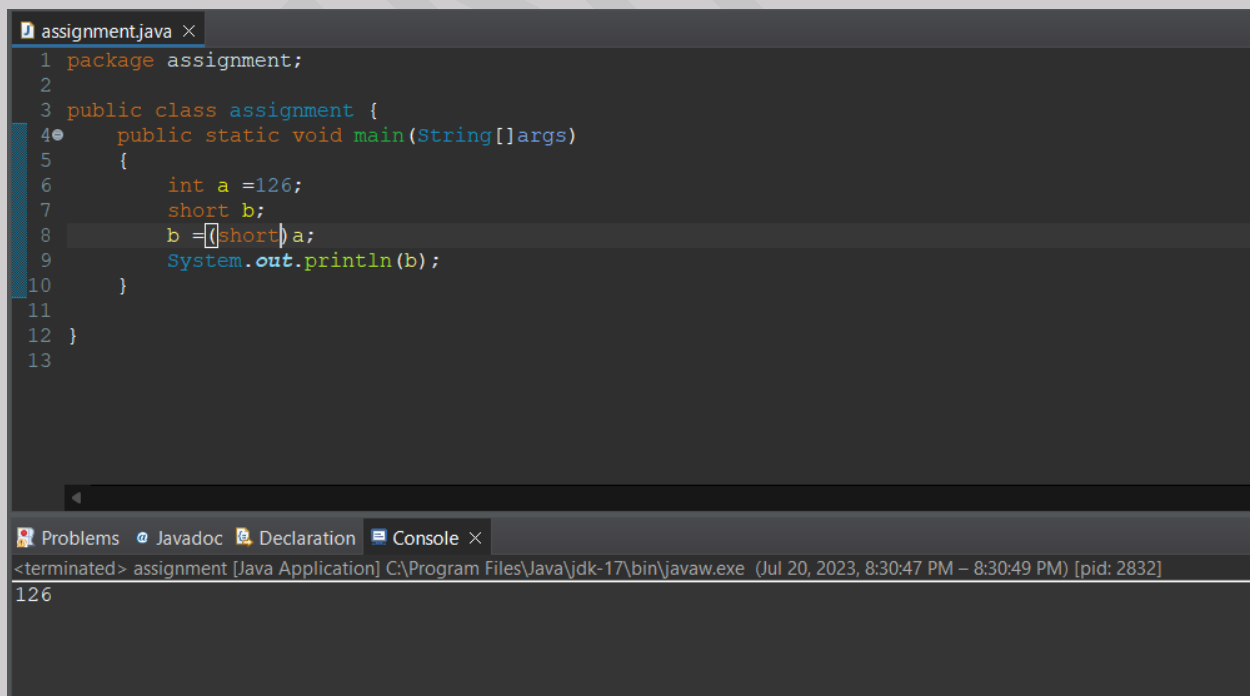
The screenshot shows an IDE window titled 'assignment.java'. The code is as follows:

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

The IDE interface includes tabs for 'Problems', 'Javadoc', 'Declaration', and 'Console'. The 'Console' tab is active, displaying the output '126'.

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

## Converting int data type to short 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         int a = 126;
7         short b;
8         b = (short) a;
9         System.out.println(b);
10    }
11
12 }
13
```

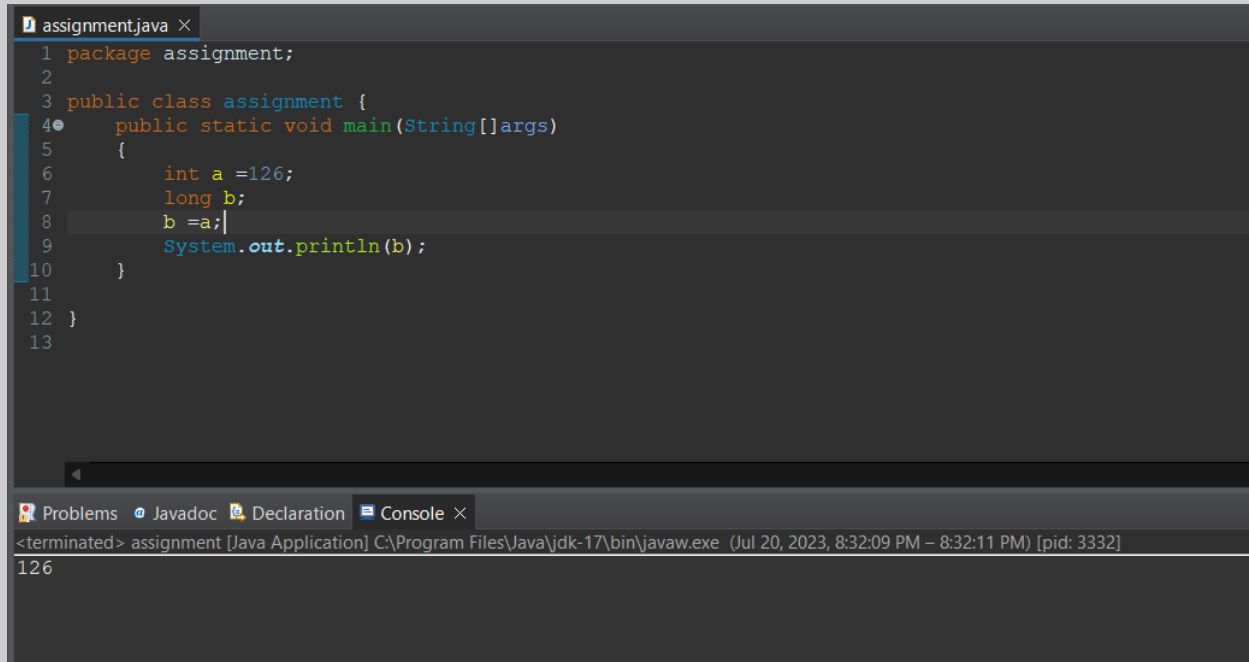
The IDE interface includes tabs for 'Problems', 'Javadoc', 'Declaration', and 'Console'. The 'Console' tab is active, displaying the output '126'.

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:



