

DISCOVER YOUR SELF

ARTIFICIAL INTELLIGENCE PROJECT

PREPARED BY:

BUSHRA ABDULKHALEG DAJAM 2110054
BUSHRA GHANEM ALZEGHABI 2110066

DR.AMATULRAHMAN ALHARBI

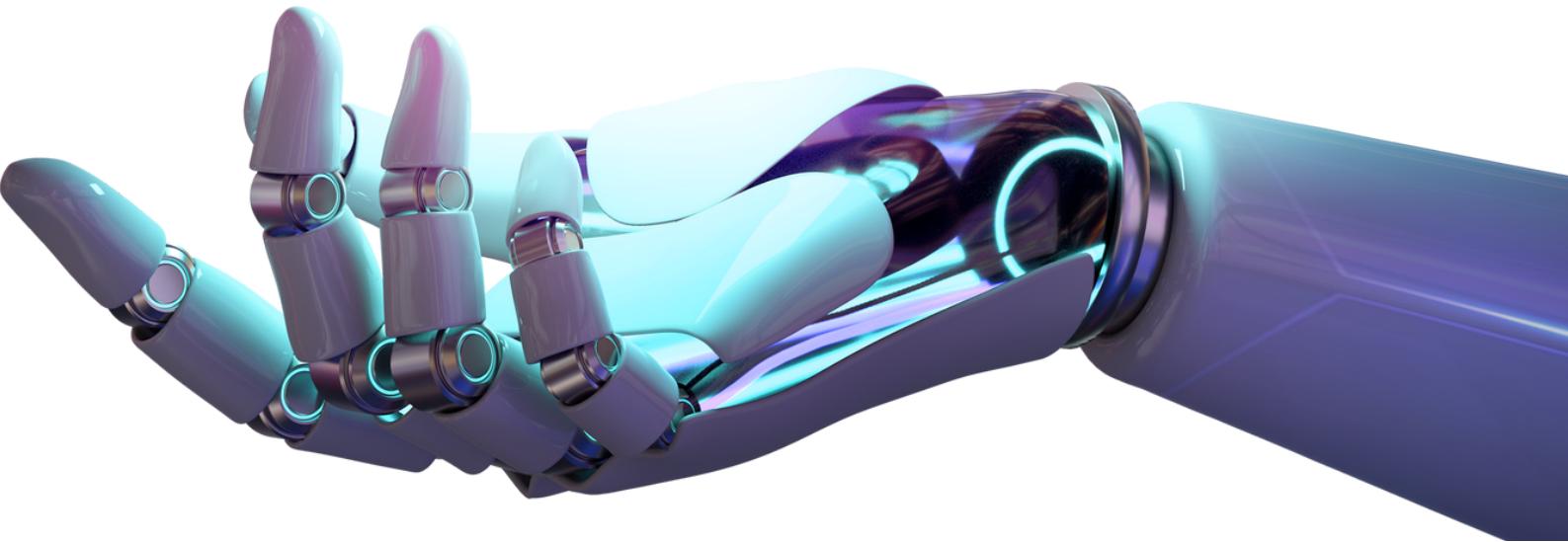
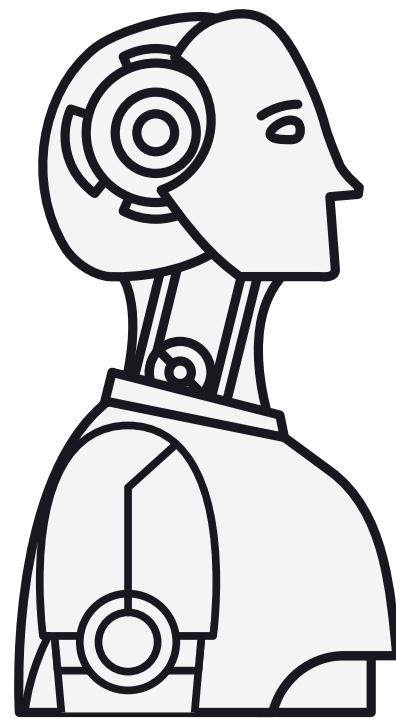


TABLE OF CONTENT

- Problem
- Expert System
- About our project
- theriacal background
- factor table
- facts
- rules
- queries
- code
- references



02 PROBLEM

No one denies that the process of choosing the appropriate university major or course can often be stressful and fearful, given that many think of it as a fateful step that will determine their future forever. So you have to choose the right major for you before you commit to it for several years, and sometimes this decision that was made can also be an obstacle in the future.

There are always a few people who choose a major simply for the sake of choice. They can't decide so they choose something they kinda like, avoid this. It is common for students to feel pressured by family and peers to choose a major as soon as possible. In addition, the high costs of tuition make students feel that there is no room for hesitation and the cost of re-starting the degree requirements may be too high for students on a tight budget. This can lead students to choose their majors even if they are not ready.

WHAT IS AN EXPERT SYSTEM ?

A human expert's expertise is preserved in an expert system's knowledge base by using knowledge stored in a knowledge base to solve problems that would typically need a human expert. They can give users recommendations as well as explanations of how they arrived at a specific decision or piece of advice.

An expert system's job is to resolve the trickiest problems in a certain field.

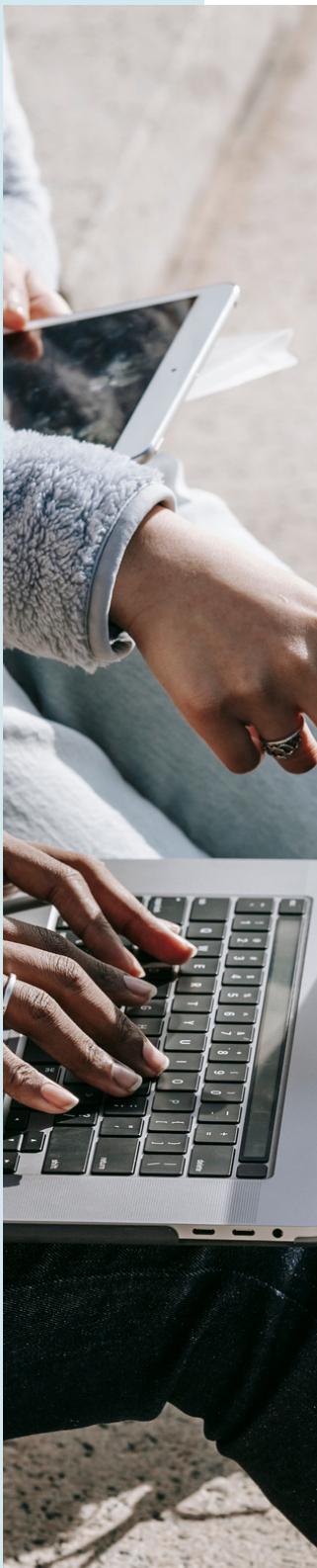


03

ABOUT OUR PROJECT



DISCOVER YOUR SELF WITH
US



Our project is to create an expert system to help students who are lost or confused about choosing their university major, which is a crucial point for their future by conducting a simple test and then presenting the appropriate majors to the student based on their answers.

