

Practical 2

1 Question 1

```
node N
list L
insert node V
P=N.prev
P.next=V
N.prev=V
V.next=N
V.prev=P
```

2 Question 2

Output the number of times the given integer k appears in the list

3 Question 3

```
input array H
input E=[newscore, newname]
while H[i] ≤ newscore
    i=i+1

while H[x]≠ NULL
    x=x+1
while x ≥ i
    H[x]=H[x-1]
    x=x-1
H[i]=E
```

4 Question 4

```
pointer1 = List.head
pointer2=List.prev
while pointer1≠ pointer2 do
    pointer1=pointer1.next
    pointer2=pointer2.prev
print pointer1.data
```

5 Question 5

5.1 a

A 2D array could be used, so that any reference, for example A[1][2], would be the meeting of player 1 and player 2

5.2 b

```
array A
array player
int win = 1
if player[a] meets player[b]
    A[a][b]=1
    A[b][a]=1
for i in array[a][i] do
    if i=0 then
        win=0
if win=1 then
    print(player[a], "has won")
win=1
for i in array[b][i] do
    if i=0 then
        win=0
if win=1 then
    print(player[b], "has won")
win=1
```