```
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
```

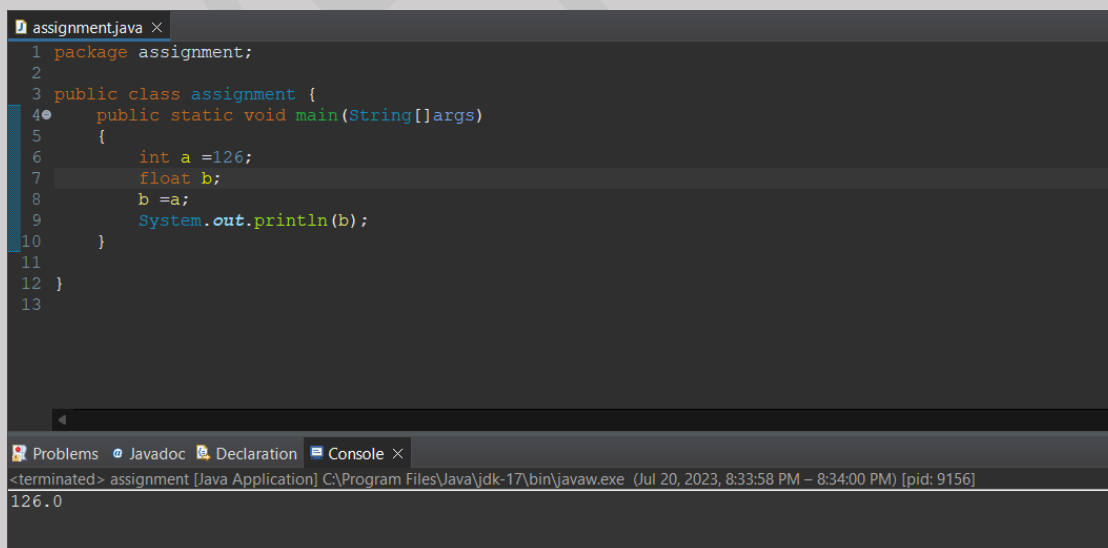
Problems Javadoc Declaration Console ×

<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:



```
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:

```
assignment.java ×
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 }
13
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:47:03 PM – 8:47:07 PM) [pid: 5740]

12

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

## Converting float 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         float a = 12.3f;
7         short b;
8         b = (short) a;
9         System.out.println(b);
10    }
11
12 }
13
```

