WRAPPER CLASSES

Wrapper Classes are used to convert primitive value into non primitive value(object).

DataTypes	WrapperClass
byte	Byte
short	Short
int	Integer
long	Long
float	Float
double	Double
char	Character
boolean	Boolean

in order to represent primitive datatype as an object we use wrapper class.

All wrapper classes are final classes.

All wrapper classes are present in java.lang package.

Boxing:-

> The process of converting primitive value into non primitive value (Object) or Wrapper Class is Known as Boxing.

> Boxing is done with the help of static method valueOf() present in every Wrapper Class.

ex:-Primitive to object(Boxing)

```java
public class WrapClass{
        public static void main(String[] args) {
                int a=10; //primitive
                Integer a1 = Integer.valueOf(a);
                System.out.println(a1); //Non primitive
                double d=63.5; //primitive
                Double d1 = Double.valueOf(d);
                System.out.println(d1); //Non primitive
                char c='a'; //primitive
                Character c1=Character.valueOf(c);
                System.out.println(c1);//Non primitive
        }
}
```

Note:-

> But from JDK 1.5 onwards boxing is implicitly done by java compiler .hence it is also Known as AutoBoxing.

ex:- AutoBoxing

```java
public class WrapClass{
        public static void main(String[] args) {
                int a=10; //primitive
                Integer a1 = a;
```

```java
            System.out.println(a1); //Non primitive
            double d=63.5; //primitive
            Double d1 = d;
            System.out.println(d1); //Non primitive
            char c='a'; //primitive
            Character c1= c;
            System.out.println(c1);//Non primitive
        }
}
```

UnBoxing :-

The process of converting Wrapper Class or Non Primitive type into primitive type is
Called UnBoxing.

UnBoxing will be done by using value().

ex:- Boxing and then UnBoxing.

```java
public class WrapClass{
        public static void main(String[] args) {
                int a=10;
                Integer a1 = Integer.valueOf(a); //Boxing
                int a2 = a1.intValue(); //UnBoxing
                System.out.println(a2);
        }
}
```

ex2:- declaring NonPrimitive value and then UnBoxing

```java
public class WrapClass{
        public static void main(String[] args) {
                Integer a=10; //Non Primitive value
                int a1 = a.intValue(); //UnBoxing
                System.out.println(a1);
        }
}
```

ex3:- declaring NonPrimitive Value by Creating object

```java
public class WrapClass{
        public static void main(String[] args) {
                Integer a=new Integer(100); //Non Primitive value
                int a1 = a.intValue(); //UnBoxing
                System.out.println(a1);
        }
}
```

ex:- AutoUnBoxing

```java
public class WrapClass{
        public static void main(String[] args) {
                Integer i=20; //Non primitive
                int i1=i; //Auto Unboxing
                System.out.println(i1);
                Double d=256.2; //Non primitive
```

```java
            double d1=d; //Auto Unboxing
            System.out.println(d1);
            Character c='z'; //Non primitive
            char c1=c; //Auto Unboxing
            System.out.println(c1);
            Boolean n=true; //Non primitive
            boolean n1=n; //Auto Unboxing
            System.out.println(n1);
        }
}
```

ex:- Auto UnBoxing

```java
public class WrapClass{
        public static void main(String[] args) {
                int e=new Integer(30); //Auto UnBoxing
                System.out.println(e);
                double d=new Double(3.2); //Auto UnBoxing
                System.out.println(d);
        }
}
```

Converting String into Respective Primitive Type

Parse() :-

It is a method of Wrapper class, it converts the string data into int, double or float.

ex:-
```java
public class WrapClass{
        public static void main(String[] args) {
                String s="123";
                System.out.println(s);
                int s1 = Integer.parseInt(s); //converting to int
                System.out.println(s1+2);

                double d = Double.parseDouble(s); //converting to double
                System.out.println(d);

                boolean b = Boolean.parseBoolean(s); //converting to boolean
                System.out.println(b);
        }
}
```