iRoom

Ethan Welsh

Tour Preferences List

Jeff Smith: John Stroud, Pyotr Tchaikovsky @ Johannes Brahms, Franz Liszt

John Stroud: Ludwig van Beethoven, Franz Liszt @ Pyotr Tchaikovsky

Pyotr Tchaikovsky: Jeff Smith, Franz Liszt @ Wolfgang Mozart, Franz Liszt

Franz Liszt: Johann Bach, Pyotr Tchaikovsky @ X

Ludwig van Beethoven: Johannes Brahms, Wolfgang Mozart @ Franz Liszt

Wolfgang Mozart: X @ Ludwig van Beethoven, Franz Liszt

Johannes Brahms: X @ X

The file is consisted of several lines, each line representing a person and their respective likes and dislikes. The first name on the line contains the name of the person whose name this entry pertains to. After a colon (:), the persons whom this individual would like to room with are found, each name separated by a comma (,) in order of preference. Finally, after an ampersand (@), is listed the names of the people with whom this individual will **not** room with (once again separated by commas).

Jeff Smith**:** John Stroud**,** Pyotr Tchaikovsky **@** Johannes Brahms**,** Franz Liszt

NAME PREFER TO ROOM WITH WILL NOT ROOM WITH

The file **must** be structured exactly as listed above. Forgetting a ':' or '@' will cause the application to crash or work incorrectly.

If an individual does not have any preference with whom they'd like to room with, then you may place an 'X' on that line to indicate as such. Likewise, if a person has no one they would not consider rooming with, an X may be placed on that line as well.

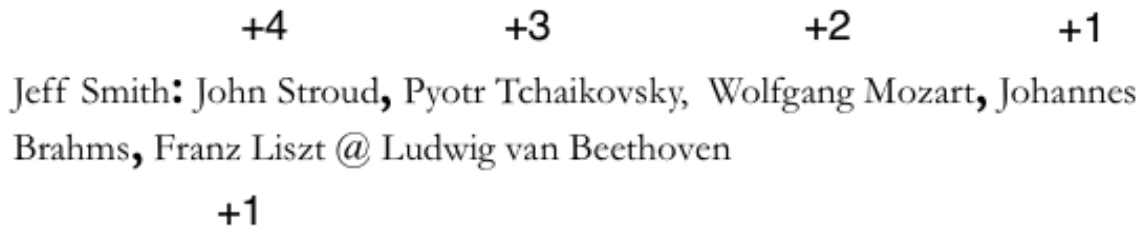
Wolfgang Mozart: **X** @ Ludwig van Beethoven, Franz Liszt
Franz Liszt: Johann Bach, Pyotr Tchaikovsky @ **X**

Scoring

In order to place people into rooms, the application computes the 'score' of each possible rooming configuration according to a person's requests (as described in the tour preferences list).

Rooms are scored according to preference such that the person listed first a person's "likes" is the most preferred person.

The first three people on a person's preference list are assigned a higher value. After that, everyone on the list is seen as equally desirable. An individual will never be placed in a room with someone on their "not" list.:



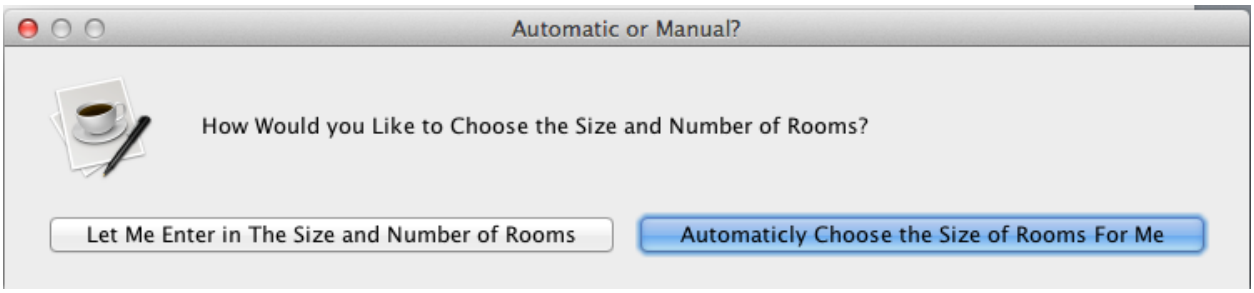
After an individual's score is computed for a room, it is added to everyone else's score in a room in order to form a composite score for a room.

