**COEN 160/275 OO Analysis, Design and Programming Fall 2015**

**Assign 3 (100 pts) Due: 24th Nov**

This assignment requires you to build a GUI based Java application called ***MyExpenseTracker.*** This application helps the user to keep track of their expenses.

***MyExpenseTracker*** allows the user to store a value for a limit on the amount of money the user wants to spend in a day, in a week or in a month (you are free to choose this duration); it allows the user to enter the amount she/he spent under various categories. The application allows the user to view the expenses by category using a visualization of your choice (a bubble chart for example) in addition to the text display.

The Graphic User Interface of the application should provide facilities for the user to do the following:

1. Enter an amount, the **expense limit**, either per day or for a period of time (a week or a month). You must provide options to set either by day, or by month or from a specific date to a specific date. A button to save the amount for the expense limit and duration.
2. Provide categories of expenses (eg: food, eating out, clothes, entertainment, gas etc).
3. Enter an amount spent under the selected category. If the amount entered results in the total expenses thus far to exceed the **expense limit** (set for the day, for the example), shows an alert that expense limit is exceeded by the amount.
4. Select to see money spent under each category.
5. Select to see how much is spent (that day) thus far under a chosen (input by the user) category.
6. Select to see how much is spent (for a period of time, selected by the user) thus far under a chosen category.
7. Select to see a visualization of the expenses (under each category) compared to the expense limit.

**Point distribution:**

1. **Graphic User interface (20 pts):** The GUI is evaluated for ease of use, attractiveness and providing features required. Java Swing classes are to be used.
2. Functionality (40 pts): Correctness of the features required.
3. **Visualization (20 pts):** You must choose an appropriate visualization for the expenses to be tracked. It should be easy for the user to get a quick and clear view of how money is spent and if it is meeting (or above or below) the expense limit. Java Drawing API must be used.
4. **Naming conventions and comments (not Javadocs)** (**5 pts**):
5. **A screen shot of the output** (**15**)