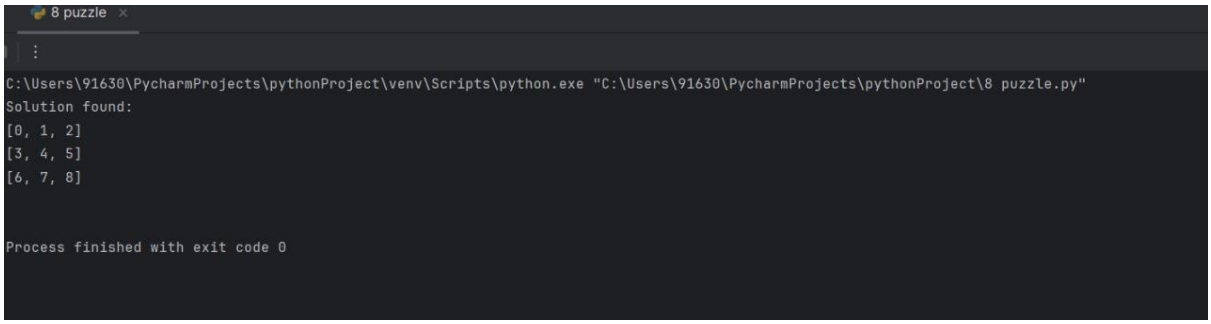
INPUTS & OUTPUTS

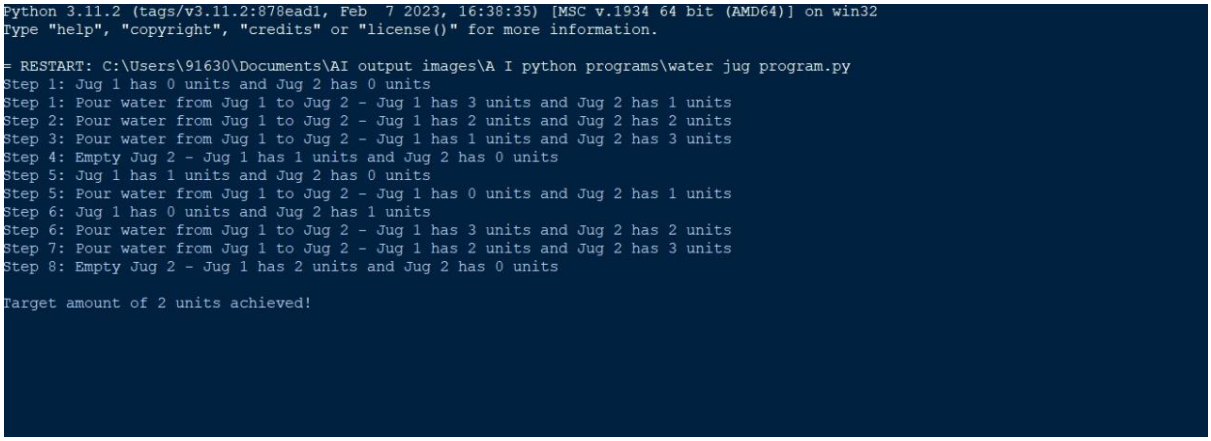
PYTHON PROGRAMS:

1.8-PUZZLE PROBLEM



2.8-QUEEN PROBLEM.

3. WATER JUG PROBLEM.



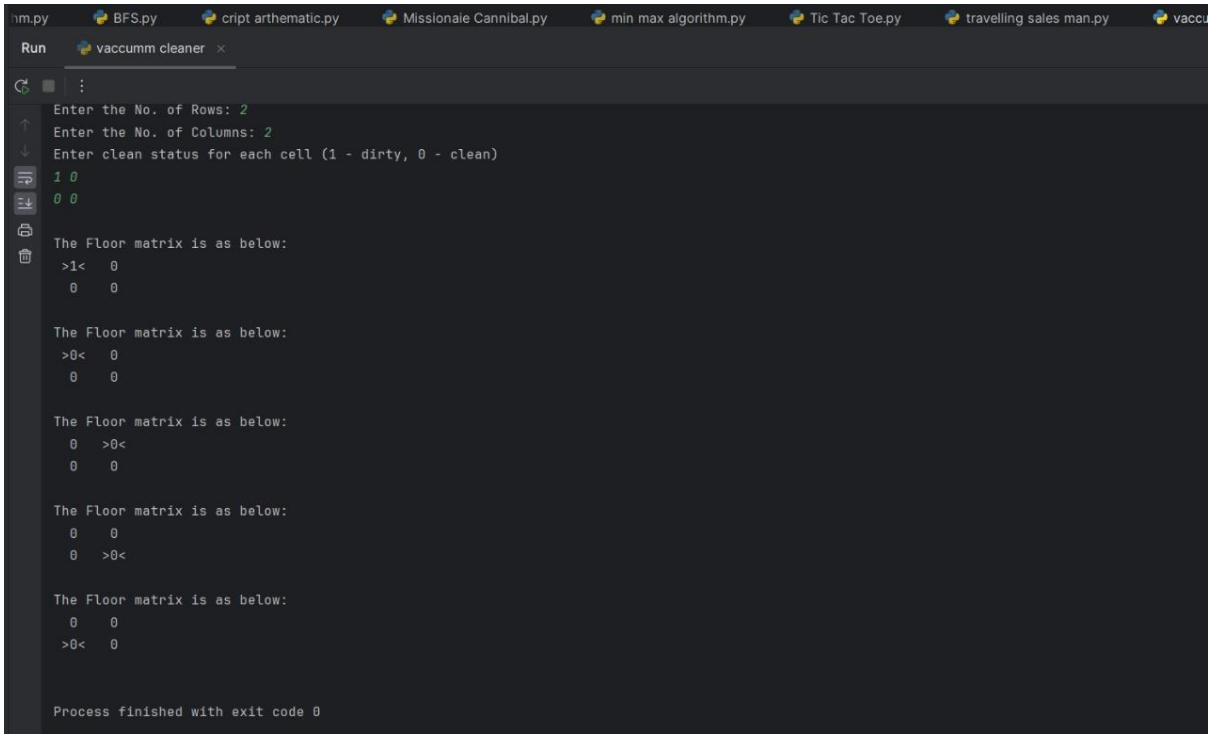
4.CRIPT-ARITHMETIC PROBLEM.

```
Python 3.11.4 (tags/v3.11.4:d2340ef, Jun  7 2023, 0
Type "help", "copyright", "credits" or "license()"
==== No Subprocess ====

WARNING: Running IDLE without a Subprocess is depre
and will be removed in a later version. See Help/ID
for details.

>>> 1337 + 8337 + 9674
>>>
```

