

Java Type Casting

Type casting is when we assign a value of one primitive data type to another type.

In Java, there are two types of casting:

- **Widening Casting** (automatically) - converting a smaller type to a larger type size `byte` -
> `short` -> `char` -> `int` -> `long` -> `float` -> `double`
- **Narrowing Casting** (manually) - converting a larger type to a smaller size type `double` -
> `float` -> `long` -> `int` -> `char` -> `short` -> `byte`

Widening Casting

Widening casting is done automatically when passing a smaller size type to a larger size type:

```
public class Main {
    public static void main(String[] args) {
        int myInt = 9;
        double myDouble = myInt; // Automatic casting: int to dou

        System.out.println(myInt);    // Outputs 9
        System.out.println(myDouble); // Outputs 9.0
    }
}
```

Narrowing Casting

Narrowing casting must be done manually by placing the type in parentheses in front of the value:

```
public class Main {
    public static void main(String[] args) {
        double myDouble = 9.78d;
        int myInt = (int) myDouble; // Manual casting: double to

        System.out.println(myDouble); // Outputs 9.78
        System.out.println(myInt);    // Outputs 9
    }
}
```

```
}  
}
```