University of Central Punjab

(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)

FACULTY OF INFORMATION TECHNOLOGY

Object Oriented Programming
Session: Spring 2020

Lab 11	
Topic	Inheritance, Access Specifiers
Objective	Making students familiarize with the concepts of access specifiers and inheritance.

Note:

1. Please do not use cin in setter and cout in getter
2. Indent your code
3. Comment your code
4. **Use meaningful variable names and follow the naming convention**
5. Plan your code carefully on a piece of paper before you implement it.
6. Name of the program should be same as the task name. i.e. the first program should be Task_1.cpp

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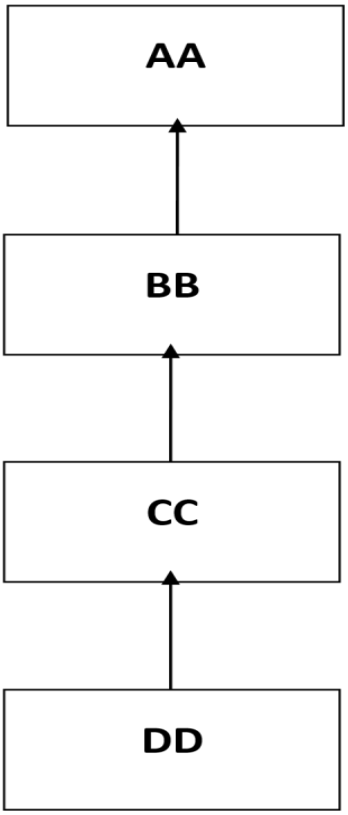
Problem No.01:

Order of Construction and Destruction

Implement the following scenario and show the execution order for construction and destruction of objects in inheritance hierarchy by just giving the output statement "class name Construtor called" and " class name Destructor called" in constructors and destructors of every class. Class AA is serving as the base class. Class BB is publicly inherited from class AA. Class CC is publicly inherited from class BB and finally the class DD is publicly inherited from class CC.

Type your text



In main()

Just instantiate object of DD class and see what happens. Check the order of construction and destruction of the parent and child objects.

Problem No.02: *(Single-level Inheritance)*

You have base class **Person** which has attributes:

- name: char*
- age : int

You have an **Employee** class which is publically inherited from **Person** class. It has attributes:

- salary : double
- employeeId : int

You have another class **BaseballPlayer** publically inherited from **Person** class. It has attributes:

- battingAverage: double
- totalRuns: int

Provide the following for all the classes.

1. Write **parameterized constructor with default arguments.**
2. Write separate setter functions for each attribute to set value.
3. Write separate getter functions for each attribute to get value.
4. Write a **display()** function to display the information.

In main()

- Make Baseball class object in main and initialize values of name, age, battingAverage and totalRuns using base/constructor initialization list and call display() against it.
- Make Employee class object in main and initialize values of name, age, employeeId and salary using base/constructor initialization list and call display() against it.

Type your text