

Assignment - 3

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

```
-----  
-----  
import java.util.Scanner;  
  
public class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        int number = sc.nextInt();  
        double result = number;  
  
        System.out.println("The integer number is " + number);  
        System.out.println("Widening conversion to double is " + result);  
    }  
}
```


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

```
-----  
-----  
import java.util.Scanner;  
  
public class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        double number = sc.nextDouble();  
        int result = (int)number;  
  
        System.out.println("The double number is " + number);  
        System.out.println("Narrowing conversion to integer is " + result);  
    }  
}
```


Q.3. Write a program that performs arithmetic operations involving different data types (int, double, float) and observes how Java handles widening conversions automatically.

```

import java.util.HashMap;
import java.util.Map;
import java.util.Scanner;
import java.util.function.BooleanSupplier;

public class Main {
    public static void main(String[] args) {
        int intNumber = 5;
        double doubleNumber = 8.99;
        float floatNumber = 1.66f;
        char character = 't';

//        int answer = intNumber + doubleNumber; //wont work
        int doubleInInt = (int) (intNumber + doubleNumber);
        System.out.println(doubleInInt);

        int floatToInt = (int) floatNumber;
        System.out.println(floatToInt);

        char floatToChar = (char) floatNumber;
        System.out.println(floatToChar);

        double intToDouble = intNumber;
        System.out.println(intToDouble);

        double floatToDouble = floatNumber;
        System.out.println(floatToDouble);

        float intToFloat = intNumber;
        System.out.println(intToFloat);

        float doubleToFloat = (float) doubleNumber;
        System.out.println(doubleToFloat);
    }
}

```


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


```

import java.util.HashMap;
import java.util.Map;
import java.util.Scanner;

```

```
import java.util.function.BooleanSupplier;

public class Main {
    public static void main(String[] args) {
        int number = 15;
        double number1 = number;
        float number2 = number;
        boolean flag;
        if(number >= 1){
            flag = true;
        }else
            flag = false;
        String temp = String.valueOf(number);

        System.out.println("Translated Double number is " + number1);
        System.out.println("Translated Float number is " + number2);
        System.out.println("Translated Boolean flag is " + flag);
        System.out.println("Translated String is " + temp);
    }
}
```