AMITY UNIVERSITY

Object Oriented Programming

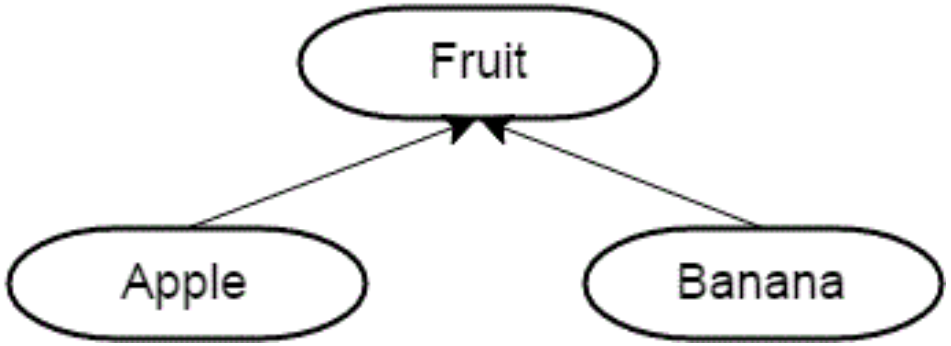
using

Programming Exercise 1

- Create a class Base1.
- Define default constructor of class Base1
- Create a class Derived1 that is derived from Base 1.
- Define default constructor of class Derived1.
- Display the output

Programming Exercise 2

- Create three classes as per the following figure:



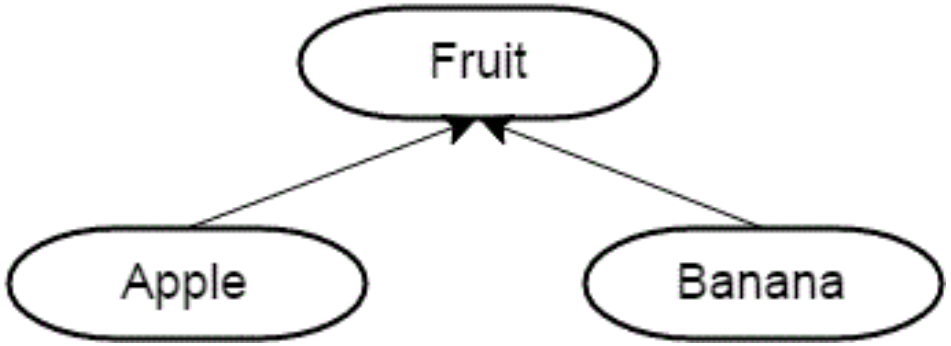
- Create Constructor of Each class and a member function to display the name of the fruit.

Access Specifiers

Base class member access specifier	Type of Inheritence		
	Public	Protected	Private
Public	Public	Protected	Private
Protected	Protected	Protected	Private
Private	Not accessible (Hidden)	Not accessible (Hidden)	Not accessible (Hidden)

Programming Exercise 2

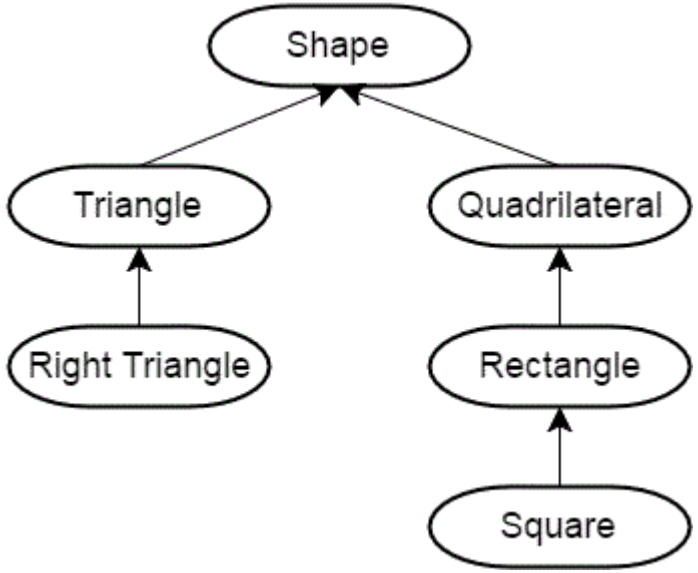
- Create three classes as per the following figure:



- Create Constructor of Each class and a member function to display the name of the fruit.
- Try different combinations of Access specifiers\
- Create subclass of class apple-green apple.

