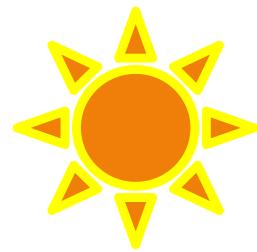
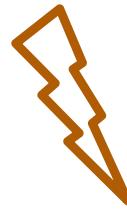


ASSIGNMENT -3

SUBMITTED BY

P.KRANTI ABHISHEK



TYPE CASTING IN JAVA

TYPE CASTING IN JAVA:

The process of conversion of data of one type to data of another type is called as Type Casting.

TYPES OF TYPE CASTING:

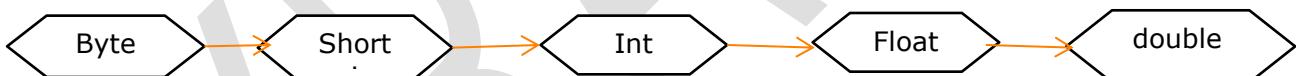
There are two types of type casting :-

1. IMPLICIT TYPE CASTING
2. EXPLICIT TYPE CASTING

IMPLICIT TYPE CASTING:

The process of converting of lower data type to higher data type is called implicit type conversion.

This is also called as Type Promotion.



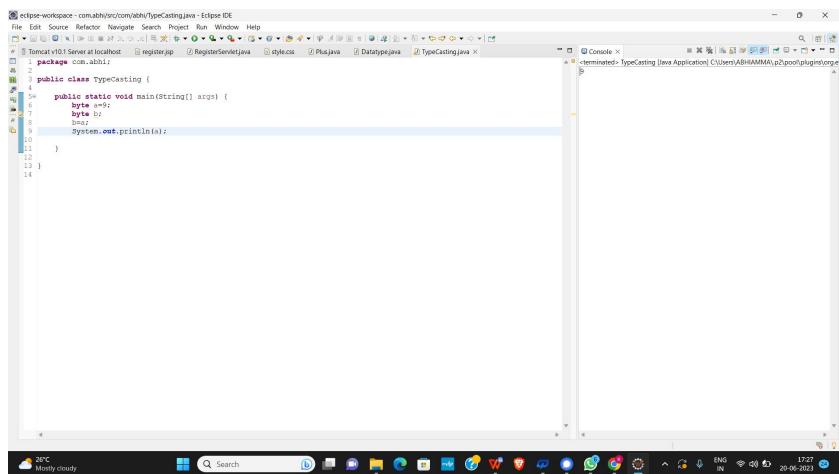
EXPLICIT TYPE CASTING:

The process of converting of Higher data type to Lower Datatype is called as Explicit Type Casting.

TYPE CASTING IN JAVA

FOR BYTE DATATYPE:

BYTE TO BYTE

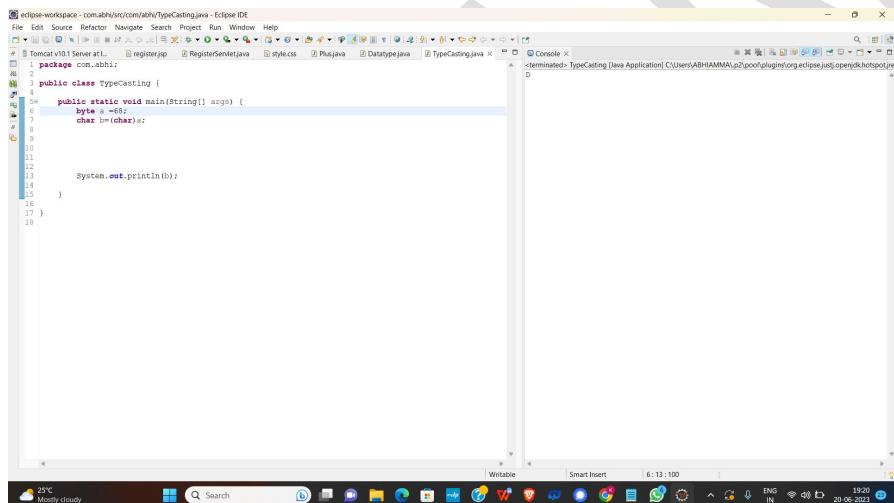


```
eclipse-workspace - com.abhi/src/com/abh/TypeCasting.java - Eclipse IDE
File Edit Source Refactor Navigate Project Run Window Help
TomcatV101 Server at localhost register.jsp RegisterServletJava style.css Plusjava Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         byte a=8;
6         byte b;
7         b=a;
8         System.out.println(b);
9     }
10
11 }
12
13
14
```

The screenshot shows the Eclipse IDE interface with a Java file named "TypeCasting.java" open. The code demonstrates implicit type casting from a byte variable 'a' to a byte variable 'b'. The output window shows the value 8.