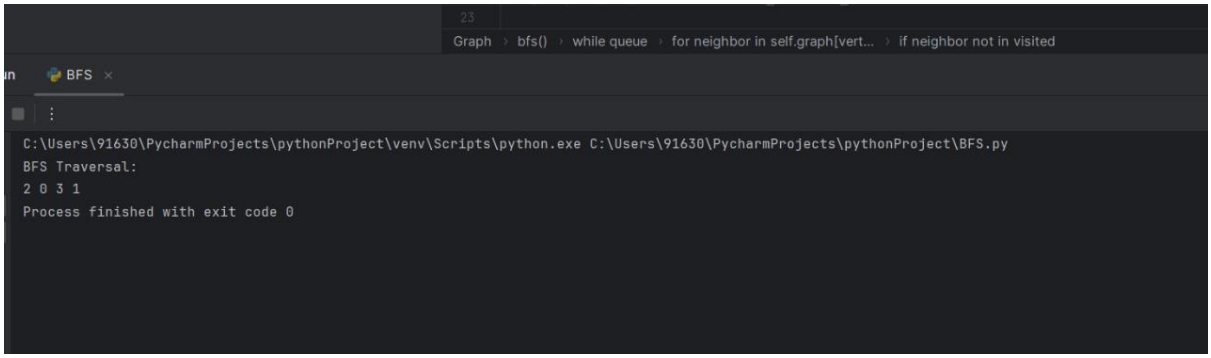
5.MISSIONARIES AND CANNIBALS PROBLEM

```
        root.children[0].children = [Node(9), Node(1)]
if __name__ == "__main__"
Run   Missionaie Cannibal
C:\Users\91630\PycharmProjects\pythonProject\venv\Scripts\python.exe "C:\Users\91630\PycharmProjects\pythonProject\Missionaie Cannibal.py"
Solution found:
Left Bank: 3 missionaries, 3 cannibals | Boat: Right
Left Bank: 3 missionaries, 1 cannibals | Boat: Left
Left Bank: 3 missionaries, 2 cannibals | Boat: Right
Left Bank: 3 missionaries, 0 cannibals | Boat: Left
Left Bank: 3 missionaries, 1 cannibals | Boat: Right
Left Bank: 1 missionaries, 1 cannibals | Boat: Left
Left Bank: 2 missionaries, 2 cannibals | Boat: Right
Left Bank: 0 missionaries, 2 cannibals | Boat: Left
Left Bank: 0 missionaries, 3 cannibals | Boat: Right
Left Bank: 0 missionaries, 1 cannibals | Boat: Left
Left Bank: 1 missionaries, 1 cannibals | Boat: Right
Left Bank: 0 missionaries, 0 cannibals | Boat: Left

Process finished with exit code 0
```

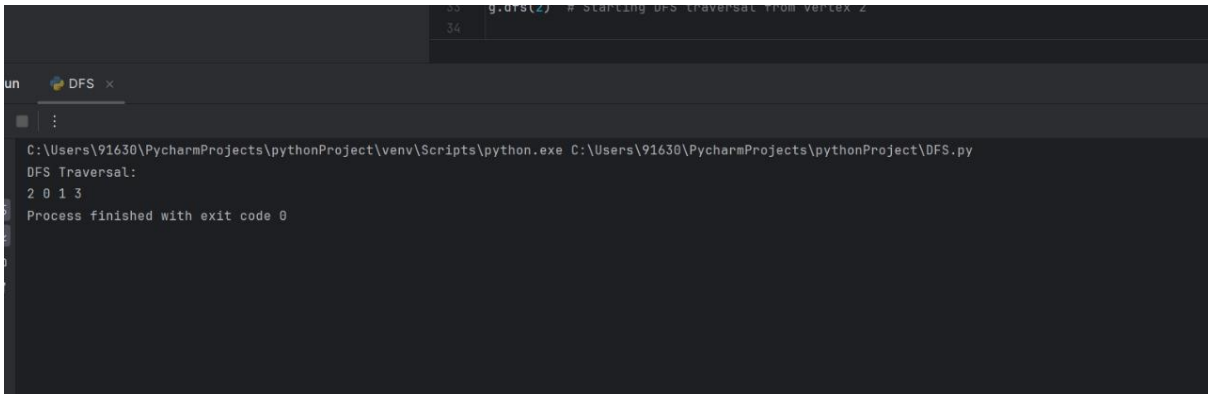
6.VACUUM CLEANER PROBLEM.



