



OBJECT ORIENTED PROGRAMMING

Inheritance

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Introduction

- Allows to create new class from existing class
- New (child) class will have all the members of existing (base) class
- While the child class can have its own members too
- Members access
 - Public members of parent class can be accessed directly in child class
 - Private members can't be used outside of class, including child class
 - Protected access specifier can be used to provide access in parent and child class only
- It provides
 - An ease to programmers to create code quickly
 - Reduces the size of the program at some extend
 - Facility of reusability at of the code
 - An aid to create and use new data types



Multiple & Multilevel Inheritance

- A child class can have multiple base classes
- All attributes of base class are considered as part of child class
- e.g.

class A

```
{ public: show() {} };
```

class B

```
{ public: show() {} };
```

class C: public A, public B

```
{ };
```

- Base classes may have same methods with same parameters
 - Creates ambiguity

```
ObjC.show();           //error  
ObjC.A::show();       //solution
```

- A child class can act as base to another class
- Inheritance describes level of base-child classes
- e.g.

class A

```
{ };
```

class B: public A

```
{ };
```

class C: public B

```
{ };
```



Questions