Byte-byte-not required

Byte-char



```
eclipse-workspace - com.abhi/src/com/abh/TypeCasting.java - Eclipse IDE
File Edit Source Refactor Navigate Project Run Window Help
TomcatV101 Server at localhost register.jsp RegisterServletJava style.css Plusjava Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         byte a=-8;
6         char b=(char)a;
7
8
9
10
11
12
13         System.out.println(b);
14     }
15 }
16
17
```

The screenshot shows the Eclipse IDE interface with a Java file named "TypeCasting.java" open. The code demonstrates explicit type casting from a byte variable 'a' to a character variable 'b' using the cast operator (char)a. The output window shows the character representation of -8.

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

BYTE-SHORT:

eclipse-workspace - com.abhi/vn/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at L register.jsp RegisterServlet.java style.css Plus.java Datatype.java TypeCasting.java
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        byte b =68;
        short B=b;
        System.out.println(b);
    }
}
```

Console <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2\pool\plugins\org.eclipse.jst\openjdkhotspot\re 68

Writable Smart Insert 7 : 17 / 122 ENG IN 1920 20-06-2023

25°C Mostly cloudy Search

IMPLICIT TYPE CASTING

BYTE-INT:

eclipse-workspace - com.abhi/vn/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at L register.jsp RegisterServlet.java style.css Plus.java Datatype.java TypeCasting.java
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        byte a =68;
        int I=a;
        System.out.println(b);
    }
}
```

Console <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2\pool\plugins\org.eclipse.jst\openjdkhotspot\re 68

Writable Smart Insert 7 : 11 / 116 ENG IN 1920 20-06-2023

25°C Mostly cloudy Search

IMPLICIT TYPE CASTING

TYPE CASTING IN JAVA

BYTE-LONG:

The screenshot shows the Eclipse IDE interface with a Java file named 'TypeCasting.java' open. The code defines a class 'TypeCasting' with a main method that prints the value of variable 'a' (of type byte) to the console. The Eclipse interface includes a toolbar, menu bar, and a central workspace area.

```
1 eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE
2 File Edit Source Refactor Navigate Project Run Window Help
3 Tomcat v10.0 Server at L register.jsp RegisterServlet.java style.css PlusJava Datatype.java TypeCasting.java
4 package com.abhi;
5
6 public class TypeCasting {
7     public static void main(String[] args) {
8         byte a=9;
9         long b;
10        b=a;
11        System.out.println(a);
12    }
13 }
14
```

The status bar at the bottom indicates the current temperature is 26°C, the date is 20-06-2023, and the time is 17:14:114.

IMPLICIT TYPE CASTING

BYTE-FLOAT:

The screenshot shows the Eclipse IDE interface with a Java file named 'TypeCasting.java' open. The code defines a class 'TypeCasting' with a main method that prints the value of variable 'a' (of type byte) to the console. The Eclipse interface includes a toolbar, menu bar, and a central workspace area.

```
1 eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE
2 File Edit Source Refactor Navigate Project Run Window Help
3 Tomcat v10.0 Server at L register.jsp RegisterServlet.java style.css PlusJava Datatype.java TypeCasting.java
4 package com.abhi;
5
6 public class TypeCasting {
7     public static void main(String[] args) {
8         byte a=9;
9         float b;
10        b=a;
11        System.out.println(a);
12    }
13 }
14
```

The status bar at the bottom indicates the current temperature is 26°C, the date is 20-06-2023, and the time is 17:14:114.

IMPLICIT TYPE CASTING

TYPE CASTING IN JAVA

BYTE-DOUBLE:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

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

The code compiles successfully, and the output is displayed in the Console tab.

IMPLICIT TYPE CASTING

BYTE-BOOLEAN:

The screenshot shows the Eclipse IDE interface with the same Java file TypeCasting.java open. The code is identical to the previous one:

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

An error message is visible in the Console tab, indicating that there is an unresolved compilation problem due to a type mismatch between byte and boolean.

NOT POSSIBLE

TYPE CASTING IN JAVA

FOR SHORT

SHORT-BYTE:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         short s=9;
6         byte b;
7         b=(byte)s;
8         System.out.println(b);
9     }
10 }
11
12
13
14 }
```

The code demonstrates explicit type casting from a short variable 's' to a byte variable 'b'. The output of the program is '9'.

EXPLICIT TYPE CASTING

SHORT-SHORT:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         short s=9;
6         short b;
7         b=s;
8         System.out.println(b);
9     }
10 }
11
12
13
14 }
```

The code demonstrates explicit type casting from a short variable 's' to another short variable 'b'. The output of the program is '9'.

