For the assignment

- **USDP**
  - Use-case model
  - Activity diagrams (one per use case)
  - Analysis model (one per use case)
  - Class diagram
  - Sequence diagrams (one per use case)

- **Database**
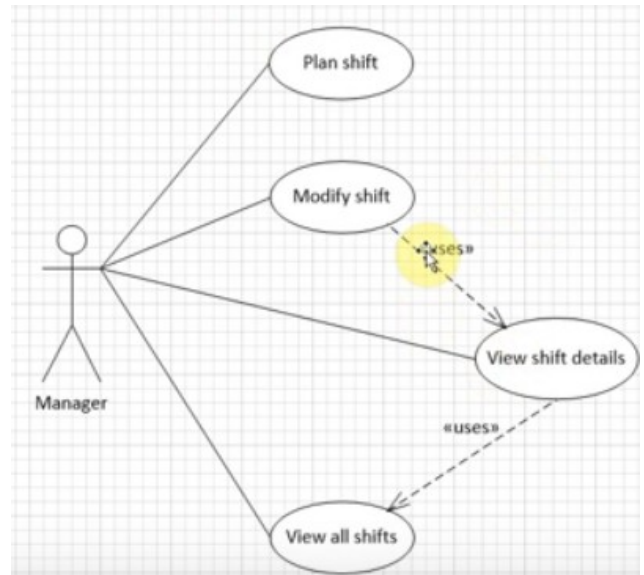 - Entity relationship diagram

- **Web client**

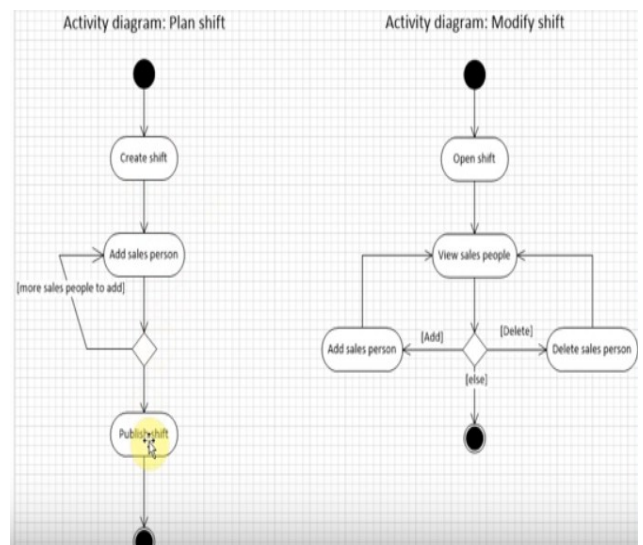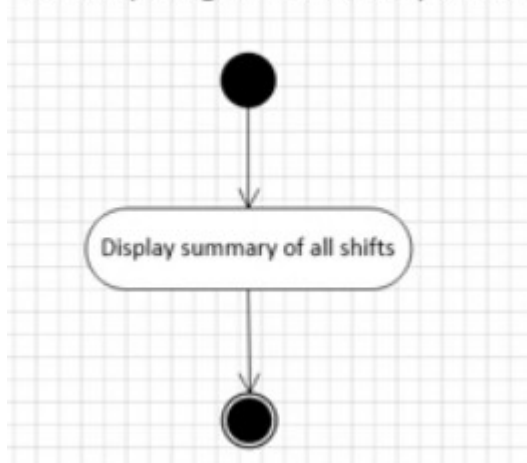CESCOM10067-4: Application Modelling

Garage Case Study

Problem domain
A garage can have franchise arrangements with one or more car manufacturers. The garage employs a number of sales personnel who work to sell vehicles to business and private clients. The sales team is very successful, and the volume of sales is rising rapidly, but it is increasingly difficult to manage the paperwork involved with:

- tracking the current stock of vehicles
- tracking customer relationships
- tracking sales
- planning employee shifts

Activity diagrams Tips

what is it that the administrator needs to do to Add,Find or Delete Medication from the system**"Database"**

 1. Well first we need to find that Medication if the medication does not exist then we can create the meditation we don't want to add a medication that already exists.

Activity diagram: View my shifts

Activity diagram describes what goes on inside the use case. That is, what activity steps it contains. The best way to do this is to create an activity diagram (UML notation).