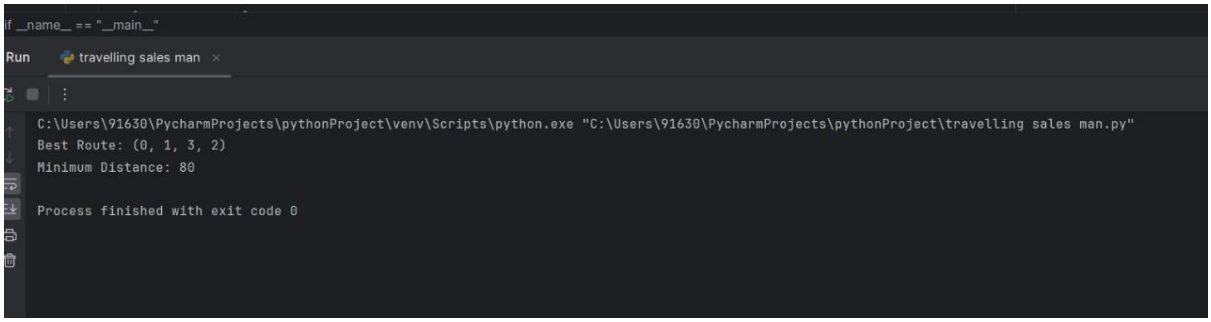
7.BREADTH FIRST SEARCH



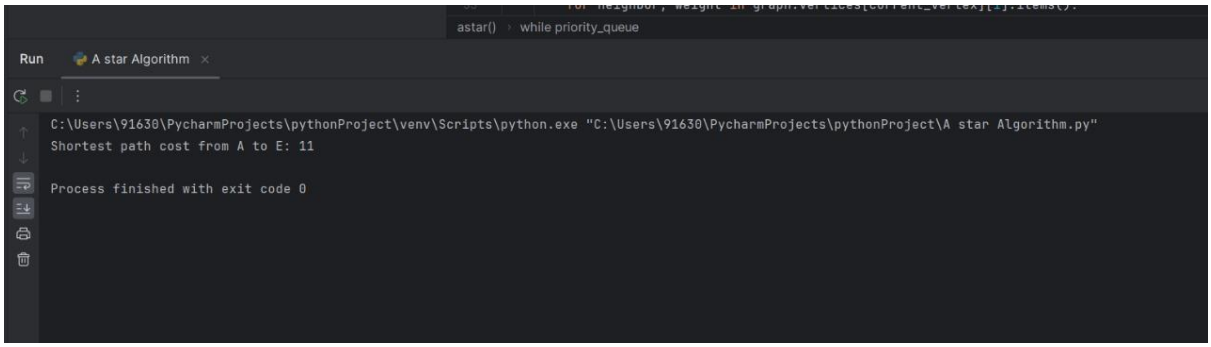
8.DEPTH FIRST SEARCH



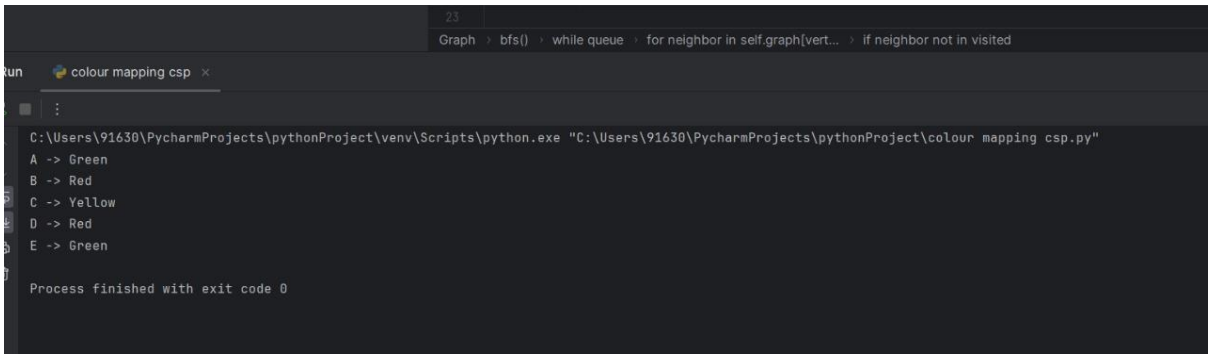
