**CSCE 155N Matlab Programming Project 4 – Spring 2012**

**DUE DATES:**

**Code and Report files: Wednesday 4/25/2012 at 11:59 PM**

**(hardcopy in class on Friday)**

**GUIfy it!**

**Problem Statement:**

Take any of the first three projects and make it GUI. Obvious ways to work with the Connect Four project is to have panels and buttons. Buttons would go at top of each column and perhaps below also (if you are implementing the delete option). It would be nice to have pictures of colored checker pieces appear on the grid. The Ricochet project likewise can use buttons around the rim for shooting and buttons inside for guessing baffles. Possibilities for the Cave project may include sliders to control rate of water flow, where the water is descending from, and perhaps positioning and resizing the victim. Anyway, there is much flexibility in what you do.

Similar to the first two projects, you are to work in teams of two or three students to design prototypes in Matlab. Larger teams may be allowed by permission, but there would be higher expectations. The teams may be different than for the original project.

**Collaboration:**

Work together as a class on any or all aspects of the research and design, ideally taking advantage of the talents of each member of the team. Form small teams to finalize each of the multiple design options. It is essential to keep track of who did what and where any useful information was found. Keeping a log is highly recommended.

**What and How to Submit:**

Read and have your program conform to the “Program Documentation Guidelines” which were provided previously.

By the two deadlines electronically hand in the two files something.m (the Matlab script file) and something.doc (which contains summaries, documentation, and sample runs). In class the second day after each deadline, hand in hardcopy versions stapled together with the cover page in front.

Each team member should submit his/her own analysis of the relative contributions of all the members toward the project. This should be submitted electronically using each member’s handin account. This is in addition to the acknowledgement section of the main report. Assuming allocation is fairly even, all will receive the same grade.

The Word document should contain the following, all carefully labeled, as appropriate to the project. If you wish to augment the credit of the original project, simply update and resubmit. If you are happy with the credit AND there is nothing substantially changed, you do NOT need to update those sections. Instead clearly mark the section as “same as original”:

* Cover page with name(s), the account under which it is submitted, title, date submitted, etc.
* A discussion of the features you implemented in the project. Describe how they work and what Matlab options were used to program them. This should be at a fairly high level, not a line-by-line analysis of the code.
* An “instruction manual” that a non-programmer can use.
* An annotated cut and paste sample dialog of the running of the program. (Hint: Use the ‘diary’ command.)
* A discussion of the testing that was performed. This should include testing of each component as it was being built, and testing of the final program ensuring that it works properly under a comprehensive range of conditions.
* An annotated cut and paste of a sample dialog demonstrating how your program responds to extreme and faulty input. (This could be combined with the previous section.)
* Acknowledge all collaborations (both internal to the team and external), detailing what each person contributed individually and what was done jointly. Indicate approximate percentages of the work contributed by each person in designing, coding, testing, documenting, and preparing the report.
* State all assumptions that you made regarding the constraints and features of the project..

**Grading Criteria:**

* Program functions as intended – 50%
* Program logic is well designed – 30%
* Documentation guidelines are followed – 10%
* Testing is comprehensive – 10%