Indian Institute of Engineering Science & Technology, Shibpur
Department of Computer Science & Technology.
8th Semester Artificial Intelligence Laboratory.
ASSIGNMENT- 1
(Simple List Processing)

Duration- 3 periods. **Full Marks (including Viva Voce)-10**

Write PROLOG programs

1. To determine whether the first two elements of a list are same.
2. To determine whether a list is *not* a two-element list.
3. To determine whether two lists are of same length.
4. To determine length of a list using your own number system, that does not contain more than two symbols.
5. To determine whether two lists are of same length using the length predicate developed in 4 (previous problem).
6. To find the last element of a list.
7. To find whether an element is a member of a list.
8. To find whether two elements are next to each other in a list.
9. To append two lists in a third list.
10. To find the last element of a list using append predicate developed in 9.
11. *To find whether an element is a member of a list using append predicate developed in 9.
12. To find whether two elements are next to each other in a list using append predicate developed in 9.
13. To reverse a list in another list.
14. *To determine whether a list is a palindrome [the structure of predicate: palindrome(L)].
15. *Write a Prolog program for double (List, ListList), where every element in List appears twice in ListList, e. g., double ([1,2,3], [1,1,2,2,3,3]) is true.

*marked programs are not done in the class.