We have many great majors and unique universities.

Here we will explain how it works:

In the beginning, he will ask the student if he wants to study in Saudi Arabia or outside, and then he will ask him about the student's budget if it is higher than 25,000 or less, and he will also ask him about some of his interests, for example, does he like analysis or not? Theoretical or practical? Based on these various questions, the student will be offered the appropriate specializations for his inclinations. use Acting humanly .

0 4

ABOUT OUR PROJECT

“
DISCOVER YOUR SELF WITH
US ”

we have 2 types of place:
KSA , outside.

and 2 variant budget :
below , above 25,000

people favorite one of theses tracks:
theoretical , practical

people may be mood with :
analysis , not analysis

S prefer to major .
W where
U university
B budget
F favorite
M mood

Suggest artificial intelligence major of uj implies
that the person's loves analysis and he is in KSA
and practical.

In predicate logic, it'll be:
$$\text{discover}(S, W, _, B, M, F).$$

$$\forall x: M(x, y, z, k) \rightarrow W(k) \wedge M(y) \wedge B(z) \wedge F(k)$$

THERIACAL BACKGROUND

We have relied on obtaining information from various sources. And we got the majors in Saudi Arabia from the King Abdulaziz University and Jeddah University websites.[3][4]

The University of Jeddah and the University of Abdulaziz have two scientific tracks, namely: Theoretical or practical On their basis, our program was built .

We obtained the types of majors, their classification, and the skills that depend on them through the For9a platform.

Evidence that we need this test or program We have found research close to the idea of our project, which supports the vision of the program.[2]

FACTOR TABLE:

Major	Where	University	Budget	analysis or not	Type
computer Science	outside	lau	above	analysis	practical
Nuclear Engineerin	outside	nyu	below	analysis	practical
Economics	outside	lau	above	analysis	theoretical
Psychology	outside	nyu	below	analysis	theoretical
Freanch Language	outside	nyu	below	not	theoretical
Translation	outside	lau	above	not	theoretical
Interior Design	outside	lau	below	not	practical
Fashion Design	outside	nyu	above	not	practical
medical	outside	nyu	above	analysis	practical
Tourism	outside	lau	above	not	theoretical

07

FACTOR TABLE:

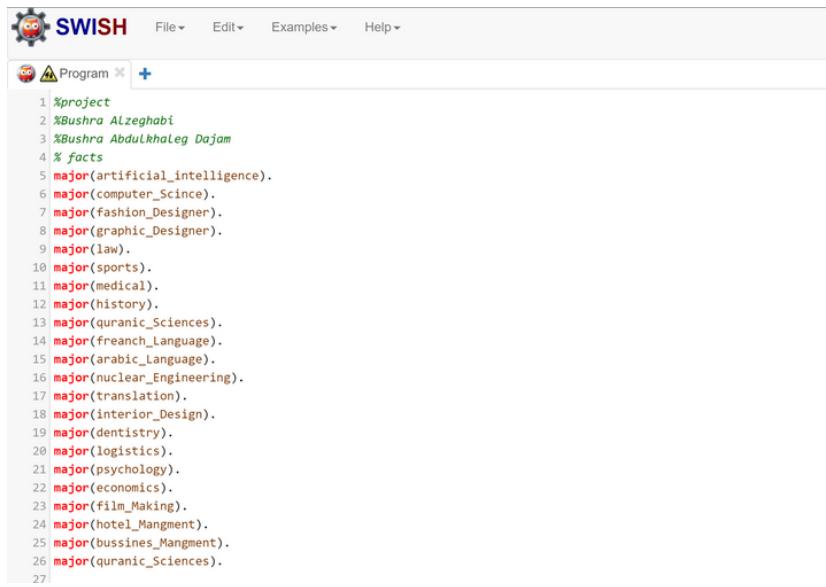
Major	Where	University	Budget	analysis or not	Tybe
artificial intelligence	KSA	uj	above	analysis	practical
Dentistry	KSA	kau	below	analysis	practical
law	KSA	uj	above	analysis	theoretical
logistics	KSA	kau	below	analysis	theoretical
Film Making	KSA	kau	above	not	practical
graphic Designer	KSA	uj	below	not	practical
Arabic language	KSA	kau	below	not	theoretical
Hotel Mangment	KSA	uj	above	not	theoretical
Bussines Mangement	KSA	kau	above	analysis	theoretical
sports	KSA	uj	below	not	theoretical
Quranic Sciences	KSA	kau	below	not	theoretical

08

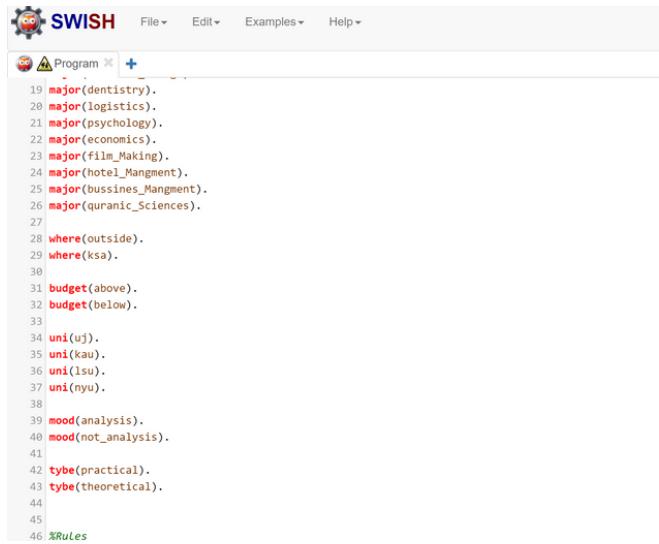
facts

66

99



```
%project
%Bushra Alzeghabi
%Bushra Abdulkhaleg Dajam
% facts
1 major/artificial_intelligence.
2 major/computer_Scince.
3 major/fashion_Designer.
4 major/graphic_Designer.
5 major/law.
6 major/sports.
7 major/medical.
8 major/history.
9 major/quranic_Sciences.
10 major/freanch_Language.
11 major/arabic_Language.
12 major/nuclear_Engineering.
13 major/translation.
14 major/interior_Design.
15 major/dentistry.
16 major/logistics.
17 major/psychology.
18 major/economics.
19 major/film_Making.
20 major/hotel_Mangment.
21 major/bussines_Mangment.
22 major/quranic_Sciences.
```



```
19 major/dentistry.
20 major/logistics.
21 major/psychology.
22 major/economics.
23 major/film_Making.
24 major/hotel_Mangment.
25 major/bussines_Mangment.
26 major/quranic_Sciences.
27
28 where/outside.
29 where/ksa.
30
31 budget/above.
32 budget/below.
33
34 uni/wj.
35 uni/kau.
36 uni/lsu.
37 uni/nyu.
38
39 mood/analysis.
40 mood/not_analysis.
41
42 type/practical.
43 type/theoretical.
44
45
46 %Rules
```

