

PES UNIVERSITY

(Established under Karnataka Act No. 16 of 2013)
100 Feet Ring Road, BSK III Stage, Bengaluru-560 085
Department of Computer Science and Engineering

UE20CS207 - DATA STRUCTURES AND ITS APPLICATIONS LABORATORY

WEEK - 2

6th September 2021 to 11th september 2021

TOPIC : SINGLY LINKED LIST

1. Implement the following operations on singly linked list (5 + 5Marks)

(ii) Swap 2 nodes without swapping the data.

(iii) Delete every alternate node starting from the first node

2. Perform the addition of 2 polynomials stored as a Singly linked list. Structure of a polynomial nodes is as follows:(20 Marks)

```
struct poly{
    int coeff;
    int px;// power of x
    int py;// power of y
    struct node *next;// pointer to hold address of next node.
}
```

Ex : first polynomial-> $3x^2y^2 + 2xy^2 + 3xy$

second polynomial -> $4x^2y^2 + 3x^2y + 6xy$

resultant polynomial-> $7x^2y^2 + 2xy^2 + 3x^2y + 9xy$