9.TRAVELLING SALES MAN PROBLEM



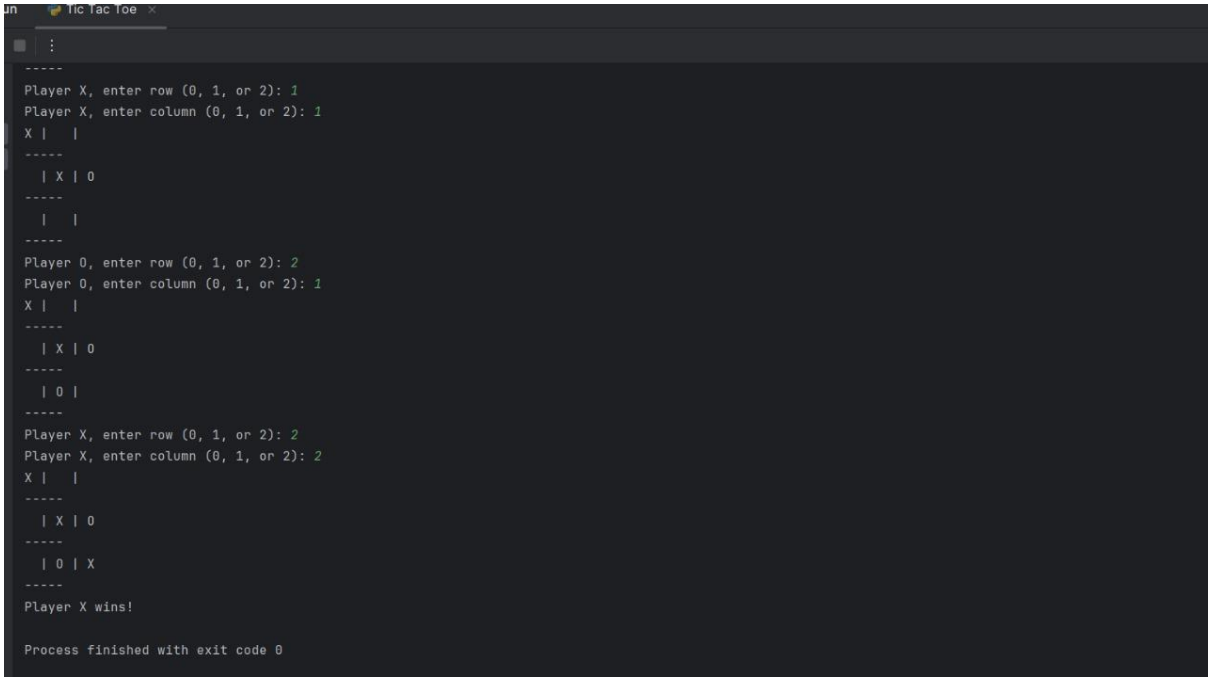
10. A STAR ALGORITHM



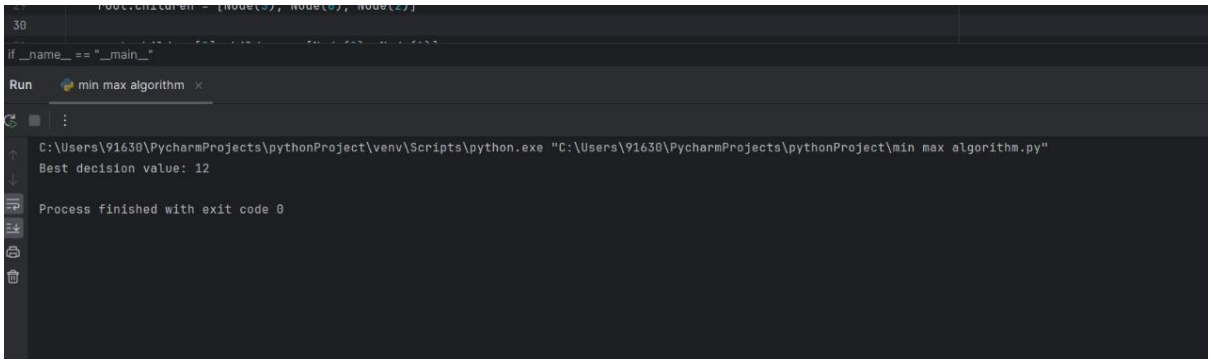
11.MAP COLORING



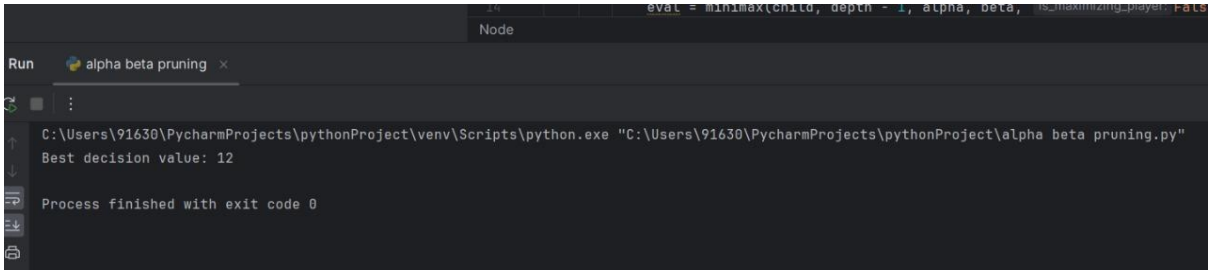