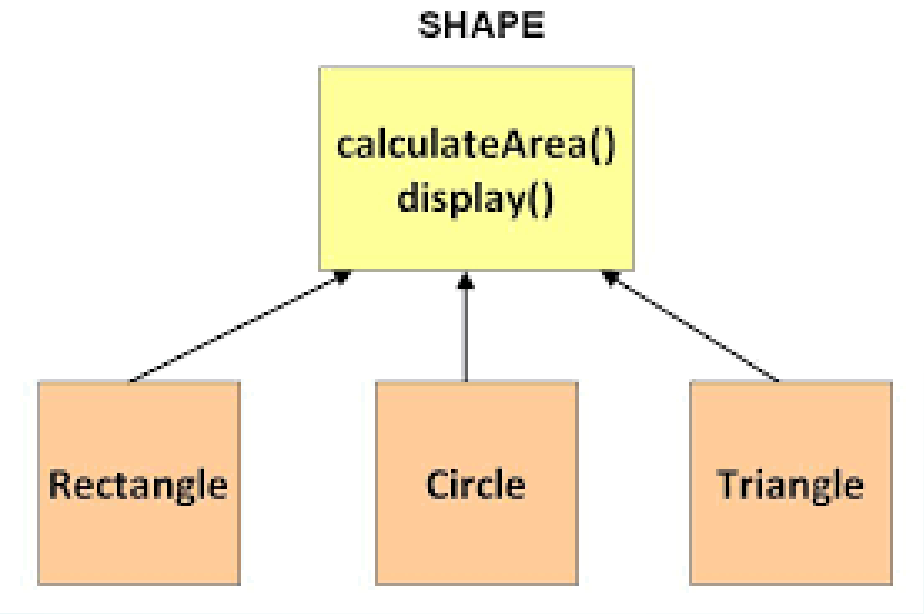
Programming Exercise 3

- Create three classes as per the following figure:



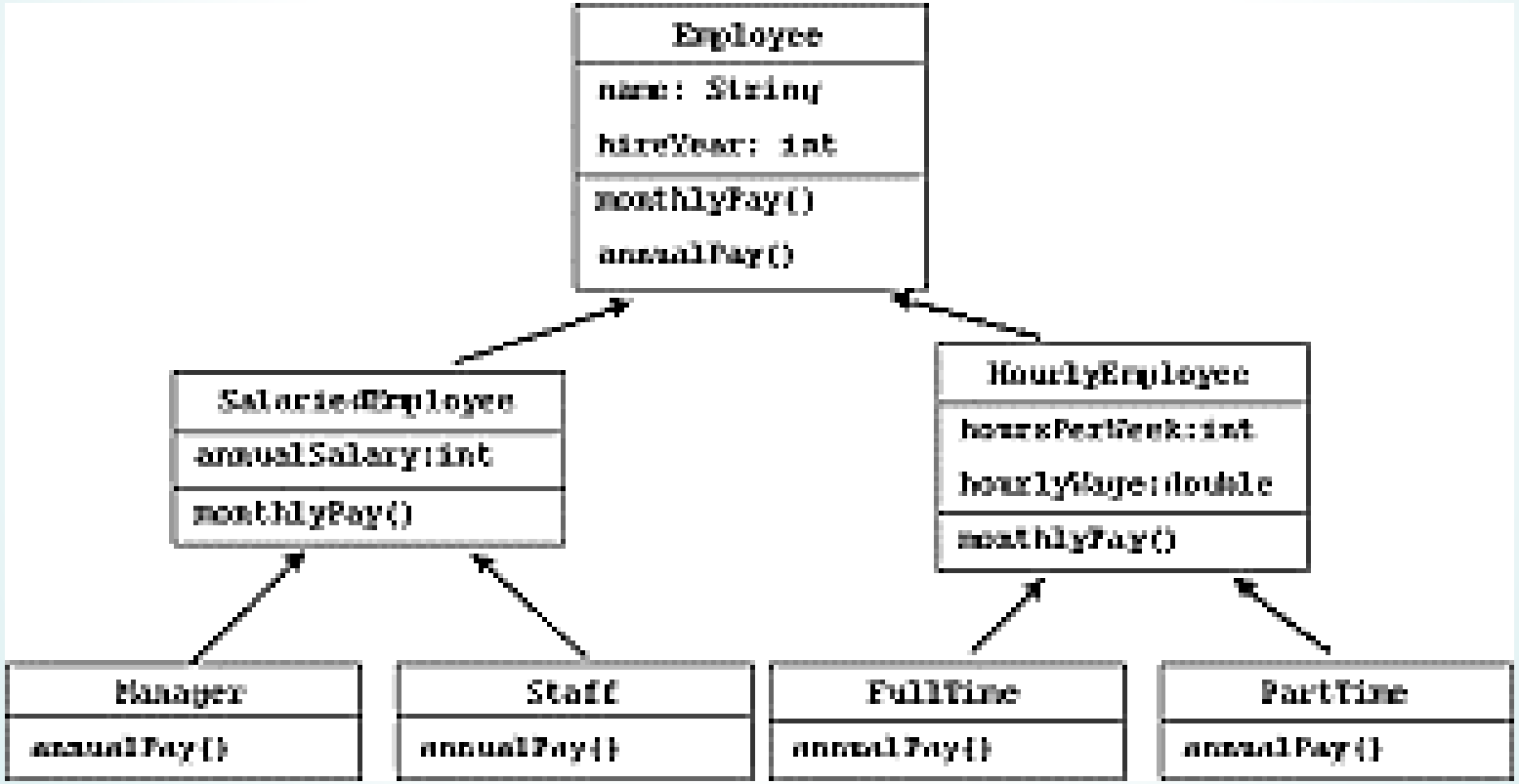
Programming Exercise 4

- Design classes as per following
- Create a pure virtual function calculate Area() and display

