Owen Dewing
CMSI 4072
Homework 2

5.1
Component-based architecture: pieces of system are loosely coupled components that provide services for each other and can communicate with each other.
Service-oriented architectures: pieces are implemented as services, and can be run on separate computers that communicate across a network.

5.2
Monolithic architecture would probably be the most efficient architecture for this tic tac toe game, as it is the most contained and relatively small. Also, no database is required. There are not enough separate pieces for service-oriented/component-based architectures.

The architecture can also be data-centric, as different moves could be classified in a database system using tables. Furthermore, the architecture can also be rule-based, as there are rules and win-lose conditions with tic tac toe.
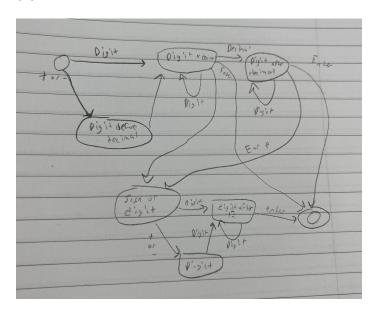
5.4
Now that two players are playing against each other over an Internet Connection, the architecture can be service-oriented, as the computers will communicate across a network. Being a chess game, the architecture/interface will also be rule-based. There still is no need for components, and the game can still be accomplished through a single program. Thus, the architecture is monolithic, service-oriented, and rule-based.

5.6
The ClassyDraw app does not need a database, because it can store each drawing in a separate file. To maintain the app, the program could create a temporary file storing the original drawing while a user is editing it to prevent data being lost if the program crashes.

5.8

6.1

a. These classes all share drawing properties that are not specific to the object's shape (ex: background color, width).

b. Certain properties, such as Font, are only used by the Text class. The NumPoints property is only used by the Star class.

c. FillColor is shared by Rectangle, Ellipse, and Star while LineThickness and DashStyle are shared by Rectangle, Ellipse, Star, and Line.

d. All of the shared properties could be in a parent/umbrella class while the properties specific to certain classes can be left to the specific classes.

6.2