09

rules

66

99

```
44
45
46 %Rules
47
48 %MAJOR OUTSIDE
49 discover('computer Science',W,lau,B,M,F):-W=outside,B=above,M=analysis,F=practical. %50000$ 
50 discover('Nuclear Engineering',W,nyu,B,M,F):-W=outside,B=below,M=analysis,F=practical. %50000$ 
51 discover('Economics',W,lau,B,M,F):-W=outside,B=above,M=analysis,F=theoretical. %26000$ 
52 discover('Psychology',W,nyu,B,M,F):-W=outside,B=below,M=analysis,F=theoretical. %23000$ 
53 discover('French Language',W,nyu,B,M,F):-W=outside,B=below,M=not,F=theoretical. %10000$ 
54 discover('Translation',W,lau,B,M,F):-W=outside,B=above,M=not,F=theoretical. %45000$ 
55 discover('Interior Design',W,lau,B,M,F):-W=outside,B=below,M=not,F=practical. %42000$ 
56 discover('Fashion Design',W,nyu,B,M,F):-W=outside,B=above,M=not,F=practical. %39000$ 
57 discover('medical',W,nyu,B,M,F):-W=outside,B=above,M=analysis,F=practical. %44000$ 
58 discover('Tourism',W,lau,B,M,F):-W=outside,B=above,M=not,F=theoretical. %40000$ 
59
60
```

```
59
60
61 %MAJOR IN KSA
62 discover('artificial intelligence',W,uj,B,M,F):-W=ksa,B=above,M=analysis,F=practical. %51000$ 
63 discover('Dentistry',W,kau,B,M,F):-W=ksa,B=below,M=analysis,F=practical. %19000$ 
64 discover('law',W,uj,B,M,F):-W=ksa,B=above,M=analysis,F=theoretical. %28000$ 
65 discover('logistics',W,kau,B,M,F):-W=ksa,B=below,M=analysis,F=theoretical. %27000$ 
66 discover('Film Making',W,kau,B,M,F):-W=ksa,B=above,M=not,F=practical. %19000$ 
67 discover('graphic Designer',W,uj,B,M,F):-W=ksa,B=below,M=not,F=practical. %19000$ 
68 discover('Arabic language',W,kau,B,M,F):-W=ksa,B=below,M=not,F=theoretical. %7000$ 
69 discover('Hotel Management',W,uj,B,M,F):-W=ksa,B=above,M=not,F=theoretical. %7000$ 
70 discover('Business Management',W,kau,B,M,F):-W=ksa,B=above,M=analysis,F=theoretical. %35000$ 
71 discover('sports',W,uj,B,M,F):-W=ksa,B=below,M=not,F=theoretical. %9000$ 
72 discover('Quranic Sciences',W,kau,B,M,F):-W=ksa,B=below,M=not,F=theoretical. %16000$ 
73
74
```

10

Queries

66

99

QUERY 1&2&3&4:

```

75 place(W):-write('Do you prefer to study here in ksa or outside?'),nl,
76     write('write ksa or outside'),read(W).
77
78 budjets(B):- write('write your budget : Above 25,000 or below'),nl,
79     write('write above or below'),read(B).
80
81 favorite(F):- write('are you like theoretical or practical?'),nl,
82     write('write theoretical or practical?'),read(F).
83
84 tybes(M):- write('Do you like analysis or not?'),nl,
85     write('write analysis or not'),read(M).
86

```

in this queries we will ask user some question about our project and take inputs from user and we will call this queries later to use it.

Query 5: ask(M).

When writing this query ,we will call the queries before , four questions are asked: First, Do you prefer to study here in ksa or outside? Here, inside or outside is chosen and entered in the box. The second question is write your budget: Above 25,000 or below? Here, the budget is chosen either above or below and entered into the box. The third question: Are you like theoretical or practical? Here, the appropriate type is chosen and entered in the box. The fourth question: Do you like analysis or not? Here, it determines whether it depends on the analysis or not, and it is entered in the box. Then it presents the suggestion to the user.

```

SWISH File Examples Help
Program + 
oo
87 ask(S):- write('*****'),nl,
88     write('hello to our program * DISCOVER YOUR SELF *'),nl,
89     write('*****'),nl,
90     place(W),
91     budjets(B),
92     favorite(F),
93     tybes(M),
94     write('we reccomend for you this majors:'),
95     discover(S,W,B,M,F).

```

```

ask(M).
-----
hello to our program * DISCOVER YOUR SELF *
-----
Do you prefer to study here in ksa or outside?
write ksa or outside
    ksa
write your budget : Above 25,000 or below
write above or below
    above
are you like theoretical or practical?
write theoretical or practical?
    practical
Do you like analysis or not?
write analysis or not
    analysis
we recommend for you this majors:
M = 'artificial intelligence'
fnska
?- ask(M).

```

Query 6: university(X)

will ask user which university he want and then discover major on what chosen

```

97 university(X):-write('choose which univesity do you want to discover?:'),nl,
98     write('uj or kau or nyu or lau'),read(Input),
99     discover(X,_,Input,_,_).
100

```

```

university(X).
choose which univesity do you want to discover?
uj or kau or nyu or lau
    uj
X = 'artificial intelligence'
X = law
X = 'graphic Designer'
X = 'Hotel Mangment'
X = sports
?- university(X).

```

Query 7:world(X)

will ask user which world(place) he want and then discover major on what chosen

```

101 world(X):-write('choose which world do you want to discover?:'),nl,
102     write('ksa or outside'),read(Input),
103     discover(X,Input,_,_,_).
104

```

```

world(X).
choose which world do you want to discover?
ksa or outside
    outside
X = 'computer Science'
X = 'Nuclear Engineering'
X = 'Economics'
X = 'Psychology'
X = 'French Language'
X = 'Translation'
X = 'Interior Design'
X = 'Fashion Design'
X = medical
X = 'Tourism'
?- world(X).

