There are two types of Type Casting:

Implicit and Explicit

Conversion of data from **one Type to another Type**

The compiler is responsible to perform Type Casting.

Implicit

Implicit happens automatically.

When ever we are assigning Lower Data Type to Bigger Data Type Variable then Implicit Type Casting will be preferred.

Implicit is when we try to assign a child class object to a parent class object.

Byte → Short →Int → Long → Float → Double

Explicit

Explicit developer need to do.
When ever we are assigning Bigger DataType to Lower Data Type then explicit Type casting is required.
Explicit is when we try to assign a parent class object to a child class object.
Double → Float → Long →Int →Short → Byte
Java Supports primitive as well as object or reference casting.

Implicit Casting

```
byte b1 = 10;
short s1 = 20;
int i = 30;
long l = 40;

System.out.println(b1); // 10
System.out.println(s1); // 20
System.out.println(i); // 30
System.out.println(l); // 40

float f1 = 10.0f;
double d1 = 20.0;
System.out.println(f1); // 10.0
System.out.println(d1); // 20.0

char ch = 'A';
System.out.println(ch); // A
```

Implicit Casting

```
// Assigning byte to short
byte b1 = 10;
short s1 = b1;
System.out.println(s1); // 10

// Assigning short to int
short s2 = 20;
int i1 = s2;
System.out.println(i1); // 20

// Assigning int to long
int i2 = 30;
long l1 = i2;
System.out.println(l1); // 30

// Assigning float to double
float f1 = 10.5f;
double d1 = f1;
System.out.println(d1); // 10.5
```

Implicit Casting

```
// Assigning char to int
char ch = 'A';
int i3 = ch;
System.out.println(i3); // 65
//byte b2 = ch; // Type mismatch: cannot convert from char to byte
//short s3 = ch; // Type mismatch: cannot convert from char to short
float f2 = ch;
System.out.println(f2); //65.0
long s3 = ch;
System.out.println(s3); // 65
```

Implicit Casting

```
boolean b1 = true;
System.out.println(b1);
//byte b2 = b1; // Type mismatch: cannot convert from boolean to byte
//short s1 = b1; // Type mismatch: cannot convert from boolean to short
//long l1 = b1; // Type mismatch: cannot convert from boolean to long
//
//float f1 = b1; // Type mismatch: cannot convert from boolean to float
//double d1 = b1; // Type mismatch: cannot convert from boolean to double
//
//char ch = b1; // Type mismatch: cannot convert from boolean to char
//
//boolean b2 = b1; //Duplicate local variable b2
```

Explcit Casting

```
long l1 = 10;
int i1 = (int) l1;
System.out.println(i1); // 10

short s1 = (short) l1;
System.out.println(s1); // 10

byte b1 = (byte) s1;
System.out.println(b1); // 10

long l2 = 65;
char ch = (char)l2;
System.out.println(ch); // A

double d1 = 10.0;
float f1 = (float)d1;
System.out.println(f1); // 10.0
```