NATIONAL UNIVERSITY
OF COMPUTER & EMERGING SCIENCES
LAHORE

FAST

Course Data Structures Answer Sheet No. 41094

Student's Name Huzaifa Shahzad Signature

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6/25

Q NO 1

```
int x=0;                                   ——— C1 ——— n-1
for(int i=0; i<N; ++i){                    ——— 100
  for(int j=1; j<=100; ++j){               ——— N-j
    for(int k=j; k<N; ++k){
      x=x+i+j+k;                           ——— (n-1)*(100)*(n-j)
    }
  }
}
```

$T(n) = C_1 + C_2 * (n-1) * (100) * (n-j)$

Bigoh = $O(n-1 * n-j * 100)$ finally?

Q NO 2

→ Its a bool function taking two strings as parameters.

Substring A = abc

Substring B = cba

```
bool fun(string str, string str){
  if (length of A != length of B) {
```

Q / Part No.

Rough Work Q / P

integer j = Length of B

```
Loop (i=0; i< Length of A; i++)
{
    if (A[i] == B[j])
        j++;
    else
        return false;
}
return true;
```

/* This function will check first substring with second by running loops in converse order */

QNO3

```
bool changeHead (int pos){
node *p = head;
node *q = p;
node *r = q;
if (head != null){
While ((r->data != pos) &&
{
    q = r;
    r = r->next;
}
```

Rough Work

~~q->next = r;~~

p = head->next;

node *temp = r->next;

temp->next = p;

r->next = temp;

q->next = r;

head = q;

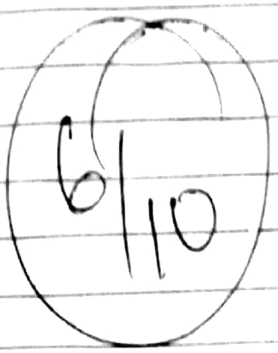
return true;

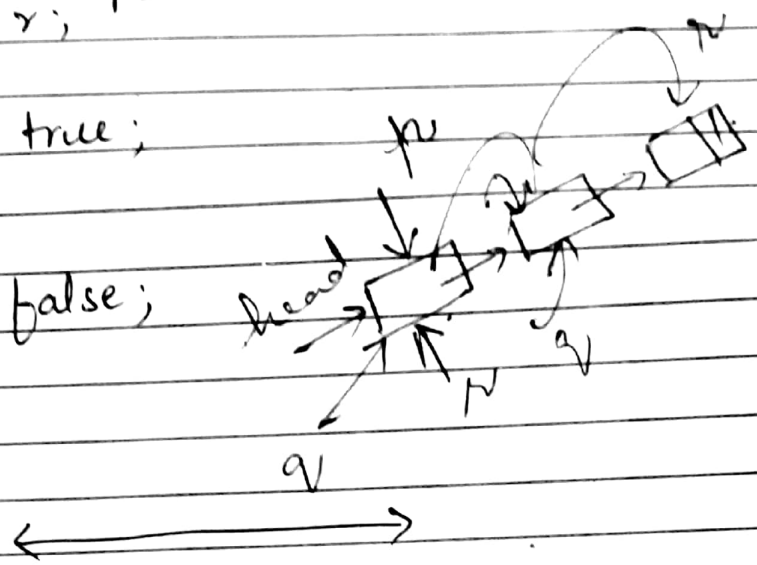
}

else

return false;

