WEEK – 2

Structural Modeling-Object Diagram

2.1 Object diagram for a Company's structure

Design and develop an object diagram for a company's structure. a company's,structure,from

which there are mainly two departments - The sales department and the R&D department. The

department contains persons.

/* Object diagram for Company's structure */

To design an Object Diagram:

Select first an element where a new Object Diagram to be contained as a

child.

Select Model | Add Diagram | Object Diagram in Menu Bar or select Add

Diagram | Object Diagram in Context Menu.

To design an Object:

Select Object in Toolbox.

Drag on the diagram as the size of Object.

Name Expression: Edit name expression.

Syntax of Name Expression

expression:: = ['<<' stereotype `&gt;&gt;`] [visibility] name

stereotype: = (identifier)

visibility: = '+' | '#' | '-' | '~'

name: = (identifier)

To design a Link (or Directed Link):

Select Link (or Directed Link) in Toolbox.

Drag from an instance and drop on another instance.

Objects for company structure : Company, department1, department 2,person

Objects:

Company

Department1

Department2

Manager

Employee

Clients

Developers

Attributes:

Company:name, departments

Department1:

Department2

Manager

Employee

Clients

Developers

Department1

Department2

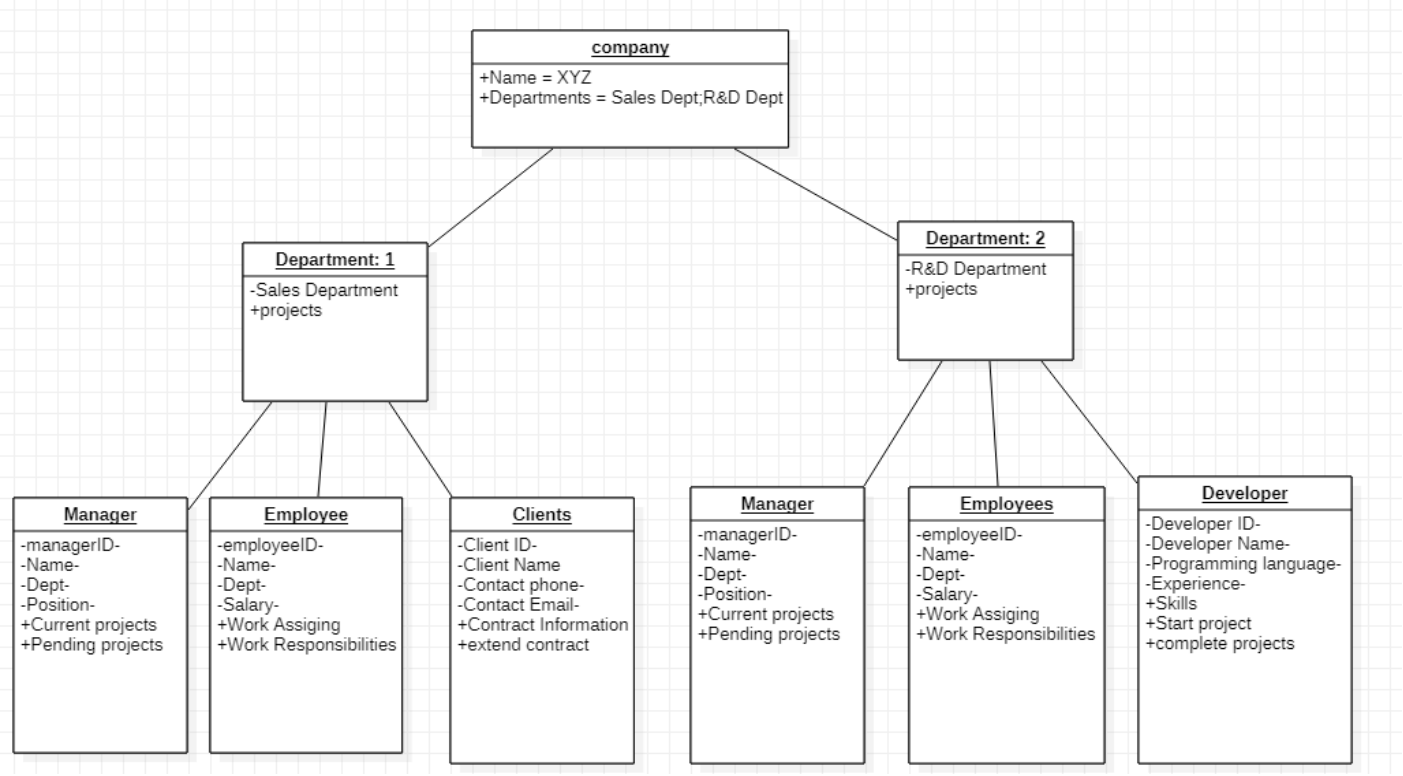
Manager

Employee

Clients

Developers

Object diagram:



2.2) Design and develop an object diagram for a university course department. the courses are math, statics, it divided by graduate and undergraduate

Hints:

/* Object diagram for Company's structure */

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Name Expression: Edit name expression.