CANNOT BE REQUIRED

TYPE CASTING IN JAVA

SHORT-INT:

The screenshot shows the Eclipse IDE interface with a Java project named "com.abhi". The main.java file contains the following code:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         short a=9;
6         int b;
7         b=a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15 }
```

The code demonstrates explicit type casting from a short variable 'a' to an int variable 'b'. The output of the program is '9'.

IMPLICIT TYPE CASTING

SHORT-LONG:

The screenshot shows the Eclipse IDE interface with a Java project named "com.abhi". The main.java file contains the following code:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         short a=9;
6         long b;
7         b=a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15 }
```

The code demonstrates implicit type casting from a short variable 'a' to a long variable 'b'. The output of the program is '9'.

IMPLICIT TYPE CASTING

TYPE CASTING IN JAVA

SHORT-CHAR:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         byte a = 68;
6         char b = (char)a;
7
8         System.out.println(b);
9     }
10 }
11
12
13
14 }
```

The code defines a class TypeCasting with a main method. It declares a byte variable a and initializes it to 68. It then performs an explicit type cast to a character variable b using the (char) operator. Finally, it prints the value of b to the console.

EXPLICIT TYPE CASTING

SHORT-FLOAT:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         short a=5;
6         float b;
7
8         b=a;
9         System.out.println(b);
10    }
11
12 }
13
14 }
```

The code defines a class TypeCasting with a main method. It declares a short variable a and initializes it to 5. It then declares a float variable b and performs an explicit type cast using the (float) operator to assign the value of a to b. Finally, it prints the value of b to the console.

IMPLICIT TYPE CASTING

TYPE CASTING IN JAVA

SHORT-DOUBLE:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code defines a class TypeCasting with a main method that initializes a short variable 'a' to 9 and a double variable 'b'. It then prints the value of 'b' to the console. The console output shows the value 9.0.

```
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        short a=9;
        double b;
        b=a;
        System.out.println(b);
    }
}
```

IMPLICIT TYPE CASTING

SHORT-BOOLEAN:

The screenshot shows the Eclipse IDE interface with the same TypeCasting.java file. This time, the code initializes a short variable 'a' to 9 and a boolean variable 'b'. When attempting to print 'b' to the console, the IDE displays a compilation error message: "Type mismatch: cannot convert from short to boolean".

```
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        short a=9;
        boolean b;
        b=a;
        System.out.println(b);
    }
}
```

NOT POSSIBLE

TYPE CASTING IN JAVA

FOR INT

INT-SHORT:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         int a=9;
6         short b;
7
8         b=(short)a;
9         System.out.println(b);
10    }
11
12 }
13
14 }
```

The IDE shows syntax highlighting and code completion. The variable 'b' is highlighted in blue, and the cast operation 'b=(short)a;' has a tooltip indicating it's a 'Type Casting' operation.

EXPLICIT TYPE CASTING

INT-INT:

The screenshot shows the Eclipse IDE interface with the same Java file TypeCasting.java open. The code is identical to the previous one:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         int a=9;
6         int b;
7
8         b=a;
9         System.out.println(b);
10    }
11
12 }
13
14 }
```

This time, the cast operation 'b=a;' is highlighted in blue, and the tooltip indicates it's an 'Explicit Type Casting' operation.

NOT REQUIRED

TYPE CASTING IN JAVA

INT-BYTE:

eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at L register.jsp RegisterServiceJava style.css PlusJava Datatype.java TypeCasting.java
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        int a = 68;
        byte b=(byte)a;
        System.out.println(b);
    }
}
```

Console <terminated> TypeCasting [Java Application] C:\Users\ABHISAMMA\p2pool\plugins\org.eclipse.jdt\openjdk hotspot\jre 68

Writable Smart Insert 7:8:112 20:33 20-06-2023

24°C Mostly cloudy Search 7:8:112 20:33 20-06-2023

This screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code demonstrates explicit type casting from an int variable 'a' to a byte variable 'b'. The output of the program is '68', as shown in the Console tab.

EXPLICIT TYPE CASTING

INT-CHAR:

eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at L register.jsp RegisterServiceJava style.css PlusJava Datatype.java TypeCasting.java
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        int a = 68;
        char b=(char)a;
        System.out.println(b);
    }
}
```

Console <terminated> TypeCasting [Java Application] C:\Users\ABHISAMMA\p2pool\plugins\org.eclipse.jdt\openjdk hotspot\jre D

Writable Smart Insert 6:15:102 20:33 20-06-2023

25°C Rain forecast Search 6:15:102 20:33 20-06-2023

This screenshot shows the Eclipse IDE interface with the same Java file TypeCasting.java open. In this version, the int variable 'a' is cast to a char variable 'b'. The output is the character 'A', as shown in the Console tab.

