Computer Science 010: Design and Implementation of Solutions to Computational Problems

Assignment 5

For this assignment you are going to work on both an assignment related to Python AND you are going to try a different methodology for completing the assignment: Pair Programming.

First, read this article on what Pair Programming is and why we are doing it:
http://collaboration.csc.ncsu.edu/laurie/Papers/EdSym_PL_0318.pdf

For this assignment you will be assigned a partner. You and the partner are responsible for turning in one solution. Both partners will get the same grade, modified by a self-assessment of the teamwork.

When you are writing the code for this assignment you must be colocated. During that time, only the "driver" may touch the computer. The "navigator" must be present and watching the task by assisting the driver in catching bugs, strategizing the solution and looking up documentation.   There should be active communication while you are programming.

Fight against these three phenomena:

Disengagement may present as one of the members physically withdraws away from the keyboard, accesses email, or even falls asleep.

The "**Watch the Master**" phenomenon can arise if one member is more experienced than the other. In this situation, the junior member may take the observer role, deferring to the senior member of the pair for the majority of coding activity. This can easily lead to disengagement.

Silence immediately indicates a lack of collaboration.

Program #1

Complete problem "Business P5.27"
The problem recommends a "Hint", you should treat that as a requirement, not as a hint.
The program should take as a input from the user, one Roman numeral between I and MMMCMXCIX and return the decimal number that corresponds to it from 1 to 3999.

Partner Assignments

Driver	Navigator
Ariel Adams	Kaylee Yoon
Jason Campbell	M'Kya Williams
Jade Chambers	Matthew Walton
Reilly Cole	Heather Totten
Natelli Cripe	Benjamin Thomas
Eric Davis	Abigail Deyoung
Rebecca Smith	Dempsey Salazar
Emma Donelson	Tomilyn Ryba
McKalie Drown	Maya Rouillard
Hannah Fisk	Bailey Reid
Rebecca Frink	Samuel Reep
Sophia Fuller	Dante Poleselli
William Furnberg	Gabriel Parkinson
Zhenyuan Gao	Ryley Oroku
Sophia Gigliotti	Jesse Olson
Jennifer Hoffman	Melissa Moors
Caleb Hsu	Connor McManigal
Nathan Kim	Tanner Leslie
Mohammad Mahjoub	David Kyle

Evaluation

When you are done I will ask for you to complete a confidential self assessment that will be part of your grade. Completing it is part of your grade and working as a good partner is part of your grade. This is what I will ask:
1. List your name and your partner's name.
2. Provide a short summary of your contributions to the assignments. Did you contribute a fair share of the work?
3. Provide a short summary of your partner's contributions to the assignments. Did your partner contribute a fair share of the work?
4. When working together, what percentage of the time would you estimate that you spent "driving" at the computer? What percentage of the time did your partner spend "driving" at the computer? (These should add up to 100%.)
5. Pair programming should be done with both of you at the computer at the same time, working together. Did it work out this way? That is, did you and your partner work entirely together sidebyside for the assignments that you turned in? Did you or your partner do any of the work on your own?
6. Is there anything else that I should know about the general experience of pair programming, or how you and your partner worked out?
7. Nonconfidential question: Is there any feedback you can provide about your partner that I can share, if the need arises? You should feel completely free to leave this section blank if you wish. Alternatively, if you want some constructive feedback about your partner to make its way back through me, this is the place to indicate it.