```

11

Queries

66

99

```
uj(MAJOR).
list of all major at UJ :
MAJOR = 'artificial intelligence'
MAJOR = law
MAJOR = 'graphic Designer'
MAJOR = 'Hotel Mangement'
MAJOR = sports
?- uj(MAJOR).
```

Qurye 8: uj(MAJOR). -line 106**This query shows all majors affiliated to the University of Jeddah without regard to any other classification.**

```
kau(MAJOR).
list of all major at KAU :
MAJOR = 'Dentistry'
MAJOR = logistics
MAJOR = 'Film Making'
MAJOR = 'Arabic language'
MAJOR = 'Business Management'
MAJOR = 'Quranic Sciences'
?- kau(MAJOR).
```

Qurye 9: kau(MAJOR). -line 109**This query shows all majors affiliated to the King Abdulaziz University without regard to any other classification.**

```
lau(MAJOR).
list of all major at LAU :
MAJOR = 'computer Science'
MAJOR = 'Economics'
MAJOR = 'Translation'
MAJOR = 'Interior Design'
MAJOR = 'Tourism'
?- lau(MAJOR).
```

Qurye 10: lau(MAJOR). -line 112**This query shows all majors affiliated to the University of Los Angeles without regard to any other classification.**

```
nyu(MAJOR).
list of all major at NYU :
MAJOR = 'Nuclear Engineering'
MAJOR = 'Physics'
MAJOR = 'French Language'
MAJOR = 'Fashion Design'
MAJOR = medical
?- nyu(MAJOR).
```

Qurye 11: nyu(MAJOR). -line 116**This query shows all majors affiliated to the New York university without regard to any other classification.**

```
practical(MAJOR).
here is list of all major that contain practical part while studing :
MAJOR = 'computer Science'
MAJOR = 'Economics'
MAJOR = 'Interior Design'
MAJOR = 'Fashion Design'
MAJOR = 'French Language'
MAJOR = 'Artificial intelligence'
MAJOR = 'Dentistry'
MAJOR = 'Film Making'
MAJOR = 'Graphic Designer'
?- practical(MAJOR).
```

Qurye 12: practical(MAJOR). line 140**This query shows all majors that Have A practical TYPE without regard to any other classification.**

```
theoretical(MAJOR).
here is list of all major that contain theoretical part while studing :
MAJOR = 'Economics'
MAJOR = 'Psychology'
MAJOR = 'Arabic language'
MAJOR = 'Translation'
MAJOR = 'Tourism'
MAJOR = medical
MAJOR = logistics
MAJOR = 'Arabic language'
MAJOR = 'Hotel Mangement'
MAJOR = 'Business Management'
MAJOR = sports
MAJOR = 'Quranic Sciences'
?- theoretical(MAJOR).
```

Qurye 13: theoretical(MAJOR). line 143**This query shows all majors that Have A theoretical TYPE without regard to any other classification.**

12

Queries

66

99

Qurye 14: budget_Below(MAJOR). line 165

This query shows all majors that Have A budget Below 25000\$ without regard to any other classification.

```
budget_Below(MAJOR).
all major that have budget below 25000 :
MAJOR = 'Nuclear Engineering'
MAJOR = 'Psychology'
MAJOR = 'Arabic language'
MAJOR = 'Interior Design'
MAJOR = 'Dentistry'
MAJOR = 'logistics'
MAJOR = 'Graphic Designer'
MAJOR = 'Arabic language'
MAJOR = 'Sports'
MAJOR = 'Quranic Sciences'
```

Qurye 15: budget_Above(MAJOR). line 168

This query shows all majors that Have A budget Above 25000\$ without regard to any other classification.

```
budget_Above(MAJOR).
all major that have budget above 25000 :
MAJOR = 'Computer Science'
MAJOR = 'Economics'
MAJOR = 'Tourism'
MAJOR = 'Fashion Design'
MAJOR = 'Tourism'
MAJOR = 'Artificial Intelligence'
MAJOR = 'Film Making'
MAJOR = 'Graphic Designer'
MAJOR = 'Business Management'
```

Qurye 16: analysis(MAJOR). line 119

This query shows all majors with analysis-based without regard to any other classification.

```
analysis(MAJOR).
here is list of all major that have more analysis :
MAJOR = 'Computer Science'
MAJOR = 'Nuclear Engineering'
MAJOR = 'Psychology'
MAJOR = 'Economics'
MAJOR = 'Arabic language'
MAJOR = 'Artificial Intelligence'
MAJOR = 'Dentistry'
MAJOR = 'logistics'
MAJOR = 'Business Management'
```

Qurye 17: notana(MAJOR). line 122

This query shows all majors with not analysis-based without regard to any other classification.

```
notana(MAJOR).
here is list of all major that not have analysis :
MAJOR = 'French Language'
MAJOR = 'Translation'
MAJOR = 'Interior Design'
MAJOR = 'Graphic Designer'
MAJOR = 'Tourism'
MAJOR = 'Film Making'
MAJOR = 'Graphic Designer'
MAJOR = 'Arabic language'
MAJOR = 'Hotel Management'
MAJOR = 'Sports'
MAJOR = 'Quranic Sciences'
```

Qurye 18: analysis_KSA(MAJOR). line 126

This query shows all majors in ksa with analysis-based without regard to any other classification.

```
analysis_KSA(MAJOR).
here is list of all major in ksa that have more analysis :
MAJOR = 'Artificial Intelligence'
MAJOR = 'Dentistry'
MAJOR = 'Law'
MAJOR = 'Logistics'
MAJOR = 'Business Management'
```

Qurye 19: notana_KSA(MAJOR). line 132

This query shows all majors in ksa without analysis-based without regard to any other classification.

```
notana_OUTSIDE(MAJOR).
here is list of all major abroad that not have analysis :
MAJOR = 'French Language'
MAJOR = 'Translation'
MAJOR = 'Interior Design'
MAJOR = 'Fashion Design'
MAJOR = 'Tourism'
```

Qurye 20 : notana_OUTSIDE(MAJOR). line 135

This query shows all majors outside ksa without analysis-based without regard to any other classification.

13

Queries

66

99

```

par theoretical_KSA(MAJOR).
here is list of all major in ksa that contain theoretical part while studing :
MAJOR = law
MAJOR = logistics
MAJOR = "Arabic language"
MAJOR = "Hotel Mangement"
MAJOR = "Business Mangement"
MAJOR = sports
MAJOR = "Quranic Sciences"

?- theoretical_KSA(MAJOR).

```

Query 21: theoretical_KSA(MAJOR). line 151

This query shows all majors that Have A theoretical TYPE in ksa without regard to any other classification.

```

practical_OUTSIDE(MAJOR).
here is list of all major abroad that contain practical part while studing :
MAJOR = "computer Science"
MAJOR = "Nuclear Engineering"
MAJOR = "Interior Design"
MAJOR = "Fashion Design"
MAJOR = medical

?- practical_OUTSIDE(MAJOR).

```

Query 21: practical_OUTSIDE(MAJOR). line 156

This query shows all majors that Have A practical TYPE not in ksa without regard to any other classification.

```

theoretical_OUTSIDE(MAJOR).
here is list of all major abroad that contain theoretical part while studing :
MAJOR = "Economics"
MAJOR = "Psychology"
MAJOR = "French Language"
MAJOR = "Translation"
MAJOR = "Tourism"

?- theoretical_OUTSIDE(MAJOR).