Jeff Smith: John Stroud, Pyotr Tchaikovsky @ Johannes Brahms, Franz Liszt John Stroud: Ludwig van Beethoven, Franz Liszt @ Pyotr Tchaikovsky Pyotr Tchaikovsky: Jeff Smith, Franz Liszt @ Wolfgang Mozart, Franz Liszt Franz Liszt: Johann Bach, Pyotr Tchaikovsky @ X Ludwig van Beethoven: Johannes Brahms, Wolfgang Mozart @ Franz Liszt Wolfgang Mozart: X @ Ludwig van Beethoven, Franz Liszt Johannes Brahms: X @ X	----------7---------- Jeff Smith (3) Pyotr Tchaikovsky (4) ----------7---------- ----------3---------- John Stroud (3) Franz Liszt (0) ----------3---------- ----------4---------- Ludwig van (4) Johannes Brahms (0) ----------4---------- ----------0---------- Wolfgang Mozart (0) ----------0---------- Total Score of: 14

Running

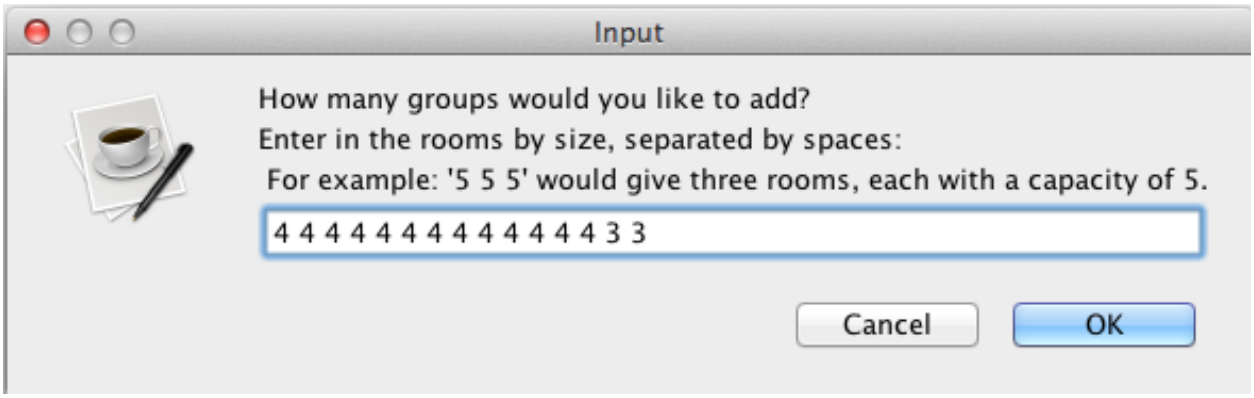
After filling in the Tour Preference List, and making sure that the formatting is correct, simply double click the **iRoom.jar** file. At once, you should be prompted with a dialog asking you where your Tour Preferences List can be found. Select the file and click open to proceed. You'll see a message saying that the file has been found shortly after.

Next you will receive another file selection dialogue, this time asking you where it would like you store the results and what you would like to name the file. Type in whatever you'd like to name the output of the application into the **Save As** field, then select the destination and click **Save.**



Next, you'll receive an option asking you if you'd like to generate the room sizes automatically or manually. If you choose the option to create rooms automatically on the right, you'll be asked to enter in the maximum room size. With 58 people, if you enter the maximum room size as 4, the program will create fifteen rooms, thirteen of which will contain 4 people, and two of which will contain 3 people.

If you choose the "manual" option on the left, then you'll be asked how many rooms (and of what sizes) you'd like to add. In order to add a room, type the capacity of the room you'd like to separated by a space (' '). So if I wanted to manually generate the 15 rooms to accommodate 58 people, I could enter the following:



After choosing the rooms and sizes, the program will run and write the finished result to the location you previously specified. The program varies drastically according to the number of persons and sizes of rooms that you choose, but for your purposes, you can expect the program to be complete after approximately 30 seconds.