CONSTRUCTORS IN DERIVED CLASS

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CONNSTRUCTORS IN DERIVED CLASSES

- We can use constructors in derived classes in C++
- If base class constructor does not have any arguments, there is no need of any constructor in derived class.
- But if there are one or more arguments in the base class constructor, derived class need to pass arguments to the base class constructor
- If both base and derived classes have constructors, base class constructor is executed first.

CONNSTRUCTORS IN MULTIPLE INHERITANCE

- In multiple inheritance, base classes are constructed in the order in which they appear in the class declaration
- In multilevel inheritance, the constructors are executed in the order of inheritance

SPECIAL SYNTAX

- C++ supports an special syntax for passing arguments to multiple base classes
- The constructor of the derived class receives all the arguments at once and then will pass the calls to the respective base classes
- The body is called after all the constructors are finished executing.

```
Derived-Constructor (arg1, arg2, arg3,….): Base1-Constructor(arg1, arg2), Base2-Constructor(arg3, arg4){
…
} Base1-Constructor(arg1, arg2)
```

SPECIAL CASE OF VIRTUAL BASE CLASS

- The constructors for virtual base classes are invoked before an nonvirtual base class
- If there are multiple virtual base classes, they are invoked in the order declared.
- Any non-virtual base class are then constructed before the derived class constructor is executed