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**Analysis Write up**

**Program 5**

For the fifth program we continued working on what we have created for program four, but only adding one data structure which was the binary search tree. I added two binary search trees one for the pizzeria and one for days of the week specialties. The IDEA really helped me a lot during this process with giving suggestions for errors and creating function that wasn’t created when I called it. One of the things I like about that when I’m trying to write commands like system out I can just simply write sout and then press tab and it will do the whole command for me. Also, when I created variables and I try to use that variable, I once I type one letter it would give the suggestion and I would press tab and it would just fill the rest. Thus, now I don’t worry about having long variable names, since the IDEA helps this much. However, writing huge programs doesn’t seem that fun anymore since the idea helps in so many ways that one don’t feel how big the program was. Also, it helped me a lot with using exception handling because it would tell me where I need to throw an exception or catch a throw and that was a really helpful too. On the other hand, the efficiency of this program was pretty decent because I used binary search tree which gives good log performance for adding and retrieving which was way better than using a lot of other data structures. What wasn’t so efficient about my program is that I didn’t give the user the choice of deleting a day from a restaurant even though the code is there, but I give the user the choice to delete a restaurant. Also, what I didn’t like is that I didn’t make the user make an order from a restaurant even though it wasn’t required for this program I would have done it if had more time. What was efficient about my program was that I read from the external file the restaurant’s name and zip code so the client can edit them without looking at code. Another good thing was that used my node class in the inside tree so I can create multiple randomly generated pizzas for each day of the week in the tree. To conclude, my approach was very decent and I was able to make a program that’s performance wise was fast.