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# **LL** Operations

- Create singly linked list
- ✓ Traversing through LL

# Insert node at Last Position : Singly Linked List

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Insert node at Last / End Position in Singly Linked List

Inserting node at start in the SLL (Steps):

- 1. **Create** New Node
- 2. Fill Data into "Data Field"
- 3. Make it's "Pointer" or "Next Field" as NULL
- 4. Node is to be inserted at Last Position so we need to traverse **SLL upto Last Node**.
- 5. Make link between last node and newnode

```
void insert_at_end()
{
struct node *new_node,*current;

new_node=(struct node *)malloc(sizeof(struct node));

if(new_node == NULL)
```

✓ Display Linked List from First to

#### Last

- ✓ Linked list terms
- ✓ Insert node at First Position
- ✓ Insert node at Last Position
- ✓ Insert node at middle position
- ✓ Delete Node from First Postion
- ✓ Search Perticular Element
- ✓ Counting number of Nodes in

Singly Linked List

✓ C Program to Create Singly

Linked List .using Node Structure

```
printf("nFailed to Allocate Memory");

printf("nEnter the data : ");
scanf("%d", &new_node->data);
new_node->next=NULL;

if(start==NULL)
{
    start=new_node;
    current=new_node;
}
else
{
    temp = start;
    while(temp->next!=NULL)
    {
        temp = temp->next;
        }
        temp->next = new_node;
}
```

# Diagram: Attention: 1. If starting node is not available then "Start = NULL" then following part is executed if(start==NULL) start=new\_node;

```
current=new_node;
}
```

- If we have previously created First or starting node then <u>"else</u>
   <u>part"</u> will be executed to insert node at start
- 3. Traverse Upto Last Node., So that **temp** can keep track of Last node

```
else
      {
        temp = start;
      while(temp->next!=NULL)
      {
        temp = temp->next;
      }
}
```

4. Make Link between Newly Created node and Last node ( temp)

```
temp->next = new_node;
```

## To pass Node Variable to Function Write it as -

```
void insert_at_end(struct node *temp)
```

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