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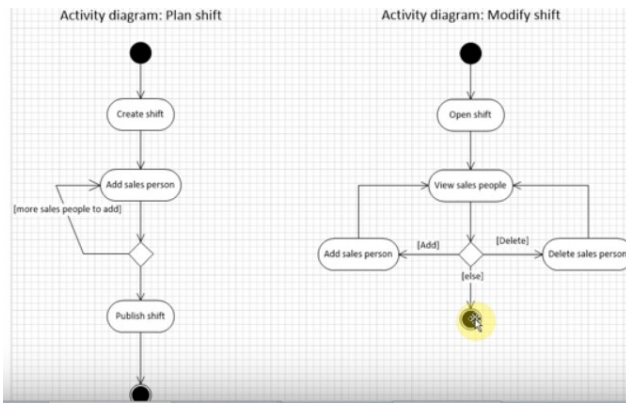
Activity diagram: Plan shift / Activity diagram: Modify shift

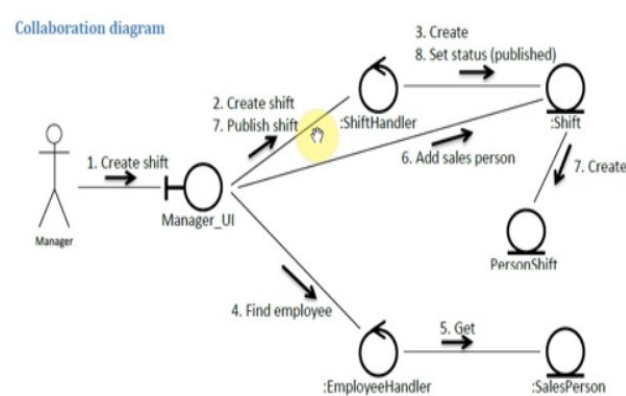**Activity diagram describes what goes on inside the use case. That is, what activity steps it contains. The best way to do this is to create an activity diagram (UML notation).**
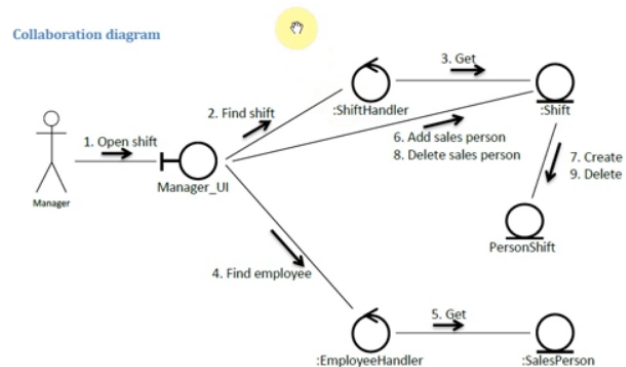
1. interface or boundary class is the user entering point into the system. (UI) or (GUI)

2. Entity classes used to store data in the system.

3. Control classes use to manipulate the entity classes in response to something from a boundary class

Collaboration diagram

Create a shift use case analysis model example
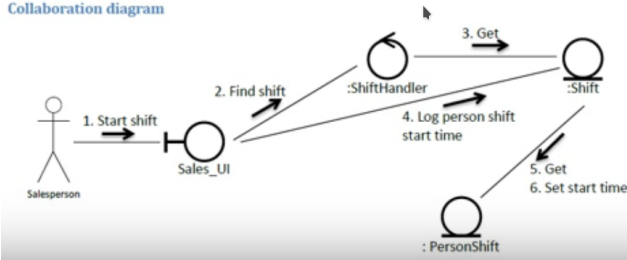
We don't just suddenly create a shift

1. what we find is that the manager the actor asks via the manager UI class   to create a shift this UI class

2. will then ask the shift handler to create a shift and the shift handler

3. will create a shift object.

4. The manager UI class will ask the employee handler to find an employee and the handler will then search through its collection of salesperson objects and get the one that matches the name that was passed in and return now the salesperson so the manager UI now has got a shift object and a salesperson object.

6. can add the salesperson to the shift which will cause the shift to create a personshift object storing the sales person in that shift object.