```

Query 22: theoretical_OUTSIDE(MAJOR). line 158

This query shows all majors that Have A theoretical TYPE not in ksa without regard to any other classification.

```

ksa_below(MAJOR).
all major in KSA that contain budget below 25000 :
MAJOR = "Dentistry"
MAJOR = logistics
MAJOR = "graphic Designer"
MAJOR = "Arabic language"
MAJOR = sports
MAJOR = "Quranic Sciences"

?- ksa_below(MAJOR).

```

Query 23: ksa_below(MAJOR). line 173

This query shows all majors that Have A below budget (less than 250000) in ksa without regard to any other classification.

```

ksa_above(MAJOR).
all major in KSA that contain budget Above 25000 :
MAJOR = "artificial intelligence"
MAJOR = law
MAJOR = "Hotel Making"
MAJOR = "Hotel Mangement"
MAJOR = "Business Mangement"

?- ksa_above(MAJOR).

```

Query 24: ksa_above(MAJOR). line 176

This query shows all majors in ksa that Have A above budget (more than 250000) in ksa without regard to any other classification.

```

outside_above(MAJOR).
all major outside that contain budget Above 25000 :
MAJOR = "computer Science"
MAJOR = "Economics"
MAJOR = "Translation"
MAJOR = "Fashion Design"
MAJOR = medical
MAJOR = "Tourism"

?- outside_above(MAJOR).

```

Query 25: outside_above(MAJOR). line 184

This query shows all majors not in ksa that Have A above budget (more than 250000) in ksa without regard to any other classification.

14

Queries

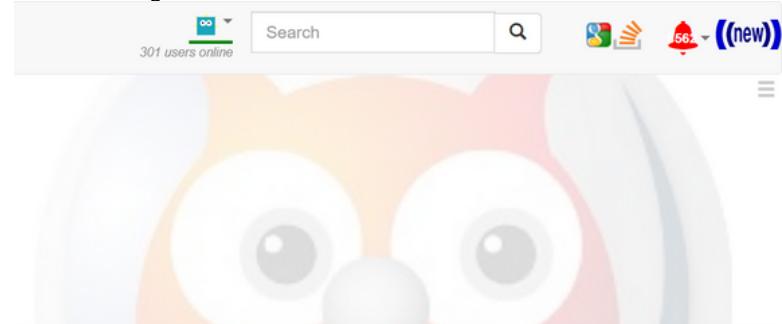
66

99

Qurye 26: practical_KSA(S).

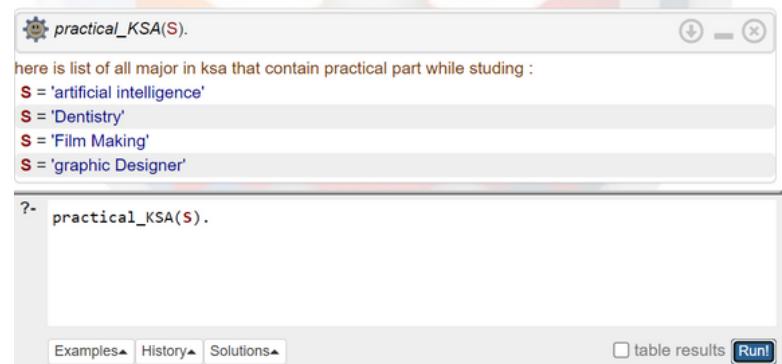
here is list of all major in ksa that contain practical part while studing :

```
S = 'artificial intelligence'
S = 'Dentistry'
S = 'Film Making'
S = 'graphic Designer'
```



This query shows all majors in ksa with practical type.

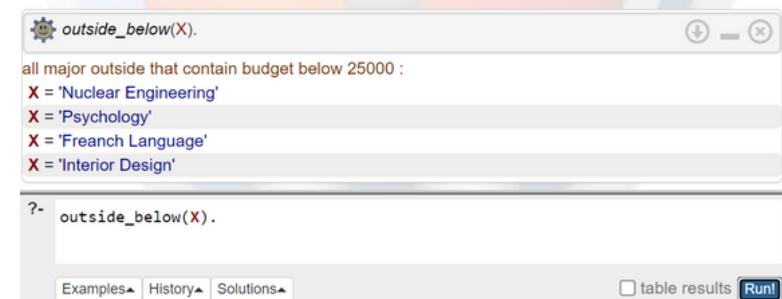
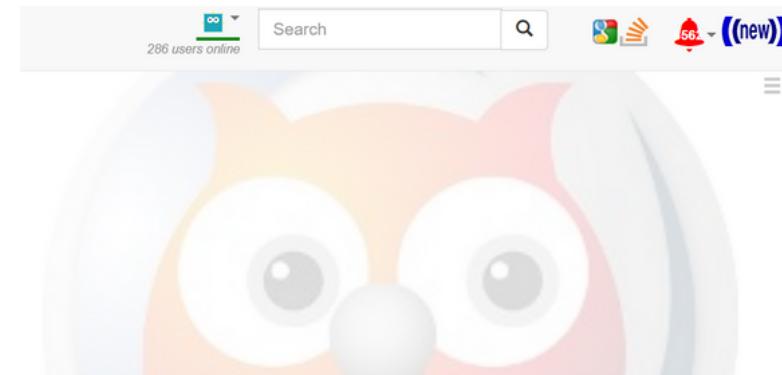
```
SWISH File Examples Help
Program + 
147 %MAJOR THAT HAVE A practical TYPE AND AT KSA.
148 practical_KSA(S):- write('here is list of all major in ksa that contain practical part while studing :'),
149 discover(S,ksa,_,_,_,practical).
150 %MAJOR THAT HAVE A theoretical TYPE AND AT KSA.
151 theoretical_KSA(S):- write('here is list of all major in ksa that in contain theoretical part while studing :'),
152 discover(S,ksa,_,_,_,theoretical).
```



Qurye 27: outside_below(X).

all major outside that contain budget below 25000 :

```
X = 'Nuclear Engineering'
X = 'Psychology'
X = 'Freanch Language'
X = 'Interior Design'
```



15

Queries

66

99

Qurye 28: *analysis_OUTSIDE(X).*

: here is list of all major abroad that have more analysis

'X = 'computer Science'

'X = 'Nuclear Engineering'

'X = 'Economics'

'X = 'Psychology'

X = medical

This query shows all majors abroad with analysis-based.

The screenshot shows the SWISH interface with two main panes. The top pane displays the query results: "here is list of all major abroad that have more analysis : X = 'computer Science' X = 'Nuclear Engineering' X = 'Economics' X = 'Psychology' X = medical". The bottom pane shows the query command: ?- analysis_OUTSIDE(X). Below the panes are tabs for Examples, History, and Solutions, and a Run! button.