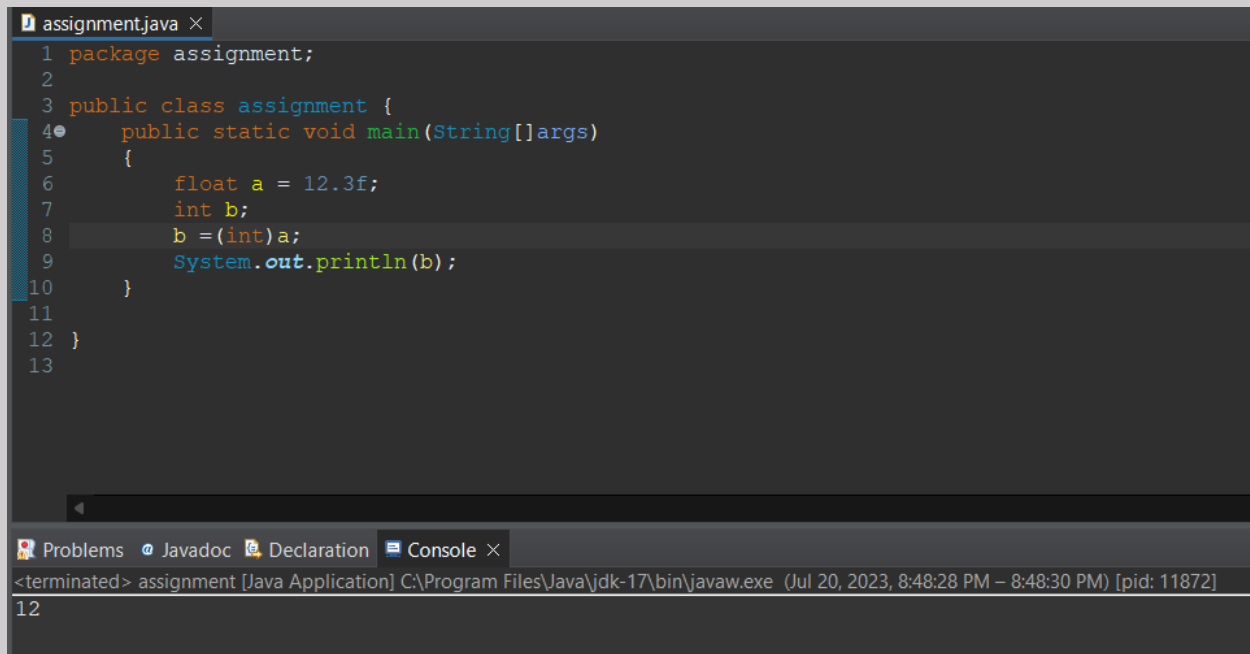
Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 8:47:46 PM – 8:47:51 PM) [pid: 13684]

12

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

## Converting float data type to int data type:



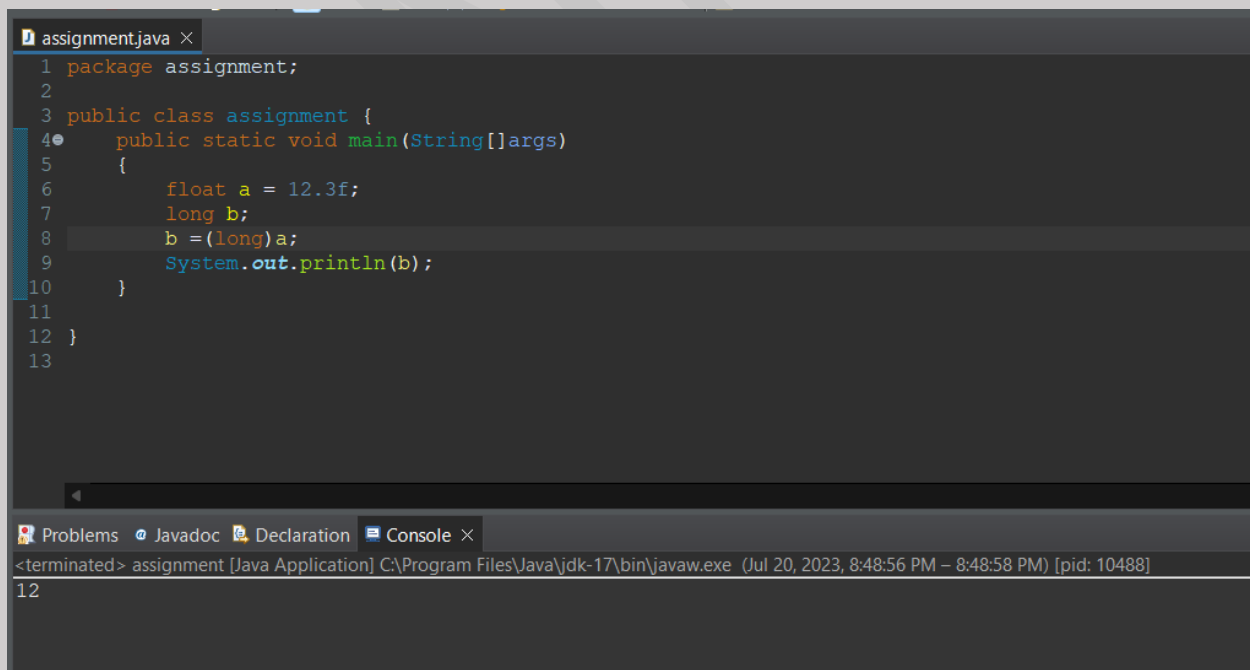
The screenshot shows an IDE window titled 'assignment.java'. The code is as follows:

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

The bottom of the IDE shows a console window with the output '12'.