Syntax of Name Expression

expression:: = ['<<' stereotype `>>`] [visibility] name

stereotype: = (identifier)

visibility:: = '+' | '#' | '-' | '~'

name:: = (identifier)

Link

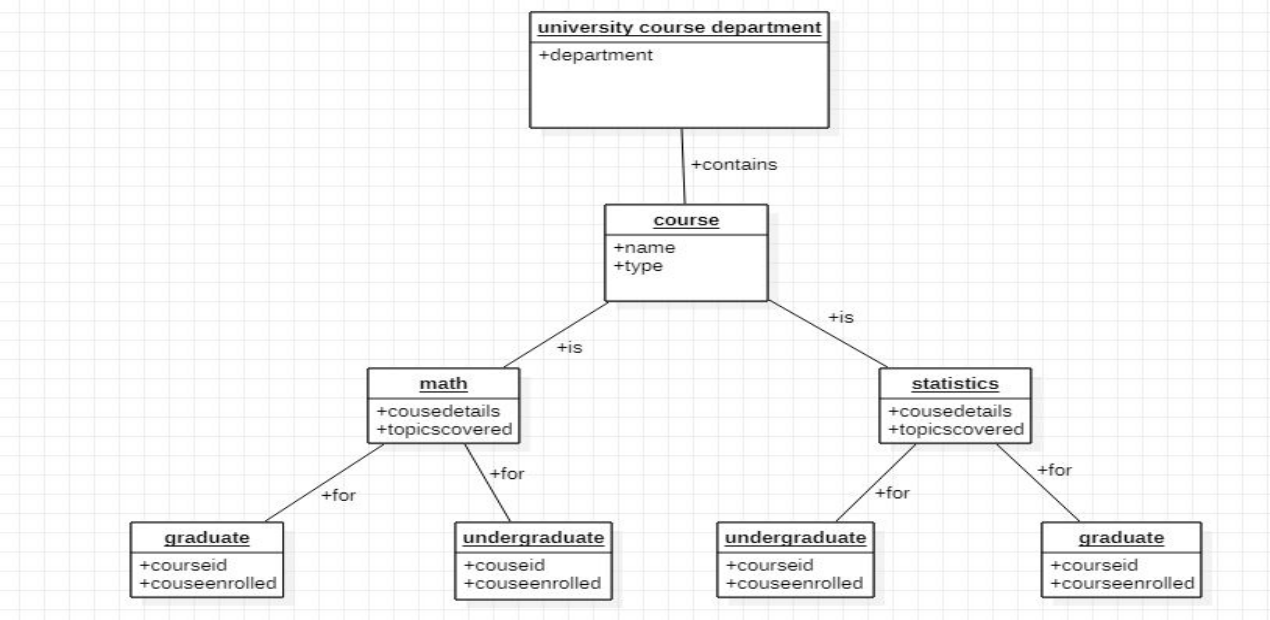
To design a Link (or Directed Link):

Select Link (or Directed Link) in Toolbox.

Drag from an instance and drop on another instance.

Objects : Department, Course, Math, stats, as attributes are graduates,

undergraduates.



Conclusion: The Object diagram was designed successfully by following the steps described above

2.3) Design and develop an object diagram for just-in-time (JIT) inventory system.

