IDEA BEHIND THE PROJECT:

I have used Pytholog to represent the family relations as given. Pytholog is a Python library that is used to implement logic programming. It is a Pythonic way to implement "Prolog" which is a logic programming language. In my program, I have first created a knowledge base which I use to store various facts and rules. I have used facts such as who is "**male**" and who is "**female**" and who is the "**father**" and "**mother**" of who. After stating these facts, I defined a set of rules to identify the various complexities in the relations. From these rules, one can infer relations such as **"parent", "brother", "sister", "grandfather", "grandmother", "grandparent", "uncle" and "aunt"**.

These rules have been defined using very basic rules such as if an individual, say **X,** is supposed to be the parent of another person, say **Y,** then **X** has to be either **"mother"** or **"father"** of **Y.** Similarly, if **X** is supposed to be **"brother"** of **Y,** then **X** must be **"male"** and both **X** and **Y** should have same parents.

INSTRUCTIONS TO RUN THE CODE:

The code can be easily executed by simply opening up the "**.ipynb"** file provided. One can follow the below to execute the code:

1) Open the **"anaconda"** command prompt.
2) Type the command- **"jupyter"** notebook. This would open the **"jupyter"** notebook tab on your default browser.
3) Once the browser is open, navigate to the "KaranSood_ex1.ipynb" file and run it.

Once you hit **"Run"** button in the interactive environment, the output can easily be seen.

IMPORTANT:

PLEASE MAKE SURE THAT IF YOU ARE RUNNING THE "KaranSood.py" FILE IN AN IDE, THEN "pytholog" IS INSTALLED IN THE ENVIRONMENT, ELSE IT WOJLD THROW AN ERROR SAYING THAT IT COULD NOT FIND THE MODULE.