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

## Converting float data type to long 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         float a = 12.3f;
7         long b;
8         b = (long)a;
9         System.out.println(b);
10    }
11 }
12 }
13
```

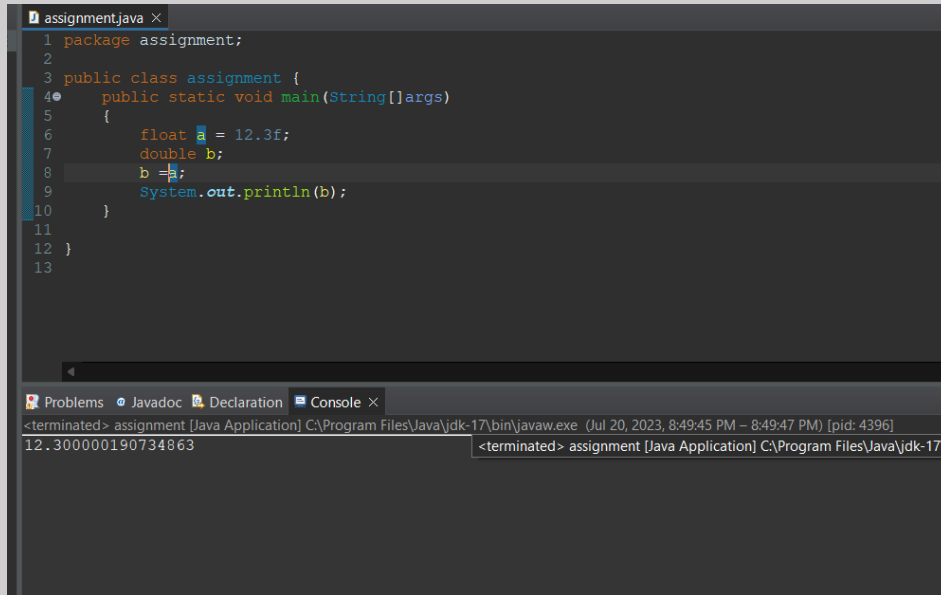
The bottom of the IDE shows a console window with the output '12'.

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
```

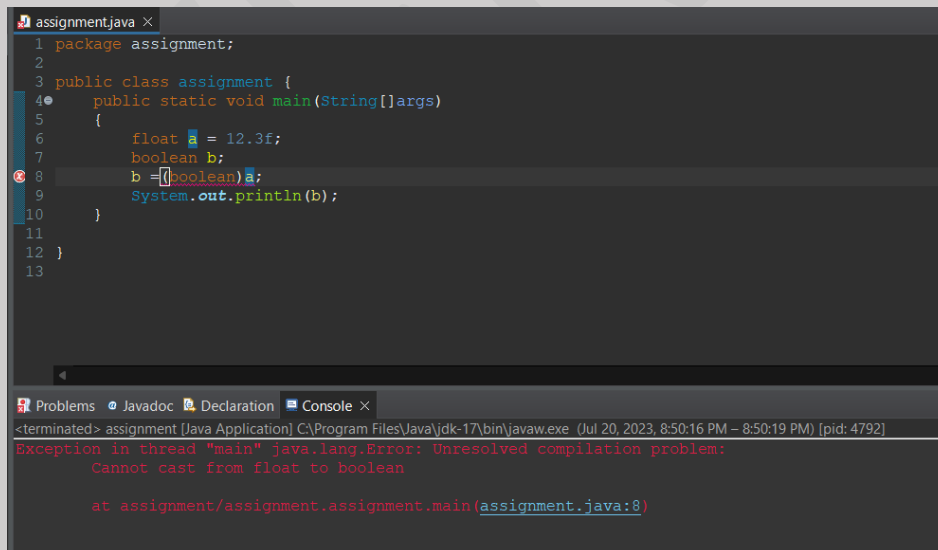
Problems Javadoc Declaration Console ×

<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 ×

<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:

```
assignment.java ×
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
```

Problems Javadoc Declaration Console ×

<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:25:01 PM – 9:25:05 PM) [pid: 6528]

12 <terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\java

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

## Converting double data type to int 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         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, 9:25:45 PM – 9:25:48 PM) [pid: 5320]

12

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]

