

Systems Development: Object Oriented Programming

(H171 35)

Case Study: Payroll system using polymorphism

Step 4 – create concrete derived class CommissionEmployee

* CommissionEmployee extends Employee base class
* Class CommissionEmployee additionally includes private instance variables to store the gross sales (grossSales) and the commission rate (commissionRate), and *properties* for each which validate that grossSales is not negative, and the commisisonRate is a value greater than 0 and less than 1.
* Class CommissionEmployee includes a constructor that takes the first name, last name, a social security number, sales and commission rate as arguments. Remember to call the base class (Employee) constructor and pass the first name, last name and social security number
* Class CommissionEmployee overrides methods Earning and ToString:
  + Earnings – overrides Employee’s abstract method Earnings to provide a concrete implementation that returns the CommissionEmployee’s earnings (see Case Study Overview for calculation)
  + ToString – overrides Employee’s version. Returns “commission employee:” , followed by the base class Employee specific information (i.e. first name, last name and social security number) obtained by invoking the base class’s ToString, then the employee’s gross sales and commission rate.