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CMSI402
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Homework 2

5.1

The difference between component-based architecture and service-oriented architecture is:
Component-based architectures try to make each piece of the system as separate as possible to allow each different team of developers to operate independently while service-oriented architectures have each piece being a service, which is entirely self-contained and runs on its own. Component-based limits the amount of work needed between the overlap of features, while service-oriented has no overlap as it is completely independent.

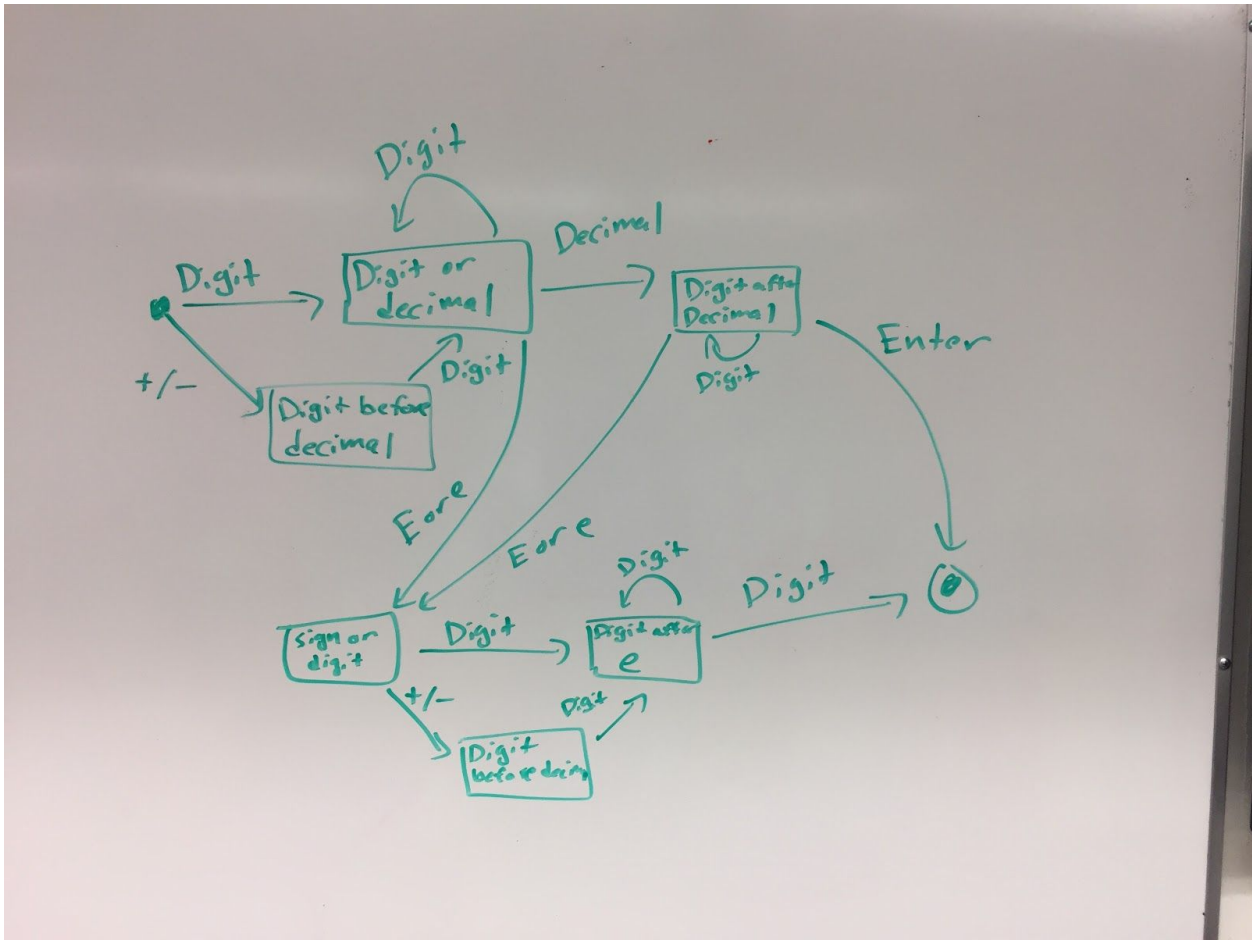
5.2

A monolithic architecture could be appropriate, since all of the high scores are saved locally, and you are playing against a simple AI. Having a single program that executes everything would work fine considering how simple of a program this is, requiring no communication outside of it.
A rule-based architecture would also be applicable, and the rules of the system are explicitly stated: Play Tic-tac-toe then save high scores locally.