The bottom part of the screenshot shows the SWISH interface with the following code:

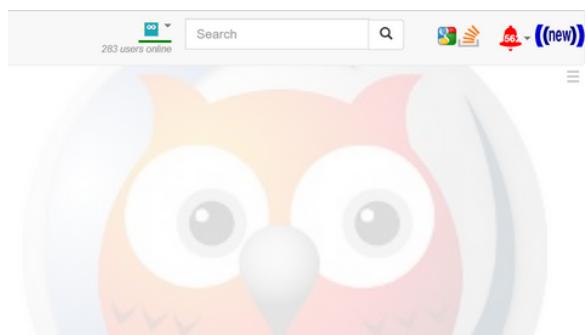
```
128 XMAJOR THAT HAVE A ANALYSIS MOOD AND AT ABROAD.  
129 analysis_OUTSIDE(S):- write('here is list of all major abroad that have more analysis :'),  
130 discover(S,outside,_,_,analysis,_).
```

Qurye : *discover(X,outside,_,above,analysis,practical).*

X = 'computer Science'

X = medical

This query shows all majors abroad with a budget above 25,000 and analysis-based, as well as practical type.



Qurye : *discover('artificial intelligence',WHER,UNI,BUDGET,X,TYPE).*

BUDGET = above,

TYPE = practical,

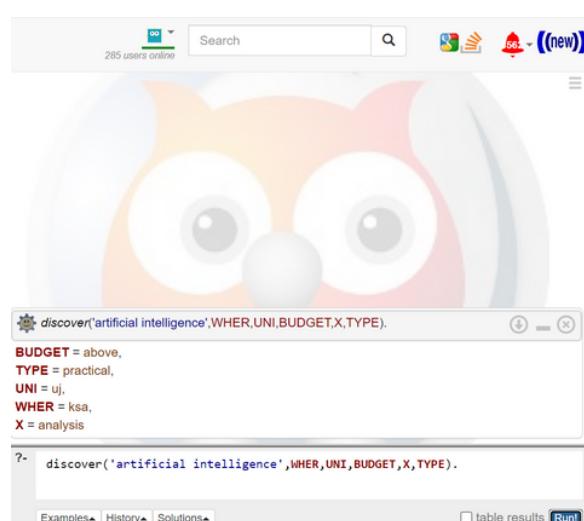
UNI = uj,

WHER = ksa,

X = analysis

This query shows whether there is this majors in the KSA or abroad, with which university, what is its budget and type, and whether it depends on the analysis or not.

chose artificial intelligence and it showed me that it is in KSA, at the University of Jeddah, its type is practical and depends on analysis.



16

Queries

66

99

Qurye : *discover(MAJOR,_,UNI,BUDGET,analysis,TYPE).*

This query shows all majors abroad or in ksa with analysis-based.

The screenshot shows a web-based query interface with a search bar at the top. Below the search bar, there is a list of results for the query `?- discover(MAJOR,_,UNI,BUDGET,analysis,TYPE).`. The results are as follows:

```
BUDGET = above,  
MAJOR = 'computer Science',  
TYPE = practical,  
UNI = tau  
BUDGET = below,  
MAJOR = 'Nuclear Engineering',  
TYPE = practical,  
UNI = nyu  
BUDGET = above,  
MAJOR = 'Economics',  
TYPE = theoretical,  
UNI = tau  
BUDGET = below,  
MAJOR = 'Psychology',  
TYPE = theoretical,  
UNI = nyu
```

At the bottom of the interface, there are buttons for 'Next', '10', '100', '1,000', and 'Stop'. Below these buttons is a link labeled '?- discover(MAJOR,_,UNI,BUDGET,analysis,TYPE).'. At the very bottom, there are tabs for 'Examples', 'History', 'Solutions', and a 'Run!' button.

Qurye : *discover('Hotel Mangment',_,UNI,BUDGET,_,TYPE).*

BUDGET = above,
TYPE = theoretical,
UNI = uj

This query shows me the university that has a hotel management major, and it shows the budget for the major and the type.

]

The screenshot shows a web-based query interface with a search bar at the top. Below the search bar, there is a list of results for the query `?- discover('Hotel Mangment',_,UNI,BUDGET,_,TYPE).`. The results are as follows:

```
BUDGET = above,  
TYPE = theoretical,  
UNI = uj
```

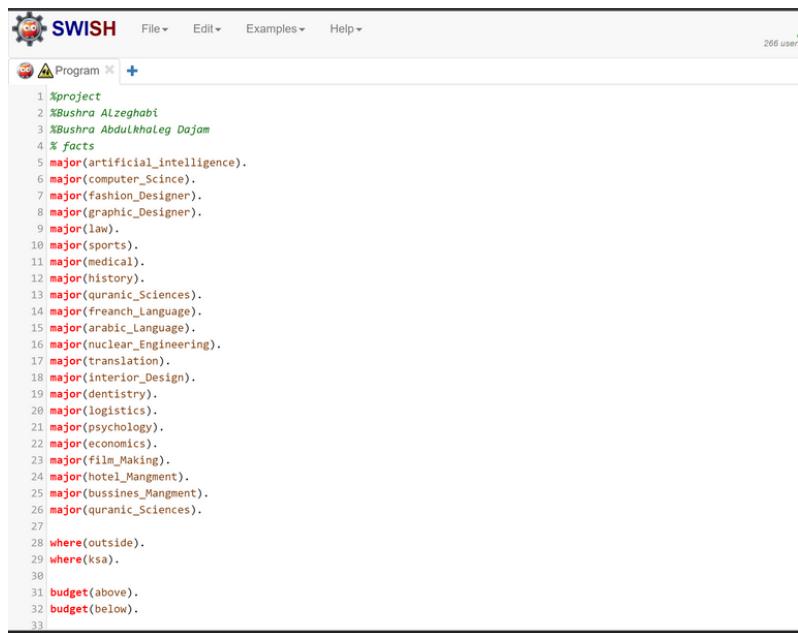
At the bottom of the interface, there are links for '?- discover('Hotel Mangment',_,UNI,BUDGET,_,TYPE).'. Below these links, there are tabs for 'Examples', 'History', 'Solutions', and a 'Run!' button. A large, cartoonish owl graphic is visible in the background of the interface.

