

Assignment No- 4

1) Write a program that demonstrates widening conversion from int to double and prints the result.

=>

```
package ort.assignment1;
```

```
public class Widening {
```

```
    public static void main(String[] args) {
```

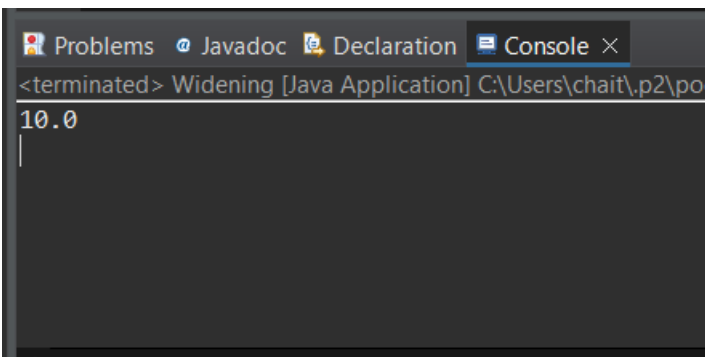
```
        int n=10;
```

```
        double result=n;
```

```
        System.out.println(result);
```

```
    }
```

```
}
```



The screenshot shows the Eclipse IDE's console window. The title bar indicates the application is 'Widening [Java Application]' located at 'C:\Users\chait\p2\po'. The console output shows '<terminated>' followed by '10.0' on the next line, demonstrating the widening conversion from int to double.

2) Create a program that demonstrates narrowing conversion from double to int and prints the result.

=>

```
package ort.assignment1;
```

```
public class Narrowing {
```

```
    public static void main(String[] args) {
```

```
        double n=10;
```

```
        int result=(int)n;
```

```
        System.out.println(result);
```

```
    }
```

```
}
```

```
package ort.assignment1;
```

```
public class Narrowing {
```

```
    public static void main(String[] args) {
```

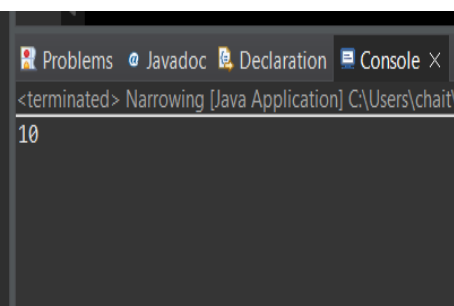
```
        double n=10;
```

```
        int result=n;
```

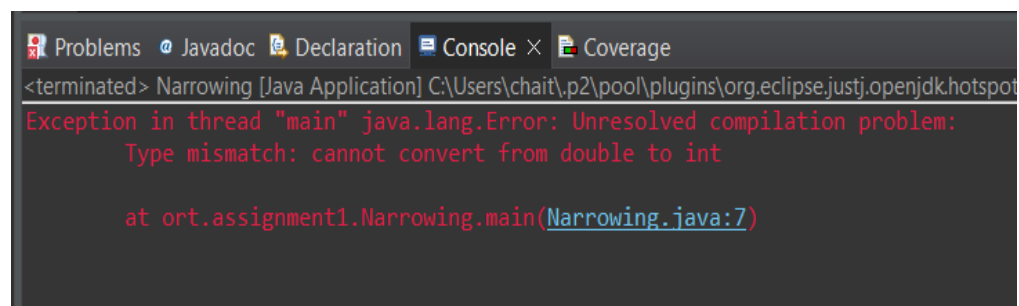
```
        System.out.println(result);
```

```
    }
```

```
}
```



The screenshot shows the Eclipse IDE's console window. The title bar indicates the application is 'Narrowing [Java Application]' located at 'C:\Users\chait\'. The console output shows '<terminated>' followed by '10' on the next line, demonstrating the narrowing conversion from double to int.



The screenshot shows the Eclipse IDE's console window. The title bar indicates the application is 'Narrowing [Java Application]' located at 'C:\Users\chait\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot'. The console output shows a red error message: 'Exception in thread "main" java.lang.Error: Unresolved compilation problem: Type mismatch: cannot convert from double to int at ort.assignment1.Narrowing.main(Narrowing.java:7)'. This indicates a compilation error due to the narrowing conversion.

Write a program that performs arithmetic operations involving different data types (int, double, float) and observes how Java handles widening conversions automatically.