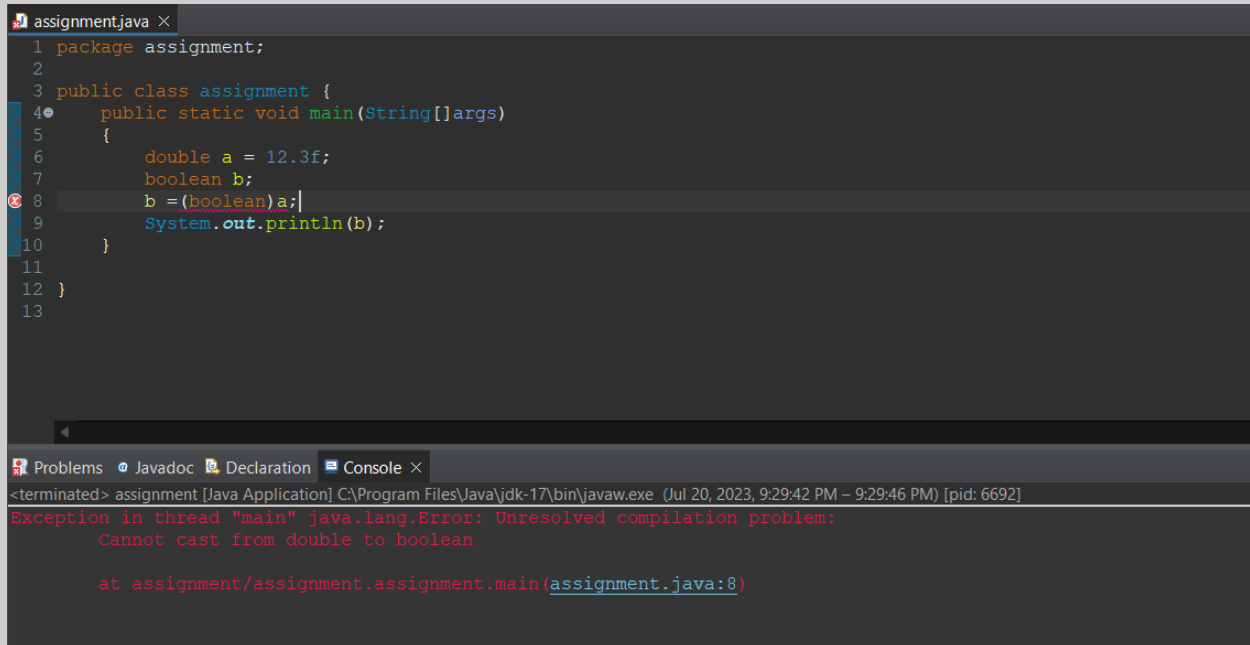
125254.0

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

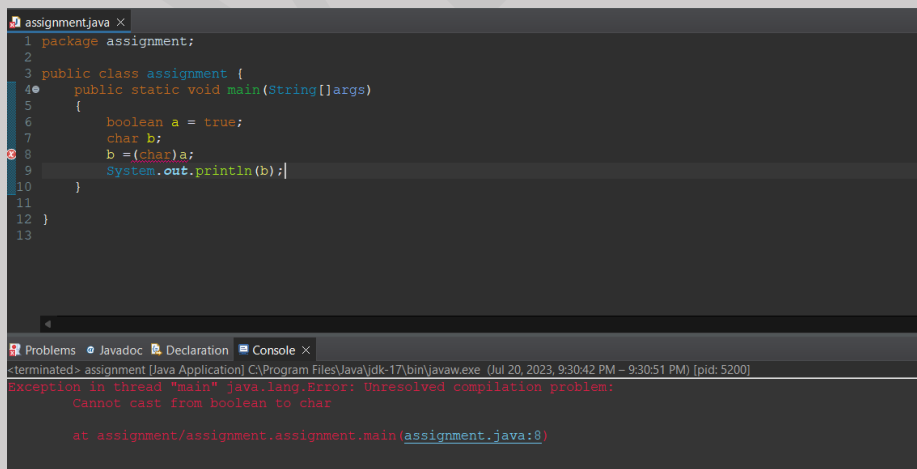
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:29:42 PM – 9:29:46 PM) [pid: 6692]

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

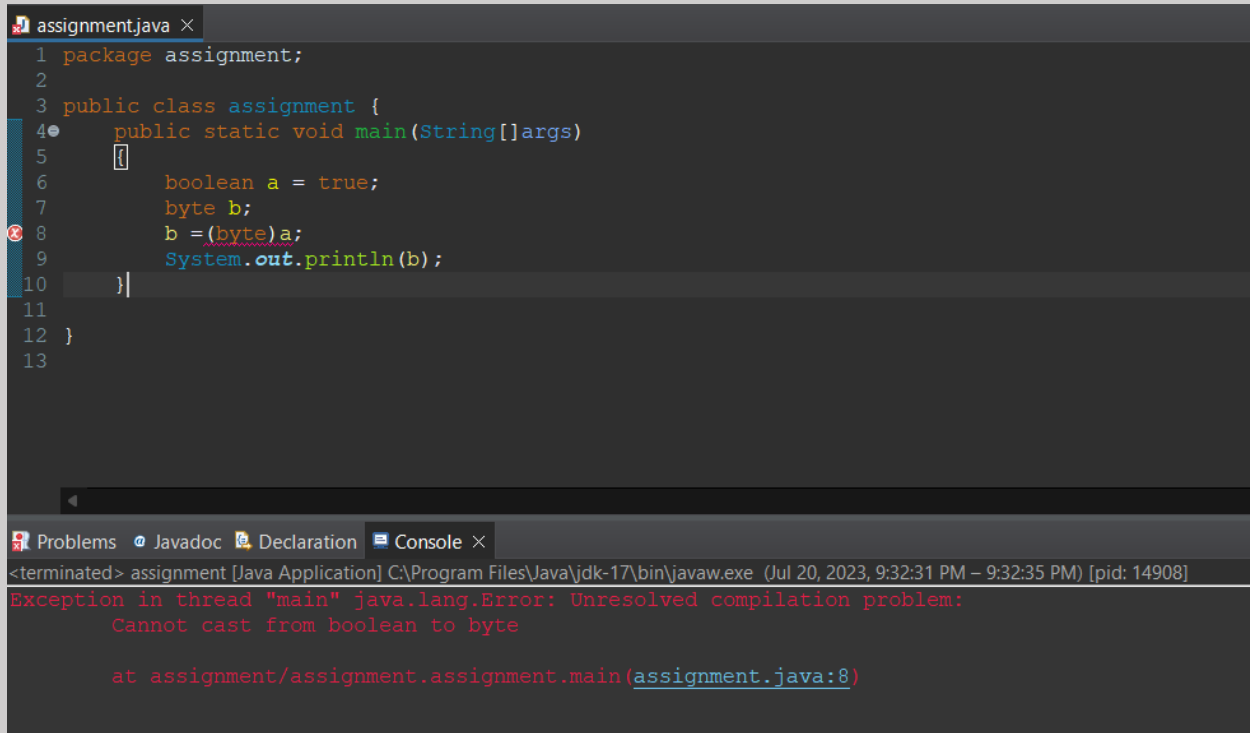
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:30:42 PM – 9:30:51 PM) [pid: 5200]