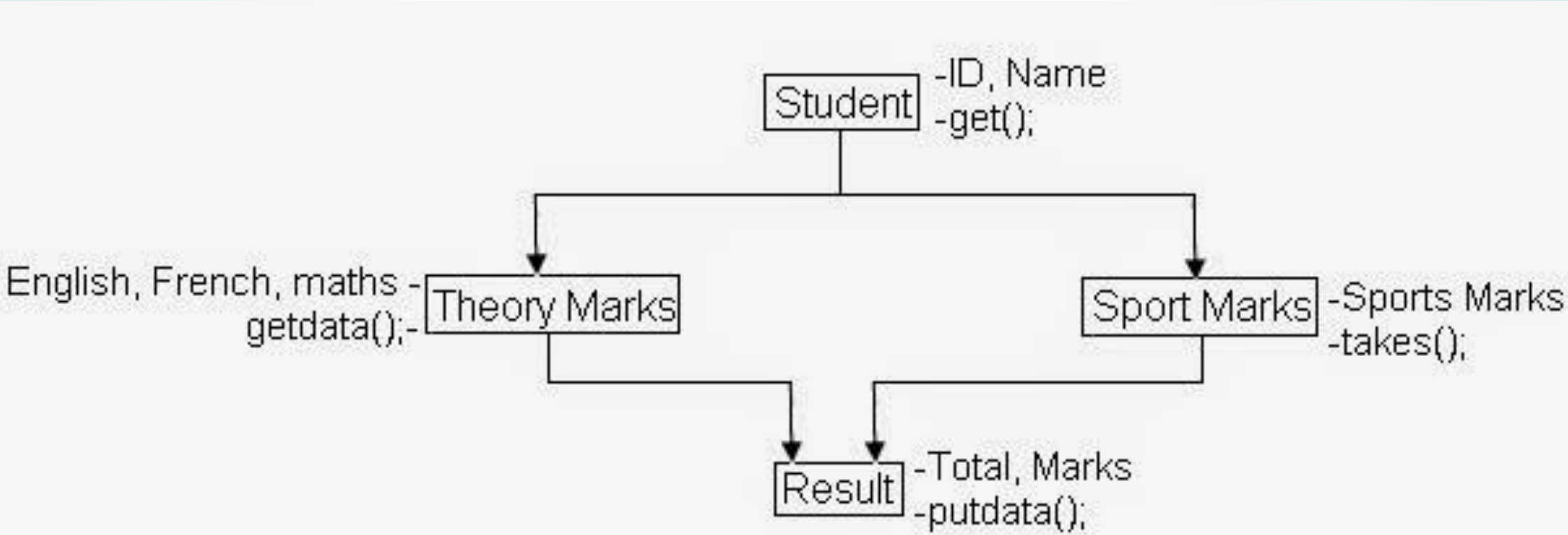


Programming Exercise 4

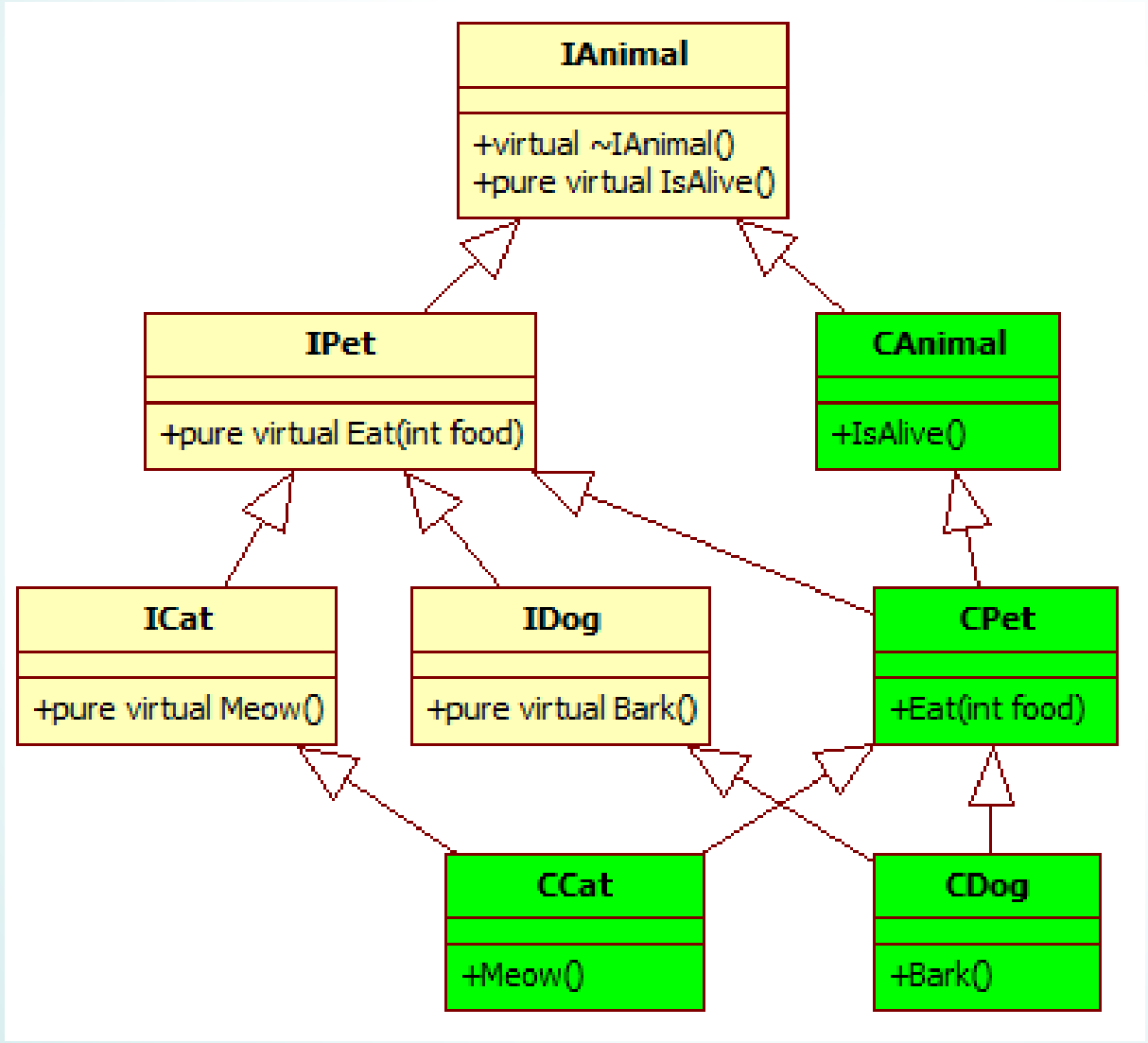
- Design classes as per following



Programming Exercise 5



Programming Exercise 6



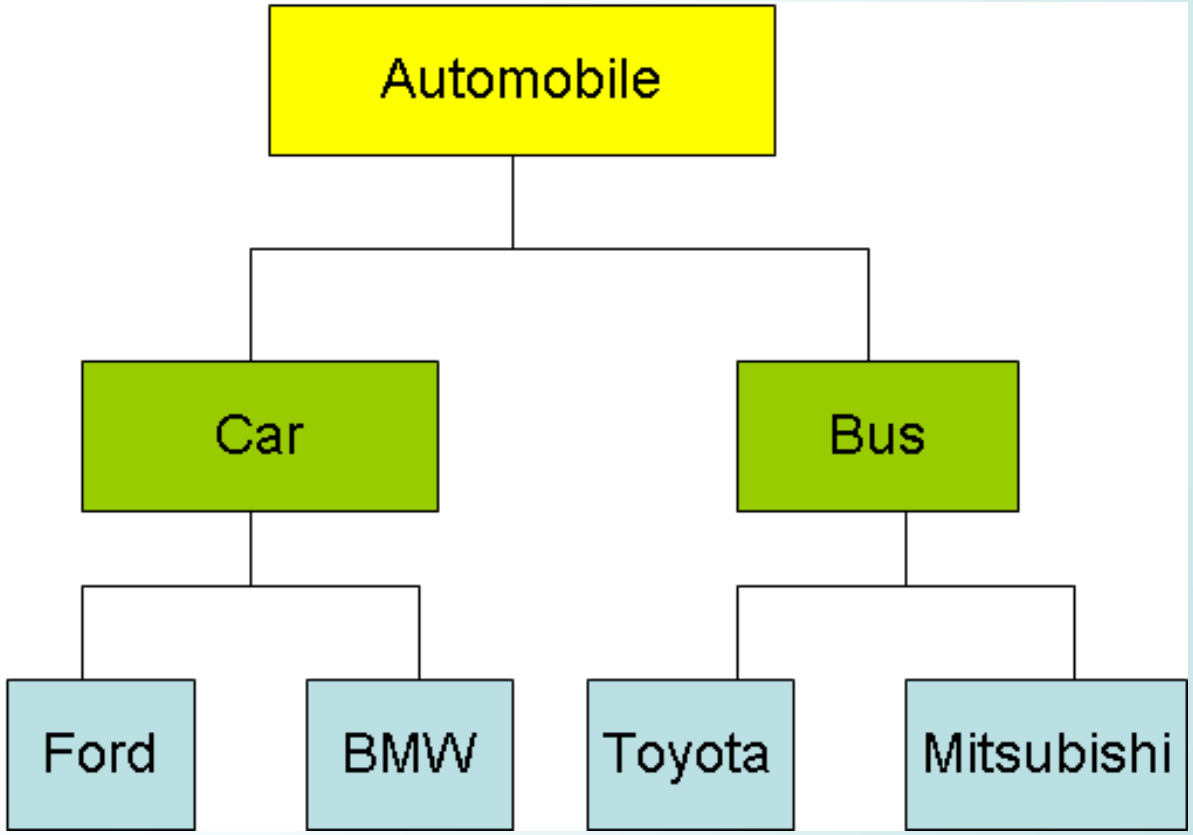
Programming Exercise 7

Function Overriding:

1. Create class calculation which have 2 data members num1,num2 and one pure virtual function result
2. Create classes addition,subtraction,multiplication and define result in them

