Queensland University of Technology (QUT)

IFN556   Practical Exercise Questions – Using Classes and Objects

1. Create an application named **TestSoccerPlayer** that instantiates and displays a SoccerPlayer object. The SoccerPlayer class contains properties that hold a player's name (a string), jersey number (an integer), goals scored (an Integer), and assists (an integer).

2. Write a program named **DemoJobs** for Harold's Home Services. The program should instantiate several Job objects and demonstrate their methods. The Job class contains four data fields – descriptor (for example, "wash windows"), time in hours to complete (for example, 3.5), per-hour rate charged (for example, $35.00), and total fee (hourly rate times hours). Include properties to get and set each field except the total fee – that field will be read-only, and its value is calculated each time either the hourly fee or the number of hours is set. Write a method for the Job class to display information of a Job object. The Job class also contains a method to change the per-hour rate by adding an amount of money to the current rate if the current rate of the job is less than $20.00. Write a Main() method that demonstrates all the methods work correctly.

3. Create an application named SalesTransactionDemo that declares several SalesTransaction objects and displays their values. The SalesTransaction class contains fields for a salesperson name, sales amount and commission and a readonly field that stores the commission rate. Include three constructors for the class. One constructor accepts values for the name, sales amount, and rate, and when the sales value is set, the constructor computes the commission as sales value times the commission rate. The second constructor accepts a name and sales amount, but sets the commission rate to 0. The third constructor accepts a name and sets all the other fields to 0.

4. Create a program named **SalesTaxDemo** that declares an array of 10 Sale objects. Prompt the user for data for each object and display the 10 objects. Data fields for Sale objects include an inventory number, amount of the sale, and tax owed. Include a property with get and set accessors for the first two data fields, but make the tax owed a read-only property. The tax should be calculated whenever the amount of the sale is set. Assume that the tax rate is 8 percent for the first $100 and a 6 percent for any amount greater than $100.