

Design and Implementation

We created 3 threads to handle 3 events using *pthread_create* which are in the form of functions. Our functions consisted of checking rows, columns and 3x3 sub-grids for duplicate values. Once we created the threads with respect to their functions, we used *pthread_join* to make sure each thread completed before moving on to the next thread. Once all threads had completed and the 9x9 grid was checked for rows, columns, and 3x3 sub-grids with respect to duplicate values, the validation was completed.