12.TIC TAC TOE GAME



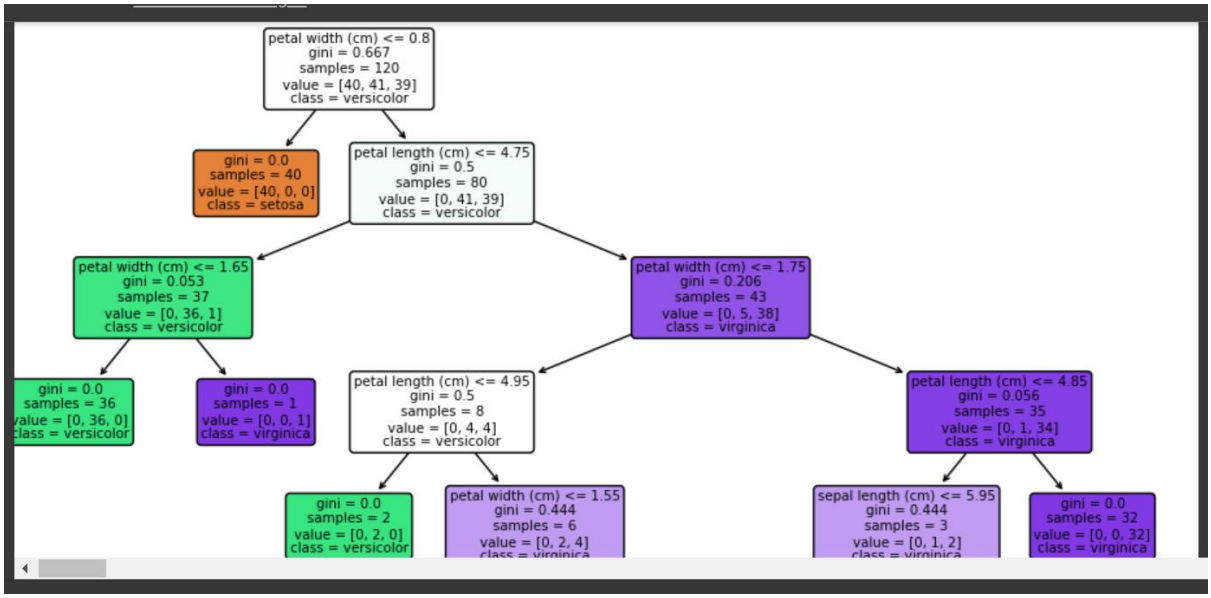
13.MIN MAX ALGORITHM.



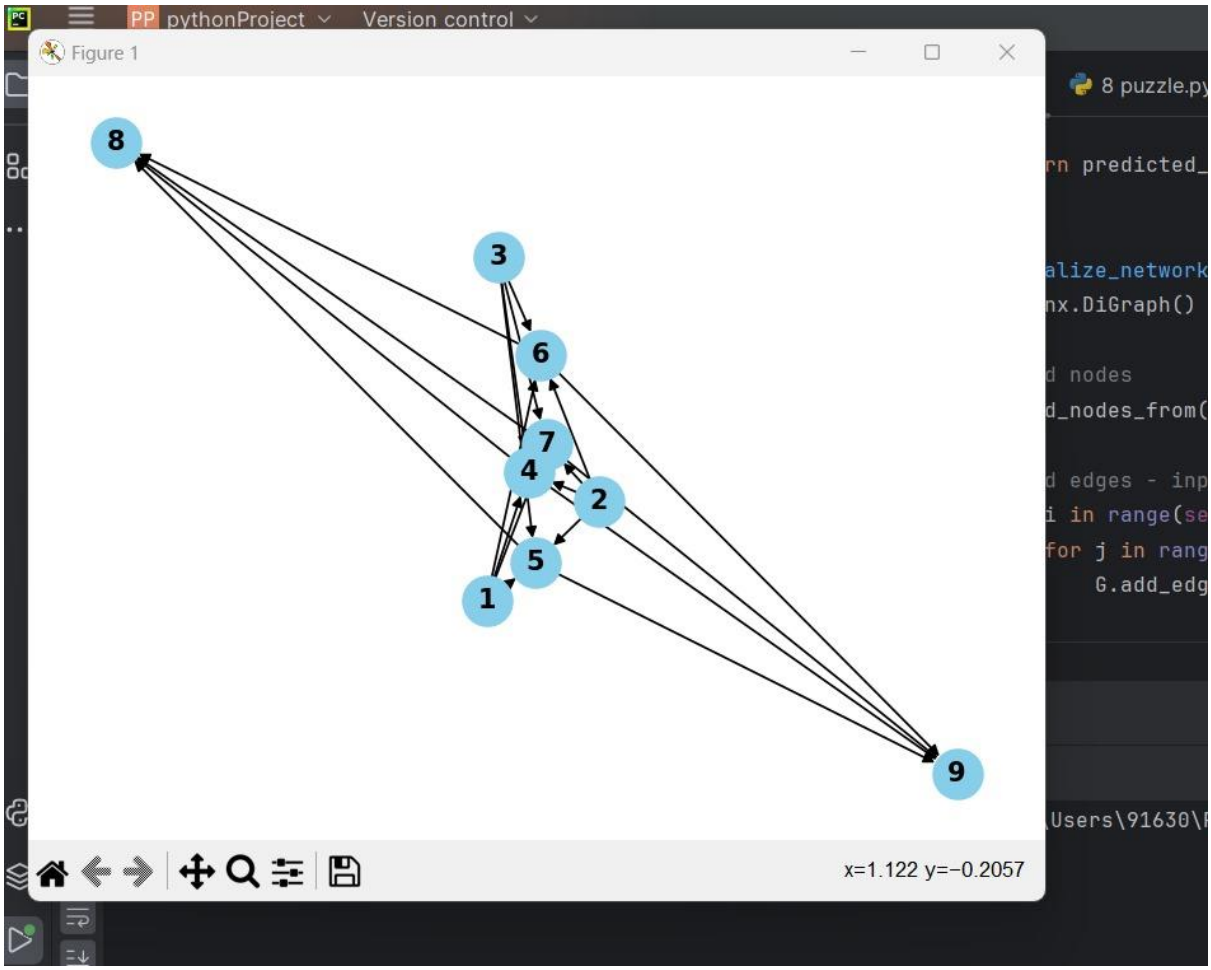
14.ALPHA &BETA PRUNING.