17

code

66

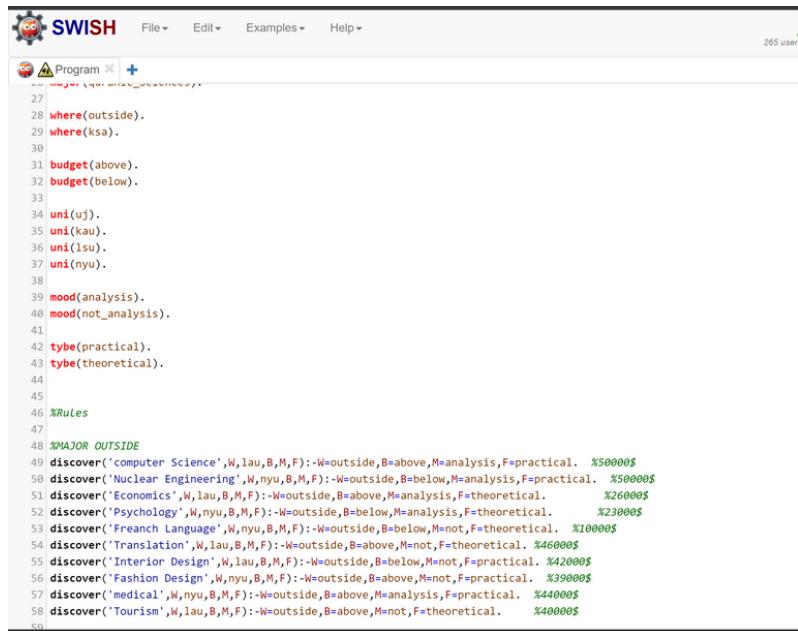
99



```

Project
1 %project
2 #Bushra Alzehabi
3 #Bushra Abdulkhaleg Dajam
4 % facts
5 major/artificial_intelligence.
6 major/computer_Science.
7 major/fashion_Designer.
8 major/graphic_Designer.
9 major/law.
10 major/sports.
11 major/medical.
12 major/history.
13 major/quranic_Sciences.
14 major/french_Language.
15 major/arabic_Language.
16 major/nuclear_Engineering.
17 major/translation.
18 major/interior_Design.
19 major/dentistry.
20 major/logistics.
21 major/psychology.
22 major/economics.
23 major/film_Making.
24 major/hotel_Management.
25 major/bussines_Management.
26 major/quranic_Sciences.
27
28 where/outside.
29 where/ksa.
30
31 budget/above.
32 budget/below.
33

```



```

Project
27
28 where/outside.
29 where/ksa.
30
31 budget/above.
32 budget/below.
33
34 uni/uj.
35 uni/kau.
36 uni/isu.
37 uni/nyu.
38
39 mood/analysis.
40 mood/not_analysis.
41
42 type/practical.
43 type/theoretical.
44
45
46 XRules
47
48 #MAJOR OUTSIDE
49 discover/('computer Science',W,lau,B,M,F):-W=outside,B=above,M=analysis,F=practical. %50000$ 
50 discover/('Nuclear Engineering',W,nyu,B,M,F):-W=outside,B=below,M=analysis,F=practical. %50000$ 
51 discover/('Economics',W,lau,B,M,F):-W=outside,B=above,M=analysis,F=theoretical. %26000$ 
52 discover/('Psychology',W,nyu,B,M,F):-W=outside,B=below,M=analysis,F=theoretical. %23000$ 
53 discover/('French Language',W,nyu,B,M,F):-W=outside,B=below,M=not,F=theoretical. %10000$ 
54 discover/('Translation',W,lau,B,M,F):-W=outside,B=above,M=not,F=theoretical. %46000$ 
55 discover/('Interior Design',W,lau,B,M,F):-W=outside,B=below,M=not,F=practical. %42000$ 
56 discover/('Fashion Design',W,nyu,B,M,F):-W=outside,B=above,M=not,F=practical. %39000$ 
57 discover/('Medical',W,nyu,B,M,F):-W=outside,B=above,M=analysis,F=practical. %44000$ 
58 discover/('Tourism',W,lau,B,M,F):-W=outside,B=above,M=not,F=theoretical. %40000$ 
59

```

18

code

66

99

```

44
45
46 %%Rules
47
48 %%MAJOR OUTSIDE
49 discover('computer Science',W,lau,B,M,F):-W=outside,B=above,M=analysis,F=practical. %50000$ 
50 discover('Nuclear Engineering',W,nyu,B,M,F):-W=outside,B=below,M=analysis,F=practical. %50000$ 
51 discover('Economics',W,lau,B,M,F):-W=outside,B=above,M=analysis,F=theoretical. %26000$ 
52 discover('Psychology',W,nyu,B,M,F):-W=outside,B=below,M=analysis,F=theoretical. %23000$ 
53 discover('French Language',W,nyu,B,M,F):-W=outside,B=below,M=not,F=theoretical. %10000$ 
54 discover('Translation',W,lau,B,M,F):-W=outside,B=above,M=not,F=theoretical. %40000$ 
55 discover('Interior Design',W,lau,B,M,F):-W=outside,B=below,M=not,F=practical. %42000$ 
56 discover('Fashion Design',W,nyu,B,M,F):-W=outside,B=above,M=not,F=practical. %39000$ 
57 discover('Medical',W,nyu,B,M,F):-W=outside,B=above,M=analysis,F=practical. %44000$ 
58 discover('Tourism',W,lau,B,M,F):-W=outside,B=above,M=not,F=theoretical. %40000$ 
59
60
61 %%MAJOR IN KSA
62 discover('artificial intelligence',W,uj,B,M,F):-W=ksa,B=above,M=analysis,F=practical. %51000$ 
63 discover('Dentistry',W,kau,B,M,F):-W=ksa,B=below,M=analysis,F=practical. %19000$ 
64 discover('law',W,uj,B,M,F):-W=ksa,B=above,M=analysis,F=theoretical. %28000$ 
65 discover('logistics',W,kau,B,M,F):-W=ksa,B=below,M=analysis,F=theoretical. %27000$ 
66 discover('File Making',W,kau,B,M,F):-W=ksa,B=above,M=not,F=practical. %19000$ 
67 discover('graphic Designer',W,uj,B,M,F):-W=ksa,B=below,M=not,F=practical. %19000$ 
68 discover('Arabic language',W,kau,B,M,F):-W=ksa,B=below,M=not,F=theoretical. %7000$ 
69 discover('Hotel Mangement',W,uj,B,M,F):-W=ksa,B=above,M=not,F=theoretical. %7000$ 
70 discover('Bussines Mangement',W,kau,B,M,F):-W=ksa,B=above,M=analysis,F=theoretical. %35000$ 
71 discover('sports',W,uj,B,M,F):-W=ksa,B=below,M=not,F=theoretical. %9000$ 
72 discover('Quranic Sciences',W,kau,B,M,F):-W=ksa,B=below,M=not,F=theoretical. %16000$ 
73
74 nlare(W):-writeln('Do you prefer to study here in ksa or outside?'),nl

```



SWISH

File ▾ Edit ▾ Examples ▾ Help ▾ 267 users

```

73
74
75 place(W):-write('Do you prefer to study here in ksa or outside?'),nl,
76     write('write ksa or outside'),read(W).
77
78 budjets(B):- write('write your budget : Above 25,000 or below'),nl,
79     write('write above or below'),read(B).
80
81 favorite(F):- write('are you like theoretical or practical?'),nl,
82     write('write theoretical or practical?'),read(F).
83
84 types(M):- write('Do you like analysis or not?'),nl,
85     write('write analysis or not'),read(M).
86
87 ask(S):- write('*****'),nl,
88     write('Hello to our program * DISCOVER YOUR SELF *'),nl,
89     write('*****'),nl,
90     place(W),
91     budjets(B),
92     favorite(F),
93     types(M),
94     write('We reccommend for you this majors:'),
95     discover(S,W,_,_,_).
96

