# **BCS 345 Lab – Exceptions**

# **Overview**

Write a program that throws and catches user-defined exceptions.

# Part 1

Define a new exception class named BadSalaryException. The class should have one member variable for salary. There should be get/set methods for salary.

#### Part 2

Define an Employee class. It should have the following member variables:

Name (String), Id (int), Salary(double)

Write a default constructor that initializes the member variables.

Write get/set methods for each member variable.

The setSalary method should throw a BadSalaryException if the salary being set is less than 0. If a bad salary is passed in it should create an instance of BadSalaryException, set the salary on that exception and throw the exception. If the salary is good then just set the value of salary on the current instance (the current instance is an Employee).

### Part 3

Write the main class (that contains the main method).

Create two instances of Employee in main and set the data on those instances. Call the Employee methods in a try/catch block. There should be a catch block for BadSalaryException. The catch block should get the bad salary value from the exception and display an error message on screen with that bad salary in it. Make sure that one of the calls to setSalary has a bad salary value (<0).

# Part 4

Add code to throw/catch exceptions for a bad id. Define a new exception class named BadIdException. The class should have one member variable for id (with get/set methods for it). Update the setId method on Employee so that it generates and throws a BadIdException. Valid Ids are in the range 0-9999. Update main so that it catches BadIdExceptions and gives an appropriate error message.