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 ×

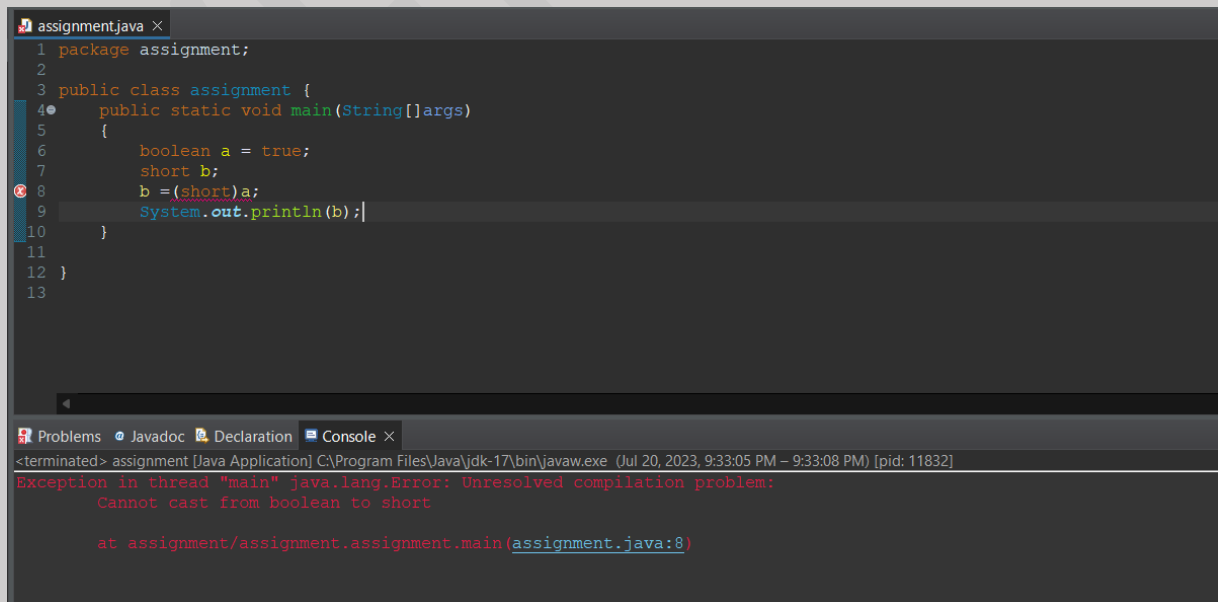
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:32:31 PM – 9:32:35 PM) [pid: 14908]