```

```

96
97 university(X):-write('choose which univesity do you want to discover?:'),nl,
98     write('uj or kau or nyu or lau'),read(Input),
99     discover(X,_,Input,_,_,_).
100
101 world(X):-write('choose which world do you want to discover?:'),nl,
102     write('ksa or outside'),read(Input),
103     discover(X,Input,_,_,_).
104

```

19

code

66

99

```

104 %MAJOR IN KSA AND Jeddah University.
105 uJ(S):- write('list of all major at UJ :'),
106   discover(S,ksa,uJ,_,_).
107 
108 %MAJOR IN KSA AND King Abdualaziz University.
109 kau(S):- write('list of all major at KAU :'),
110   discover(S,ksa,kau,_,_).
111 
112 %MAJOR OUTSIDE AND At the University of Los Angeles.
113 lau(S):- write('list of all major at LAU :'),
114   discover(S,outside,lau,_,_).
115 
116 %MAJOR OUTSIDE AND At..... .
117 nyu(S):- write('list of all major at NYU :'),
118   discover(S,outside,nyu,_,_).
119 
120 %MAJOR THAT HAVE A ANALYSIS MOOD.
121 analysis(S):- write('here is list of all major that have more analysis :'),
122   discover(S,ksa,analysis,_,_).
123 
124 %MAJOR THAT DO NOT HAVE A ANALYSIS MOOD.
125 notana(S):- write('here is list of all major that not have analysis :'),
126   discover(S,ksa,notana,_,_).
127 
128 %MAJOR THAT HAVE A ANALYSIS MOOD AND AT KSA.
129 analysis_KSA(S):- write('here is list of all major in ksa that have more analysis :'),
130   discover(S,ksa,analysis_KSA,_,_).

```

The screenshot shows the SWISH IDE interface with the title bar "SWISH" and menu options "File", "Edit", "Examples", and "Help". The main window displays a Prolog program with numbered lines from 124 to 156. The code defines predicates for major analysis based on location and mood, such as `discover/4`, `analysis/1`, and `notana/1`. It also includes comments like "%MAJOR THAT HAVE A ANALYSIS MOOD". The code is color-coded for syntax highlighting.

```

124   discover(S,ksa,notana,_,_).
125 
126 %MAJOR THAT HAVE A ANALYSIS MOOD AND AT KSA.
127 analysis_KSA(S):- write('here is list of all major in ksa that have more analysis :'),
128   discover(S,ksa,analysis_KSA,_,_).
129 %MAJOR THAT HAVE A ANALYSIS MOOD AND AT ABROAD.
130 analysis_OUTSIDE(S):- write('here is list of all major abroad that have more analysis :'),
131   discover(S,outside,analysis,_,_).
132 %MAJOR THAT DO NOT HAVE A ANALYSIS MOOD AND AT KSA.
133 notana_KSA(S):- write('here is list of all major in ksa that not have analysis :'),
134   discover(S,ksa,notana,_,_).
135 %MAJOR THAT DO NOT HAVE A ANALYSIS MOOD AND AT ABROAD.
136 notana_OUTSIDE(S):- write('here is list of all major abroad that not have analysis :'),
137   discover(S,outside,notana,_,_).
138 
139 %MAJOR THAT HAVE A practical TYPE.
140 practical(S):- write('here is list of all major that contain practical part while studing :'),
141   discover(S,ksa,practical,_,_).
142 %MAJOR THAT HAVE A theoretical TYPE.
143 theoretical(S):- write('here is list of all major that in contain theoretical part while studing :'),
144   discover(S,ksa,theoretical,_,_).
145 
146 
147 %MAJOR THAT HAVE A practical TYPE AND AT KSA.
148 practical_KSA(S):- write('here is list of all major in ksa that contain practical part while studing :'),
149   discover(S,ksa,practical,_,_).
150 %MAJOR THAT HAVE A theoretical TYPE AND AT KSA.
151 theoretical_KSA(S):- write('here is list of all major in ksa that in contain theoretical part while studing :'),
152   discover(S,ksa,theoretical,_,_).
153 
154 
155 
156 %MAJOR THAT HAVE A practical TYPE AND ABROAD.

```

The screenshot shows the SWISH IDE interface with the title bar "SWISH" and menu options "File", "Edit", "Examples", and "Help". The main window displays the continuation of the Prolog program from the previous screenshot, with numbered lines from 156 to 187. This part covers additional predicates like `budget_Below/1`, `budget_Above/1`, and `outside_below/1`, along with their corresponding `discover/4` and `write/1` calls. The code continues to define major characteristics based on budget and location.

```

156 practical_OUTSIDE(S):- write('here is list of all major abroad that contain practical part while studing :'),
157   discover(S,outside,practical,_,_).
158 %MAJOR THAT HAVE A theoretical TYPE AND ABROAD.
159 theoretical_OUTSIDE(S):- write('here is list of all major abroad that in contain theoretical part while studing :'),
160   discover(S,outside,theoretical,_,_).
161 
162 
163 
164 %MAJOR THAT HAVE budget Below 25000$.
165 budget_Below(S):- write('all major that have budget below 25000 :'),
166   discover(S,_,below,_,_).
167 %MAJOR THAT HAVE budget Above 25000$.
168 budget_Above(S):- write('all major that have budget Above 25000 :'),
169   discover(S,_,above,_,_).
170 
171 
172 %MAJOR THAT HAVE budget Below 25000$ AND IN KSA.
173 ksa_below(S):- write('all major in KSA that contain budget below 25000 :'),
174   discover(S,ksa,below,_,_).
175 %MAJOR THAT HAVE budget Above 25000$ AND IN KSA.
176 ksa_above(S):- write('all major in KSA that contain budget Above 25000 :'),
177   discover(S,ksa,above,_,_).
178 
179 
180 %MAJOR THAT HAVE budget Below 25000$ AND ABROAD.
181 outside_below(S):- write('all major outside that contain budget below 25000 :'),
182   discover(S,outside,below,_,_).
183 %MAJOR THAT HAVE budget Above 25000$ AND ABROAD.
184 outside_above(S):- write('all major outside that contain budget Above 25000 :'),
185   discover(S,outside,above,_,_).
186 
187 % THE END

```

REFERENCES

- [1] <https://www.for9a.com/specialities>
- [2] Abu-Naser, S. S., Baraka, M. H., & Baraka, A. (2008). A proposed expert system for guiding freshman students in selecting a major in Al-Azhar University, Gaza.
Chicago
- [3] <https://www.uj.edu.sa/Home.aspx?Lng=EN>
- [4] https://www.kau.edu.sa/home_english.aspx