التعامل مع القوائم في لغة البرولوغ

إعداد م.ع مريم البوعينين

1

```
getlist([H|T]):-
read(X),not(X=end),H=X,getlist
(T).
getlist([]).
```

طباعة عناصر اللوائح

```
writelist([]).
writelist([H|T]):-
write(H),nl,writelist(T).
```

```
go:-
write("enter the A-list
element's? or type end to
end."),nl,nl,
getlist(List),
write("A-list: "),nl,
writelist(List).
```

```
Type 'quit.' to end and [Ctrl]-C to stop user input.


?- go.
"enter the A-list element's? or type end to end."


3.
4.
7.
end.
"A-list: "
3
4
7


yes
```

LISTNER SCREEN

```
first(H,[H|T]).
last(H,[H]).
last(Last,[H|T]):-last(Last,T).
```
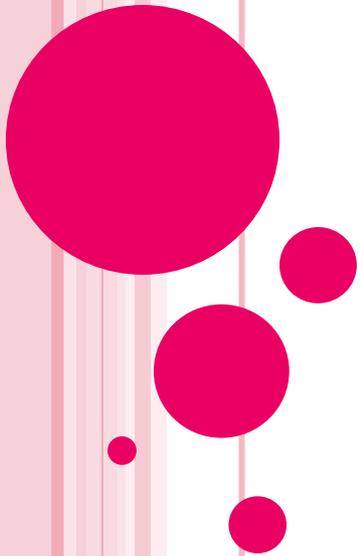
```
write("A-list: "),nl,

writelist(List),
write("first element: "),
first(F,List),
write(F),nl,nl,
write("last element: "),
last(L,List),
write(L).
```
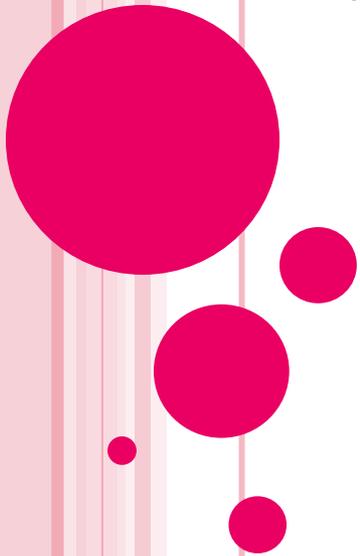
```
?- go.
"enter the A-list element's? or type end to end."

4.
3.
9.
end.
"A-list: "
4
3
9
"first element: "4

"last element: "9
yes
?-
```

LISTNER SCREEN

```
count([],0).
count([H|T],Q):-count(T,Q1),Q
is 1+Q1.
```

```
write("last element: "),
last(L,List),

write(L),nl,nl,
write("the number of list
element= "),
count(List,Z),
write(Z).
```

```
?- go.
"enter the A-list element's? or type end to end."


2.
3.
5.
8.
end.
"A-list: "
2
3
5
8
"first element: "2

"last element: "8

"the number of list element= "4
yes
?-
```

قاعدة لايجاد العنصر ذو الأعلى قيمة

```
maxx([H],H).
maxx([H|T],H):-
maxx(T,Max1),H>Max1.
maxx([H|T],Max1):-
maxx(T,Max1),Max1>=H.
```

```
write("the number of list
element= "),
count(List,Z),

write(Z),nl,nl,
write("the max element= "),
maxx(List,M),
write(M).
```

```
?- go.
"enter the A-list element's? or type end to end."

3.
9.
4.
end.
"A-list: "
3
9
4
"first element: "3

"last element: "4

"the number of list element= "3

"the max element= "9
yes
?- |
```

```
delette(_,[],[]).
delette(H,[H|T],[H1|T1]):-
 delette(H,T, [H1|T1]).
delete(X,[H|T],Mnew):-
not(X=H),delete(X, T,R),
Mnew=[H|R].
```

```
write("the max element= "),
maxx(List,M),

write(M) ,
write("enter the element that
you want to delete? "),nl,
read(D),nl,
delette(D,List,List2),
write("the list after deleted:
"),nl,
writelist(List2).
```

```
?- go.
"enter the A-list element's? or type end to end."

1.
2.
3.
end.
"A-list: "
1
2
3
"first element: "1

"last element: "3

"the number of list element= "3

"the max element= "3
"enter the element that you want to delete? "
2.
```

```
"the list after deleted: "
1
3
```

إعداد م.عفت الجبان - كلية التقنية بالطائف 1432-1433هـ

قاعدة لعكس القائمة

```
reverse(L1,L2):-rev(L1,[],L2).
rev([],L,L).
rev([H|T],L2,L3):-
rev(T,[H|L2],L3).
```

```
writelist(List2) ,
write("reversed list : "),nl,
reverse(List,R_list),
writelist(R_list).
```

```
?- go.
"enter the A-list element's? or type end to end."


1.
2.
3.
end.
"A-list: "
1
2
3
```

LISTNER SCREEN

```
"reversed list : "
3
2
1

yes
```

```
append([],L,L).
append([X|T],L2,[X|L3]):-
append(T,L2,L3).
```
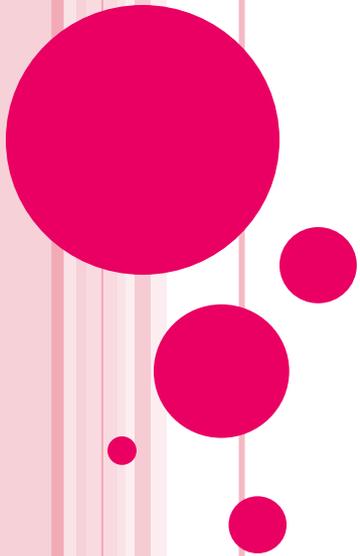
```prolog
writelist(R_list) ,
write("A_List + R_list = "),nl,
append(List,R_list,A_list),
writelist(A_list).
```

```
"A_List + R_list = "
1
2
3
3
2
1

yes
?-
```

ماهو الخطأ في شاشة التنفيذ؟

```
?- GO.

BAD GOAL : H6Z
?- |
```

```
?- go.
"enter the A-list element's? or type end to end."


1.2.3.end.
"A-list: "
1.2
3
"first element: "1.2


"last element: "3


"the number of list element= "2


"the max element= "3
```

LISTNER SCREEN

```prolog
write("A_List + R_list = "),nl,
append(List,R_list),
writelist(R_list).
```

```
2.

"the list after deleted: "
1
3
"reversed list : "
3
2
1
"A_List + R_list = "
"A-list: "
1
2
"first element: "1

"last element: "2

"the number of list element= "2

"the max element= "2
"enter the element that you want to delete? "
```

سؤال تقييم (درجة لأول عشرة حلول صحيحه)

اكتبي برنامجا يقرأ اسمك كقائمة من الحروف ثم يكتبه بطريقة أفقية ؟