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

INT-LONG:

The screenshot shows the Eclipse IDE interface with a Java project named 'TypeCasting'. The code in the editor is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         int a=9;
6         long b;
7         b=a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15 }
```

The 'Console' tab shows the output: 9

IMPLICIT TYPE CASTING

INT-FLOAT:

The screenshot shows the Eclipse IDE interface with a Java project named 'TypeCasting'. The code in the editor is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         int a=9;
6         float b;
7         b=a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15 }
```

The 'Console' tab shows the output: 9.0

IMPLICIT TYPE CASTING

TYPE CASTING IN JAVA

INT-DOUBLE:

eclipse-workspace - com.abhi/src/com/abh/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at L register.jsp RegisterServlet.java style.css PlusJava Datatype.java TypeCasting.java Console <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2pool\plugins\org.eclipse.justmydk.hotspot.jre.65.0
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         int a = 65;
6         double b = a;
7
8
9
10
11
12         System.out.println(b);
13     }
14
15 }
16
17 }
```

Sarjapur Road Closed road Search Writable Smart Insert 7 : 18 : 122 ENG IN 20:46 20-06-2023

IMPLICIT TYPE CASTING

INT-BOOLEAN:

eclipse-workspace - com.abhi/src/com/abh/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at L register.jsp RegisterServlet.java style.css PlusJava Datatype.java TypeCasting.java Console <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2pool\plugins\org.eclipse.justmydk.hotspot.jre.65.0
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         int a = 65;
6         boolean b = a;
7
8
9
10
11
12         System.out.println(b);
13     }
14
15 }
16
17 }
```

24°C Mostly cloudy Search Writable Smart Insert 7 : 16 : 120 ENG IN 20:49 20-06-2023

CANNOT POSSIBLE

TYPE CASTING IN JAVA

FOR LONG

LONG-SHORT:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         long l=84264;
6         short b;
7
8         b=(short)l;
9         System.out.println(b);
10    }
11
12 }
13
14 }
```

The variable 'b' is explicitly cast from 'long' to 'short'. The output window shows the value 84264.

EXPLICIT TYPE CASTING

LONG-INT

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         long l=84264;
6         int b;
7
8         b=(int)l;
9         System.out.println(b);
10    }
11
12 }
13
14 }
```

The variable 'b' is explicitly cast from 'long' to 'int'. The output window shows the value 84264.

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

LONG-LONG:

```
eclipse-workspace : com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at L register.jsp RegisterServlet.java style.css Plusjava Datatype.java TypeCasting.java
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        long b=84264;
        long c;
        b=b;
        System.out.println(b);
    }
}
```

Console <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2\pool\plugins\org.eclipse.jdt.core\openjdkhotspot.jre.84264

CANNOT BE REQUIRED

LONG-FLOAT:

```
eclipse-workspace : com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at L register.jsp RegisterServlet.java style.css Plusjava Datatype.java TypeCasting.java
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        long b=68.0;
        float c=(float)b;
        System.out.println(b);
    }
}
```

Console <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2\pool\plugins\org.eclipse.jdt.core\openjdkhotspot.jre.68.0

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

LONG-BYTE:

```
eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcatv10.1 Server at L register.jsp RegisterServlet.java style.css Plusjava Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         Long a = 68L;
6         byte b=(byte)a;
7
8
9
10
11
12         System.out.println(b);
13
14     }
15
16
17 }
18
```

The screenshot shows the Eclipse IDE interface with a Java file named 'TypeCasting.java' open. The code demonstrates explicit type casting by converting a 'Long' variable 'a' to a 'byte' variable 'b' using the constructor of the 'byte' class. The output of the program is '66', as shown in the 'Console' tab.

EXPLICIT TYPE CASTING

LONG-DOUBLE:

```
eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcatv10.1 Server at L register.jsp RegisterServlet.java style.css Plusjava Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         long a=84264;
6         double b;
7
8         b=a;
9         System.out.println(b);
10
11
12     }
13
14 }
15
```

The screenshot shows the Eclipse IDE interface with a Java file named 'TypeCasting.java' open. The code demonstrates explicit type casting by converting a 'long' variable 'a' to a 'double' variable 'b' using assignment. The output of the program is '84264.0', as shown in the 'Console' tab.

IMPLICIT TYPE CASTING

TYPE CASTING IN JAVA

LONG-CHAR:

The screenshot shows the Eclipse IDE interface with a Java code editor and a console window. The code attempts to cast a long variable to a char variable:public class TypeCasting {
 public static void main(String[] args) {
 long a=84264;
 boolean b;
 b=boolean(a);
 System.out.println(b);
 }
}The console output shows a syntax error:

```
Exception in thread "main" java.lang.Error: Unresolved compilation problems:
  Syntax error on token "boolean", delete this token
  Type mismatch: cannot convert from long to boolean
  at com.abhi/com.abhi.TypeCasting.main(TypeCasting.java:9)
```

EXPLICIT TYPE CASTING

LONG-BOOLEAN:

The screenshot shows the Eclipse IDE interface with a Java code editor and a console window. The code attempts to cast a long variable to a boolean variable:public class TypeCasting {
 public static void main(String[] args) {
 long a=84264;
 boolean b;
 b=boolean(a);
 System.out.println(b);
 }
}The console output shows a syntax error:

```
Exception in thread "main" java.lang.Error: Unresolved compilation problems:
  Syntax error on token "boolean", delete this token
  Type mismatch: cannot convert from long to boolean
  at com.abhi/com.abhi.TypeCasting.main(TypeCasting.java:9)
```

NOT POSSIBLE

TYPE CASTING IN JAVA

FOR FLOAT

FLOAT-BYTE:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open in the editor. The code contains a main method that casts a float value to a byte and prints it.

