

Practical 7  
Artificial Intelligence  
EL3  
19BCE248

AIM: Write a PROLOG program on lists.

- i. Reversing a list.
- ii. Finding the position of given element in the list a) from beginning. b) from end.

Code:

```
reverse([],[ ]). reverse([X|LIST],ANS) :- reverse(LIST,TEMP), append(TEMP,[X],ANS).
```

```
indexof([X|LIST], Y, COUNT, ANS):- ( X==Y -> ANS is COUNT ; Z is COUNT+1, indexof(LIST, Y, Z, ANS) ).
```

```
lastindexof(LIST, Y, COUNT, ANS):- reverse(LIST, LST), indexof(LST, Y, COUNT, ANS).
```

Output:

```
reverse([1,2,3,4,5],Z).  
Z = [5, 4, 3, 2, 1]
```

```
indexof([1,2,3,4,5],2,0,Z).  
Z = 1
```

```
lastindexof([1,2,3,4,5],4,0,Z).  
Z = 1
```