**TIM 58: Systems Analysis and Design**

**Homework Set #7**

*Due as a paper copy in class at the beginning of class Tuesday February 28.*

**1.a The book presents three approaches to acquiring design services: custom development, package development, and outsourcing.** **Explain what each of these are and provide one potential advantage and one potential negative associated with each. (3 pts)**

**1.b The book’s perspective on potential benefits and negatives focuses on the perspective of the company. Now please take on the perspective of an individual who is graduating from college and is considering three job offers in Systems Design: one from a company that plans to custom design its information system, one from a company that produces packaged software solutions (e.g., Oracle, Microsoft), and one from a consulting firm that provides complete outsourcing services for information system. If you were this person facing this choice, what would be more or less attractive to you about *the nature of the work* for each company (assume that salary, location, and other aspects of the jobs are similar)? (3 pts)**

**2. Name and describe the five different software layers. How do these layers relate to functional and nonfunctional requirements (from Ch. 3)? In Figure 7-19, why are no arrows pointing at the layer on the bottom and no arrows pointing at the layer on the top? (6 points).**

**3. What is an “object wrapper” and why is it used? (1 pt)**

**4. Look at Figure 7-2 on p. 244, which describes relationships between functional and structural models. If you track lines running sideways, you will find four occurrences of the term “AssociatedWith”. For each of these, list what items are associated and how they are associated. (6 pts).**

**5. Figure 7-8 on p. 250 shows relationships between functional and behavioral models. The term “AssociatedWith” shows up four times. For each list what items are associated and how they are associated. (6 pts)**

**6. Figure 7-13 on p. 253 shows relationships between structural and behavioral models. The term “AssociatedWith” again shows up four times. For each list what items are associated and how they are associated. (6 pts)**