SYS466 Fall 2018
Professor: Barb Czegel

Lab 7 (2% of Final Grade): Object level Sequence Diagrams –advanced topics

Due: At the end of the lab session

Objectives:

- Create sequence diagrams for generalized and specialized objects
- Create sequence diagrams for objects in a composition relationship
- Use service controllers to show interfaces with subsystems

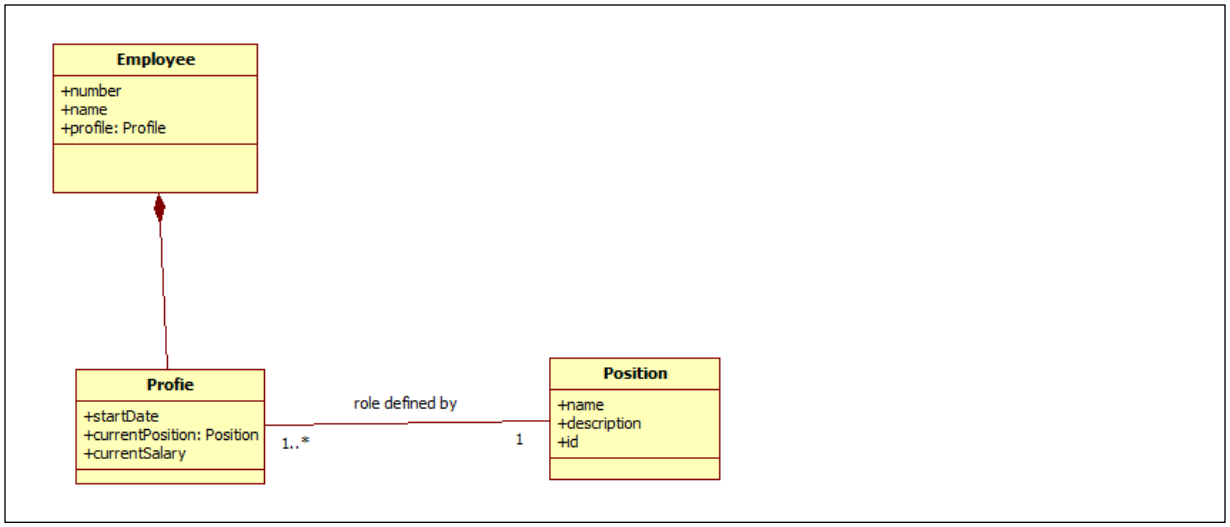
This is an individual lab and must be done in the lab room itself. **INDIVIDUAL SUBMISSIONS ONLY. PLEASE DO NOT USE INTERNET EXPLORER TO ACCESS THIS LAB – USE FIREFOX OR CHROME.**

Submission and Credit:

- Only those students who sign in will get credit for the lab. Submission is to be done via Blackboard. Email submissions WILL NOT be accepted.
- **Name your submission name_Lab7.uml, for example JenSmith_Lab7.uml**

Special Instructions For This Lab:

- You will be working in the **Company and Plowing models of the uml file you have been given**. In that model you will find diagrams and empty sequence diagrams. Please use these for your answers. Do not create any new diagrams
    - The class diagram named Controllers will contain the 4 controller classes you need. It is in the Company model but you can use it in the Plowing model also



