

**Assignment 1:**

Create a linked list (10 nodes at least), each node contain the name, age and degree of a student. Search for all the students who passed the exam ( $\text{degree} \geq 50$ ), then delete them from the old list and put them in a new list, finally display the result 2 lists one containing the succeed students and one containing the failed ones.

**Assignment 2:**

Write and test this method:

```
void rotateLeft (Node list) // moves the first element of the specified list to its end;
```

For example, if list is {22, 33, 44, 55, 66, 77, 88, 99}, then rotateLeft (list) will change list to {33, 44, 55, 66, 77, 88, 99, 22}. Note that no new nodes are created by this method.

**Assignment 3:**

- From your study about Queue data structure, Design, implement and test a circular priority queue.

**Assignment 4:**

The insertion sort uses a loop-within-a-loop algorithm that compares every item in the array with every other item. If you want to remove duplicates, this is one way to start. Modify the insertionSort() method so that it removes duplicates as it sorts

**Assignment 5:**

In this problem, we would like to build a binary search tree from its pre-order traversal. You are given as input the pre-order traversal of a binary search tree. Please write a program to reconstruct the binary search tree from its pre-order traversal.