



NATIONAL UNIVERSITY  
OF COMPUTER & EMERGING SCIENCES  
LAHORE

FAST

Course Data Structures Answer Sheet No. 41120

Student's Name Palestine Harib

Signature 8/12/2023

Roll No. 18L-1142 Section A Date 10/10/2023

20/25

Question #1:-

int x = 0 — (1)

for(int i=0; i<N; ++i) — (N+1)

{ for(int j=1; j=1 || 0; ++j) — (100)

{ for(int k=j; k<N; ++k) — (100N)

{ x=x+i+j+k; — (100N) <sup>#2</sup>

{ } = 1 + N + 100 + 100N + 100N <sup>#2</sup>

= 100N<sup>2</sup> + 100N + N

$\approx N^2$

$= O(N^2)$  ✓

$= O(N)$  ?

4/5

Q / Part

Q / Part No.

Question #2 :-

\* **Code :-**

bool check(string A, string B)

{

    stack<string> S;

    int i=0, j=0;

    char x='0';

    bool flag=0;

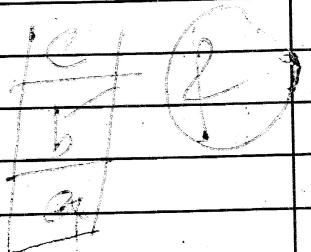
[abcabc]

    while (A[i] != '0')

{

        S.push(A[i]);

        i++;



    while (B[j] != '0')

{

        if (S.top() == B[j])

            will always

{ flag=1;

        pop();



    it will always { else,

        check {

            element }

            { flag=0;

            }

            j++;

        if (flag == 1) { return true; }

    else

        { return false; }

Pseudo code:- / Algorithm :-

- ① First push all the element of string A in stack while
- ② Iterate a loop for string B
- ③ Pop one by one element of string A
- ④ Compare it with the element of string B
- ⑤ If flag = -1 then return true.
- ⑥ Else return false;

### Question # 3

bool changehead(int pos)

```
{
    int c = 0, c1 = -1;
    Node * temp = head;
    Node * temp2 = nullpt;
    Node * t1 = nullpt; head;
    Node * t2 = nullpt;
```

while ( $t1 \neq \text{nullpt}$ )

```
{
    t2 = t1;
    t2 = t1->next;
```

white ( $\text{temp} \neq \text{nullpt}$ )

```
{
    if ( $c == \text{pos}$ ) N
```

```
{
    t1->next = head->next;
    head = t1;
```

while ( $c > c \&& (++c1) = c$ )

```
{}
```

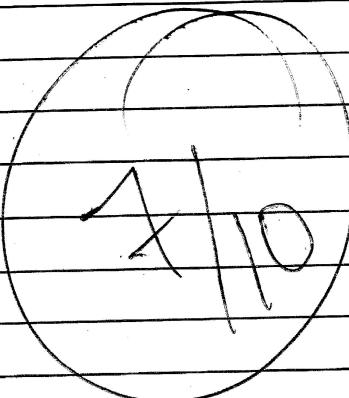
temp2 = temp2 → next;  
    } C1 ++;

} temp2 = nullpte;

C++;

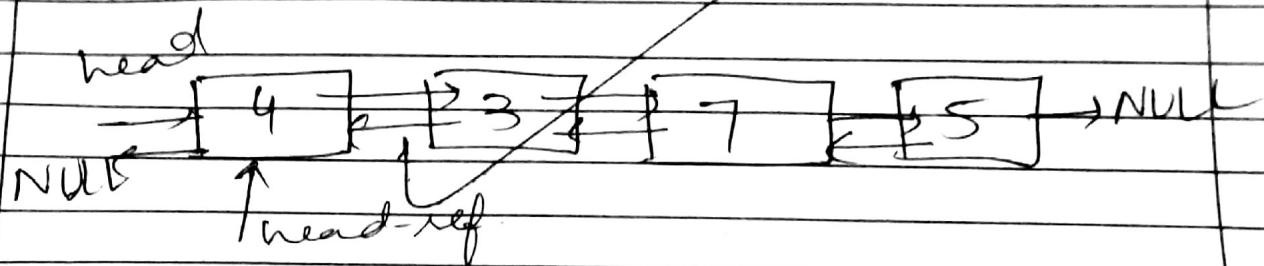
temp = temp → next;

3



Question #4

The link list will be:-



void foo( ) [ROUGH WORK]

{

temp|current

current->next|current->prev

5

T

S

T

7

3

7

5

5

4

5

7

7

5 | 3

}

7