

SAMPLE MIDTERM EXAM

QUESTIONS

PART A. MULTIPLE CHOICE. Select one choice only.

....

PART B. MODELING.

1. Giving reasons for your answers based on the type of system being developed, suggest the most appropriate generic software process model that might be used as a basis for managing the development of the following systems:

- a. A self-driving car
- b. A multiplayer video game
- c. An e-commerce system

2. Develop an activity diagram for the following flow of activities:

“A car assembly line begins by assembling the chassis. Next, the interior team bolts the seats to the chassis, then the steering column. At the same time, the engine team mounts the engine to the chassis, and then tests the engine. If the engine fails the test, it must be remounted. After the engine and interior are installed, the body is bolted to the chassis.”

3. Consider an ATM machine. Write a use-case specification for the “Make EFT” use-case. Include at least one exceptional and one alternate flow.

4. Draw a use case diagram for the following case narrative:

“A Real Estate Inc. (AREI) sells houses. People who want to sell their houses sign a contract with AREI and provide information on their house. This information is kept in a database by AREI and a subset of this information is sent to the citywide multiple listing services used by all real estate agents. AREI works with two types of potential buyers. Some buyers have an interest in one specific house. In this case, AREI prints information from its database, which the real estate agent uses to help show the house to the buyer (a process beyond the scope of the system to be modeled). Other buyers seek AREI’s advice in finding a house that meets their needs. In this case, the buyer completes a buyer information form that is entered into a buyer data base, and AREI real estate agents use its information to search AREI’s data base and the multiple listing services for houses that meet their needs. The results of these searches are printed and used to help the real estate agent show houses to the buyer.”