

Course Name: A Level (2nd Sem)

Topic: Wrapper class in Java

Subject: JAVA

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Wrapper class in Java:

The wrapper classes in Java are used to convert primitive types (int, char, float, etc) into corresponding objects. The eight primitive data types byte, short, int, long, float, double, char and boolean are not objects, Wrapper classes are used for converting primitive data types into objects, like int to Integer etc.

Autoboxing is the automatic conversion that the Java compiler makes between the primitive types and their corresponding object. Autoboxing and unboxing feature converts primitive into object and object into primitive automatically. The automatic conversion of primitive into object is known as **autoboxing** and vice-versa **unboxing**.

Each of the 8 primitive types has corresponding wrapper classes:

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

Why do we require Wrapper class:

1. Wrapper class objects allow null values while primitive data type doesn't allow it.
2. Data structures support only objects, therefore it is required to convert the primitive type to object first which we can do by using wrapper classes.

Converting a primitive type to Wrapper object:

```
public class W1 {  
    public static void main(String args[]) {  
  
        int num=10;  
        float num1=20;  
        double d1=30;  
        long l1=40;  
  
        Integer obj=Integer.valueOf(num);  
        Float f1=Float.valueOf(num1);  
        Double d=Double.valueOf(d1);  
        Long l=Long.valueOf(l1);  
        System.out.println(num+ " "+ obj);  
        System.out.println(num1+ " "+ f1);  
        System.out.println(d1+ " "+ d);  
        System.out.println(l1+ " "+ l);  
  
    }  
}
```

Converting Wrapper class object to Primitive:

```
public class W2 {  
    public static void main(String[] args) {  
  
        Integer a1 = Integer.valueOf(14);  
        Double b1 = Double.valueOf(3.145);  
  
        int a = a1.intValue();  
        double b = b1.doubleValue();  
  
        System.out.println("The value of a: " + a);  
        System.out.println("The value of b: " + b);  
    }  
}
```

Exercise:

1. Explain autoboxing and unboxing.
2. What is wrapper class in Java? Explain.