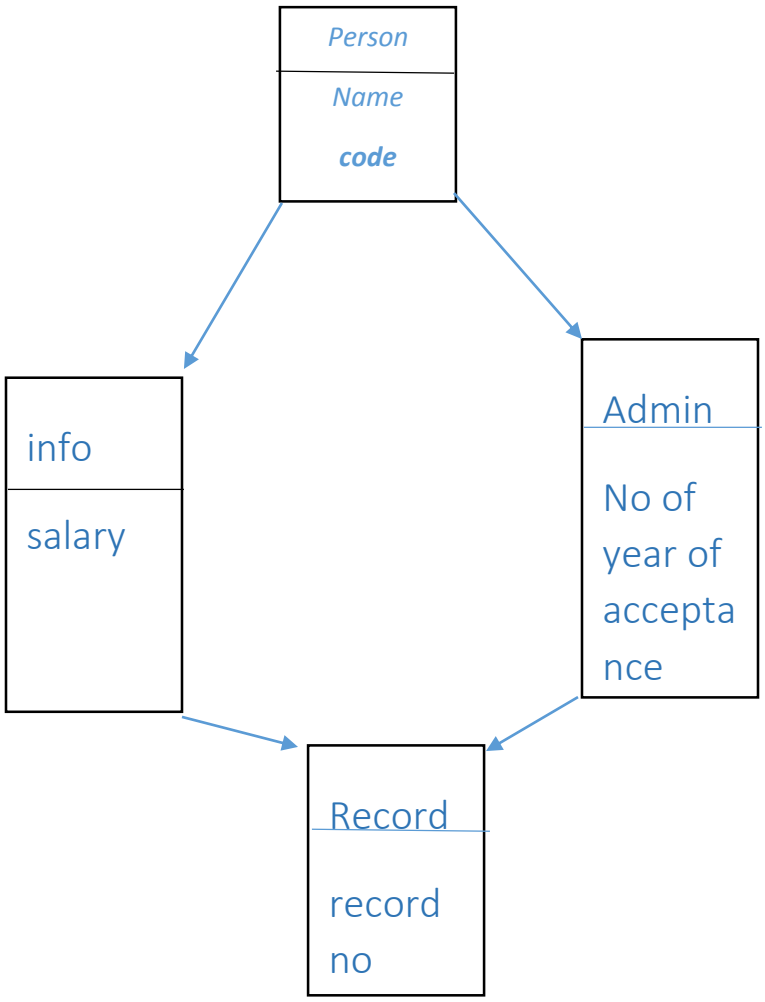
Tutorials of chapter 4

Inheritance

1. “Ambiguity is essential evil” ”,explain by example how it can effectively solve in complex programming?**[PU 2015 spring]**
2. Consider the class network of the following figure:



the class record derives information from both Account and Admin classes and in turn derive information from the class Person.Define all the four classes with at least one parameterized constructor and void display() method in each class.In main() function,create the object of the class record and initialize all the data members and display them**.[PU 2015 spring/2018 fall]**

3. Differentiate between Is-a rule and has-a rule**.[PU 2015 fall/2016 spring]**
4. Explain how inheritance supports reusability?Describe the syntax of multiple and multilevel inheritance.**[PU 2015 fall,2017 fall]**
5. Compare and contrast composition and inheritance**.[PU 2015 fall]**
6. WAP to enter the information of 'n' students and then display it using the concept of multilevel inheritance.**[PU 2015 Fall]**
7. Create a class Person with data members name,age and address.Create another class Teacher with data members qualification and department.Also create another class Student with data member program and semester.Both classes are inherited from the class person.Every class has at least one parameterized constructor which uses base class constructor.Create member function showdata() in each to display the information of the class member**.[PU 2014 spring]**
8. Define subtype and subclass.Explain why multiple inheritance is dangerous.**[PU 2014 fall]**
9. Discuss the context where it becomes important to make the base class virtual.Also include an appropriate example**.[PU 2014 ,2016 fall]**
10. State principle of substitutability.Explain sub classing for specialization,generalization.List out the advantages of inheritance.**[PU 2016 fall]**
11. What is inheritance?What are the different forms of inheritance?**[PU 2016 spring,2017 spring]**
12. Write a base class that ask the user to enter time(hour,minute and second) and derived class adds the time of it's own with the base.Finally make the third class that is friend of derived and calculate the difference of base class time and its own time**.[PU 2017 fall]**

13. When base class and derived class have the same function name what happens when derived class object calls the function?[**PU 2017 fall]**
14. Reusability implies non-interference.Explain.[pu 2017 fall]
15. How does visibility mode control the access of members in the derived class?Explain with an example.**[PU 2017 spring]**
16. WAP to create a class called alpha that have alpha(int a) and showa(),create another class names beta that have beta(int b) and showb().Create third class named gamma that is inherited from both alpha and beta ,gamma class have gamma(int a,int b,int c) and showg().**[PU 2017 spring]**
17. Explain how does composition supports re-usability?**[PU 2018 fall]**
18. What is a hybrid inheritance?Does ambiguity occurs in hybrid inheritance?If yes, how can you remove this?Explain with an example.**[PU 2018 fall]**
19. How does inheritance influence the working of constructors and destructors?Class Y has been derived from class X .The class Y does not contain any data members of its own.Does the class Y require constructors?If yes why?[**PU 2013 spring]**
20. Specify is-a rule and has-a rule with suitable example.How are arguments sent to the base constructors in multiple inheritance?Whose responsibility is that?**[PU 2013 spring]**