Objects

- Customer
- Order
- Normal order
- Special order

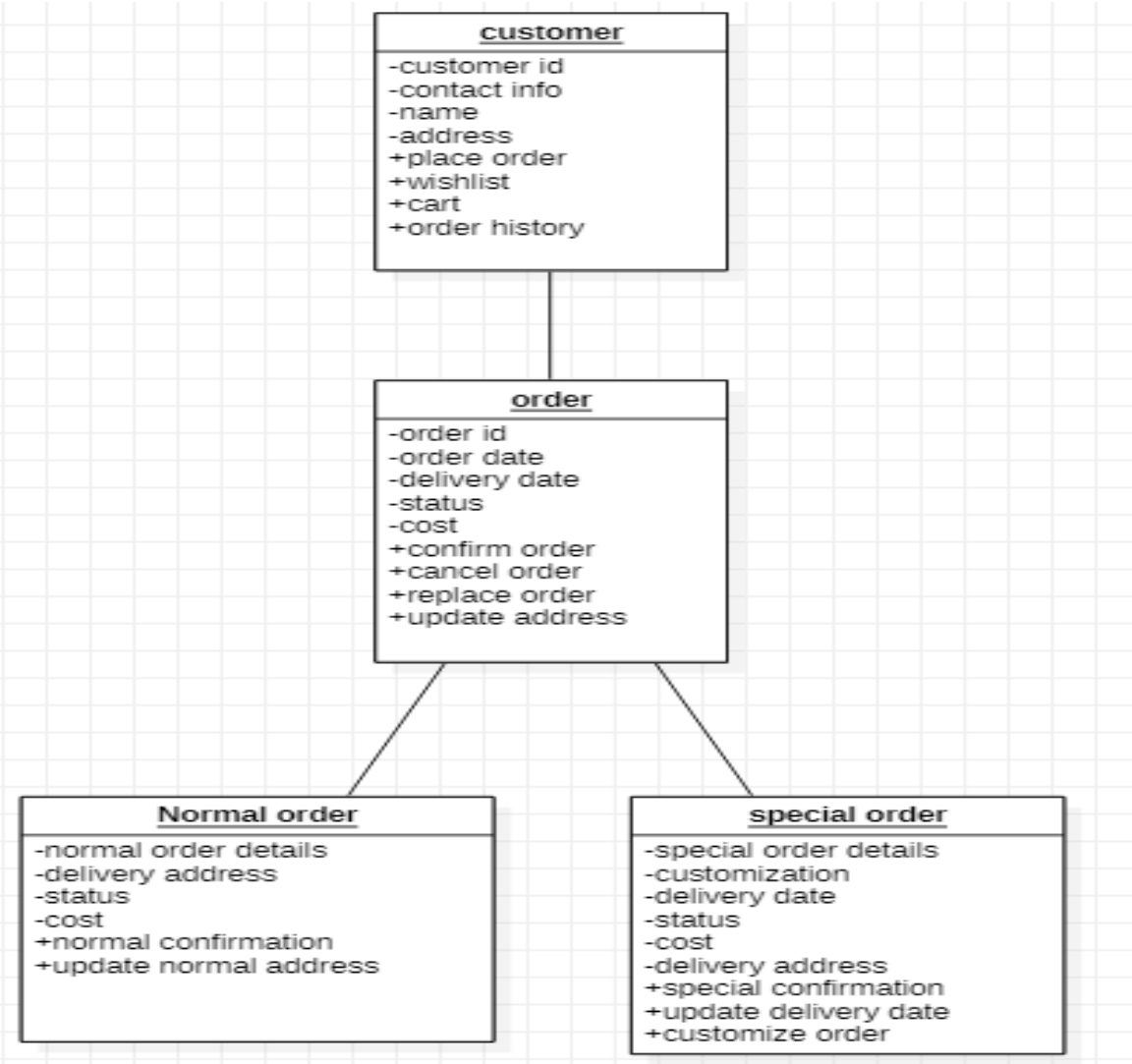
Attributes

- Customer: customer id,contact info,name,address
- Order: order id,order date,delivery date,status,cost
- Normal order : normal order details, delivery address, status,cost
- Special order : special order details, customization, delivery date,status,cost,delivery address

Methods

- Customer: place order, wishlist, cart, order history
- Order: confirm order, cancel order, replace order, update address
- Normal order: normal confirmation, update normal address

- Special order: special confirmation, update delivery date, customize order



2.4: Object diagram for e-Learning on Smart Library

Objects: Administrator, Magazine, Article, Comment, Person.

