Upload link: https://www.dropbox.com/l/AAAqDFlb8zjBEPCHoICy5qakQe7SqjS94Jc

DS Practical, Sheet 4

(1) Given a Singly linked list with $n > 0$ element(s). Write a function **`AlternatingSplit()`** which takes one list and divides up its nodes to make two smaller lists. The sublists should be made from alternating elements in the original list. So if the original list is {a, b, a, b, a}, then one sublist should be {a, a, a} and the other should be {b, b}. The elements in the new lists may be in any order. Write a complete Program and test it.

(2) Reverse every three nodes of a doubly linked list where front pointer is pointing front node and rear pointer is pointing rear node. For example, if your input is

1 <- - > 2 <- - >3<- - >4<- - >5<- - >6<- - >7<- - >8

Then your output should be

3<- - >2<- - >1<- - >6<- - >5<- - >4<- - >7<- - >8

(3) Implement Deque either using a doubly linked list or circular array.