**TIM 58: Systems Analysis and Design**

**Winter 2017**

**Team Project Part Three**

***Project Folder Due at the Beginning of Class on Thursday, March 2.***

In Part Two your team generated its Functional and Nonfunctional Requirements for the project’s information system. Part Three focuses on the **Functional and Structural Requirements.**

1. Select one substantive functional requirement from your list and generate models. Specifically, generate:
   1. A **use-case diagram** that illustrates the basic processes or external functionality that the system must enable (e.g., Fig. 4-21).
   2. A set of **use case descriptions** for at least THREE use cases in the use-case diagram (e.g., Fig. 4-13).
   3. At least TWO **activity diagrams** that show the steps needed to carry out different functions of the use case (e.g., Fig. 4-8).

The most important part of this step is getting the diagrams to be consistent with the use case descriptions. The use case descriptions should be the focal point of your efforts.

1. For the same functional requirement, generate **CRC cards** (e.g., Fig 5-6) and a **Class Diagram** (e.g., Fig. 5-7)**.** In the book, CRC cards have information on both the front and back; please included both sides on your cards.
2. On pages 242-3 of our textbook there is a section called *Balancing Functional and Structural Models*. It offers four steps that help confirm that functional and structural models are consistent with each other, or “balanced.” For each of the four steps:
   1. List the step.
   2. Demonstrate that the step has been carried out for your project. In this class project, not every description or diagram needs to be prepared (just the items and numbers listed in the assignment), so if, for example, a CRC card does not exist for a certain class, simply state this.
3. In your Project Folder,
   1. After Separator #3, include your use-case diagram, use-case descriptions, activity diagrams, class diagram, and CRC cards (these can go in a pocket of the notebook).
   2. In the Appendix, add your Functional and Structural Model Balancing Analysis (from Step 3 above) as well as any original versions of the models and cards before they were adjusted as a result of Step 3.