Attributes:

Administrator: admin ID, admin Name, admin Email, admin Role

Magazine: magazine ID, magazine Title, publication Date, editor

Article: article ID, article Title, author, content, publication Date

Comment: comment ID, article ID, commenter ID, comment Text, comment Date

Person: person ID, person Name, email, account Type

Methods:

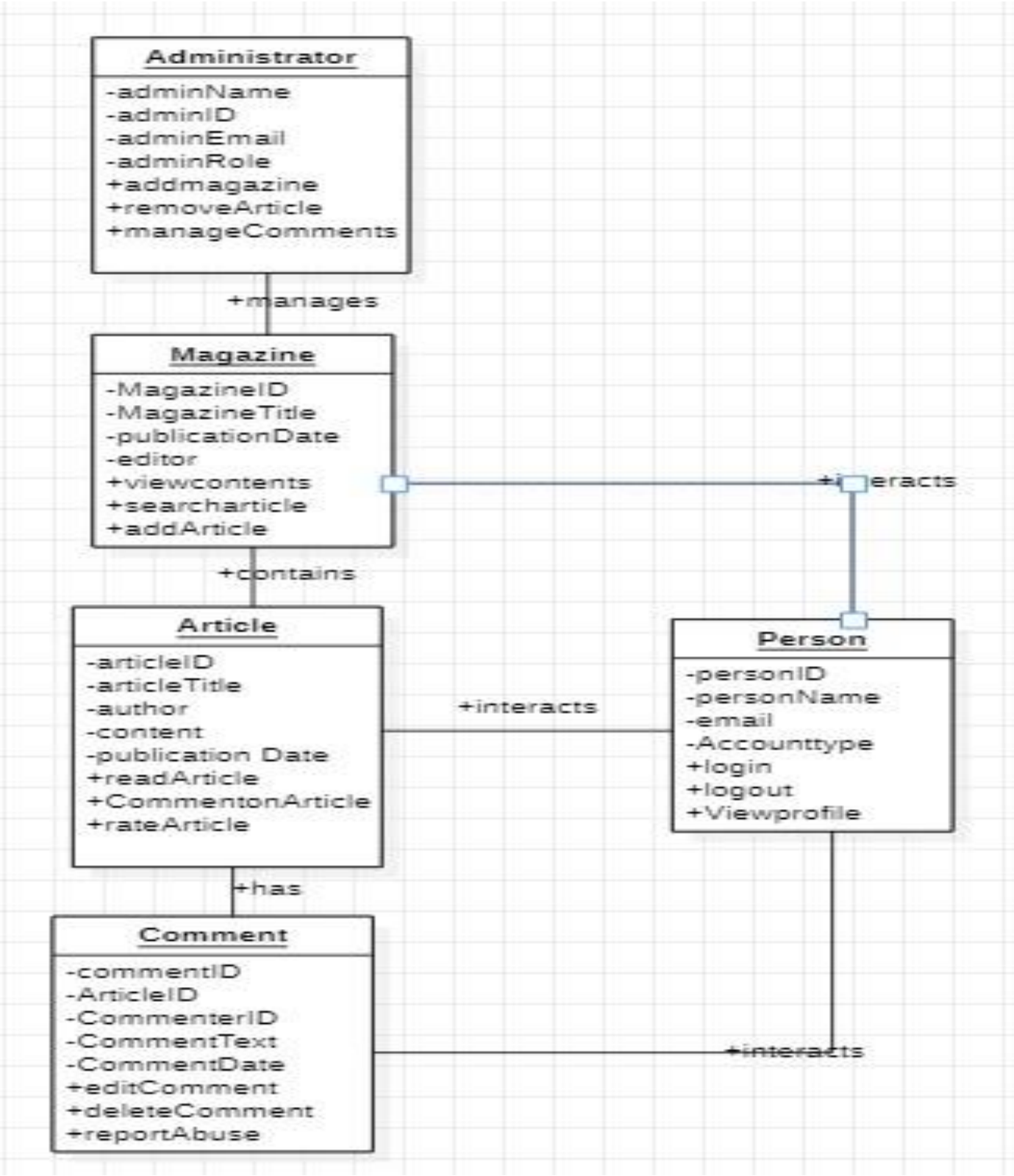
Administrator: add Magazine(), remove Article(), manage Comments()

Magazine: view Contents(), search Articles(), add Article()

Article: read Article(), comment On Article(), rate Article()

Comment: edit Comment (), delete Comment(), report Abuse()

Person: login(), logout(), view Profile()



2.5) Design and develop an object diagram for e-tailing system. The object diagram of an e-tailing system is used to show how the parts of a system work together to make the online shopping operate. The object Diagram for e-tailing system represents the objects and the links between objects. It's an instance of class diagram that shows how objects are linked one to other.

Hints:

/* Object diagram for e-tailing system */

To design an Object Diagram:

Select first an element where a new Object Diagram to be contained as a child.

