

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.