UNIVERSITATEA TEHNICĂ A MOLDOVEI

FACULTATEA CALCULATOARE, INFORMATICĂ ȘI MICROELECTRONICĂ

DEPARTAMENTUL INFORMATICĂ ȘI INGINERIA SISTEMELOR

Lucrare de laborator nr.1

la Inteligenta Artificiala

A realizat: **st. gr. C-161 Osovschi Mihail**

A verificat: **conf.univ. Bumbu Tudor**

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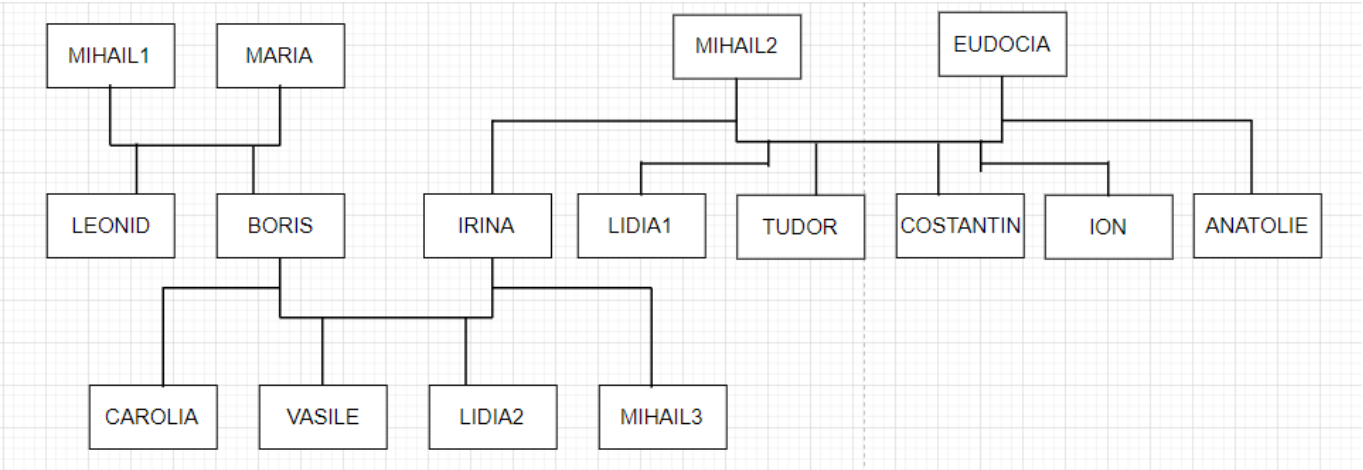
Arbore genealogic:



Codul programului:

```
1
2  /* Facts */
3
4  male(mihail1).
5
6  male(mihail2).
7  male(leonid).
8
9  male(boris).
10
11 male(tudor).
12
13 male(constantin).
14
15 male(ion).
16
17 male(anatolie).
18
19 male(vasile).
20
21 male(mihail3).
22
23 female(maria).
```

```
24
25 female(eudochia).
26
27 female(irina).
28
29 female(lidia1).
30
31 female(carolina).
32
33 female(lidia2).
34
35 parent(mihail1,boris).
36
37 parent(mihail1,leonid).
38
39 parent(maria,boris).
40
41 parent(maria,leonid).
42
43 parent(mihail2,tudor).
44
45 parent(mihail2,constantin).
46
47 parent(mihail2,ion).
48
49 parent(mihail2,anatolie).
50
51 parent(mihail2,irina).
52
53 parent(mihail2,lidia1).
```

```
54
55  parent(eudochia,tudor).
56
57  parent(eudochia,constantin).
58
59  parent(eudochia,ion).
60
61  parent(eudochia,anatolie).
62
63  parent(eudochia,irina).
64
65  parent(eudochia,lidia1).
66
67  parent(boris,carolina).
68
69  parent(boris,vasile).
70
71  parent(boris,lidia2).
72
73  parent(boris,mihail3).
74
75  parent(irina,carolina).
76
77  parent(irina,vasile).
78
79  parent(irina,lidia2).
80
81  parent(irina,mihail3).
82
```

```
/* Rules */

father_of(X,Y):- male(X),
    parent_of(X,Y).

mother_of(X,Y):- female(X),
    parent_of(X,Y).

grandfather_of(X,Y):- male(X),
    parent_of(X,Z),
    parent_of(Z,Y).

grandmother_of(X,Y):- female(X),
    parent_of(X,Z),
    parent_of(Z,Y).

sister_of(X,Y):- %(X,Y or Y,X)%
    female(X),
    father_of(F, Y), father_of(F,X),X \= Y.

sister_of(X,Y):- female(X),
    mother_of(M, Y), mother_of(M,X),X \= Y.

aunt_of(X,Y):- female(X),
    parent_of(Z,Y), sister_of(Z,X),!.

brother_of(X,Y):- %(X,Y or Y,X)%
    male(X),
    father_of(F, Y), father_of(F,X),X \= Y.
```

```
brother_of(X,Y):- male(X),
    mother_of(M, Y), mother_of(M,X),X \= Y.

uncle_of(X,Y):-
    parent_of(Z,Y), brother_of(Z,X).

ancestor_of(X,Y):- parent_of(X,Y).
ancestor_of(X,Y):- parent_of(X,Z),
    ancestor_of(Z,Y).
```

Concluzie :

La aceasta lucrare de laborator am studiat și am obținut deprinderi practice în limbajul de programare prolog implimentînd arborele genealogic .