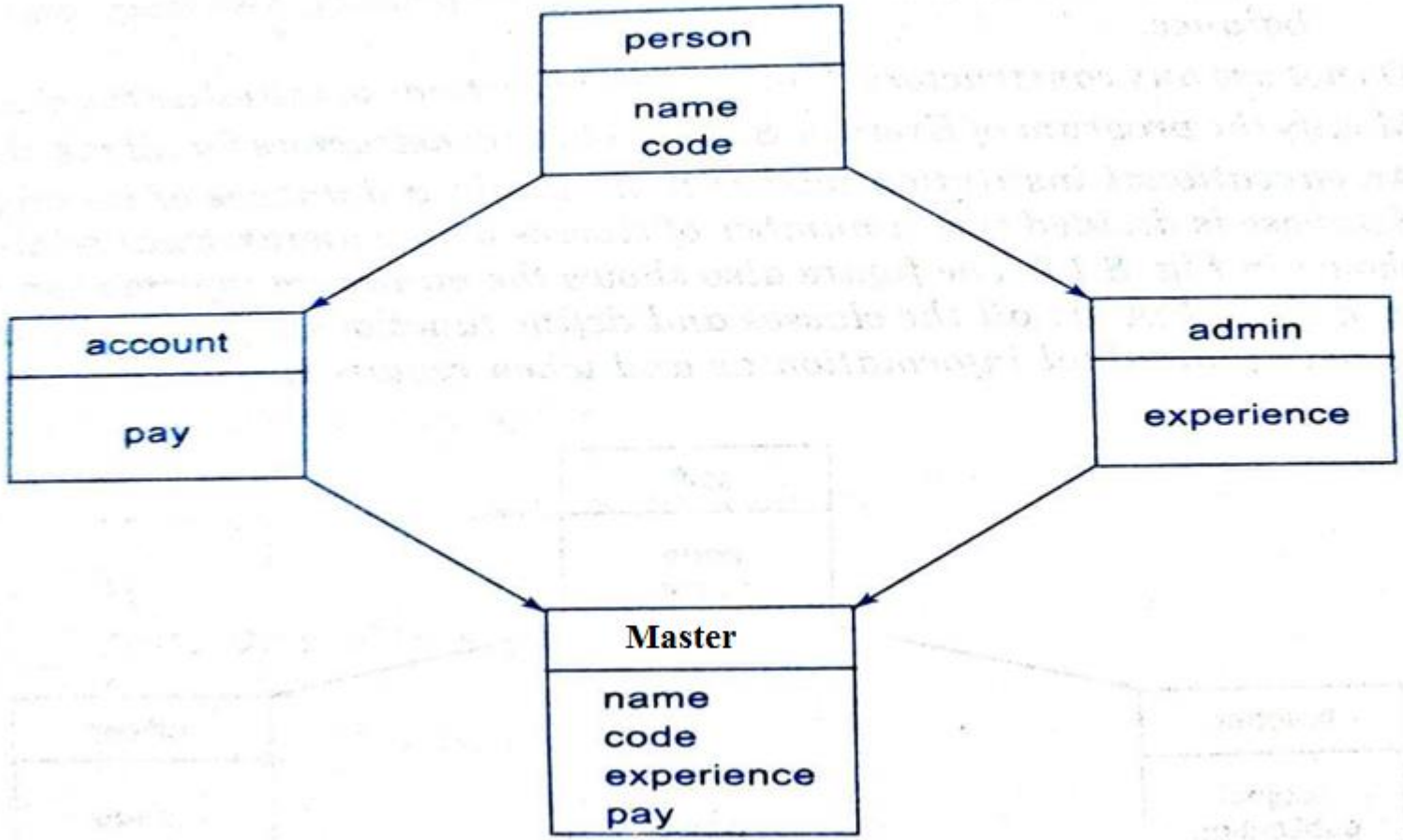
Programming Exercise 8

- Automobile- Abstract class, default constructor and parametrized constructor
- Car- default
- Bus-Default
- Ford-parameterized
- BMW-parameterized
- Toyota-parameterized
- Mitsubishi- default



Programming Exercise 9

Consider a class network of Fig. 8.15. The class ***master*** *derives information from both account and admin classes which in turn derive information from the class* ***person****. Define all the four classes and write a program to create, update and display the information contained in* ***master*** *objects.*



Programming Exercise 9 (contt.)

- In the last example, the classes account, admin are derived from the class person. As we know, we can use container classes in place of inheritance in some situations. Redesign the program such that the classes account, admin contain the objects of person and master contain the object of both account, admin.

Complete the program

The ZooAnimal class definition below is missing a prototype for the Create function. It should have parameters so that a character string and three integer values (in that order) can be provided when it is called for a ZooAnimal object. Like the Destroy function, it should have return type void. Write an appropriate prototype for the ZooAnimal Create function.

```
class ZooAnimal
{
private:
char *name;
int cageNumber;
int weightDate;
int weight;
public:
void Destroy (); // destroy function
char* reptName ();
int daysSinceLastWeighed (int today);
};
```