Computer Science 457 Project 3

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**How to run Database.py?**

Simply change your current working directory to the one containing both the Database.py and PA3\_test.sql files. Then Simply run python3 Database.py. An example can be seen below:



**Functionality**

From the test script that I was provided we had to implement 2 different ways of joining tables. Those being inner join and left outer join. Somethings that both of the implementations share is that the left and right tables will be loaded into a dictionary that is mapped from user-defined variable name for the table to the actual table itself. From there it will perform that actions that are need for each join in a nested for loop.

In the case of inner join it just has to return all values that the tables share, the inner portion of a Venn diagram. For that, the nested for loop will check all relevant values and will load matching tuples into a candidate table that will be eventually printed out after the operation of joining is complete.

In the case of left outer join, it will add all values that the tables share along with every value that is already present in the left side table, the left and inner portions of the Venn diagram. For this case to function you basically use 90% of the inner join code, but when a match isn’t found for a tuple in the left handed table you pair it with null values as placeholders in the candidate table.