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 ×

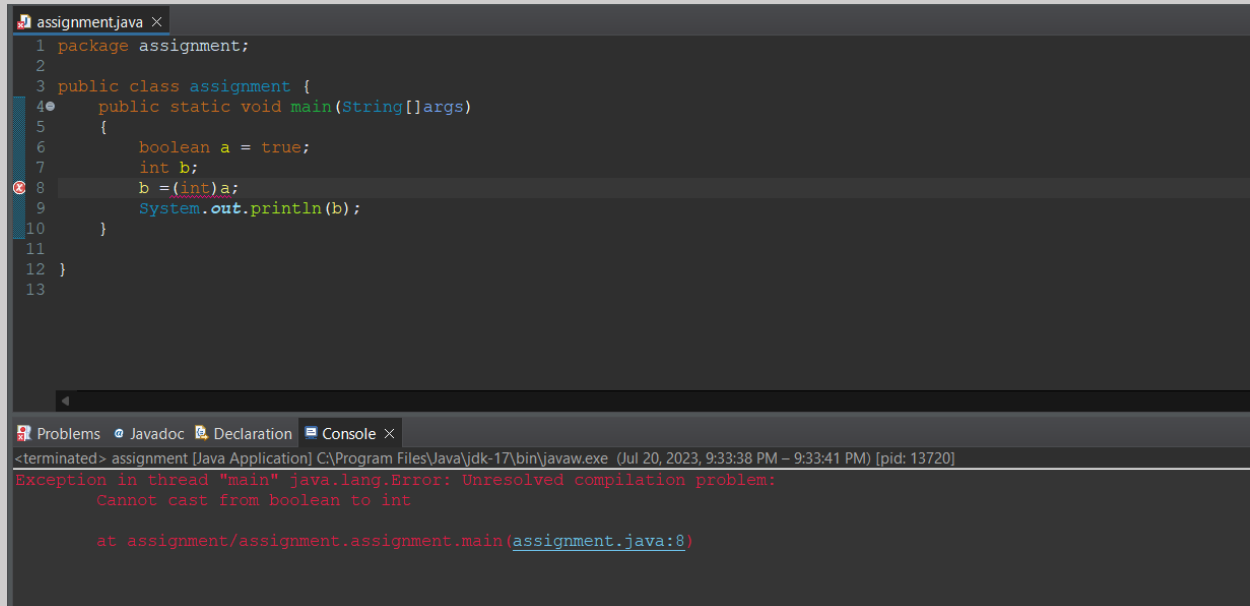
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:33:05 PM – 9:33:08 PM) [pid: 11832]

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 ×

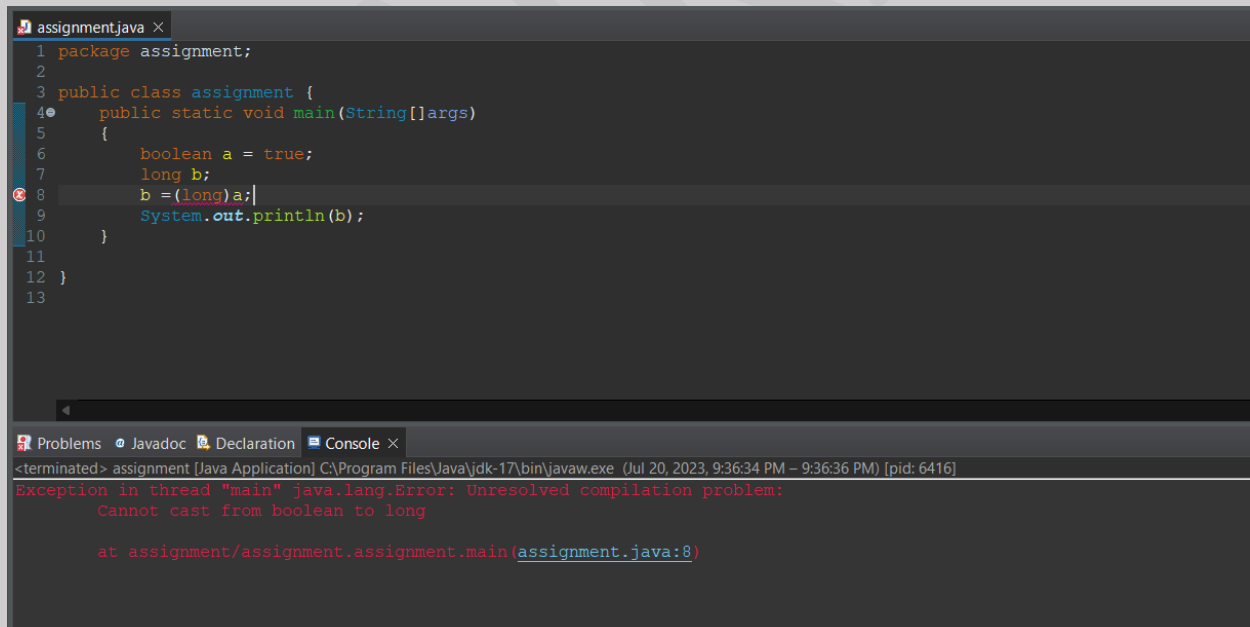
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:33:38 PM – 9:33:41 PM) [pid: 13720]

