# Wrapper classes in Java

The **wrapper class in Java** provides the mechanism to convert primitive into object and object into primitive.

**autoboxing** and **unboxing** feature convert primitives into objects and objects into primitives automatically. The automatic conversion of primitive into an object is known as autoboxing and vice-versa unboxing.

The eight classes of the java.lang package are known as wrapper classes in Java. The list of eight wrapper classes are given below:

Primitive Type Wrapper class

boolean Boolean

char Character

byte Byte

short Short

int Integer

long Long

float Float

double Double

## Autoboxing

The automatic conversion of primitive data type into its corresponding wrapper class is known as autoboxing, for example, byte to Byte, char to Character, int to Integer, long to Long, float to Float, boolean to Boolean, double to Double, and short to Short.

**public** **class** WrapperExample1{

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

//Converting int into Integer

**int** a=20;

Integer i=Integer.valueOf(a);//converting int into Integer explicitly

Integer j=a;//autoboxing, now compiler will write Integer.valueOf(a) internally

System.out.println(a+" "+i+" "+j);

}}

## Unboxing

The automatic conversion of wrapper type into its corresponding primitive type is known as unboxing. It is the reverse process of autoboxing. Since Java 5, we do not need to use the intValue() method of wrapper classes to convert the wrapper type into primitives.

**public** **class** WrapperExample2{

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

//Converting Integer to int

Integer a=**new** Integer(3);

**int** i=a.intValue();//converting Integer to int explicitly

**int** j=a;//unboxing, now compiler will write a.intValue() internally

System.out.println(a+" "+i+" "+j);

}}

**public** **class** WrapperExample3{

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

**byte** b=10;

**short** s=20;

**int** i=30;

**long** l=40;

**float** f=50.0F;

**double** d=60.0D;

**char** c='a';

**boolean** b2=**true**;

//Autoboxing: Converting primitives into objects

Byte byteobj=b;

Short shortobj=s;

Integer intobj=i;

Long longobj=l;

Float floatobj=f;

Double doubleobj=d;

Character charobj=c;

Boolean boolobj=b2;

//Printing objects

System.out.println("---Printing object values---");

System.out.println("Byte object: "+byteobj);

System.out.println("Short object: "+shortobj);

System.out.println("Integer object: "+intobj);

System.out.println("Long object: "+longobj);

System.out.println("Float object: "+floatobj);

System.out.println("Double object: "+doubleobj);

System.out.println("Character object: "+charobj);

System.out.println("Boolean object: "+boolobj);

//Unboxing: Converting Objects to Primitives

**byte** bytevalue=byteobj;

**short** shortvalue=shortobj;

**int** intvalue=intobj;

**long** longvalue=longobj;

**float** floatvalue=floatobj;

**double** doublevalue=doubleobj;

**char** charvalue=charobj;

**boolean** boolvalue=boolobj;

//Printing primitives

System.out.println("---Printing primitive values---");

System.out.println("byte value: "+bytevalue);

System.out.println("short value: "+shortvalue);

System.out.println("int value: "+intvalue);

System.out.println("long value: "+longvalue);

System.out.println("float value: "+floatvalue);

System.out.println("double value: "+doublevalue);

System.out.println("char value: "+charvalue);

System.out.println("boolean value: "+boolvalue);

}}