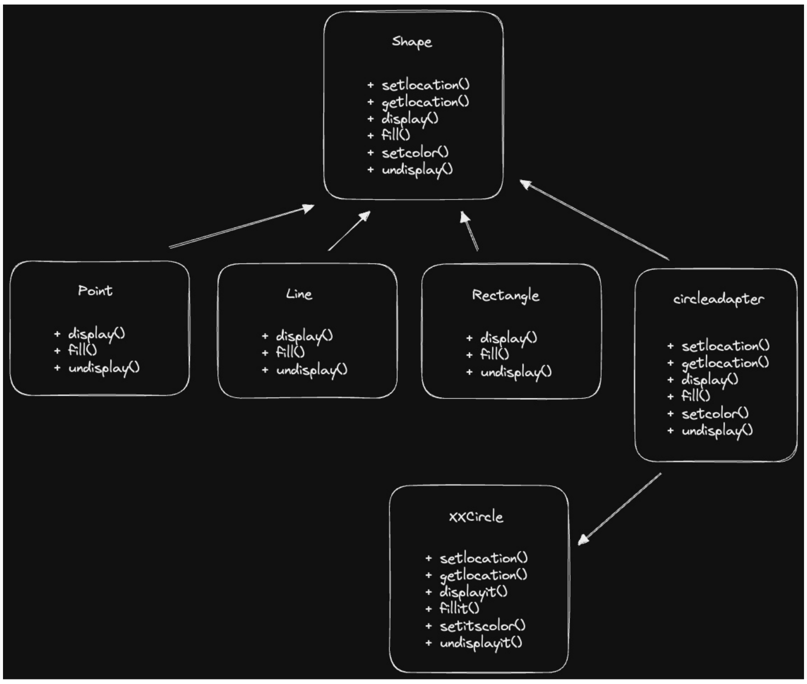
Chapter 7 - Tanner Shimanek

A. Suppose you have a Shape hierarchy as follows:

Now you want to add a Circle class, but you hear that someone else has already created one, named XXCircle, and you just want to reuse it. Its interface is slightly different though:

Draw a UML diagram that adapts this class to your hierarchy. Write skeleton code that just uses print statements for all the methods, and write a test driver that creates a sequence of Shapes and displays all of the shapes it contains, verifying that your Circle class nicely coexists with the other types of Shape.



B. A web application uses a database to get Employee data. The application could use the database API directly, but this would result in a number of low-level SQL calls scattered throughout the code (setting the connection, building queries, extracting results, building Employee objects, etc.). Explain how you can design the application so that it is not directly dependent on the database used, and so getting and setting employee data won't be such a pain.

You could create an adapter class that handles the queries, and make subclasses that handles the connection setting, etc. So, we should not need to directly access the database, instead, we would call our query adapter class to call the particular query class like setConnection or getData, etc.