

## PROLOG ASSIGNMENT

1) Define the relation `subset( Set, Subset)` where `Set` and `Subset` are two lists representing two sets. We would like to be able to use this relation not only to check for the subset relation, but also to generate all possible subsets of a given set.

For example: ?- `subset( [a,b,c], S)`.

`S = [a,b,c];`

`S = [b,c];`

`S = [c];`

2) Define the predicate `palindrome( List)`. A list is a palindrome if it reads the same in the forward and in the backward direction. For example, `[m,a,d,a,m]`

3) Write queries to find the following from the family database: (Create the database just like shown in lab)

(a) names of families without children;

(b) all employed children;

(c) names of families with employed wives and unemployed husbands; (d) all the children whose parents differ in age by at least 15 year

4) Write a prolog program to sort all the elements of a list using merge sort.

5) Write a prolog program to find the reverse of a list.