1. Explain why design conflicts might arise when designing an architecture for which both availability and security requirements are the most important non-functional requirements.

Design conflicts might arise because of the fact it can sometimes be difficult to make something available to whomever may need access, while still having the proper security requirements in place. I had a recent event come up where a new part time employee in the HR department needed access to a specific file in the HR folder, while not allowing access to other files within the same folder. This caused a slight problem, as I could give him access to the folder that the file was in, but not the parent folder, as the parent folder had files that he was not entitled to access. I ended up creating a solution where I mapped a network drive to the folder he needed access to for his login. This made it so that he could have access to the file he needed, but not the ones in the parent folder.

2. Suggest an architecture for a system (such as iTunes) that is used to sell and distribute music on the Internet. What architectural patterns are the basis for your proposed architecture?

From what I understand, this would be basically a client-server architecture. The client, the music application, would access the server to find out what music is available, and even what music may have been purchased and available for download.

3. Based on your experience with a bank ATM, draw an activity diagram that models the data processing involved when a customer withdraws cash from the machine.

