Question 1

CategoryDAO

<>
CategoryItem

+name()

+history

Owner

+name

Address

+streeet
+city
+zip

ProductCatalogService

*

*

1 +currentOwner

1

Category

Product

+productNumber
+price

Review

+nrOfStars
+description

*

ProductDAO

1

Question 2

a.

HistoryList

+addCommand()
+undo()
+redo()
+getPreviousCommands()

<<interface>>
ICommand

+execute()
+unexecute()

*

LineCommand

+execute()
+unexecute()

RectangleCommand

+execute()
+unexecute()

CircleCommand

+execute()
+unexecute()
+executePreviousCommands()

1

Application

+main()
+setShape()
+draw()
+undo()
+redo()

1

1

1

Canvas

+draw()
+setShape()
+clear()

<<interface>>
Shape

+draw()

1

Line

+draw()

Rectangle

+draw()

Circle

+draw()
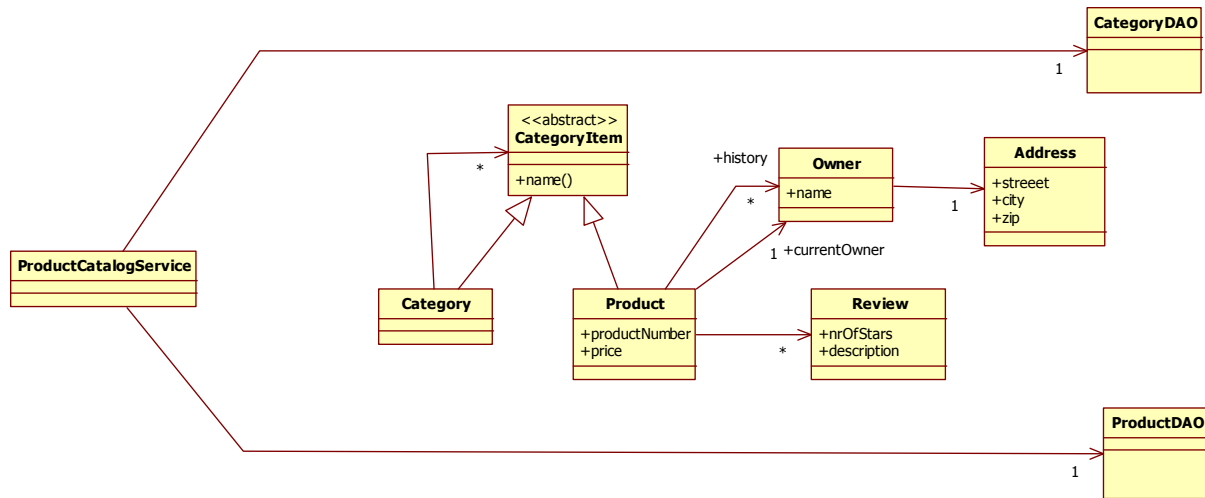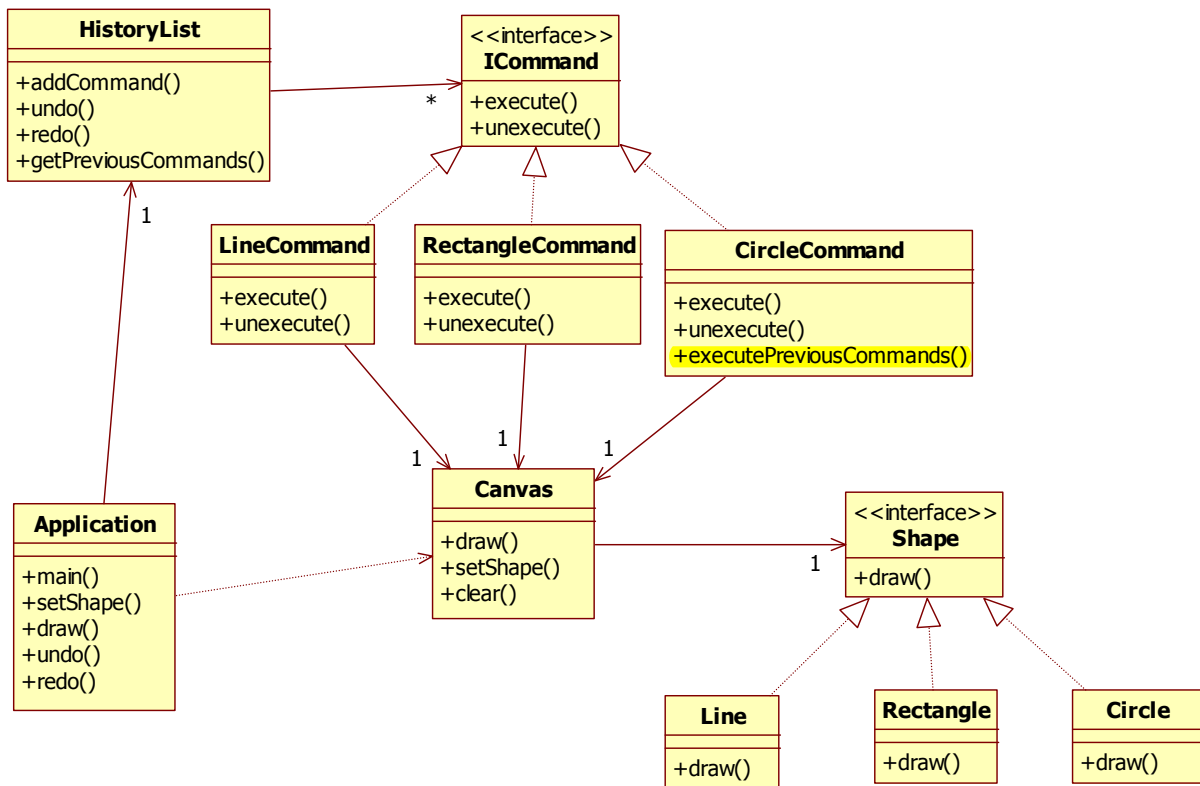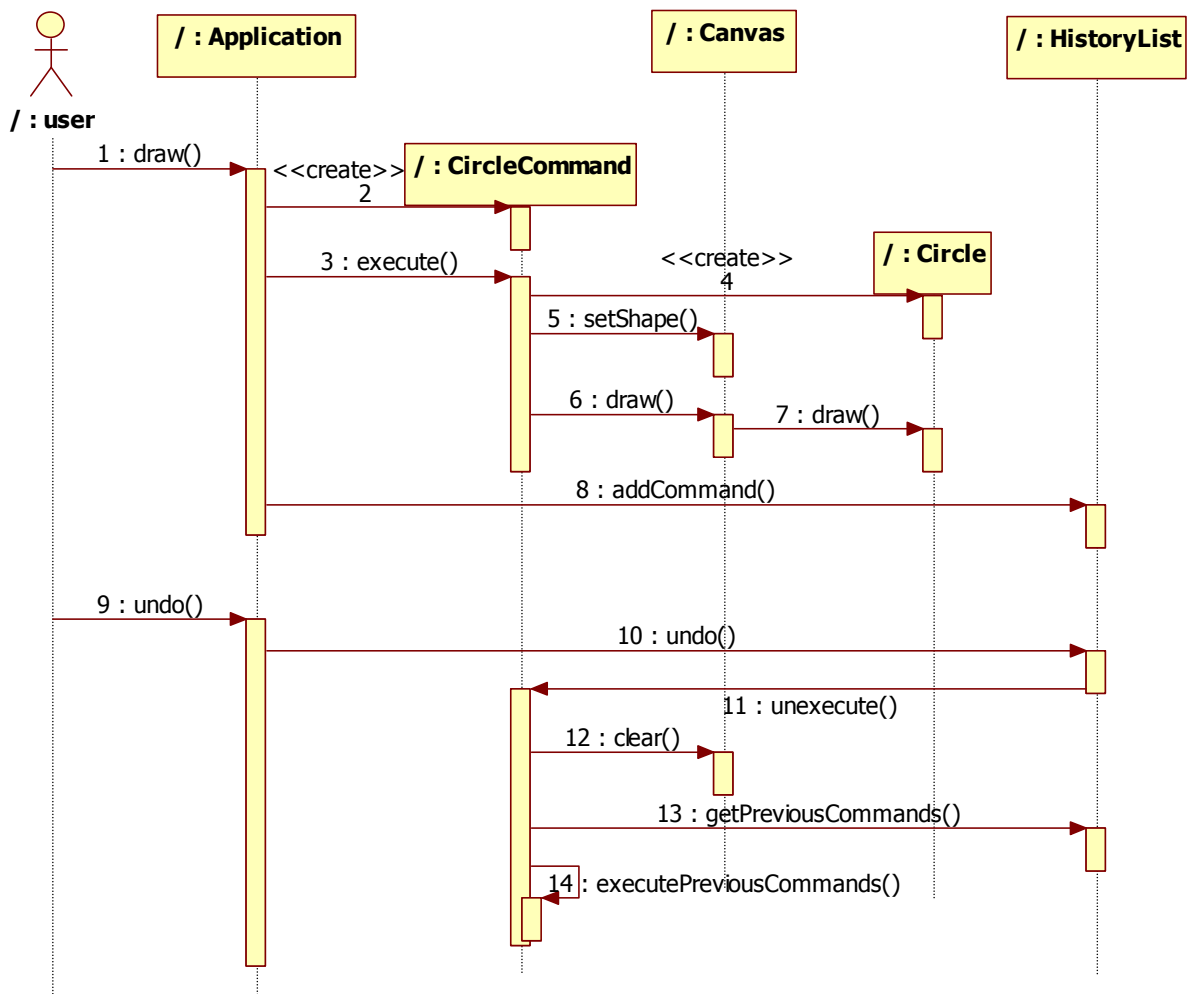
b.

c.

First clear the canvas, and then call execute() on the whole list of Command classes in the Historylist, except the last command (which is the command we want to undo).

Question 3

Game
- +clickLeftButton()
- +up()
- +down()

<>
GameState
- +clickLeftButton()
- +up()
- +down()

1 +nextState

1

1

Car
- +increaseSpeed()
- +decreaseSpeed()
- +turnleft()
- +turnright()

Speed
- +clickLeftButton()
- +up()
- +down()

Steering
- +clickLeftButton()
- +up()
- +down()

Turbo
- +clickLeftButton()
- +up()
- +down()