15.DECESION TREE.

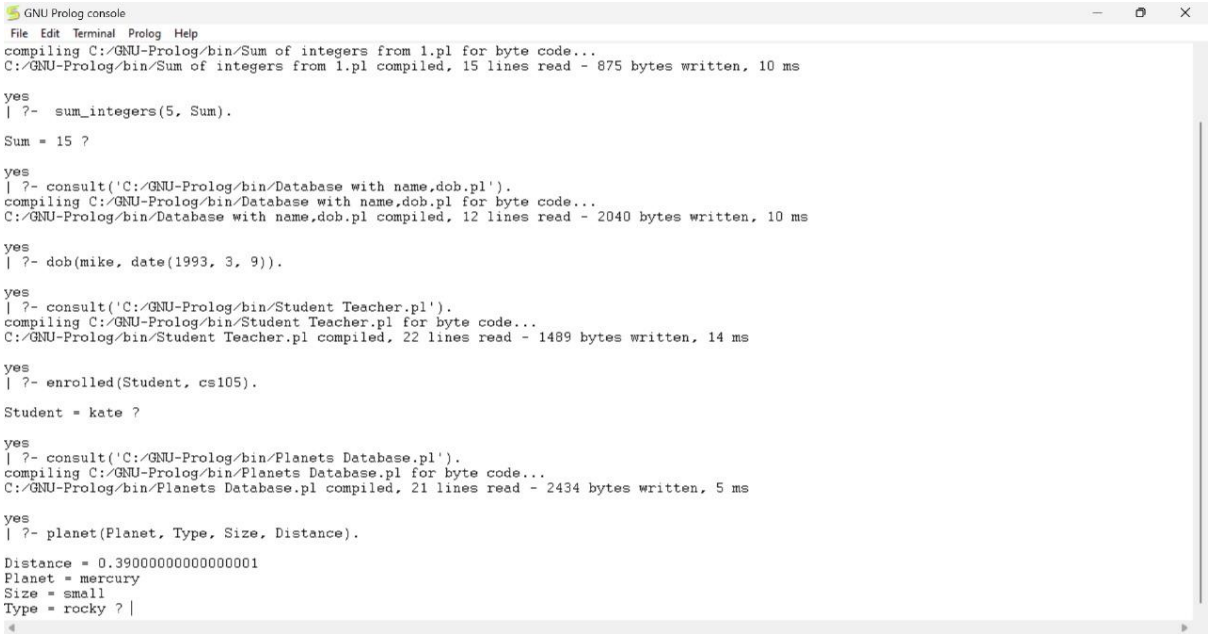


16.FEED FORWARD NEURAL NETWORK.

