

Dynamic Modeling

1. Find the objects and events in the related scenarios of the system. Construct sequence diagram(s) according to the description of system behaviors.

Answer:

Actors and Objects

The information that is exchanged

Any conditions or constrains

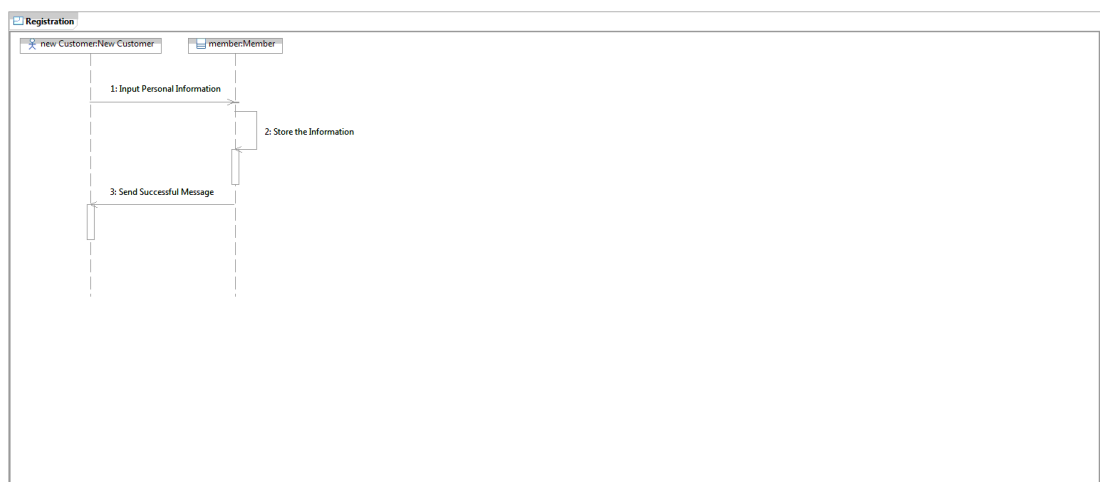
Use Case	Objects	Events
Register As A Member	New Customer Members Member Database	<ol style="list-style-type: none">1. A new customer inputs personal information to the member database.2. The member database stores the information and sends the successful message to the member.
Purchase Goods	Members Sensor Monitor Member Database	<ol style="list-style-type: none">1. A member waves the membership card at the sensor or enters his membership number.2. The sensor signals the monitor for

		<p>information.</p> <ol style="list-style-type: none"> 3. The member inputs his or her password. 4. The monitor checks whether the password is valid or not. (The validation process may take some time) 5. If the password is correct, the system records the purchase information to the member database.
Generate Statements	<p>Statement Generator</p> <p>Management-Platform</p> <p>Manager</p> <p>Member Database</p> <p>Members</p>	<ol style="list-style-type: none"> 1. The management platform creates a statement generator. (not an event) 2. The statement generator shows dialog box to the manager. 3. The manager clicks "Generate" button 4. The statement

