**CSE 135: Fundamentals of Computer Programming**

**Lab 13: Inheritance, abstract methods and class**

**July 21, 2014**

Today’s lab will help you understand two concepts i.e., Inheritance and Abstract methods and Abstract Class.

1. In an organization XYZ, employees can be divided into three types based on their way of earning. First type of employees is those who get a fixed monthly salary at the end of the month. Employees can also work on hourly bases where they get salary depending on the number of hours they have worked multiplied by the per hour pay rate already decided (vary from employee to employee). The last type of employees work on commission bases, say the number of sales they have made. They get a fixed commission on each sale.
   1. Design a class employee with its attributes and methods, including an abstract method which will calculate the salary of each employee and a protected attribute which will keep the salary amount.
   2. Design a class for fixed paid employees which will inherit the employee class
   3. Design a class for employees who get their salary on hourly basis
   4. Design a class for commission based employees

(Note: all the sub-classes have to implement the abstract method of the parent class)

* 1. Add a method toString to all classes which will print the first name, last name and mobile number.
  2. From the main method create three objects for these three types of employees and print their salaries to be paid:

|  |  |  |
| --- | --- | --- |
| **Salary Data for the Month of March 2014** | | |
| ***Fixed Salary Employees*** | ***Hourly basis Employees*** | ***Commission based Employees*** |
| First Name : Bruce | First name: Shane | First name: Barak |
| Last Name: Lee | Last name: Warne | Last name: Obama |
| Mob. Num: 0000000000 | Mob. Num: 1111111111 | Mob. Num: 2222222222 |
| Basic: 1500 | Per hour rate: 150 | Commission rate: 3000 |
| House Rent: 30% of Basic | Total Hours: 160 | Number of sales: 1300 |
| Medical Allowance: 5% of Basic |  |  |
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