

# Casting

Converting one type of information into another type is called casting

In java casting is classified into 2 types:

1. Primitive casting --> dataType
2. Non-primitive casting --> class

## 1. Primitive-casting:

Converting one data type of information into another data type is called Primitive-casting

primitive-casting is classified into 3 types:

1. implicit casting
2. explicit casting
3. boolean casting

### 1. implicit casting:

Converting lower data type info into higher data type info is called implicit casting.

implicit casting is also called widening casting, where memory size goes on increasing,

eg.

```
int a=5    //(memory size of int is 4 byte)
sop(a)     // 5
long b = a  //(memory size of long is 8 byte)
sop(b)     //5
```

### 2. explicit casting:

converting higher data type info into lower data type info is called explicit casting.

explicit casting is also called narrowing casting, where memory size goes on decreasing.

In explicit casting data loss takes place

eg.

```
double b = 2.5  //(memory size of double is 8 byte)
sop(b)          //2.5
```

```
float a= (float) b  //(memory size of int 4 byte)
sop(a)              //2.5
```

### 3. boolean casting:

boolean casting is considered to be incompatible casting type, because boolean data type is unique type of data type where information is already predeclared inside it.

```
boolean str = true
```

## 2. Non-Primitive casting

Converting one type of class into another type of class is called non-primitive casting.

non-primitive is classified into 2 types:

- \*\* 1. Up casting
- 2. Down casting

### 1. Up casting:

Assigning subclass property into superclass is called upcasting.

before performing upcasting 1st we need to perform inheritance operation.

after performing inheritance, the property which are present inside superclass comes into subclass

In the subclass programmer can declare new properties.

At the time of upcasting operation the properties which are inherited from superclass are only eligible for the upcasting operation.

The new property which was declared inside subclass are not eligible for upcasting operation.

### 2. down casting:

Assigning superclass property into subclass is called down casting.

before performing down casting 1st we need to perform upcasting.

```

package Casting;
//super/base/parent class
public class Father
{
    public void car()
    {
        System.out.println("car: kia seltos");
    }

    public void money()
    {
        System.out.println("money: 1L");
    }

    public void home()
    {
        System.out.println("home: 2 BHK");
    }
}

```

```

package Casting;
//child/sub class
public class Son extends Father
{
    public void mobile()
    {
        System.out.println("mobile: Samsung S20");
    }

    public void car()
    {
        System.out.println("car: BMW");
    }

    public void money()
    {
        System.out.println("money: 10k");
    }

    // public void home()
    // {
    //     System.out.println("home: 2 BHK");
    // }
}

```

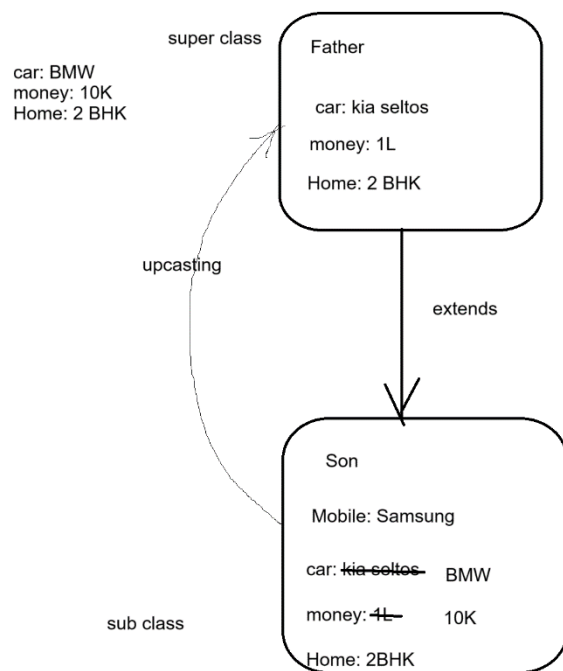
```

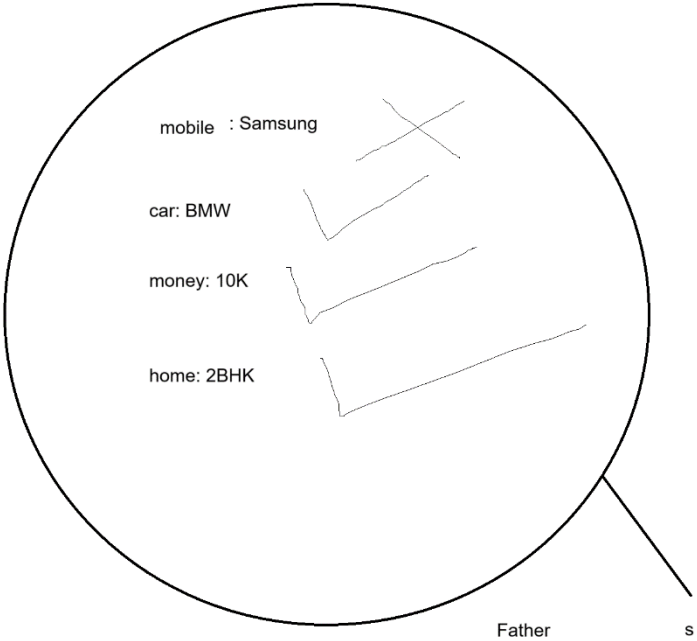
package Casting;
public class TestUpCasting
{
    public static void main(String[] args)
    {
        // Son s=new Son();
        // s.mobile();
        // s.car();
        // s.money();
        // s.home();

        //create object of sub class with reference/dataType of super class

        Father f=new Son();
        f.car();
        f.money();
        f.home();
    }
}

```





# Core Java Syllabus

## Section-1 (basic java)

1. Variable & data types
2. Keywords & Identifiers
3. methods
4. Types of variables
5. constructor
6. control statements
7. loops
8. Use of static non-static

## Section-2 (OOPs)

1. Inheritance
2. This & super keyword
3. Access specifiers
4. Polymorphism
5. Abstract class & concrete class
6. Interface & Implementation class
7. generalization
8. casting
9. Abstraction
10. encapsulation

## Section-3

1. String Class
2. Array
3. Exception handling
4. Collection
5. Map
6. Pattern programs
7. Logical programs