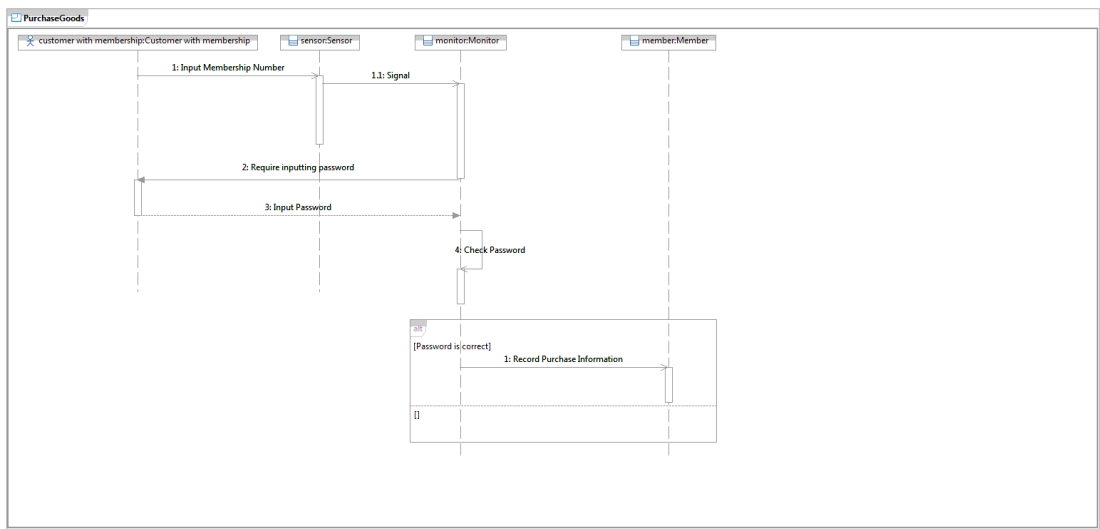
		<p>generator starts fetching data from member database. (The fetching data process may take some time)</p> <p>5. The statement generator generates a statement (sends an e-mail) to every member who has made purchases in the month.</p>
Carry Out Lucky Draws	Management-Platform Member Database Manager	<p>1. The management platform fetches the data from the member database.</p> <p>2. The management platform selects 3 members and shows a dialog box to the manager.</p> <p>3. If the manager clicks "Confirm" button within</p>

		<p>half an hour.</p> <p>4. The management platform sends discount e-coupons to the selected members by e-mail.</p> <p>5. If the confirmation is not received after 30 minutes, the management platform sends a cancellation message to the manager.</p>
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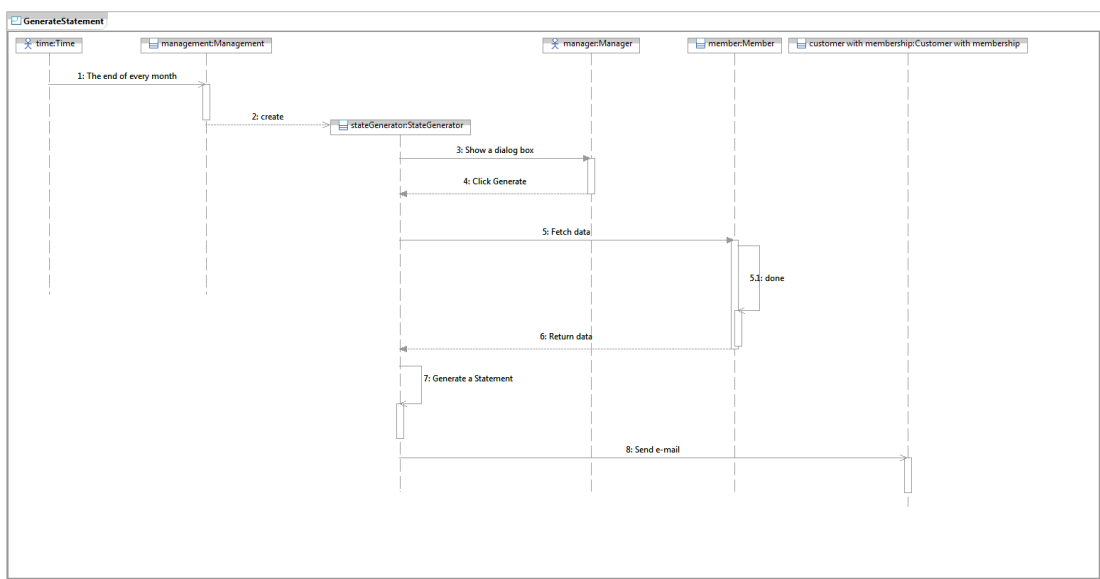
The Sequence Diagrams: Registration:



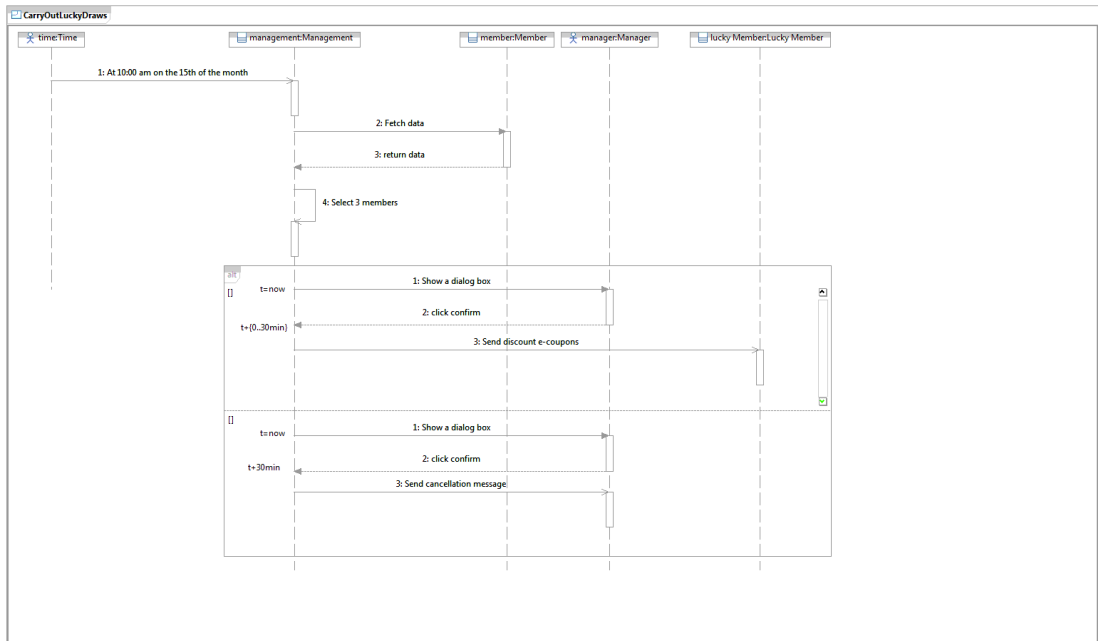
Purchase Goods



Generate Statements:

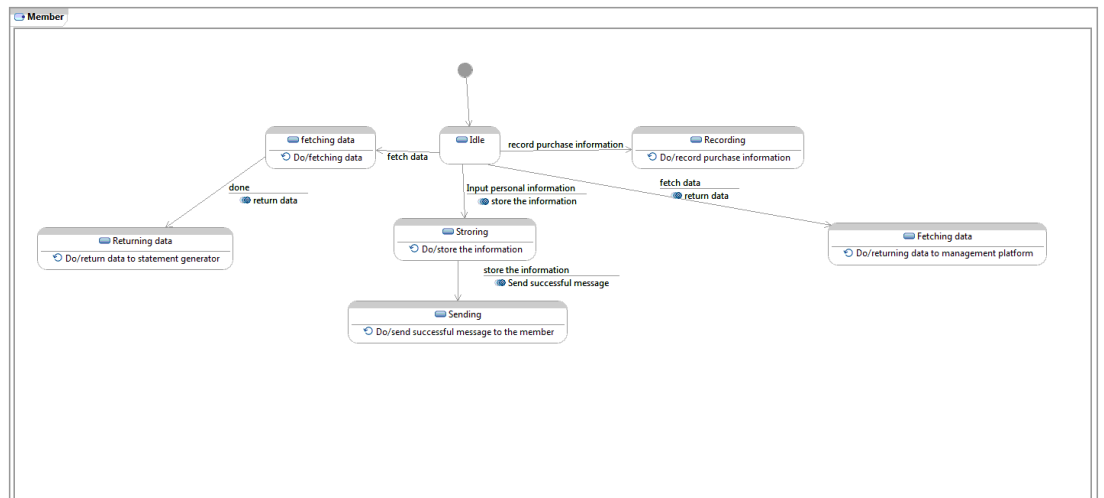


Carry Out Lucky Draws:

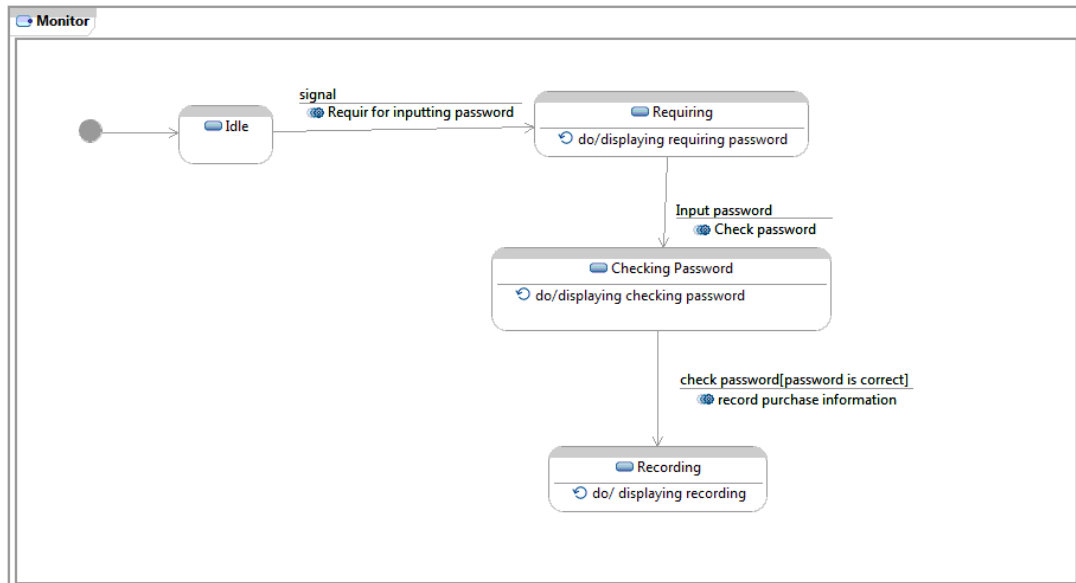


2. Construct state machines for the following objects that are underlined in the above section:

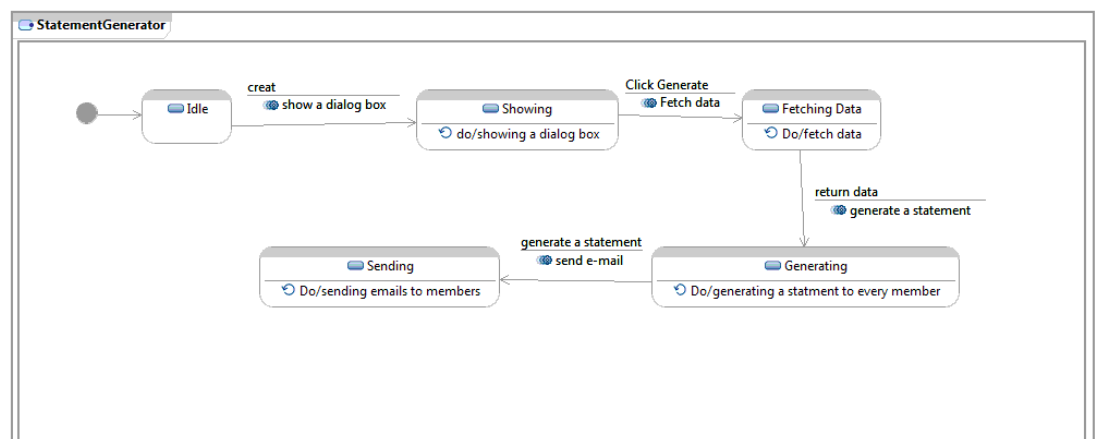
1) Member



2) Monitor



3) Statement Generator



4) Management