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         float a=3.14f;
7         byte b;
8
9         b=(byte)a;
10        System.out.println(b);
11    }
12
13 }
14
15
```

EXPLICIT TYPE CASTING

FLOAT-SHORT

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open in the editor. The code contains a main method that casts a float value to a short and prints it.

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         float a=3.14f;
7         short b;
8
9         b=(short)a;
10        System.out.println(b);
11    }
12
13 }
14
15
```

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

FLOAT-INT:

The screenshot shows the Eclipse IDE interface with a Java project named "TypeCasting". The code in the editor is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         float a=3.14f;
7         int b;
8
9         b=(int)a;
10        System.out.println(b);
11    }
12
13 }
14
15 }
```

The code converts a float value to an integer using explicit casting. The output of the program is 3.

EXPLICIT TYPE CASTING

FLOAT-LONG:

The screenshot shows the Eclipse IDE interface with a Java project named "TypeCasting". The code in the editor is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         float a=3.14f;
7         long b;
8
9         b=(long)a;
10        System.out.println(b);
11    }
12
13 }
14
15 }
```

The code converts a float value to a long using explicit casting. The output of the program is 3.

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

FLOAT-DOUBLE:

The screenshot shows the Eclipse IDE interface with a Java project named "TypeCasting". The code in TypeCasting.java is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         float a=3.14f;
6         double b;
7         b=a;
8
9         System.out.println(b);
10    }
11
12 }
13
14
15 }
16
```

The variable 'a' is of type float and its value is 3.14f. The variable 'b' is of type double. The code assigns the value of 'a' to 'b' and then prints 'b' to the console. The output in the Console view is 3.1410000324249269.

IMPLICIT TYPE CASTING

FLOAT-FLOAT:

The screenshot shows the Eclipse IDE interface with a Java project named "TypeCasting". The code in TypeCasting.java is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         float a=3.14f;
6         float b;
7         b=a;
8
9         System.out.println(b);
10    }
11
12 }
13
14
15 }
16
```

The variable 'a' is of type float and its value is 3.14f. The variable 'b' is also of type float. The code assigns the value of 'a' to 'b' and then prints 'b' to the console. The output in the Console view is 3.141.

CANNOT BE REQUIRED

TYPE CASTING IN JAVA

FLOAT-CHAR:

The screenshot shows the Eclipse IDE interface with the following Java code in the editor:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         float f=6.4f;
6         char b=(char)f;
7         System.out.println(b);
8     }
9 }
10
11
12
13
14 }
```

The code attempts to cast a float value to a character. The output window shows the result of the execution.

EXPLICIT TYPE CASTING

FLOAT-BOOLEAN:

The screenshot shows the Eclipse IDE interface with the following Java code in the editor:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         float f=1.41414f;
6         boolean b;
7         b=(boolean)f;
8         System.out.println(b);
9     }
10
11
12
13
14 }
```

The code attempts to cast a float value to a boolean. The output window displays a compilation error message indicating that it is impossible to cast from float to boolean.

CANNOT BE POSSIBLE

TYPE CASTING IN JAVA

FOR DOUBLE

DOUBLE-BYTE:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code attempts to cast a double value to a byte:

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         double a=3.141414;
7         byte b;
8         b=(byte)a;
9
10        System.out.println(b);
11    }
12
13 }
14
15 }
```

The code is highlighted in blue, indicating it's being edited. The Eclipse interface includes a toolbar, menu bar, and a console window at the bottom.

EXPLICIT TYPE CASTING

DOUBLE-SHORT:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code attempts to cast a double value to a short:

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         double a=3.141414;
7         short b;
8         b=(short)a;
9
10        System.out.println(b);
11    }
12
13 }
14
15 }
```

The code is highlighted in blue, indicating it's being edited. The Eclipse interface includes a toolbar, menu bar, and a console window at the bottom.

