**TIM 58: Systems Analysis and Design**

**Winter 2017**

**Homework Set #8 (covering Chapters 8 and 9)**

*Due as a paper copy in class at the beginning of class Tuesday March 7.*

1. **Explain the concept of polymorphism and give an example. (3 pts)**
2. **Describe the concept of inheritance. What kinds of inheritance conflicts can arise (explain two types)? (6 points)**
3. **Summarize the first three steps of the normalization process. (3 pts)**
4. **Explain the terms denormalization and clustering. How are they linked? (3 points)**
5. **Why would an analyst first normalize and then denormalize the design of the data management layer? (3 pts)**
6. **Explain the term Indexing. (3 pts)**

1. **Why should the object persistent classes be dependent on the associated problem domain classes instead of the other way around? (3pts)**
2. **Explain what a contract is, the purpose of a contract, the parties to a contract, and what is specified in a contract. Make up an example of your own that illustrates all of the above, and provide a filled-out Contract Form. (6 pts).**