**CSE 135: Fundamentals of Computer Programming**

**Lab 11: Inheritance**

**Nov 19, 2014**

1. Design a class of Employee which inherits the Person class given, since each employee is also a person. The identities, person and employee, have different attributes therefore it is logical to design a separate class for Employee.
   1. For an example, employee has designation which should not be included in the person class because not all persons have a designation. Think about other attributes which can be included in the Employee class.
   2. Write a method in the Employee class which will generate the salary of the employee. Sample output is given below:

Name: XYZ

Address: House # 1, Road # 1, ABC, Bangladesh

Designation: Floor Incharge

Basic Salary = 25000

House Rent = 12500 (50% of basic salary)

Medical Allowance = 1000 (fixed amount)

Net Salary = 38500

Tax Deduction = (2500) (10% of Basic Salary)

Gross Salary = 36000

As you can understand that basic salary and medical allowance should be fixed for different positions. In the example above, the basic salary of floor incharge is 25000.

1. Design a Student class which extends Person class. Think and include all necessary attributes related to Student only. Your class should have a method which will generate the Mark sheet of the Student.

Sample output is given below:

Name: ABC

Address: House # 1, Road # 1, ABC, Bangladesh

Student Id: 123466789

Discipline: BS CSE

Programming Concepts: 3.0

Fundamentals of OOP: 4.0

Basic Mathematics: 2.5

Physics: 3.0

CGPA: 3.125

1. From the main method, create an object of Student and Employee, take their SSN and generate the Marksheet or Salary of employee (whichever is applicable) and display it on the screen.

**(Note: The Person class is already given below. You should change it as you wish)**

**public** **class** Person {

**private** **int** ssn;

**private** String name;

**protected** String address;

Person()

{

**this**.name = "";

}

**public** **int** getSsn() {

**return** ssn;

}

**public** **void** setSsn(**int** ssn) {

**this**.ssn = ssn;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** String getAddress() {

**return** address;

}

**public** **void** setAddress(String address) {

**this**.address = address;

}

}