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

DOUBLE-LONG:

eclipse-workspace : com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at Local register.jsp RegisterServletJava style.css Plus.java Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         double a=3.141414;
7         long b;
8         b=(long)a;
9
10        System.out.println(b);
11    }
12
13 }
14
15 }
16
```

Console <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2\pool\plugins\org.eclipse.jdt.core\openjdk\hotspot\jre

8:16:142 18:24 20-06-2023

EXPLICIT TYPE CASTING

DOUBLE-INT:

eclipse-workspace : com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.1 Server at Local register.jsp RegisterServletJava style.css Plus.java Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         double a=3.141414;
7         int b;
8         b=(int)a;
9
10        System.out.println(b);
11    }
12
13 }
14
15 }
16
```

Console <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2\pool\plugins\org.eclipse.jdt.core\openjdk\hotspot\jre

8:15:140 18:22 20-06-2023

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

DOUBLE-FLOAT:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         double a=3.141414;
7         float b;
8         b=(float)a;
9
10        System.out.println(b);
11    }
12
13 }
14
15 }
16
```

The code demonstrates explicit type casting where a double value is converted to a float using the (float) cast operator.

EXPLICIT TYPE CASTING

DOUBLE-DOUBLE:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         double a=3.141414;
7         double b;
8         b=a;
9
10        System.out.println(b);
11    }
12
13 }
14
15 }
16
```

The code demonstrates explicit type casting where a double value is converted to another double using the assignment operator (=).

CANNOT BE REQUIRED

TYPE CASTING IN JAVA

DOUBLE-CHAR:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code attempts to cast a double value to a char variable:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         double a=75.258;
6         char b=(char)a;
7         System.out.println(b);
8     }
9 }
10
11
12
13
14
15
16
17 }
```

The code is highlighted in blue, indicating syntax errors. The error message 'Inconvertible types; cannot cast from double to char' is displayed in the status bar at the bottom.

EXPLICIT TYPE CASTING

DOUBLE-BOOLEAN:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code attempts to cast a double value to a boolean variable:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         double a=75.258;
6         boolean b=(boolean)a;
7         System.out.println(b);
8     }
9 }
10
11
12
13
14
15
16
17 }
```

The code is highlighted in blue, indicating syntax errors. The error message 'Inconvertible types; cannot cast from double to boolean' is displayed in the status bar at the bottom.

CANNOT BE POSSIBLE

TYPE CASTING IN JAVA

FOR CHAR

CHAR-SHORT:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         char a='A';
7         short b;
8
9         b=(short)a;
10
11         System.out.println(b);
12     }
13 }
14
15
16 }
```

The variable 'a' is explicitly cast to a short type 'b' using the cast operator '(short)'. The code is run in the Eclipse IDE, and the output is displayed in the Console tab.

EXPLICIT TYPE CASTING

CHAR-BYTE:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         char a='A';
7         byte b;
8
9         b=(byte)a;
10
11         System.out.println(b);
12     }
13 }
14
15
16 }
```

The variable 'a' is explicitly cast to a byte type 'b' using the cast operator '(byte)'. The code is run in the Eclipse IDE, and the output is displayed in the Console tab.

EXPLICIT TYPE CASTING

TYPE CASTING IN JAVA

CHAR-CHAR:

eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcatv10.1 Server at L register.jsp RegisterServlet.java style.css Plus.java Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         char a='A';
7         char b;
8
9         b=a;
10
11         System.out.println(b);
12     }
13
14 }
15
16 }
17
```

The screenshot shows the Eclipse IDE interface with the Java file "TypeCasting.java" open. The code demonstrates a type cast from a character 'A' to another character variable 'b'. The output window shows the character 'A'.

CANNOT BE REQUIRED

CHAR-BOOLEAN:

eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcatv10.1 Server at L register.jsp RegisterServlet.java style.css Plus.java Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         char a='A';
7         boolean b;
8
9         b=(boolean)a;
10
11         System.out.println(b);
12     }
13
14 }
15
16 }
17
```

The screenshot shows the Eclipse IDE interface with the Java file "TypeCasting.java" open. The code attempts to convert a character 'A' to a boolean value and print it. The output window displays a compilation error message: "Exception in thread "main" java.lang.Error: Unresolved compilation problem: Cannot cast from char to boolean".

CANNOT BE POSSIBLE

TYPE CASTING IN JAVA

CHAR-INT:

The screenshot shows the Eclipse IDE interface with a Java project named 'TypeCasting'. The code in the editor is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         char a='A';
6         int b;
7         b=a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15
16 }
```

The code defines a class 'TypeCasting' with a main method. Inside the main method, a character variable 'a' is assigned the value 'A'. This value is then cast to an integer variable 'b'. Finally, 'b' is printed to the console.

IMPLICIT TYPE CASTING

CHAR-LONG:

The screenshot shows the Eclipse IDE interface with a Java project named 'TypeCasting'. The code in the editor is as follows:

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         char a='A';
6         long b;
7         b=a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15
16 }
```

The code defines a class 'TypeCasting' with a main method. Inside the main method, a character variable 'a' is assigned the value 'A'. This value is then cast to a long variable 'b'. Finally, 'b' is printed to the console.