Exercise 1: Generate Employee List

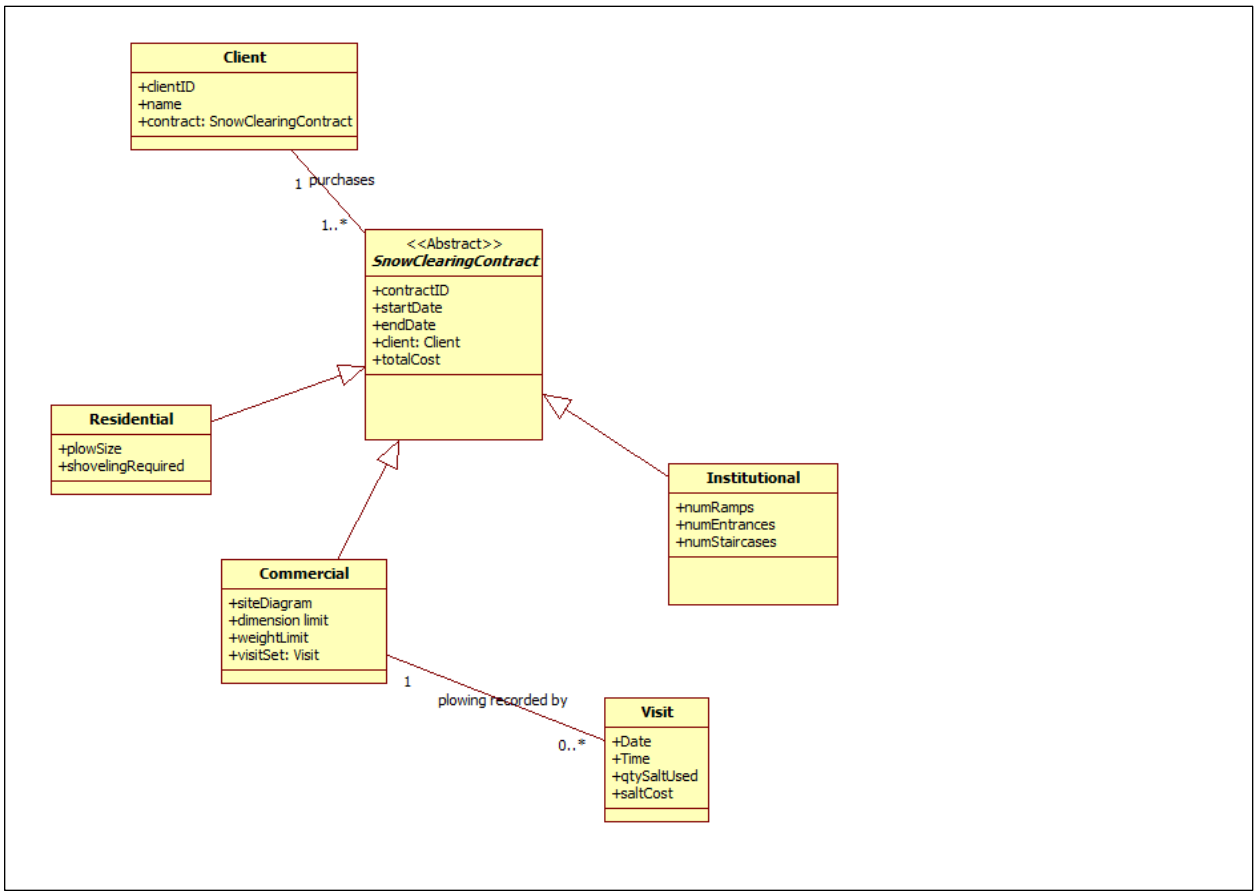
Put into Employee model into SD titled Generate Employee List

Manager	System
Requests employee report.	Generates a report showing all employees (name and number of each employee) and the position of each employee (position name).

Exercise 2: Update Employee Position

Put into Employee model into SD titled Update Employee Position

Actor – Manager	System
Enters employee number.	Displays employee name and employee position name
Requests to see all positions	Displays all position names
Chooses a position and requests to replace the employee's position with the new position.	Changes the employee's position to the new position. *(Removes old position from employee* *Adds the new position to employee)* Saves the changes to the DB.



Exercise 3: Report on Contract Value

Put into Plowing model into SD titled Report on Contract Value

Actor – Manager	**System**
Enters a date	Gets total value (sums total cost) of all contracts with start date greater than entered date.

Exercise 4: Report on Salt

Put into Plowing model into SD titled Report on Salt

Actor – Manager	System
Enters commercial contract ID	Returns value of total salt used so far in that contract – quantity and $ value.

Exercise 5: Create Commercial Contract

Put into Plowing model into SD titled Create Commercial Contract

Actor – Manager	System
Enters client ID	Shows client name
Enters start date, end date, total cost and requests to create Commercial contract	Creates contract and displays the contract so far.
Adds site diagram, weight limit, dimension limit	Add site diagram, weight limit, dimension limit to contract. Displays contract so far.
Checks everything, and indicates to go ahead with contract.	Saves contract to the DB. Sends contract to payment system for payment processing

Hint: don't forget reference attributes