# Programming Logic and Design

# CA-PLDES

# Assignment 2

Student Name: _____

Student Number: _____

Instructor: _____

Date: _____

Results:

Part 1: _____/15

Part 2: _____/15

Total: _____/30

# Assignment 2: ABC Insurance

This assignment will require you to apply your skill and knowledge of the various control structures, modularization and data handling techniques that you learned in Chapters 1 through 9. You will be required to create two pseudocode/algorithms depicting your solution to the problems below. Each part of the solution builds upon the previous part.

**Part 1.**
Plan the logic for ABC Insurance company program to determine policy premiums. The program continuously prompts the user for an insurance policy number. When the user enters an appropriate sentinel value, end the program. Call a method that prompts each user for the type of policy needed—health or auto. While the user's response does not indicate health or auto, continue to prompt the user. When the value is valid, return it from the method. Pass the user's response to a new method where the premium is set and returned—$550 for a health policy or $225 for an auto policy. Display the results for each policy. Your task is to create the pseudocode for this solution

**Part 2.**
Modify Exercise 8a so that the premium-setting method calls one of two additional methods—one that determines the health premium or one that determines the auto premium. The health insurance method asks users whether they smoke; the premium is $550 for smokers and $345 for nonsmokers. The auto insurance method asks users to enter the number of traffic tickets they have received in the last three years. The premium is $225 for drivers with three or more tickets, $190 for those with one or two tickets, and $110 for those with no tickets. Each of these two methods returns the premium amount to the calling method, which returns the amount to be displayed.

**Critical points:**

- Appropriate Mainline Logic
- Modularization
- Proper Pseudocode structure (indentation, structure)
- Identification of appropriate variables and constants, methods etc. (Proper naming)

**What to Submit:**

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|---|---|
| Pseudocode for Part 1 | 15 points |
| Pseudocode for Part 2 | 15 points |
| | 30 Points |

**Assignment Due:** Start of Session 11