Student ID_____**Student Name**_____

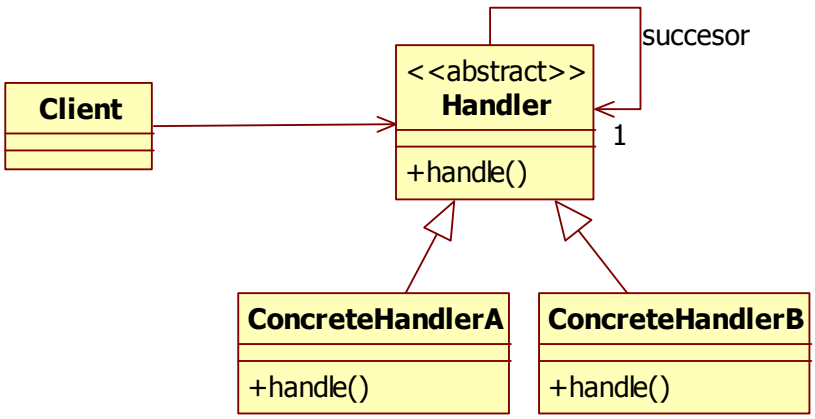
Advanced Software Development DE

Midterm Exam May 18, 2013

Question 1 [15 points] {15 minutes}

a) With the Chain of Responsibility pattern a request is send to a chain of multiple handlers. The handlers themselves decide if they handle the particular request and if they pass the request to the next handler.
You use this pattern when a certain request should be handled by a certain handler class and you have more than one handler class. You need flexibility in the chain of handler classes.

b) .



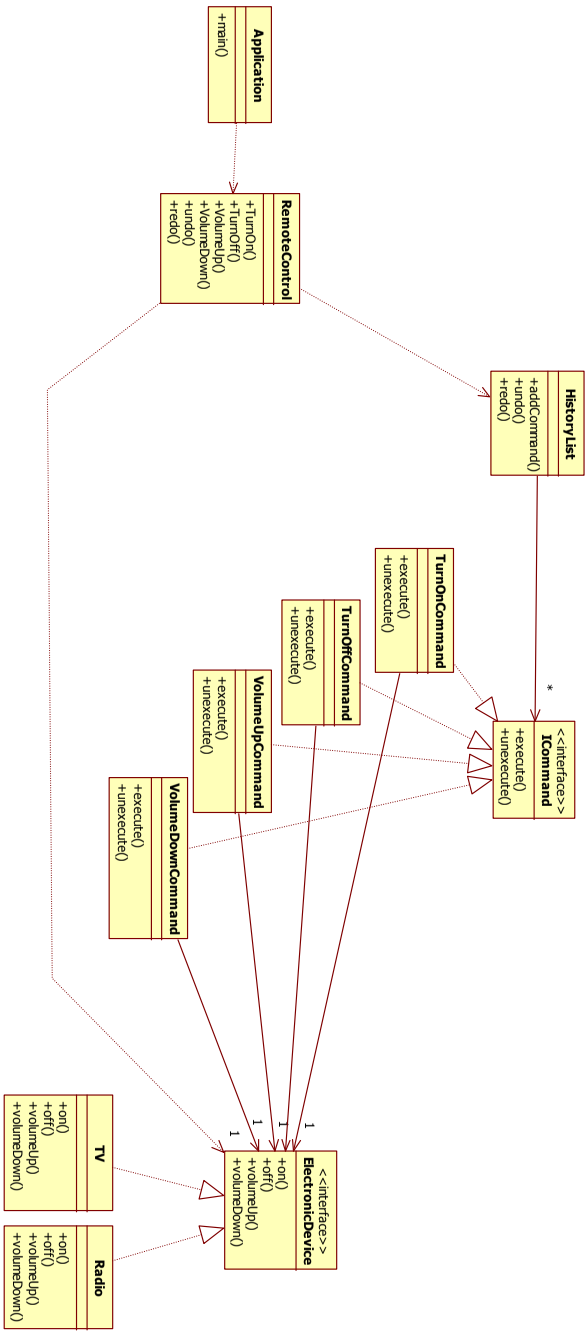
Question 2 [10 points] {15 minutes}

Suppose you have to design and implement a document editor like Microsoft Word. Explain for each of the following design patterns what problem this particular pattern can solve in a document editor like MS Word. Watch out, you have only 15 minutes for this question so your answer should be short and can be just 1 or 2 sentences.