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 ×

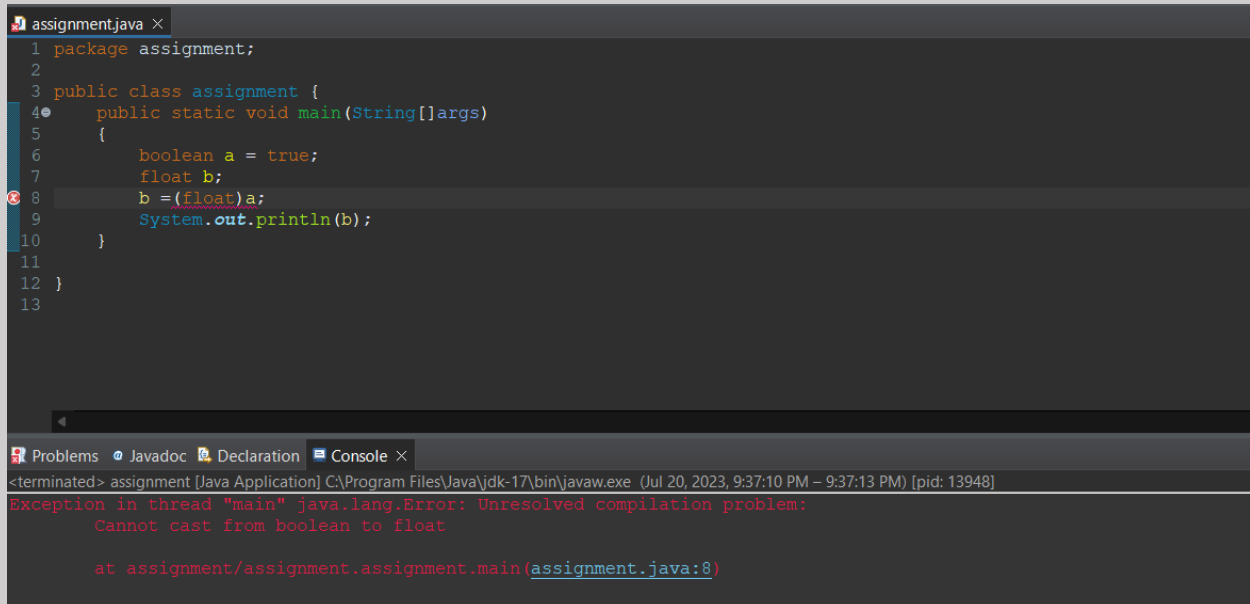
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:36:34 PM – 9:36:36 PM) [pid: 6416]

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 ×

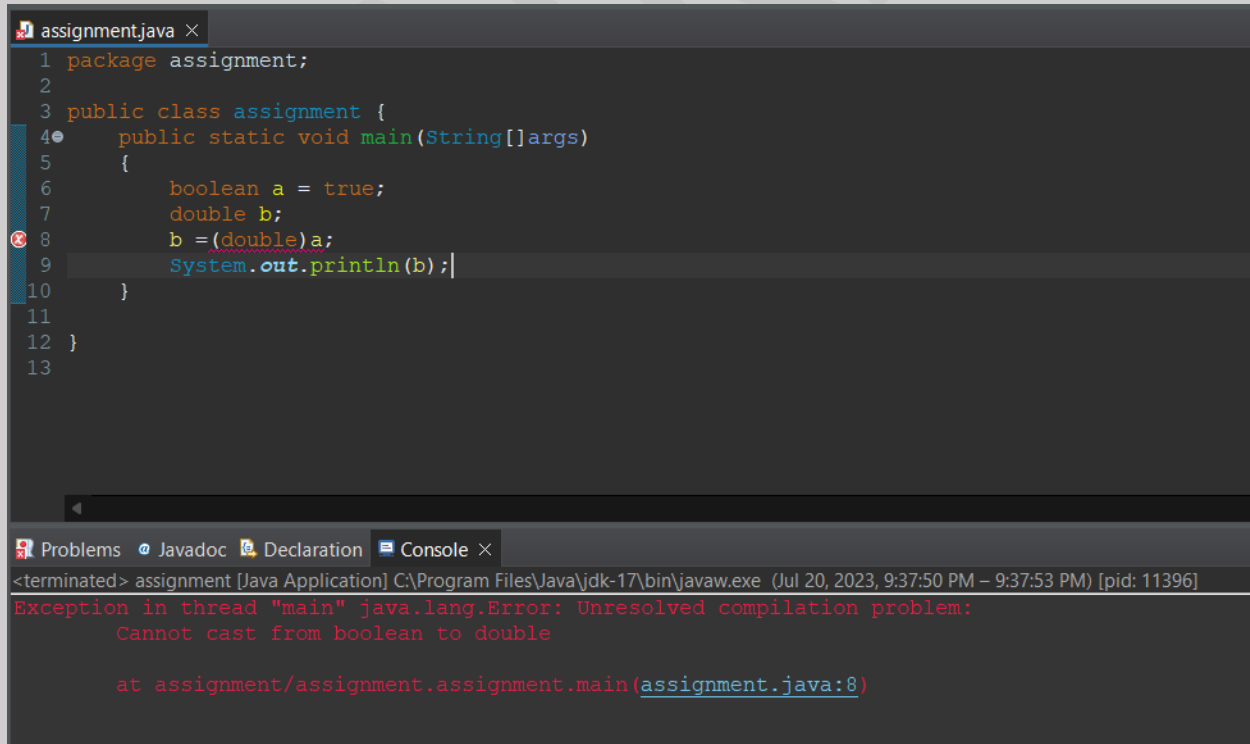
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Jul 20, 2023, 9:37:10 PM – 9:37:13 PM) [pid: 13948]

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

