

## Inheritance Assignments

Assmt ID	Assignment
a	<p>The class inheritance diagram is given below.</p> <pre> classDiagram     class Person {         Name         Age         Read_data         Display_Data     }     class Student {         Roll         Marks         Get_data         Compute_grade         Show_Data     }     class Employee {         BP         HR         Sal         Get_data         Compute_Salary         Show_Data     }     Person &lt; -- Student     Person &lt; -- Employee                     </pre> <p>The diagram illustrates a class hierarchy where <b>Person</b> is the base class. It has attributes <b>Name</b> and <b>Age</b>, and methods <b>Read_data</b> and <b>Display_Data</b>. Two subclasses, <b>Student</b> and <b>Employee</b>, inherit from <b>Person</b>. <b>Student</b> has attributes <b>Roll</b> and <b>Marks</b>, and methods <b>Get_data</b>, <b>Compute_grade</b>, and <b>Show_Data</b>. <b>Employee</b> has attributes <b>BP</b>, <b>HR</b>, and <b>Sal</b>, and methods <b>Get_data</b>, <b>Compute_Salary</b>, and <b>Show_Data</b>.</p>
b	<p>Develop a cellphone accounts system, which will be used to manage the accounts of a cellphone company. The company has two types of accounts, Contract and PayAsYouGo. For every account the cellphone number, total call time used and total cost of calls needs to be stored. For PayAsYouGo accounts, you also need to store the type, Callmore time, Peak time or Any time (C, P, A). For Contract accounts you need to store the account holders name, address, and the length of the contract in months. The cellphone accounts system needs handle many accounts, PayAsYouGo and Contract. It also needs to provide information to a user interface, which allows a user to add new accounts, to display all the accounts and to search for the details of a particular account using the cellphone number.</p>
c	<p>Design a class Employee-no, Name, Designation, Basic Pay. Define a derived class Executive whose Basic_pay is more than Rs.10,000.</p>
D	<p>Design classes for the entities Student, Professor and Course. The Student has the attributes Name, Student ID and Major. Major attribute should differentiate between Graduate and Post Graduate Student. Design Professor class with attributes Name, EmpID and Major. The Course class includes title and duration (single subject). Incorporate appropriate getter and setter methods. Also define method study() and teach () in the respective classes.</p>