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PS-5 Discussion of Multi-Client Issues

Some unexpected or unwanted behaviors could rise from clients doing their own operations at the same time (even more problematically on the same object like in our case shape). The output was tested individually so the multi-client problems weren’t experienced first hand. Synchronized methods were used in the Sketch class (prewritten methods were in Sketchserver and Sketch) to prevent any thread interference. Since the object is visible to more than one thread, we needed to use synchronized methods to be relevant to all threads. These synchronized methods don’t handle everything. Deadlocks can occur when clients are attempting to concurrently move, recolor, or delete as there is no established linear order through which their corresponding requests are processed.