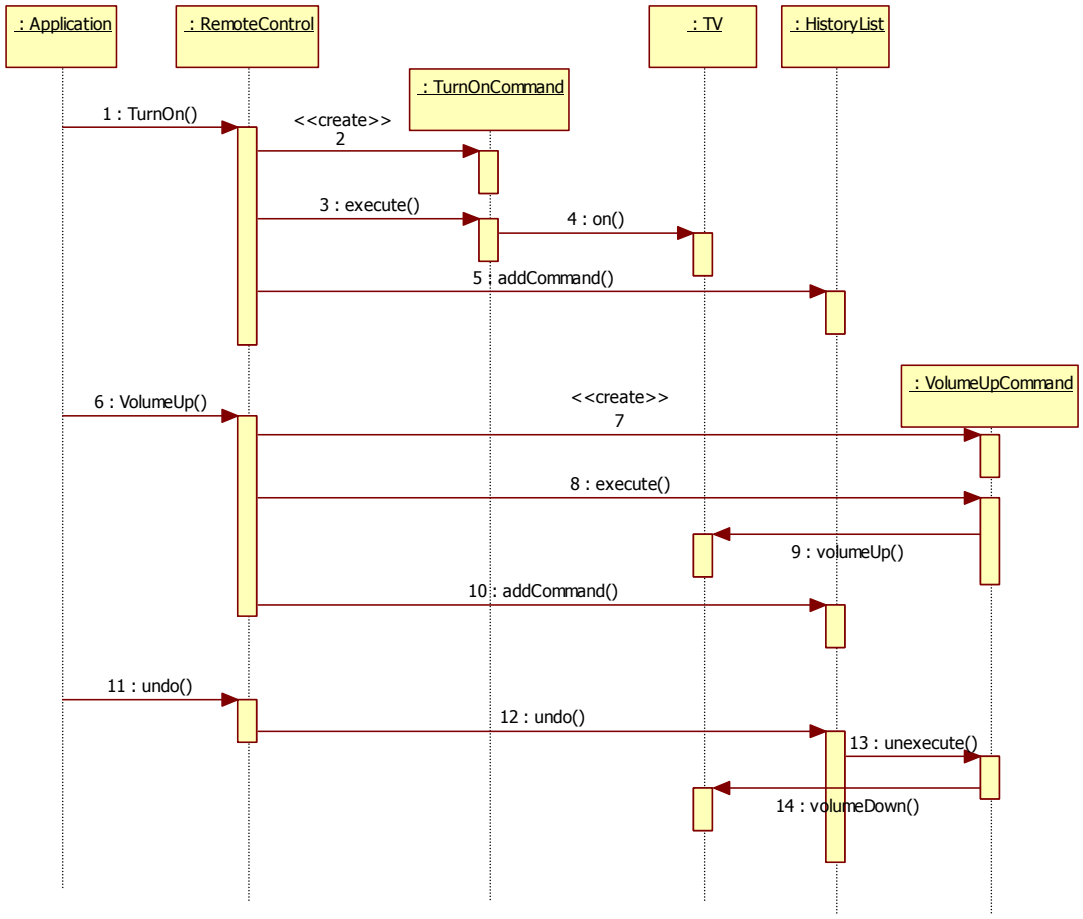
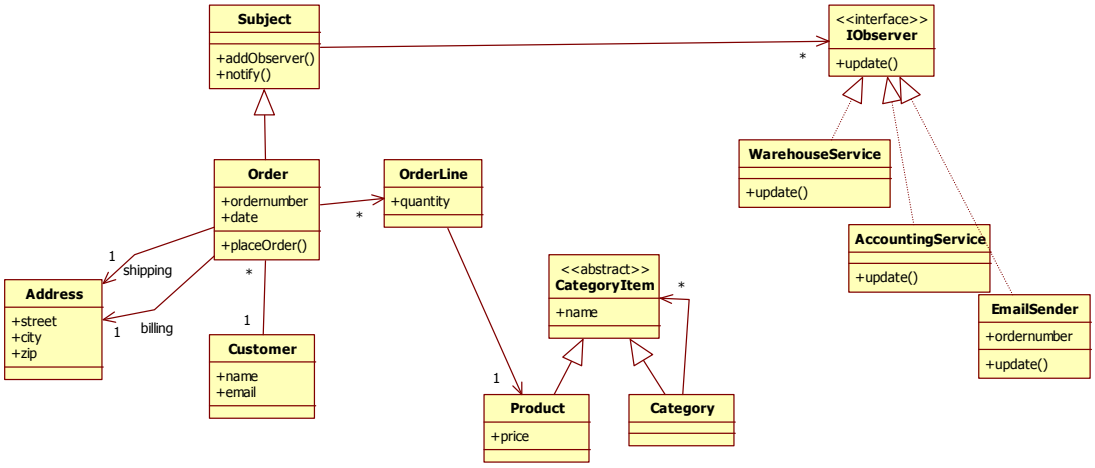
Pattern	Document editor problem that this pattern solves
Strategy	Different formatting algorithms
Iterator	Spell checking
Composite	Document structure
Command	Undo/redo functionality
Mediator	Mediate between the different buttons and menu items on the GUI
State	Different view states (1 page per screen, 2 pages per screen, full screen, web layout, etc)

Question 3 [40 points] {50 minutes}

a.



b.


: Application
: RemoteControl
: TurnOnCommand
: TV
: HistoryList
: VolumeUpCommand
1 : TurnOn()
<<create>>
2
3 : execute()
4 : on()
5 : addCommand()
6 : VolumeUp()
<<create>>
7
8 : execute()
9 : volumeUp()
10 : addCommand()
11 : undo()
12 : undo()
13 : unexecute()
14 : volumeDown()

Question 4 [30 points] {40 minutes}