IMPLICIT TYPE CASTING

TYPE CASTING IN JAVA

CHAR-FLOAT:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code defines a main method that takes a character 'a' and a float 'b' as arguments, then prints the float value. The Eclipse interface includes a toolbar, a project explorer, and a console window showing the output of the run.

```
eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.0 Server at L register.jsp RegisterServlet.java style.css Plus.java Datatype.java TypeCasting.java
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        char a='A';
        float b;
        b=a;
        System.out.println(b);
    }
}
```

Console X <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2\pool\plugins\org.eclipse.jdt.core\kotlinhotspot.jre 65.0

IMPLICIT TYPE CASTING

CHAR-DOUBLE:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code defines a main method that takes a character 'a' and a double 'b' as arguments, then prints the double value. The Eclipse interface includes a toolbar, a project explorer, and a console window showing the output of the run.

```
eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Tomcat v10.0 Server at L register.jsp RegisterServlet.java style.css Plus.java Datatype.java TypeCasting.java
package com.abhi;
public class TypeCasting {
    public static void main(String[] args) {
        char a='A';
        double b;
        b=a;
        System.out.println(b);
    }
}
```

Console X <terminated> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2\pool\plugins\org.eclipse.jdt.core\kotlinhotspot.jre 65.0

IMPLICIT TYPE CASTING

TYPE CASTING IN JAVA

FOR BOOLEAN

BOOLEAN-BYTE:

eclipse-workspace : com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
TomcatV101 Server L... register.jsp RegisterServletJava style.css Plus.java Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         boolean a=true;
6         byte b;
7         b=(byte)a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15
16
17
18 }
```

Console

```
-terminated-> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2pool\plugins\org.eclipse.just.openjdk.hotspot.jre
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Cannot cast from boolean to byte
        at com.abhi.com.abhi.TypeCasting.main(TypeCasting.java:9)
```

Smart Insert 9:17:146 18:46 20-06-2023

CANNOT BE POSSIBLE

BOOLEAN-SHORT:

eclipse-workspace : com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
TomcatV101 Server L... register.jsp RegisterServletJava style.css Plus.java Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         boolean a=true;
6         short b;
7         b=(byte)a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15
16
17
18 }
```

Console

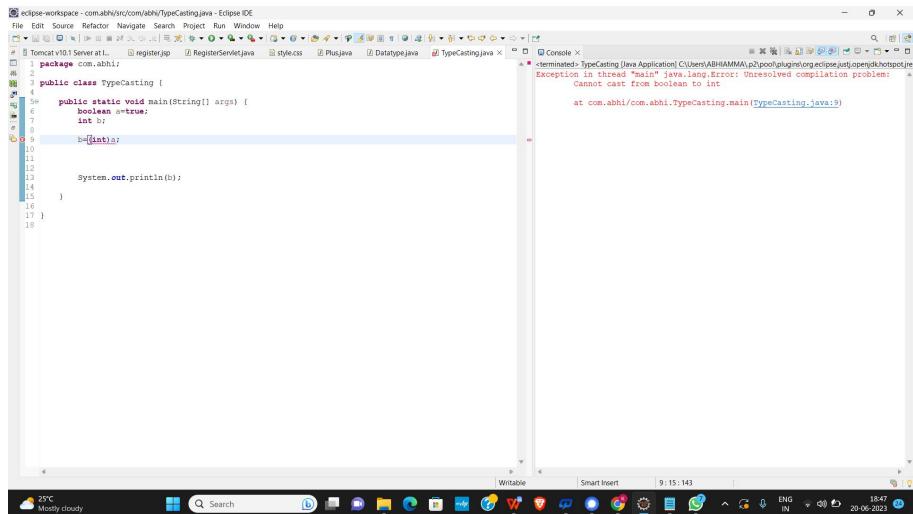
```
-terminated-> TypeCasting [Java Application] C:\Users\ABHIAMMA\p2pool\plugins\org.eclipse.just.openjdk.hotspot.jre
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    Cannot cast from boolean to byte
        at com.abhi.com.abhi.TypeCasting.main(TypeCasting.java:9)
```

