Wrapper class

1. provides the mechanism *to convert primitive into object and object into primitive*.

2. Autoboxing : automatic conversion of primitive into an object
3. Unboxing : automatic conversion of object into an primitive

4. Reason for conversion : Java is an object-oriented programming language, so we need to deal with objects many times like in Collections, Serialization, Synchronization

List of Wrapper class

Primitive Type	Wrapper class
boolean	Boolean
char	Character
byte	Byte
short	Short
int	Integer
long	Long
float	Float
double	Double

Autoboxing

```java
public class Demo
{
    public static void main(String args[])
    {
        int a=20;
        Integer i=Integer.valueOf(a);//converting int into Integer explicitly
        Integer j=a; //autoboxing
        System.out.println(a+" "+i+" "+j);
    }
}
```

Example: Primitive to Wrapper

```java
public class Demo
{
    public static void main(String args[])
    {
        int a=20;
        Integer i=Integer.valueOf(a);//converting int into Integer explicitly
        Integer j=a; //autoboxing
        System.out.println(a+" "+i+" "+j);
    }
}
```

Example: Wrapper to Primitive

```java
public class Demo
{
    public static void main(String args[]){
        Integer a=new Integer(3);
        int i=a.intValue();//converting Integer to int explicitly
        int j=a;//unboxing
        System.out.println(a+" "+i+" "+j);
    }
}
```

```java
public class Demo
{
    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;
```

Example: Wrapper Class(Contd...)

```java
//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;
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);
```

```java
//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;
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);
}}
```