Version 1 of the program creates random groups and 20 set cabins of 10 rooms each, with groups ranging from 2 to 10 people and a total of 100 students. The V1 algorithm first sorts the groups from the most people to the least, then it allocates the biggest group into cabins. When it can allocate no more, it will split up the smaller groups and put them into cabins. Version 1 also implements a searching function for the user to look up individual students and their groups and cabins. Version 2 uses a brute force approach as the name implies, it will go through every single combination of arranging Groups into Cabins, this is 3628800 possible combinations. To increase the speed, V2 uses multiple threads to run the 20 parallel calculations to complete the 3628800 combinations in roughly 5 minutes. This guarantees the combination with the least number of splits and will find the correct answer 100% of the time. Version 2 also implements a progress bar that shows the percentage to completion of the program, increasing the usability by giving the user knowledge on the program’s progress. Thus, version 2 implements both a more accurate algorithm for finding splits, and also adds user ergonomic elements such as the progress bar.