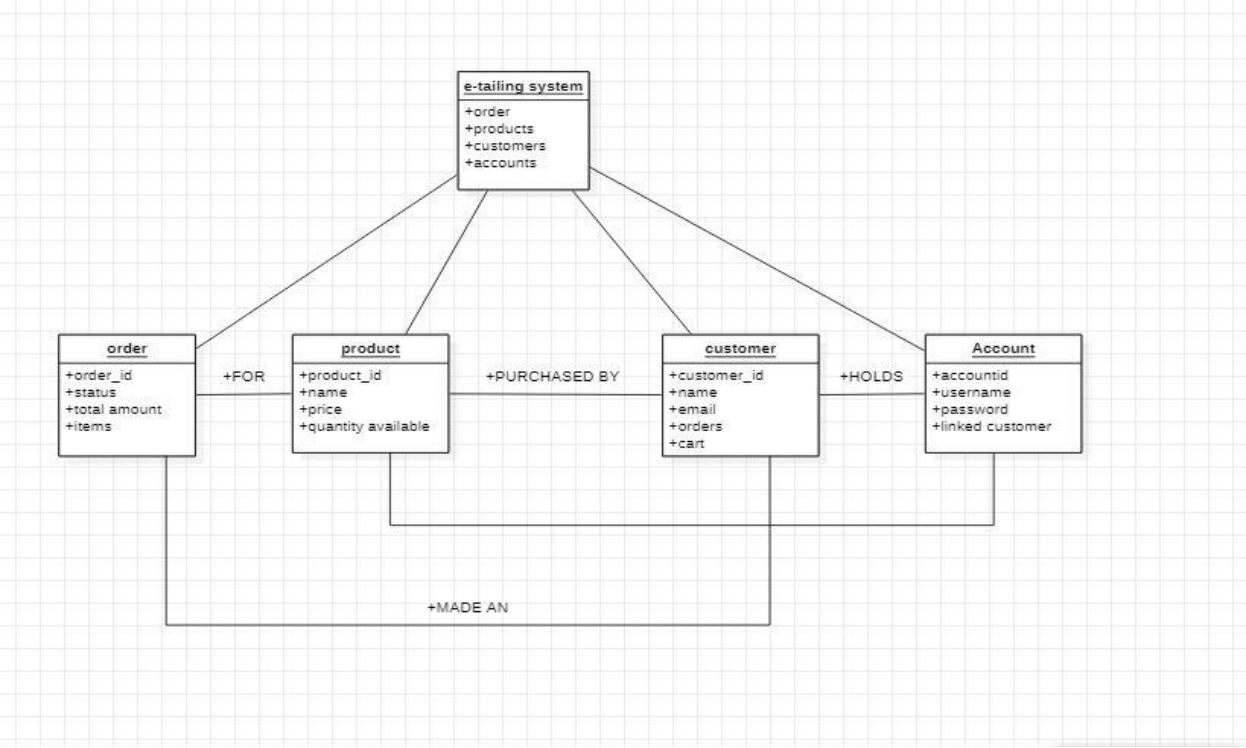
Select Model | Add Diagram | Object Diagram in Menu Bar or select Add Diagram | Object Diagram in Context Menu.

To design an Object:

Select Object in Toolbox.

Drag on the diagram as the size of Object.

Objects: order, product, customer, account.



Conclusion: The Object diagram was designed successfully by following the steps described above.

2.6 Object diagram for Elevator Control System

Design and develop an object diagram for Elevator Control System. The elevator system designed an “ideal” elevator in which some of the technical corners are cut. Our elevator has the basic function that all elevator systems have, such as moving up and down, open and close doors, and of course, pick up passengers. The elevator is supposed to be used in a building having floors numbered from 1 to MaxFloor, where the first floor is the lobby. There are car call buttons in the car corresponding to each floor. For every floor except for the top floor and the lobby, there are two hall call buttons for the passengers to call for going up and down. There is only one down hall call button at the top floor and one up hall call button in the lobby. When the car stops at a floor, the doors are opened and the car lantern indicating the current direction the car is going is illuminated so that the passengers can get to know the current moving direction of the car. The car moves fast between floors, but it should be able to slow

down early enough to stop at a desired floor. In order to certificate system safety, emergency brake will be triggered and the car will be forced to stop under any unsafe conditions.

Hints:

/* Object diagram for Elevator Control Systems */

To design an Object Diagram:

Select first an element where a new Object Diagram to be contained as a child.

Select Model | Add Diagram | Object Diagram in Menu Bar or select Add Diagram | Object Diagram in Context Menu.

To design an Object:

Select Object in Toolbox.

Drag on the diagram as the size of Object.

Objects: Door, elevator control, car, button, indicator, safety