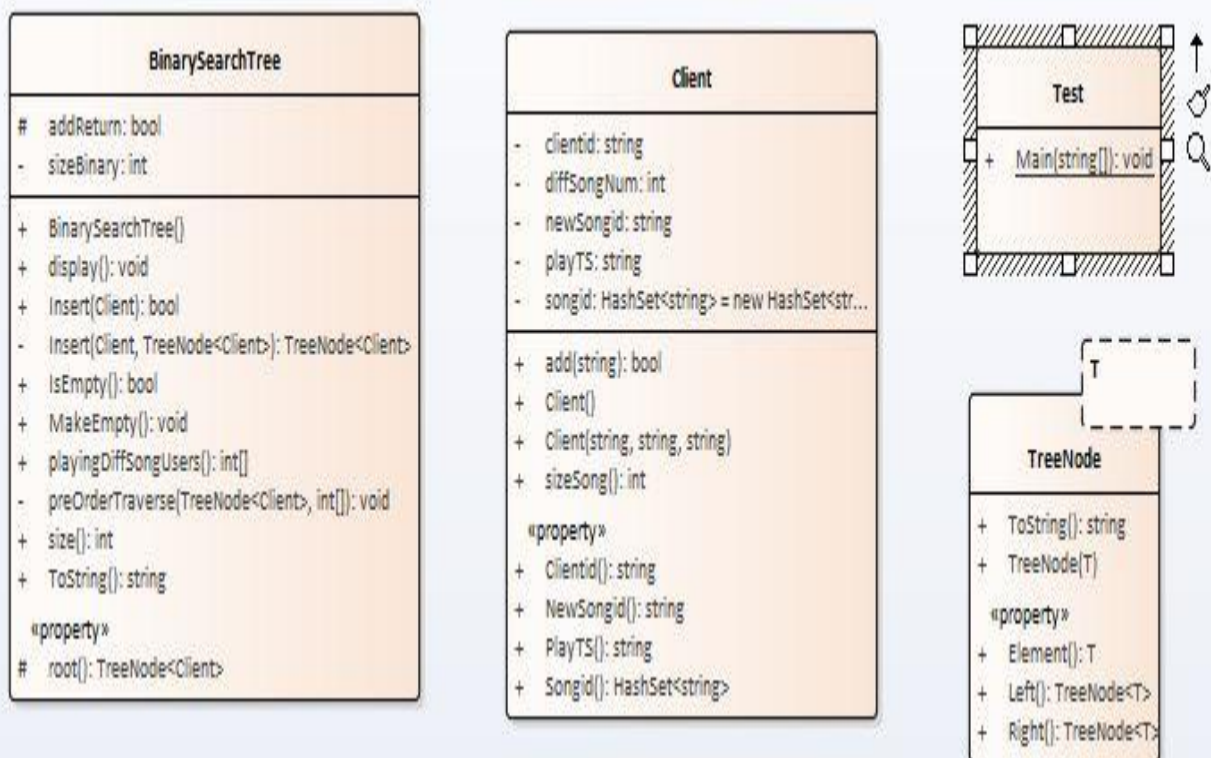# PIWORK INTERN

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REPORT

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PIWORKS

1. System Requirements

You should only change the path of the file to the 18th line in the program.cs class

3. Class Diagrams

5. Problem Solutions Approach

Firstly, I've never read such a huge amount of data before. My probing approach is this. I know that I will count, search and compare. For this, I created a client class with clientid, sondid playTs, diffSongNum. This job has made it easier. I decided to use the binary tree to keep these clients. Because, in a tree, a client can only have one. So I placed the clients and reduced the data. The search time was decreasing to compare the next client I read from the file. If I have a client to add, I do not add it. If only the song is different I add a new song to songid hashSet. If not, I can not add. I keep the client's different songs in the hashSet data structure. Because the set can have the same element. So I can easily get the number of songs and it's fast.

Secondly, Find the number of clients playing the same number of different songs. Herein, I created an array of up to an array tree and I got the number of different songs as an index. If I count the same number of people who play different songs in the same index, I can get the right result and I traverses pre-order tree and count.

Third, I showed the non-zero indexes of the array and finished.