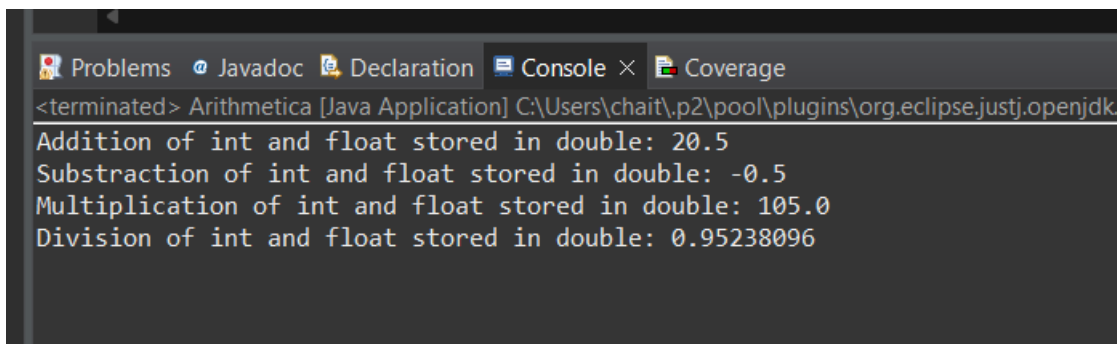
=>

```
package ort.assignment1;
```

```
public class Arithmetica {  
    public static void main(String[] args) {  
        int intN=10;  
        double doubleN=10d;  
        float floatN=10.5f;
```

```
        System.out.println("Addition of int and float stored in double: "+(intN+floatN));  
        System.out.println("Substraction of int and float stored in double: "+(intN-floatN));  
        System.out.println("Multiplication of int and float stored in double: "+(intN*floatN));  
        System.out.println("Addition of int and float stored in double: "+(intN/floatN));
```

```
    }  
}
```



```
<terminated> Arithmetica [Java Application] C:\Users\chait\p2\pool\plugins\org.eclipse.justj.openjdk.  
Addition of int and float stored in double: 20.5  
Substraction of int and float stored in double: -0.5  
Multiplication of int and float stored in double: 105.0  
Division of int and float stored in double: 0.95238096
```

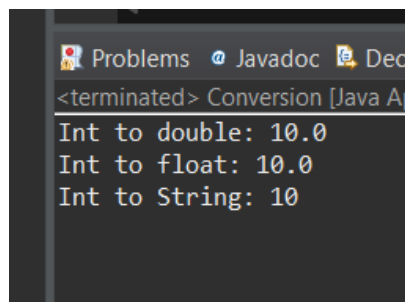
4) Write a Program that demonstrates widening conversion from int to (double,float, boolean, string) and prints the result.

```
package ort.assignment1;
```

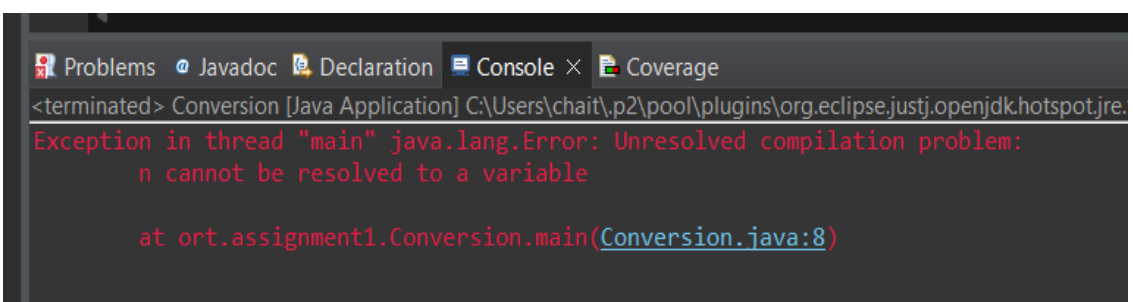
```
public class Conversion {  
    public static void main(String[] args) {  
        int n=10;  
        double d=n;  
        float f=n;  
        // boolean b=(boolean)n;  
        String s=Integer.toString(n);  
  
        System.out.println("Int to double: "+d);  
        System.out.println("Int to float: "+f);  
        System.out.println("Int to String: "+s);  
    }  
}
```

```
package ort.assignment1;
```

```
public class Conversion {  
    public static void main(String[] args) {  
        // int n=10;  
        // double d=n;  
        // float f=n;  
        boolean b=(boolean)n;  
        // String s=Integer.toString(n);  
  
        System.out.println("Int to boolean: "+  
b);  
    }  
}
```



```
<terminated> Conversion [Java A  
Int to double: 10.0  
Int to float: 10.0  
Int to String: 10
```



```
<terminated> Conversion [Java Application] C:\Users\chait\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.  
Exception in thread "main" java.lang.Error: Unresolved compilation problem:  
    n cannot be resolved to a variable  
  
    at ort.assignment1.Conversion.main(Conversion.java:8)
```