Smart Insert 7:14:123 18:46 20-06-2023

CANNOT BE POSSIBLE

TYPE CASTING IN JAVA

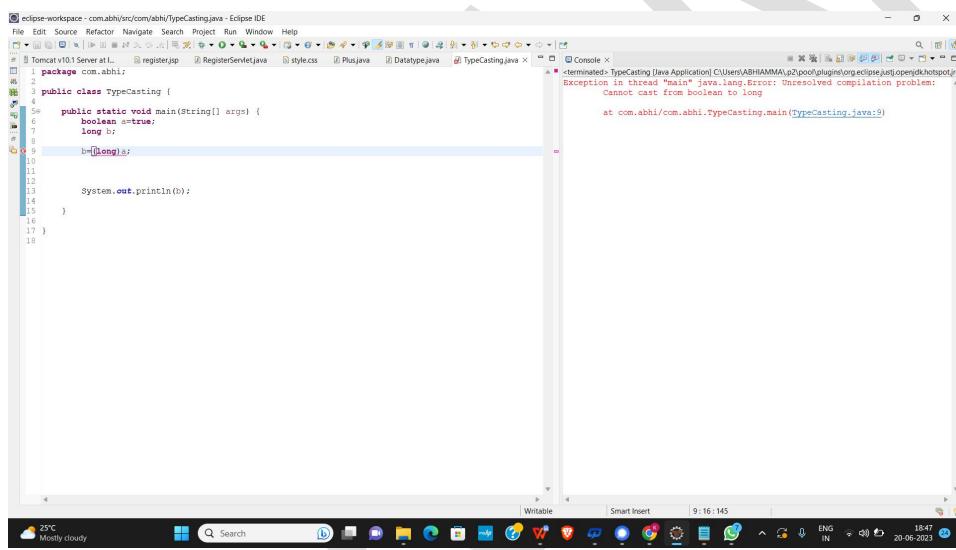
BOOLEAN-INT:



The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code attempts to cast a boolean value to an int. The error message in the console is: "Exception in thread \"main\" java.lang.Error: Unresolved compilation problem: Cannot cast from boolean to int".

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         boolean a=true;
7         int b;
8
9         b=(int)a;
10
11
12
13         System.out.println(b);
14
15     }
16
17 }
```

CANNOT BE POSSIBLE
BOOLEAN-LONG:



The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code attempts to cast a boolean value to a long. The error message in the console is: "Exception in thread \"main\" java.lang.Error: Unresolved compilation problem: Cannot cast from boolean to long".

```
1 package com.abhi;
2
3 public class TypeCasting {
4
5     public static void main(String[] args) {
6         boolean a=true;
7         long b;
8
9         b=(long)a;
10
11
12
13         System.out.println(b);
14
15     }
16
17 }
```

CANNOT BE POSSIBLE

TYPE CASTING IN JAVA

BOOLEAN-CHAR:

The screenshot shows the Eclipse IDE interface with a Java file named TypeCasting.java open. The code attempts to cast a boolean variable 'a' to a char variable 'b'. The IDE displays a red error marker on the line 'char b = a;'. The error message in the console is: 'Exception in thread "main" java.lang.Error: Unresolved compilation problem: Cannot cast from boolean to char at com.abhi/com.abhi.TypeCasting.main(TypeCasting.java:9)'.

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         boolean a=true;
6         char b;
7         b=(char)a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15
16
17 }
18 }
```

CANNOT BE POSSIBLE

BOOLEAN-BOOLEAN:

The screenshot shows the Eclipse IDE interface with the same Java file TypeCasting.java open. This time, the code casts a boolean variable 'a' to another boolean variable 'b'. The IDE shows no errors, and the output in the console is 'true'.

```
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         boolean a=true;
6         boolean b;
7         b=(boolean)a;
8         System.out.println(b);
9     }
10 }
11
12
13
14
15
16
17 }
18 }
```

CANNOT BE REQUIRED

TYPE CASTING IN JAVA

BOOLEAN-FLOAT:

eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
TomcatV101 Server at L... register.jsp RegisterServlet.java style.css Plus.java Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         boolean a=true;
6         float b;
7
8         b=(float)a;
9
10
11
12
13         System.out.println(b);
14
15     }
16 }
17 }
```

Console

```
terminated: TypeCasting [Java Application] C:\Users\ABHIAMMA\Pictures\java\openjdk\hotspot\jre\bin\javaw.exe: Unresolved compilation problem:
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to float
at com.abhi/com.abhi.TypeCasting.main(TypeCasting.java:9)
```

Smart Insert 9:17:147 ENG IN 18:47 20-06-2023

CANNOT BE POSSIBLE

BOOLEAN-DOUBLE:

eclipse-workspace - com.abhi/src/com/abhi/TypeCasting.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
TomcatV101 Server at L... register.jsp RegisterServlet.java style.css Plus.java Datatype.java TypeCasting.java
1 package com.abhi;
2
3 public class TypeCasting {
4     public static void main(String[] args) {
5         boolean a=true;
6         double b;
7
8         b=(double)a;
9
10
11
12
13         System.out.println(b);
14
15     }
16 }
17 }
```

Console

```
terminated: TypeCasting [Java Application] C:\Users\ABHIAMMA\Pictures\java\openjdk\hotspot\jre\bin\javaw.exe: Unresolved compilation problem:
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Cannot cast from boolean to double
at com.abhi/com.abhi.TypeCasting.main(TypeCasting.java:9)
```

Smart Insert 9:18:149 ENG IN 18:48 20-06-2023

CANNOT BE POSSIBLE

TYPE CASTING IN JAVA

TYPE CASTING TABLE IN JAVA