**ENED 1091**

**Spring 2016**

**Introduction to the Project 1**

**Scenario:**

The first team project for this semester is to write a program to play a game or a set of games depending on the level of complexity of the chosen games.

**Requirements:**

1. Teams will consist of 2-3 students.
2. A team leader must be chosen. The team leader will be responsible for submitting a short final report and the final code (m-file) to Blackboard. However, all team members will be involved in writing the code and the final report.
3. The team will choose a game or set of games to reach a total level of complexity of 4 points. A list of games and associated level of complexity is included in this document.
4. Attendance at recitation sections is mandatory. If a team member misses a recitation section due to illness or some other unavoidable circumstance, the team member must contact his/her team and arrange to work on some portion of the project outside of class to make up for the absence. The team must document the make-work done by the missing team member in the final report. If the missing team member does not make up for the missed session, that member will lose 10 points (out of 100) from the final project grade. Any team member who misses two or more sessions and cannot document a serious illness or other verifiable emergency will be removed from his/her team and will have to complete the project individually.

**Schedule and Milestones:**

1. Week of January 11th:
   1. Project Assigned.
   2. Form teams. Choose a team leader. Exchange contact information
   3. Discuss ideas for game(s).
   4. Start initial coding
2. Week of January 18th:
   1. Work on Project
3. Week of January 25th:
   1. Work on Project
4. Week of February 1st:
   1. Demonstrate projects
   2. Write short final report
5. Week of February 8th:
   1. Team leader submits report and final code (m-file)
   2. All team members submit peer evaluation form

**Game Choices and Point Values**

* You need a total of 4 points
* You must use the graphics (boards, card deck, and/or dice) provided for each game.

***BOARD GAMES:***

Battleship (3-4 pts)

  3 – Use random ship placement function (setup.m) to determine location of computer and player ships, computer shoots randomly

  4 – Allow for user placement of ships (must check that the ship placement is valid), computer shoots intelligently

Adventure (3-4 pts)

  3 – static invisible monsters and items, somewhat complicated algorithms for determining results of fights with monsters

  4 – smart monsters that track user location and move toward the user, complicated scoring algorithms for determining results of fights, multiple levels

Connect Four (3 pts)

Mastermind (3 pts)

Othello (4+ pts)\*

***CARD GAMES:***

Memory (2 pts)

Black Jack (3 pts)

Euchre  (4+ pts)\*

Poker (4+ pts)\*

***DICE GAMES:***

Craps (1 pt)

Pig (1 pt)

Yahtzee (4 pts)

\*Games marked as 4+ are particularly difficult and only recommended for teams of good programmers.

**Final Report Requirements:**

Accompanying the program for your project will also be a ***short*** final report for the project. The description will need to contain the following components, and should be well written (i.e. minimal spelling, grammatical errors).

Components for the Final Report:

1. An introduction section explaining which game(s) were chosen by the team and why
2. A section for each game that briefly describes the game itself and provides instructions on how to run the program for the game
3. A section describing any particular challenges faced by the team in completing the project
4. A section describing the contributions of each of the team members to the development of the project. If a team member was absent, explain how the missed time was made up outside of class.

**Rubric for Team Project 1: ENED 1091**

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| **Criterion** | | **Possible Points** |
|  | **Total Complexity Points of Working Game(s)**   * 4 or more points (35) * 3 points (25) * 2 points (15) * 1 points (5) | 35 |
| **In-Class Demonstration**   * Games worked (10) * Games are user friendly (5) | 15 |
| **Good Programming Practices**   * Good Variable Names (5) * Commented Code (5) * Efficient Code (10) | 20 |
| **Final Report** | 10 |
| **Individual Points** | **Submitted Peer Evaluation Form** | 5 |
| **Participation Score (Contribution to Project)** | 15 |
| **Penalties for Absences not made up?** |  |
| **Total: Project Score** | | **100** |