CIS 3309 Term Project

This project will give you experience applying all the skills you learned in class to build a complex software system using component-based software design principles. This project is also an exercise in team programming where you will form a team of 2 to complete the project. Your team needs to propose a project. The project selection is on a first-come/first-served basis and must be approved by me. You need to provide documentation for your project, and have the documents reviewed by me before you can begin implementing the project. You will not be able to fully implement the project until we finish discussing databases in lecture, but you can still begin the project without using a database.

**Requirements:**

The requirements are based on the type of project your team develops. However, all projects must include the following elements.

* The program should have a main start screen that allows the user to easily navigate the application.
* The application must make use of multiple forms.
  + Provide navigation between your forms.
* Provide instructions to the user on how to use the application in a separate help form.
* The program must use images to make the application more attractive and professional.
* The program must use error handling and validate all user input. Programs shouldn’t crash for any reason.
* The application must utilize a database to store all of the data used by the application and dynamic data binding.
  + The GUI’s data should come from the database as much as possible.
  + For example, if your application has a drop-down box used to choose an employee, then the drop-down box shouldn’t have the employees added manually using the designer; it should be done automatically with the data come from the database.
  + Also, you must manually write all the code to connect to the database and manipulate it through adding, editing, and removing data. You cannot use the DataSource control discussed in the textbook or any other control that automates this for you.
* The project must implement component-based software design using MVC. You will be graded on how well you organize your classes, assign responsibilities to you classes, and all other component-based design techniques discussed in class.
  + The main aspect of this project is to make use of component-based software design concepts learned in class.
* You need to create UnitTests for all the classes except for the actual form classes that represent the GUI.
  + You must write the UnitTests in parallel with your classes. You must be able to demonstrate this when asked or your project will lose points.
* A current working version of your project’s solution and all code must be kept in the CIS3309 folder of the network drive (G:\CIS3309\TermProject).

**Grading:**  
I will evaluate the program based on the documentation (planning phase), the implementation of the game, and how well you implemented component-based design in creating reusable component-based code. You need to make all the elements of the program reusable components with exception of the GUI. I will also grade you on how well you worked as a team. Each member of the group is responsible for an equal amount of work designing and coding the system. You shouldn’t assign the GUI to one member and everything else is done by the other member. The work for each element (database, code, GUI, plans) should be divided equally so that each member has done some work on each element. You must prove that you done the work in order to received credit.

**Due:**See the assignment posting under the Assignments section on BlackBoard.

**Submission:**

You need to zip the root folder for your solution into a single zip file and submit the assignment in Blackboard. To submit the assignment, you need to click the Project’s Title “Term Project” to view the submission form and upload the file. Note: Only one person in your team needs to submit the project.

**Make sure you properly submit your assignment and that it works. Programs that don’t run or don’t contain all the necessary files will not be graded.**

Please be sure to save your work periodically as you proceed and also back it up. You may want to store it on your flash drive. If you are going to zip an application in order to store it, BE SURE TO FIRST CLOSE Visual Studio. If you do store information on your flash drive be sure to copy it to a hard drive on your computer before working with the project.