PROLOG (Örnek 1)

Örnek 1 : Basit bir Prolog Örneği

```
PREDICATES
  nondeterm hoslanir(symbol, symbol).

CLAUSES
  hoslanir(ali,okuma).
  hoslanir(ali,film).

GOAL
  write("Ali'nin Hobileri :"),nl,
  hoslanir(ali,Ne).
```

Ekran Çıktısı :
Ali'nin Hobileri :
Ne=okuma
Ne=film
2 Solutions

PROLOG (Örnek 2)

Örnek 2 : Kişilerin Hobileri

```
DOMAINs
  person, activity = symbol

PREDICATES
  nondeterm hoslanir(person, activity).

CLAUSES
  hoslanir(ali,futbol).
  hoslanir(tolga,basketbol).
  hoslanir(can,yüzme). hoslanir(canan,tenis).
  hoslanir(yesim,Hobi) if hoslanir(tolga,Hobi).

GOAL
  hoslanir(yesim,futbol).
```

Ekran Çıktısı :
no

```
GOAL
  hoslanir(Kisi,futbol).
```

Ekran Çıktısı :
Kisi=ali
1 Solution

PROLOG (Örnek 3)

Örnek 3 : Otomobil Sorgulamaları

```
DOMAINs
  marka,renk=symbol
  yas, fiyat=integer
  yol=real

PREDICATES
  araba(marka,yol,yas,renk,fiyat).

CLAUSES
  araba(renault,100,5,gri,20).
  araba(opel,20.5,1,mavi,35).
  araba(kartal,120,15,siyah,10).
```

```
GOAL
  araba(Marka,_,5,_,_).

Ekran Çıktısı :
Marka=renault
1 Solution


GOAL
  araba(Marka,_,Yas,Renk,_) and Yas < 7.

Marka=renault, Yas=5, Renk=gri
Marka=opel, Yas=1, Renk=mavi
2 Solutions
```

PROLOG (Örnek 4)

Örnek 4 : Futbol Turnuvası

```
DOMAINS
  ulkead, grubu = symbol

PREDICATES
  nondeterm grup(ulkead,grubu).

CLAUSES
  grup(almanya,a).
  grup(brezilya,a).
  grup(türkiye,a).
  grup(kore,a).
  grup(çin,b).
  grup(amerika,b).

GOAL
  grup(Ulke1,a) and grup(Ulke2,a) and Ulke1<>Ulke2.
```

Ekran Çıktısı :

```
Ulke1=almanya, Ulke2=brezilya
Ulke1=almanya, Ulke2=türkiye
Ulke1=almanya, Ulke2=kore
Ulke1=brezilya, Ulke2=almanya
Ulke1=brezilya, Ulke2=türkiye
Ulke1=brezilya, Ulke2=kore
Ulke1=türkiye, Ulke2=almanya
Ulke1=türkiye, Ulke2=brezilya
Ulke1=türkiye, Ulke2=kore
Ulke1=kore, Ulke2=almanya
Ulke1=kore, Ulke2=brezilya
Ulke1=kore, Ulke2=türkiye
12 Solutions
```

PROLOG (Örnek 5)

Örnek 5 : Akrabalık Çıkarsamaları

```
PREDICATES
  nondeterm anne(symbol,symbol).
  nondeterm baba(symbol,symbol).
  nondeterm dede(symbol,symbol).

CLAUSES
  anne(sue,joe).
  baba(eric,joe).
  baba(john,sue).
  baba(bill,eric).
  baba(george,bill).
  dede(De,T) :- baba(De,G), baba(G,T).
  dede(De,T) if baba(De,G) and anne(G,T).

GOAL
  dede(Dede,Torun).
```

Ekran Çıktısı :
Dede=bill, Torun=joe
Dede=george, Torun=eric
Dede=john, Torun=joe
3 Solutions

PROLOG (Örnek 6)

Unification

```
% Örnek 6
/* Uzun Roman
Yazarları */

DOMAINS
  title, author = symbol
  pages = unsigned

PREDICATES
  book(title,pages).
  nondeterm written_by(author,title).
  nondeterm long_novelist(author).
```

```
CLAUSES
  written_by(fleming,"DR NO").
  written_by(melville,"MOBY DICK").
  book("MOBY DICK", 250).
  book("DR NO", 310).

  long_novelist(Writer) :-
    written_by(Writer,Title),
    book(Title,Length), Length>300.

GOAL
  long_novelist(Writer).
```

```
Writer=fleming
1 Solution
```

PROLOG (Örnek 7)

Listeler

```
DOMAINS
  namelist = name*
  name = symbol

PREDICATES
  nondeterm member(name,namelist).

CLAUSES
  member(Name, [Name|_]).
  member(Name, [_|Tail]):-
      member(Name,Tail).

GOAL
  member(X,[ali,veli,cemil]).
```

Ekran Çıktısı :
X=ali
X=veli
X=cemil
3 Solutions

PROLOG (Örnek 8)

```
DOMAINS
  name,address = string
  age=integer
  list=age*

PREDICATES
  nondeterm person(name, address,
      age)
  sumlist(list,age,integer)

CLAUSES
  sumlist([],0,0).
  sumlist([H|T],Sum,N):-
    sumlist(T,S1,N1),
    Sum=H+S1, N=1+N1.

person("Sherlock Holmes", "22B Baker Street", 42).
person("Pete Spiers", "Apt. 22, 21st Street", 36).
person("Mary Darrow", "Suite 2, Omega Home", 51).

GOAL
  findall(Age,person(_,_,Age),L),
  sumlist(L,Sum,N),
  Ave=Sum/N,
  write("Average=",Ave),nl.
```

Ekran Çıktısı :
Average=43
L=[42,36,51], Sum=129, N=3, Ave=43
1 Solution

PROLOG (Örnek 9)

Döngüler : fail

```
PREDICATES
  nondeterm country(symbol)
  print_countries

CLAUSES
  country("England").
  country("France").
  country("Germany").
  country("Denmark").

  print_countries:-
    country(X),
    write(X),   nl,   fail.
```

```
GOAL
  print_countries.
```

Ekran Çıktısı :
England
France
Germany
Denmark
no

PROLOG (Örnek 10)

Faktöryel, recursion, Cut(!).

```
PREDICATES
  factorial(unsigned,real)

CLAUSES
  factorial(1,1):-!.
  factorial(X,FactX):-
    Y=X-1,
    factorial(Y,FactY),
    FactX = X*FactY.

GOAL
  factorial(3,X).
```

Ekran Çıktısı :
X=6
1 Solution

PROLOG (Örnek 11)

```
% Kurallar (case gibi), Cut(!)
PREDICATES
  action(integer)

CLAUSES
  action(1):-!,
    nl,
    write("You typed 1.").
  action(2):-!,
    nl,
    write("You typed 2.").
  action(3):-!,
    nl,
    write("You typed 3.").
  action(_):-
    write("Other").

GOAL
  write("Type a number from 1 to 3 : "),
  readint(Num),
  action(Num),
  nl, write("Type a String"), readln(Str),
      write(Str),nl.
```

Ekran Çıktısı :

```
Type a number from 1 to 3 : 3

You typed 3.
Type a Stringfff
fff
Num=3, Str=fff
1 Solution
```

PROLOG (Örnek 12)

Karekök 5

```
PREDICATES
  run

CLAUSES
  run:-
    A=sqrt(5),
    write(A).

GOAL
  run.
```

Ekran Çıktısı :
2.236067977yes

PROLOG (Örnek 13)

GOAL

A=sqrt(5).

Ekran Çıktısı :
A=2.236067977
1 Solution