Collaboration diagram

Collaboration diagram
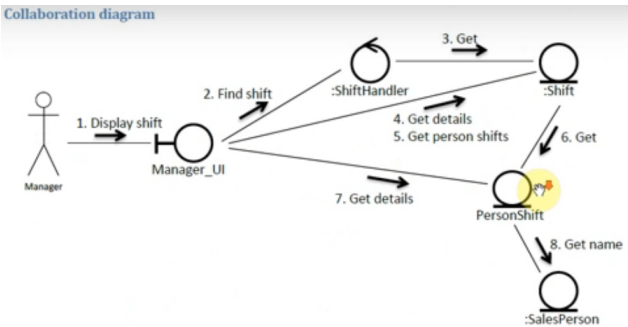
Communication or Collaboration diagrams are used to show links between participants. They focus in on which interactions are triggered and when. They also describe the order of events in all interactions.
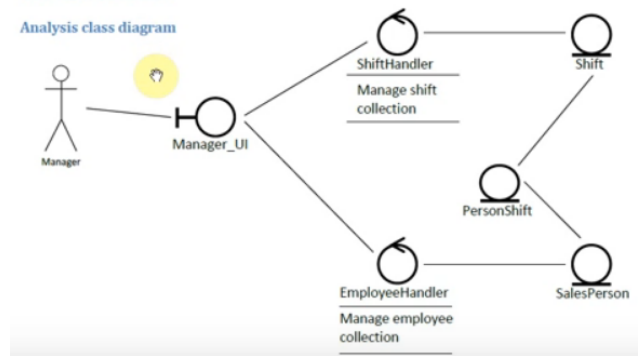
Collaboration diagram

1. Start shift
2. Find shift
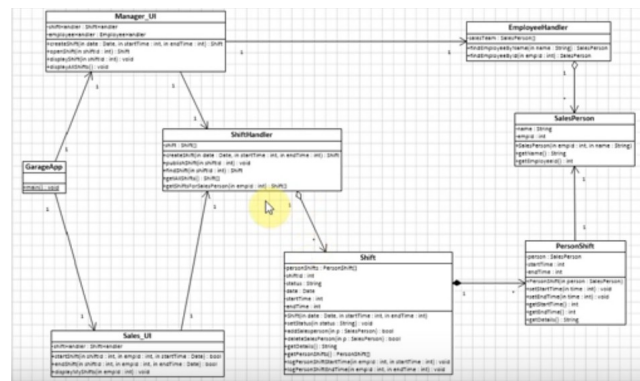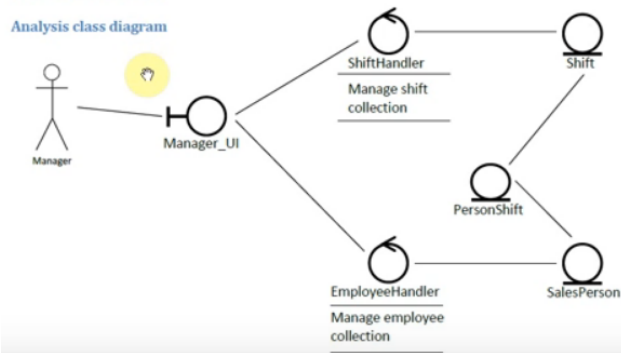3. Get
4. Log person shift start time
5. Get
6. Set start time

Salesperson

Sales_UI

:ShiftHandler

:Shift

: PersonShift

Analysis Model

Use case: Plan shift

Analysis class diagram

Manager

Manager_UI

ShiftHandler
Manage shift collection

Shift

PersonShift

EmployeeHandler
Manage employee collection

SalesPerson

Analysis Model

Use case: Plan shift

Analysis class diagram

Manager

Manager_UI

ShiftHandler
Manage shift collection

Shift

PersonShift

EmployeeHandler
Manage employee collection

SalesPerson

Sequence diagram example

Student UI, Student Manager, Student, Student Module, Module

viewResults()
findStudent()
getModuleResults()
getModule()
getCode()
getTitle()
getResult()
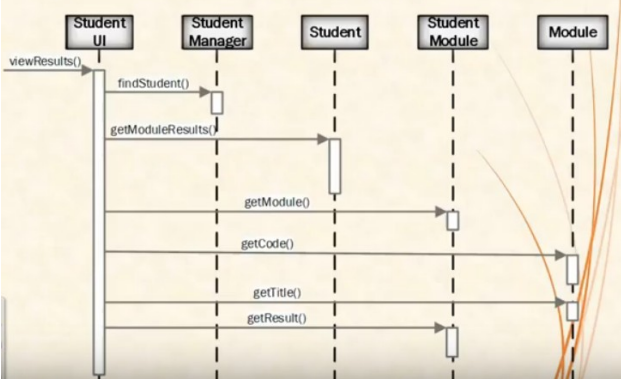
Sequence diagrams are a dynamic modeling solution.
Dynamic modeling focuses on the the interactions occurring within the system.
Sequence diagrams specifically focus on the "lifelines" of an object and how they communicate with other objects to perform a function before the lifeline ends.