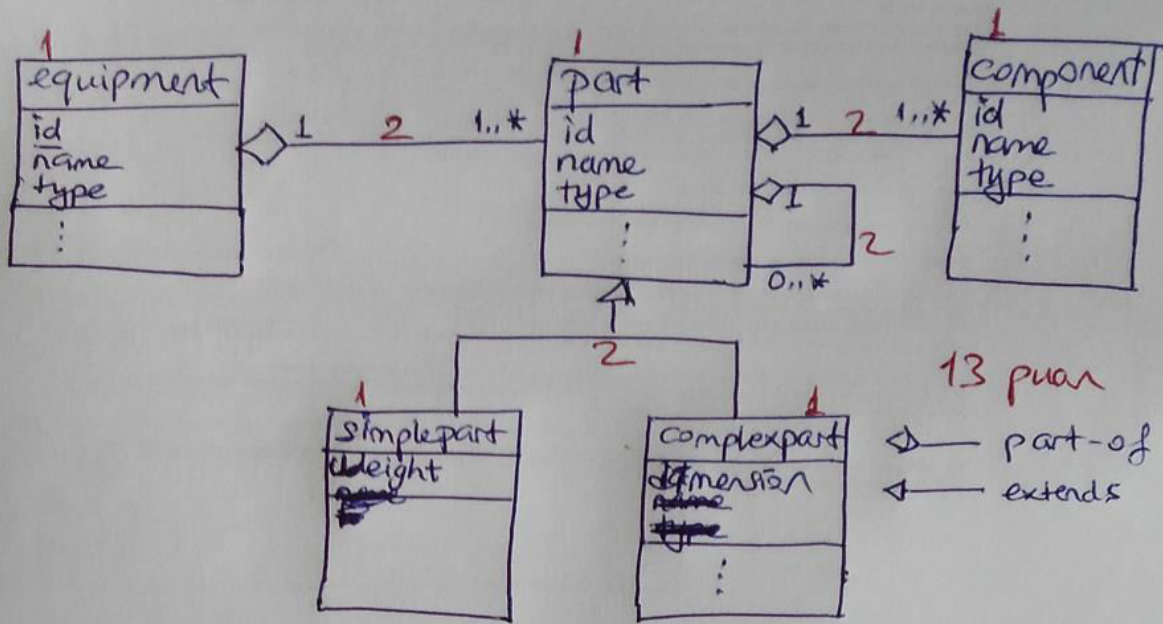


QUESTIONS:

- 1 (10 points) Design class diagram for equipments, parts and components. All entities has unique identification numbers, names, types. Following relationships exist among entity sets: An equipment consists of one or more parts, a part consists of one or more components or zero or more other parts. There are two kind of parts: (i) a simple part consists only of components and has a weight attribute, (ii) complex part consists of components or other parts and has a dimensions attribute.
- 2 (10 points) Design a use case diagram for managers who buy equipments, parts or components, and for procurement-specialists who buy only parts. Buying parts involves buying components and/or other parts. Buying equipments or parts or equipment is done in 2 steps: (i) receiving receipt (ii) making payments. Create appropriate associations between actors and tasks. Create at least one meaningful <<include>> and at least one <<extend>> relationship.
- 3 (10 points) Design a state diagram for representing states and transition for mails in a postal system as follows:

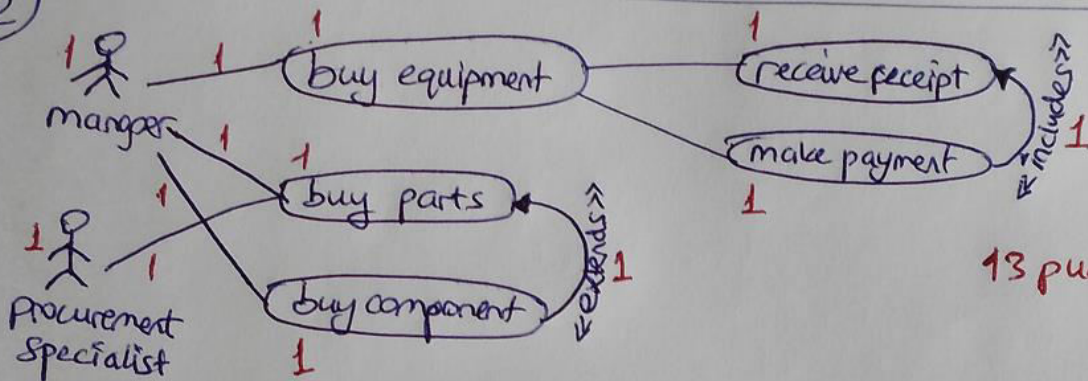
States:
 - Sender's post box (gönderenin posta kutusunda)
 - Collection center(toplama merkezinde)
 - Receivers's post box (alıcının posta kutusunda)
Events
 - [in sender's post box] If mail has invalid address send it back to sender's post box.
 - [in sender's post box] If mail has valid address send it to collection center
 - [in collection center] if processing has finished, send it to receivers's post box
 - [in collection center] if processing has failed, send it back to senders's post box
 - [in receivers's post box] if receiver not in address, send it back to collection center.
- 4 (10 points) Draw an activity diagram for the problem in question 3. Starting with putting mail Sender's post box, continuing with collection center and receivers's post box.
- 5 (10 points) Design a sequence diagram for a visitor to logging into his/her account in a web site which basically involves (i) inputting username/password to a form (ii) checking username/password against the database, if the username/password are correct, displaying user-menu, otherwise displaying login screen and in both cases storing login audit data (login date/time and username) in the database.

1



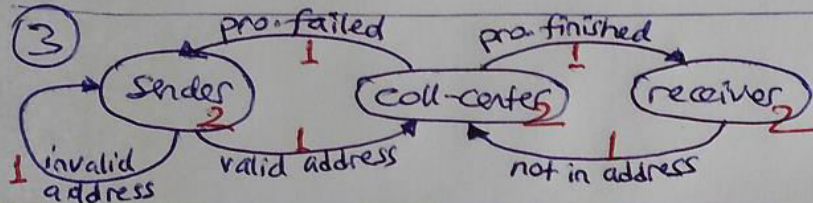
13 puan

2



13 puan

3



11 puan



13 puan