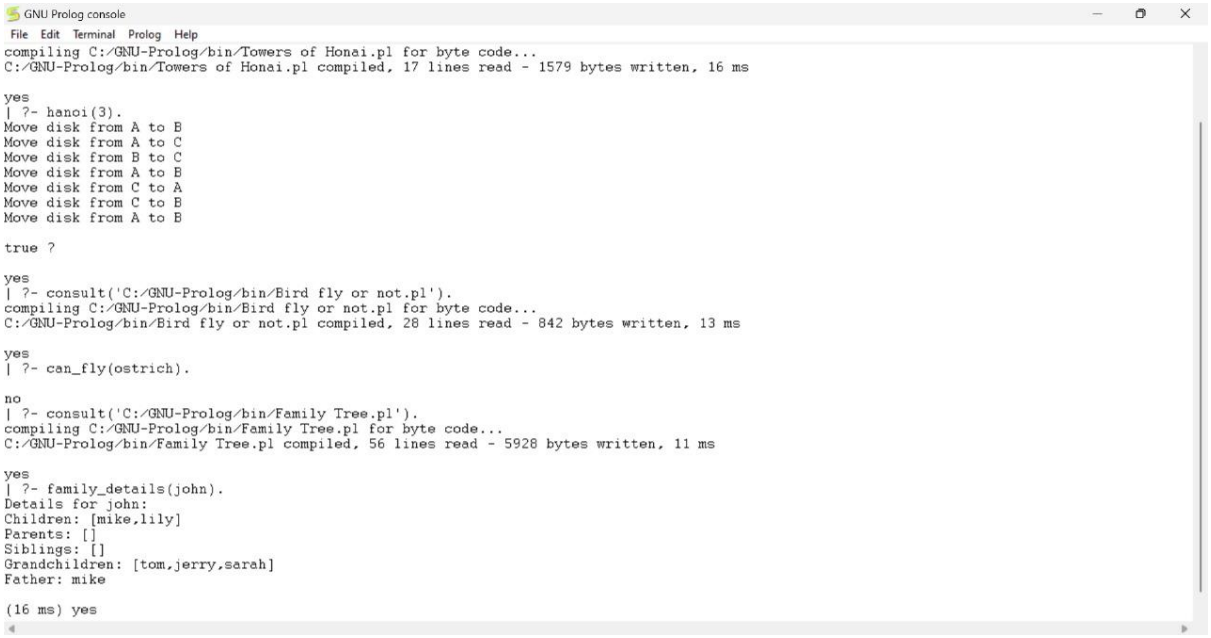


PROLOG PROGRAMS:

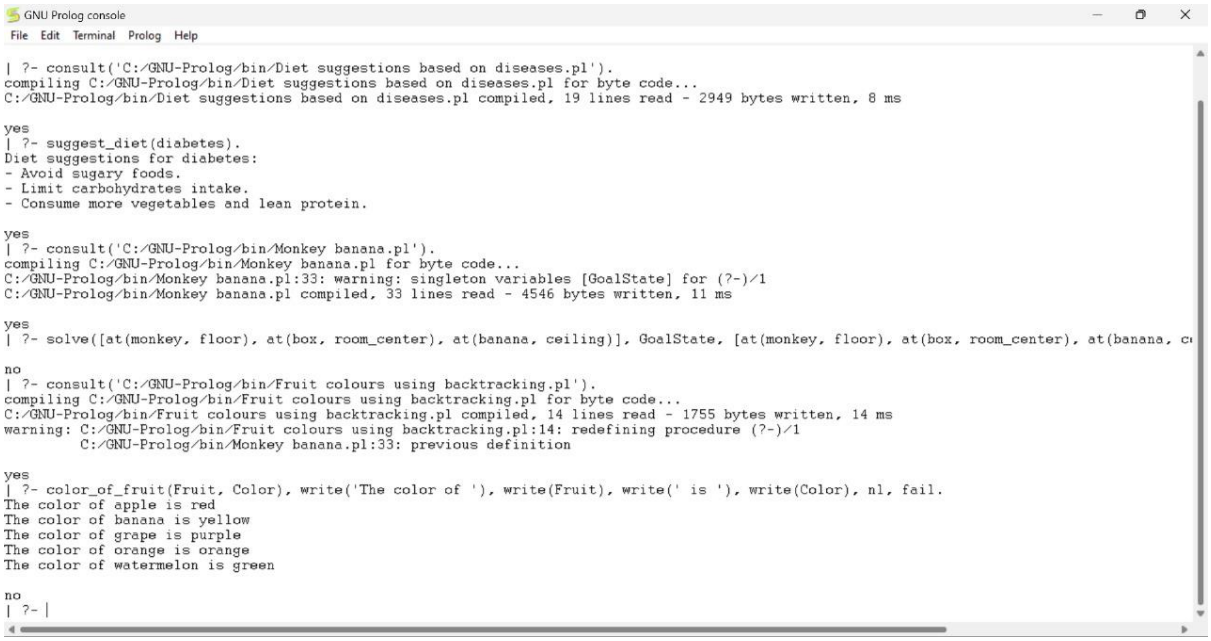
17 TO 20:



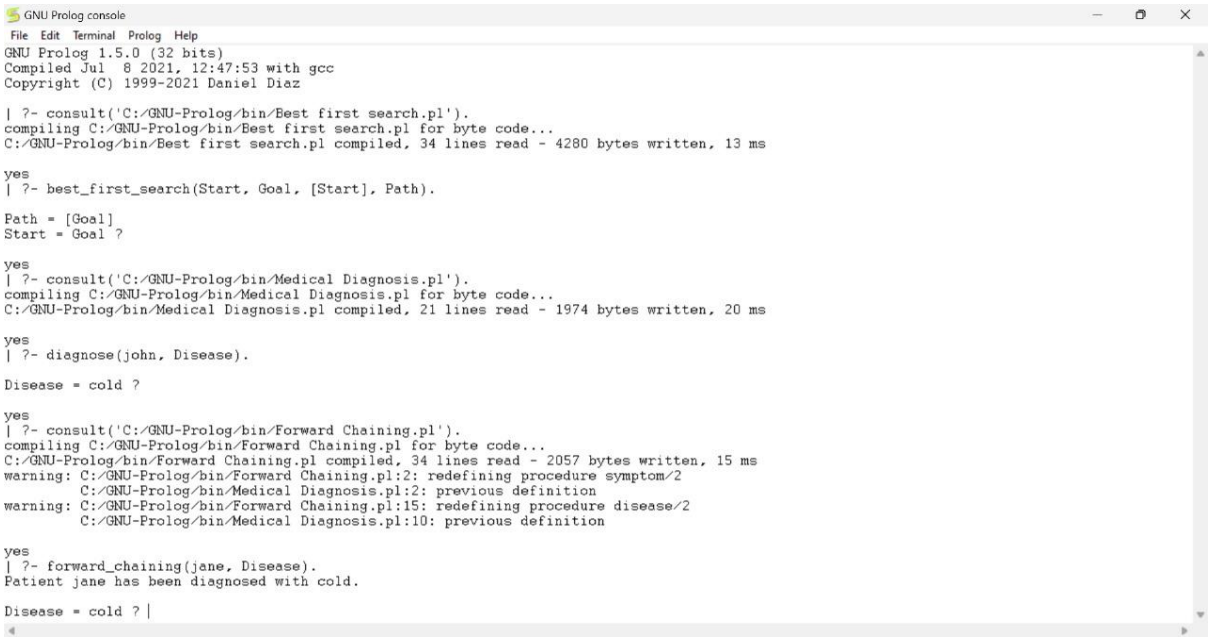
21 TO 23:



24 TO 26:


GNU Prolog console
File Edit Terminal Prolog Help
| ?- consult('C:/GNU-Prolog/bin/Diet suggestions based on diseases.pl').
compiling C:/GNU-Prolog/bin/Diet suggestions based on diseases.pl for byte code...
C:/GNU-Prolog/bin/Diet suggestions based on diseases.pl compiled, 19 lines read - 2949 bytes written, 8 ms
yes
| ?- suggest_diet(diabetes).
Diet suggestions for diabetes:
- Avoid sugary foods.
- Limit carbohydrates intake.
- Consume more vegetables and lean protein.
yes
| ?- consult('C:/GNU-Prolog/bin/Monkey banana.pl').
compiling C:/GNU-Prolog/bin/Monkey banana.pl for byte code...
C:/GNU-Prolog/bin/Monkey banana.pl:33: warning: singleton variables [GoalState] for (?-)/1
C:/GNU-Prolog/bin/Monkey banana.pl compiled, 33 lines read - 4546 bytes written, 11 ms
yes
| ?- solve([at(monkey, floor), at(box, room_center), at(banana, ceiling)], GoalState, [at(monkey, floor), at(box, room_center), at(banana, c
no
| ?- consult('C:/GNU-Prolog/bin/Fruit colours using backtracking.pl').
compiling C:/GNU-Prolog/bin/Fruit colours using backtracking.pl for byte code...
C:/GNU-Prolog/bin/Fruit colours using backtracking.pl compiled, 14 lines read - 1755 bytes written, 14 ms
warning: C:/GNU-Prolog/bin/Fruit colours using backtracking.pl:14: redefining procedure (?-)/1
C:/GNU-Prolog/bin/Monkey banana.pl:33: previous definition
yes
| ?- color_of_fruit(Fruit, Color), write('The color of '), write(Fruit), write(' is '), write(Color), nl, fail.
The color of apple is red
The color of banana is yellow
The color of grape is purple
The color of orange is orange
The color of watermelon is green
no
| ?-

27 TO 29:


GNU Prolog console
File Edit Terminal Prolog Help
GNU Prolog 1.5.0 (32 bits)
Compiled Jul 8 2021, 12:47:53 with gcc
Copyright (C) 1999-2021 Daniel Diaz
| ?- consult('C:/GNU-Prolog/bin/Best first search.pl').
compiling C:/GNU-Prolog/bin/Best first search.pl for byte code...
C:/GNU-Prolog/bin/Best first search.pl compiled, 34 lines read - 4280 bytes written, 13 ms
yes
| ?- best_first_search(Start, Goal, [Start], Path).
Path = [Goal]
Start = Goal ?
yes
| ?- consult('C:/GNU-Prolog/bin/Medical Diagnosis.pl').
compiling C:/GNU-Prolog/bin/Medical Diagnosis.pl for byte code...
C:/GNU-Prolog/bin/Medical Diagnosis.pl compiled, 21 lines read - 1974 bytes written, 20 ms
yes
| ?- diagnose(john, Disease).
Disease = cold ?
yes
| ?- consult('C:/GNU-Prolog/bin/Forward Chaining.pl').
compiling C:/GNU-Prolog/bin/Forward Chaining.pl for byte code...
C:/GNU-Prolog/bin/Forward Chaining.pl compiled, 34 lines read - 2057 bytes written, 15 ms
warning: C:/GNU-Prolog/bin/Forward Chaining.pl:2: redefining procedure symptom/2
C:/GNU-Prolog/bin/Medical Diagnosis.pl:2: previous definition
warning: C:/GNU-Prolog/bin/Forward Chaining.pl:15: redefining procedure disease/2
C:/GNU-Prolog/bin/Medical Diagnosis.pl:10: previous definition
yes
| ?- forward_chaining(jane, Disease).
Patient jane has been diagnosed with cold.
Disease = cold ?

30:


GNU Prolog console
File Edit Terminal Prolog Help
GNU Prolog 1.5.0 (32 bits)
Compiled Jul 8 2021, 12:47:53 with gcc
Copyright (C) 1999-2021 Daniel Diaz
| ?- consult('C:/GNU-Prolog/bin/Backward Chaining.pl').
compiling C:/GNU-Prolog/bin/Backward Chaining.pl for byte code...
C:/GNU-Prolog/bin/Backward Chaining.pl compiled, 24 lines read - 1683 bytes written, 9 ms
yes
| ?- ancestor(john, lisa).
true ?
yes
| ?-