15. a. Write a predicate to transform a list in a set, considering the first occurrence.

[], n =0

transformToSet (l1l2l3…ln) = removeOcc(l2l3..ln, l1, []) U trasnformToSet(l2l3…ln), otherwise

[], n = 0

removeOcc(l1l2l3..ln, elem) = removeOcc(l2l3..ln, elem)), l1 =elem

l1 U removeOcc(l2l3..ln, elem)), l1 <>elem

15. b. Write a predicate to decompose a list in a list respecting the following: [list of even numbers list of odd numbers] and also return the number of even numbers and the numbers of odd numbers.

[], n = 0

splitList (l1l2l3…ln, o1o2..om, e1e2…ep, o, e) = splitList (l2l3…ln, l1 U o1o2..om, e1e2...ep, o+1, e), l1 mod 2 =1

splitList (l2l3…ln, o1o2..on, l1 U e1e2…ep, o, e+1), l1 mod 2 =0

splitListMain(l1l2…ln) = splitList(l1l2..ln, [],[],0,0)

mergeList(l1l2…ln, a1a2..am) = [a2a3..an], n = 0

l1U mergeList(l2l3..ln, a1a2..a3), n<>0