1. How do you expect to use UML diagrams and software architecture patterns in your project for this class? If you do not expect to use them, that is a valid answer, but please tell me why.

Creating UML diagrams helps to visualize the use case scenario which is important for requirement analysis. Since we are working on a project with five members, UML diagrams will aid in documenting ideas and scenarios involving the interaction between the actors with the components of the system which further will help to have a clear picture for all the involved group members.

While developing an application, software architecture helps identify the major components of a system and how they communicate with each other. Since we will have a client-server architecture pattern for our Ride Share application, we will be looking deep into how we can create client-server application with our stack. We will need to study the ***client-server pattern*** to understand how our server and client application will communicate with one another in a network and how client can request services to a server or how server will handle client requests.

1. How might you use UML diagrams and/or software architecture patterns in a project where you are adding a new feature to an existing system (e.g., adding a new reporting tool to a database system)?

I feel like there are no special UML diagrams for adding features in existing systems. We need to identify the components of the existing system first and find out which components will be needed to communicate with the new feature component. For instance, adding a new reporting tool to a database system will require us to create UML diagrams showcasing the requirements and the use cases interactions between the new feature and the system. We will also need to figure out a software architecture pattern to accommodate such an addition to the database system. If the database is housed on a server then we can have the reporting tool as a client application that sends out requests to the server, the server then processes the request query then reports out response to the client which essentially makes it a ***client-server pattern.***

