12 SSD Assessment Task 1

**Question 1**

1. Classify each of the languages used in terms of the computer language generation to which it belongs and justify your answers.

* C :

C, a powerful but rather cryptic language capable of precisely specifying computer operations

* Forth :

Forth, a concise but versatile procedural language originally designed to regulate movement of telescopes and also used to control devices and processes ranging from heart monitors to special-effects video cameras.

* Assembly language :

1. Why is assembly language described here as rudimentary (Elementary or undeveloped) and in this case why would it be used?
2. Both fourth and C are imperative languages. Compare and contrast imperative and object oriented languages.
3. Explain the use of three different languages in this scenario rather than a single all-purpose language.

**Question 2**

1. Describe all possible results from running the code on line 22.

Line 22: go:-parent(X, Melody)

* The rule on line 22 (go:-parent(x, melody)) output the results Jim and Eleanor. This is shown through the rule that determines whether they are the parents. Line 19 (. parent(X, Y) :- father (X, Y).)) Is set to determine the child’s father and not to mention it’s the same for the mother (parent(X, Y) :- mother (X, Y).).

1. father(micheal, cathy).

father(micheal, sharon).

father(charles\_gordan, micheal).

father(charles\_gordan, julie).

father(jim, melody).

father(jim, crystal).

father(elmo, jim).

father(greg, stephanie).

father(greg, danielle).

mother(melody, cathy).

mother(melody, sharon).

mother(hazel, michael).

mother(hazel, julie).

mother(eleanor, melody).

mother(eleanor, crystal).

mother(crystal, stephanie).

mother(crystal, danielle).

sibling(X, Y) :- mother(M, X), father(F, X), mother(M, Y), father(F, Y), X \= Y.

**Question 3**