Assignment 3

Due date

- Due by 11.59 PM, October ~~23rd~~ ~~27th~~ 28th, 2016.

Submit your code as per the provided instructions. A signup sheet will be provided to you during class to setup an appointment with the TA to provide a demo of your project.

Updates

- Assignment posted:

Assignment Goal

Apply the design principles and patterns you have learned so far to develop and test code for the given problem.

Team Work

- You may work in teams of 2 studens each for this project. You CANNOT collaborate or discuss the design, implementation, or debugging ideas with any other team. If you cannot find a team mate, contact the instructor.
- Both team members should be familiar with all aspects of the code. During the demo, the TA will randomly pick one of the team members to demo and answer questions. Failure to show familiarity with any part of the code will result in deduction of 50% of the assignment grade for both team members.

Programming Language

You are required to program this project in Java.

Compilation Method

- You are required to use ANT for the following:
  - Compiling the code
  - running the code
  - Generating a tarball for submission
  - Generating javadocs
- Your code should compile and run on *bingsuns* or the *debian-pods* in the Computer Science lab in the Engineering Building.

Policy on sharing of code

- EVERY line of code that you submit in this assignment should be written by your team or be part of the code template provided for this assignment. Do NOT show your code to any other group. Our code-comparison software can very easily detect similarities.
- Post to the listserv if you have any questions about the requirements. Do NOT post your code to the listserv asking for help with debugging. However, it is okay to post design/concept questions on programming in Java/C/C++.

Project Description

Tool for New Students at BU

You need to develop a tool for student orientation program at Binghamton University. Assume that your library is used by each student to write his/her Driver code for their specific orientation plan.

- The orientation checklist consists of taking a campus tour, buying books, selecting a dorm, and registering for courses. There is ~~time~~ duration, cost, carbon footprint, and effort associated with each of these activities. Effort is measured in the number of calories spent on the activity. Carbon-footprint is measured in tonnes of CO_2. Each student is required to complete the checklist before start of classes. However, all students have some flexibility in how and when they go about completing each activity.
- There are 2 different bookstores to choose from: University Book Store, Mando Boooks. The price difference is within 5% in these book stores.
- The options for campus tour include the following: bus-ride or on-foot. The bus-ride costs $2.00, while the tour on-foot is $0.10.
- Selecting a dorm has two options: standing in a long queue outside the dorms administrator's office for your turn or through an online gaming contest that assigns dorms based on your game performance. Using the online option has a 2% surcharge.
- Registration can be done by submitting forms to the registrar's office or by accessing the registration system using computers from a specific computer-lab in the Engineering building. Submitting forms requires payment via check, which makes tuition 3% cheaper.
- Assign ~~time~~ duration in minutes for each activitiy (use your own estimate).
- Assign appropriate carbon footprint value for each activity (use your own estimates).
- Use your own estimate to decide how to calculate (or assign a value) to the calories spent for each activity.
- Design and develop the classes/interfaces that can be used for each student's orientation program. Write an example driver program for a specific student to calculate the total ~~time~~ duration, cost, and effort of the orientation, based on her/his choices.
- Note that each activity should have an interface.
- Note that ~~time~~ duration, carboon footprint, and cost should also have interfaces.
- Use Enums, to the extent possible, to specify user choices.

Design Requirements

- Same as previous assignments.

Code Organization

- Your directory structure should be the following:

```
-LastName_firstName_LastName_firstName
  ---studentOrientation
    ----- build.xml
    ----- README.txt
    ----- src
        ---studentOrientation
        ----------driver
        ---------util
        ---------other packages that you need
```

Code Templates

- None provided for this assignment.

Submission

- Same as Assignment-1

Late Submissions

- The policy for late submissions is that you will lose 10% of the grade for each day that your submission is delayed.

Grading Guidelines

Grading guidelines have been posted [here](#).

mgovinda at cs dot binghamton dot edu
Back to [CS x42: Programming Design Patterns](#)