

CSIT121 Lab Exercises

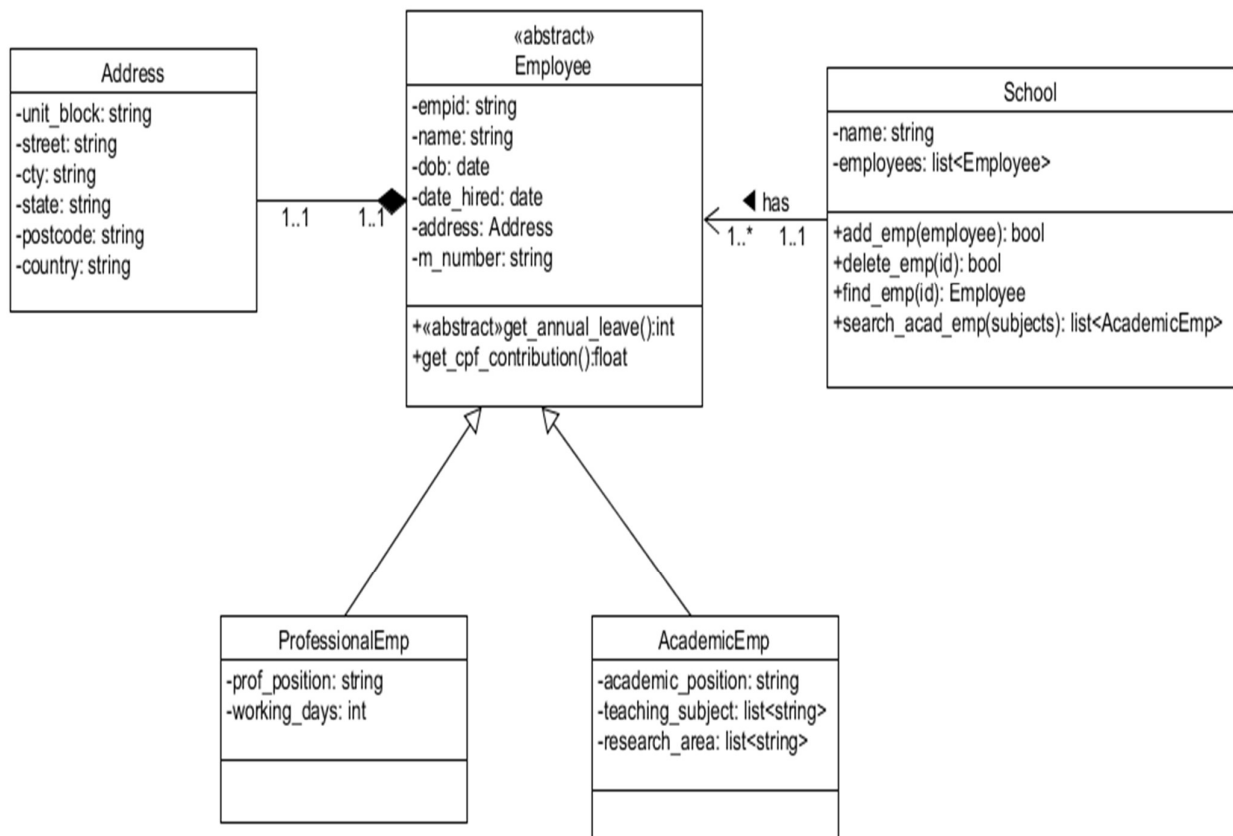
Lab 3

Objectives

- Get familiar with inheritance and polymorphism.
- Get familiar with abstract base class.

You are required to design and implement a staff management system for UOW using OOP. The basic class design of the system is given below. You can make reasonable adjustments to the basic design or have a different design.

You should include reasonable get/set methods or properties/setters for each class. You should define main and other helper functions to test the classes.



The attributes for each class are listed below:

School

- School name
- Employees of the school

Address

- Unit and block
- Street
- City
- State
- Postcode
- Country

Employee

- Employee Id
- Name (first and last name)
- DOB
- Address
- Mobile number

Professional Employee

- Name (first and last name)
- DOB
- Address
- Mobile number
- Staff ID
- Professional position
- Working days

Academic Employee

- Name (first and last name)
- DOB (date)
- Address
- Mobile number
- Staff ID
- Academic position
- Teaching subject
- Research area

Method		
get_annual_leave	This method returns the number of annual leave days for either Professional or Academic employee.	
	Professional Employee	
	Years of Employment	Annual leave
	< 2 years	15
	< 4 years	18
	4 years & above	21
Academic Employee: Flat 14 days a year		
get_cpf_contribution	This method will return the CPF contribution in percentage (%).	
	Age	CPF contribution
	<= 50	20%
	51 - 60	12%
	> 60	5%