

Andrew Cheng

When using the server-client classes with multiple clients, there may be some issues that arise with synchronization. For example, if two clients tried to either move or recolor or delete a shape at the exact same time, this could cause an error to be caused. In order to help prevent this, if statements and try catches should be used for these scenarios in order to prevent multiple client messages to be sent and implemented by the server. Another potential problem that could arise could be that creating a shape at the same time would cause them to have the exact same ids, which may cause problems when trying to delete, recolor, or move those shapes as the treemap may apply it to both cases. Once again, having try catches or if statements to catch this edge case would help to prevent it. The synchronized methods are used in the sketchserver in order to help control multiple threads and client connections. They are needed in the server methods to ensure that multiple clients can connect to the server and have a synchronized sketching and data.