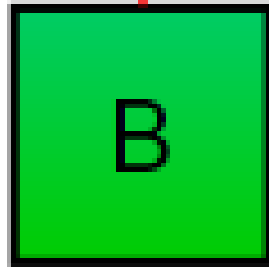
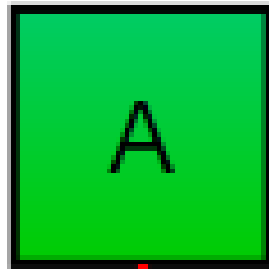
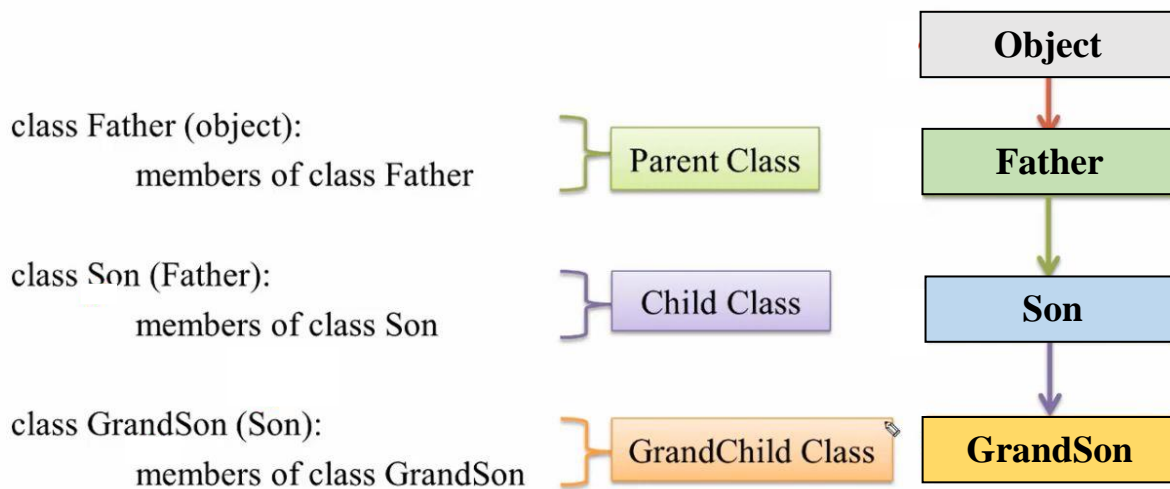


# Single Inheritance



Single Inheritance

# Multi-Level Inheritance



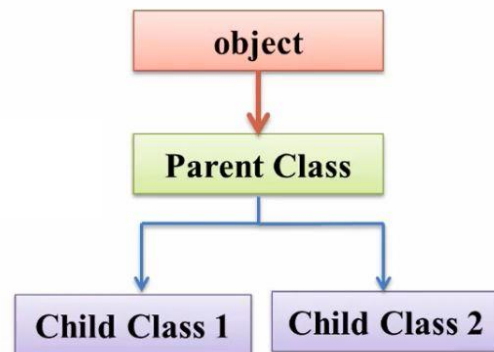
# Hierarchical Inheritance

Syntax:-

```
class ParentClassName(object):  
    members of Parent Class
```

```
class ChildClassName1(ParentClassName):  
    members of Child Class 2
```

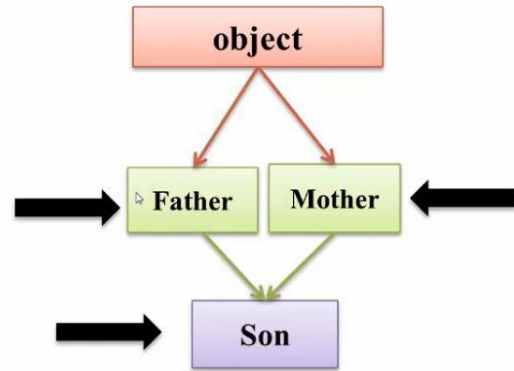
```
class ChildClassName2(ParentClassName):  
    members of Child Class 2
```



# Method Resolution Order (MRO)

`s = Son()`

- The search will start from Son. As the object of Son is created, the constructor of Son is called.
- Son has `super().__init__()` inside his constructor so its parent class, the one in the left side 'Father' class's constructor is called.
- Father class also has `super().__init__()` inside his constructor so its parent 'object' class's constructor is called.
- Object does not have any constructor so the search will continue down to right hand side class (Mother) of object class so Mother class's constructor is called.
- As Mother class also has `super().__inti__()` so its parent class 'object' constructor is called but as object class already visited, the search will stop here.



## Multiple Inheritance

If a class is derived from more than one parent class, then it is called multiple inheritance.