5.4

A good architecture for a player vs player chess program over internet connection would be a component-based architecture. These two architectures would allow the different working parts to operate more independently, allowing for the server to store and retrieve scores, a server that connects the two players, and the game engine to operate mostly independent from each other. The game engine would need to work with the server tied in to allow the two players to play, but for the most part, the execution should be independent, making component-based a good choice.

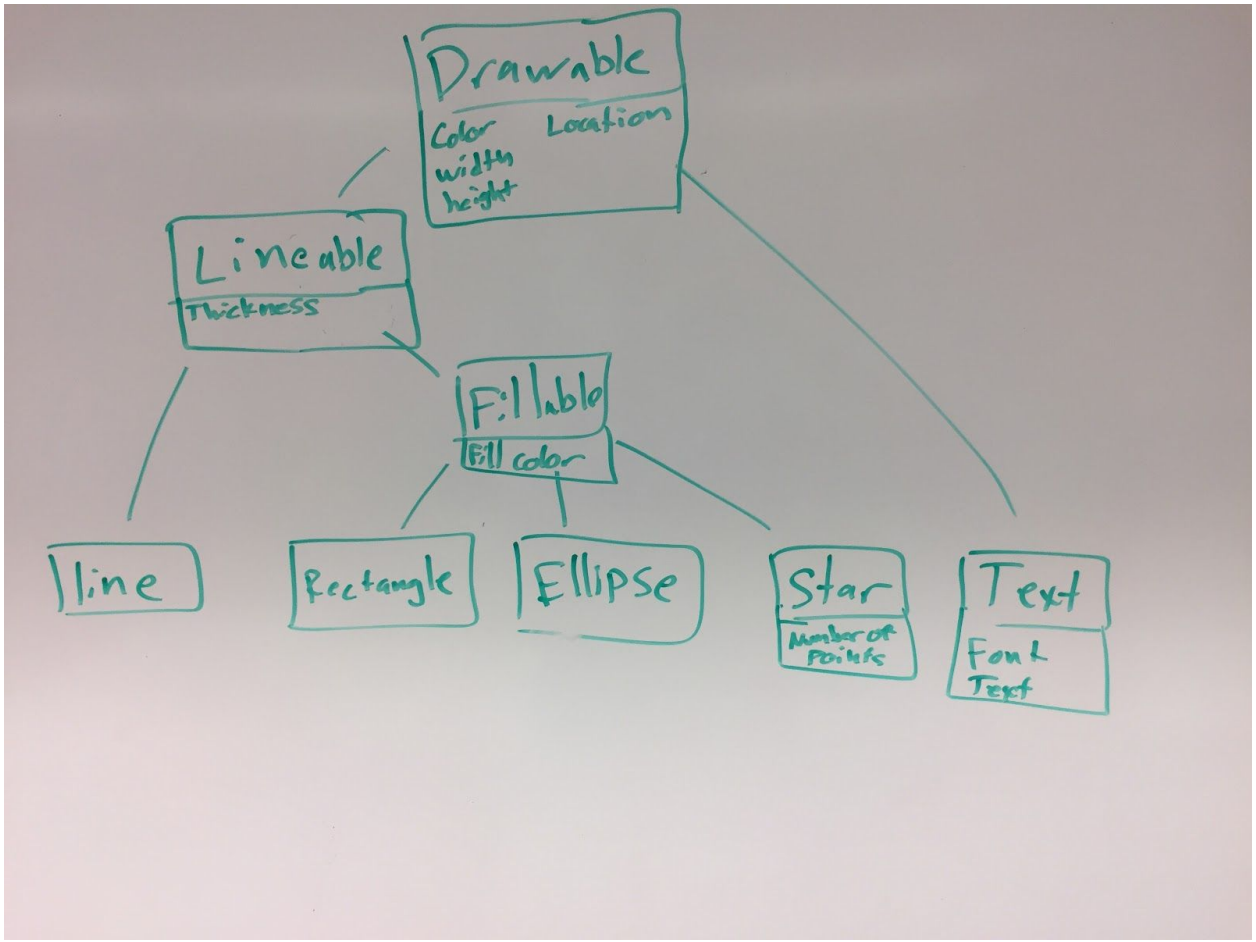
5.8



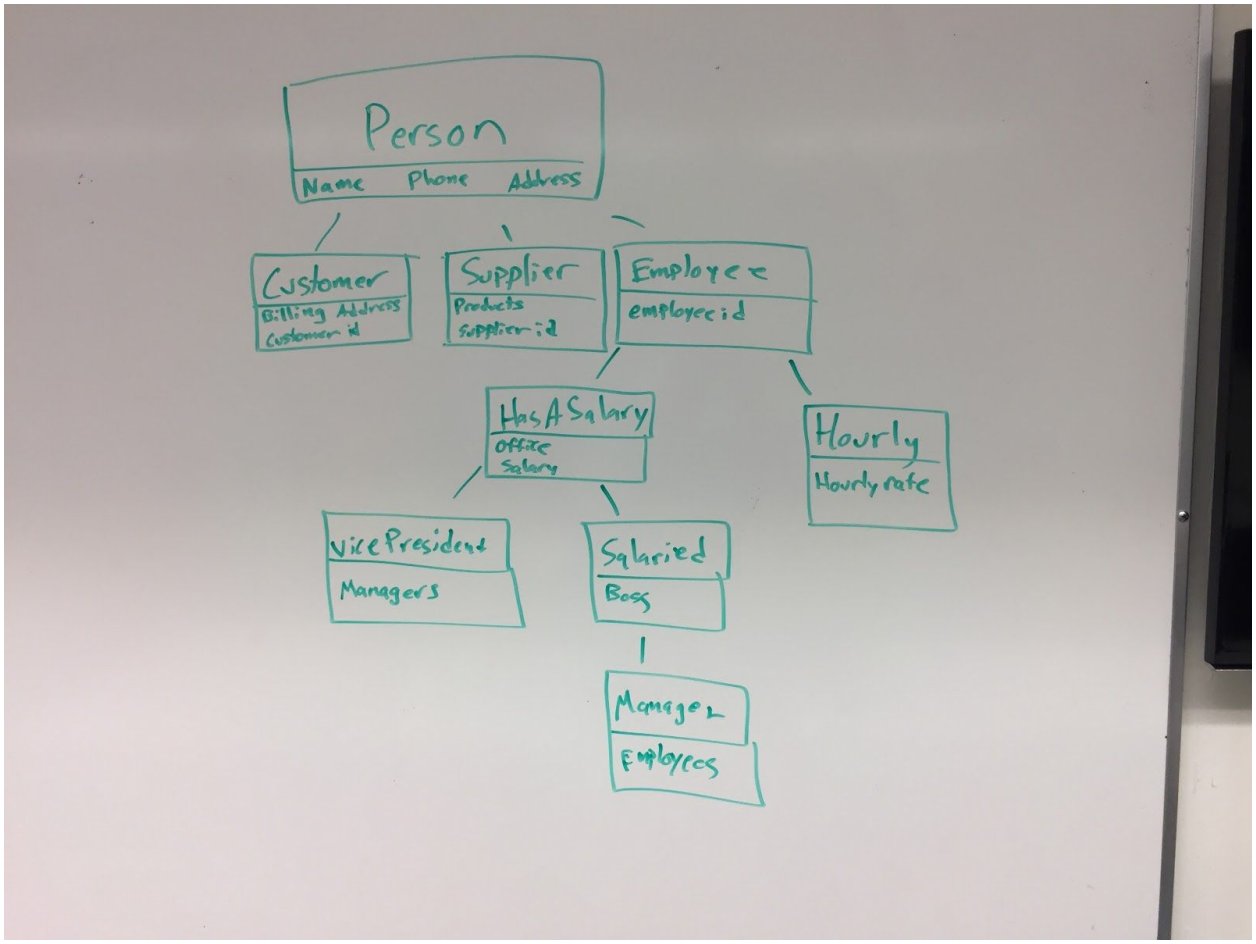
6.1

The ClassyDraw classes: Line, Rectangle, Ellipse, Star and Text.
All of these classes share the properties: color, width, height, and location (as the upper left corner). Everything except for text shares a line thickness property. Rectangle, ellipse and star share fill color. Text has its own font and text properties (actual string of text) and star has the number of points.

6.2


Drawable
Color
width
height
Location
Lineable
Thickness
Fillable
Fill color
line
Rectangle
Ellipse
Star
Number of Points
Text
Font
Text

6.3


Person
Name Phone Address
Customer
Billing Address
Customer id
Supplier
Products
Supplier id
Employee
employee id
HasASalary
Office
Salary
Hourly
Hourly rate
VicePresident
Managers
Salaried
Boss
Manager
Employees