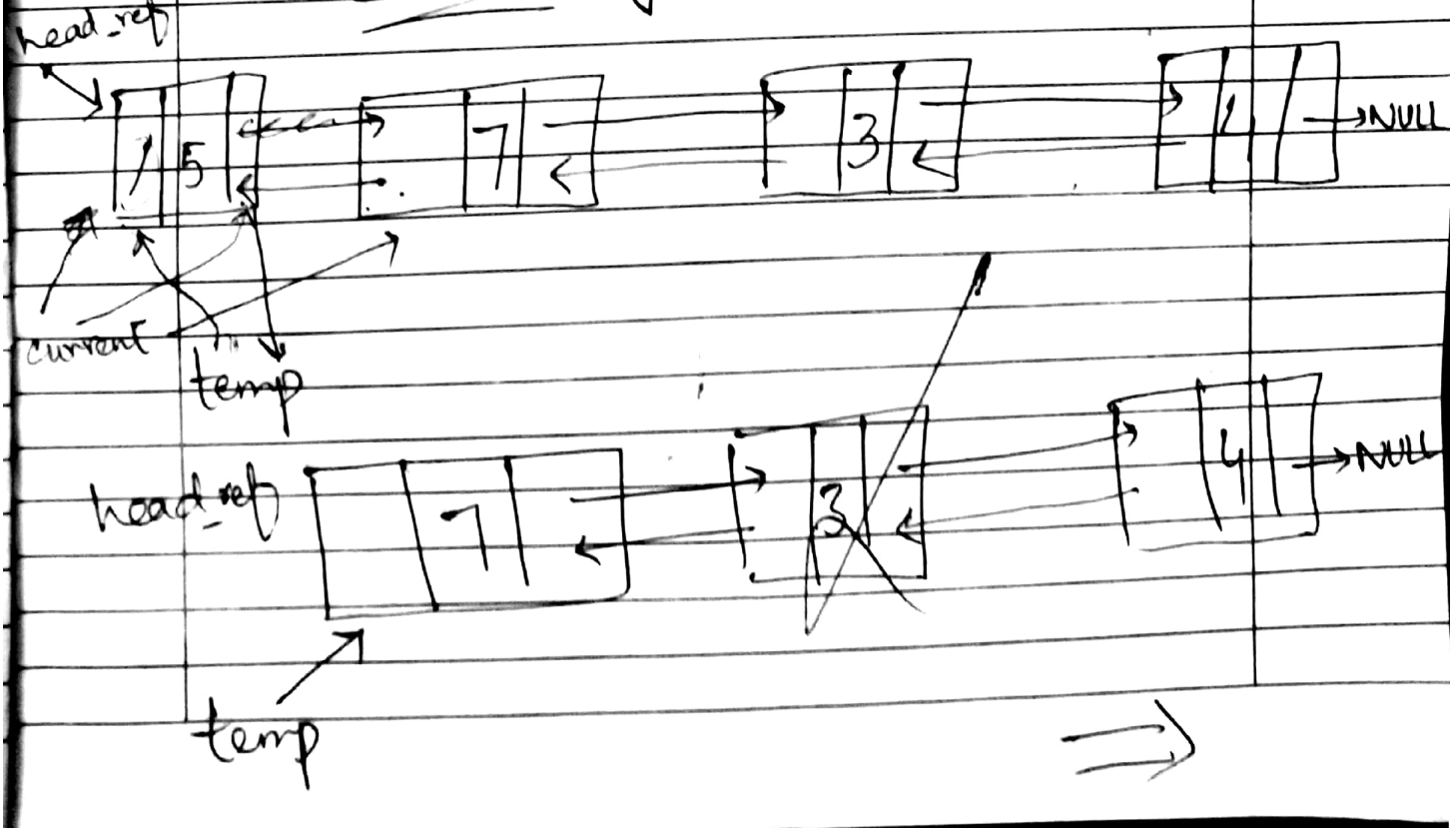
}





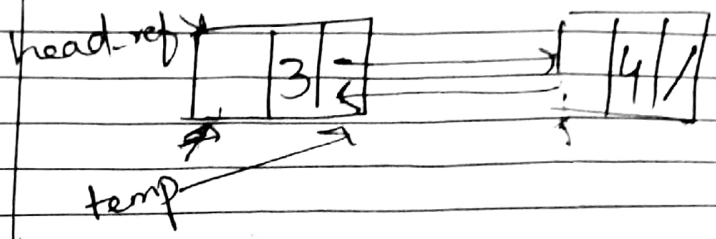
QNO4

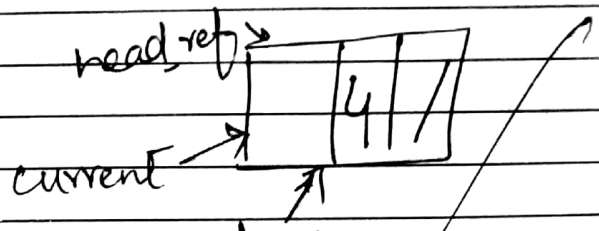
Initially



Q / Part No.

Rough Work





current ≠ NULL

Program terminated