Q1.What is the advantage and disadvantage of the array?

Ans: Advantage
1. Data Reading is fast as compare to linked list because in array we can access element in random order or sequential order
2. If our operation are reading data then array is best choice
3. In Array Memory allocation is continues in heap

Disadvantage
If our frequent operation is data insertion and data deletion then array is the worst choice.

Q2. Explain Linked List in data Structure?
Ans: A Linked Linear Data Structure in which elements(nodes) are stored in memory non-contiguously and are connected through the object

Linked List is a dynamic in nature

The Node contains two filed
1. Data : It can store actual data
2. Next: It can store reference of next node

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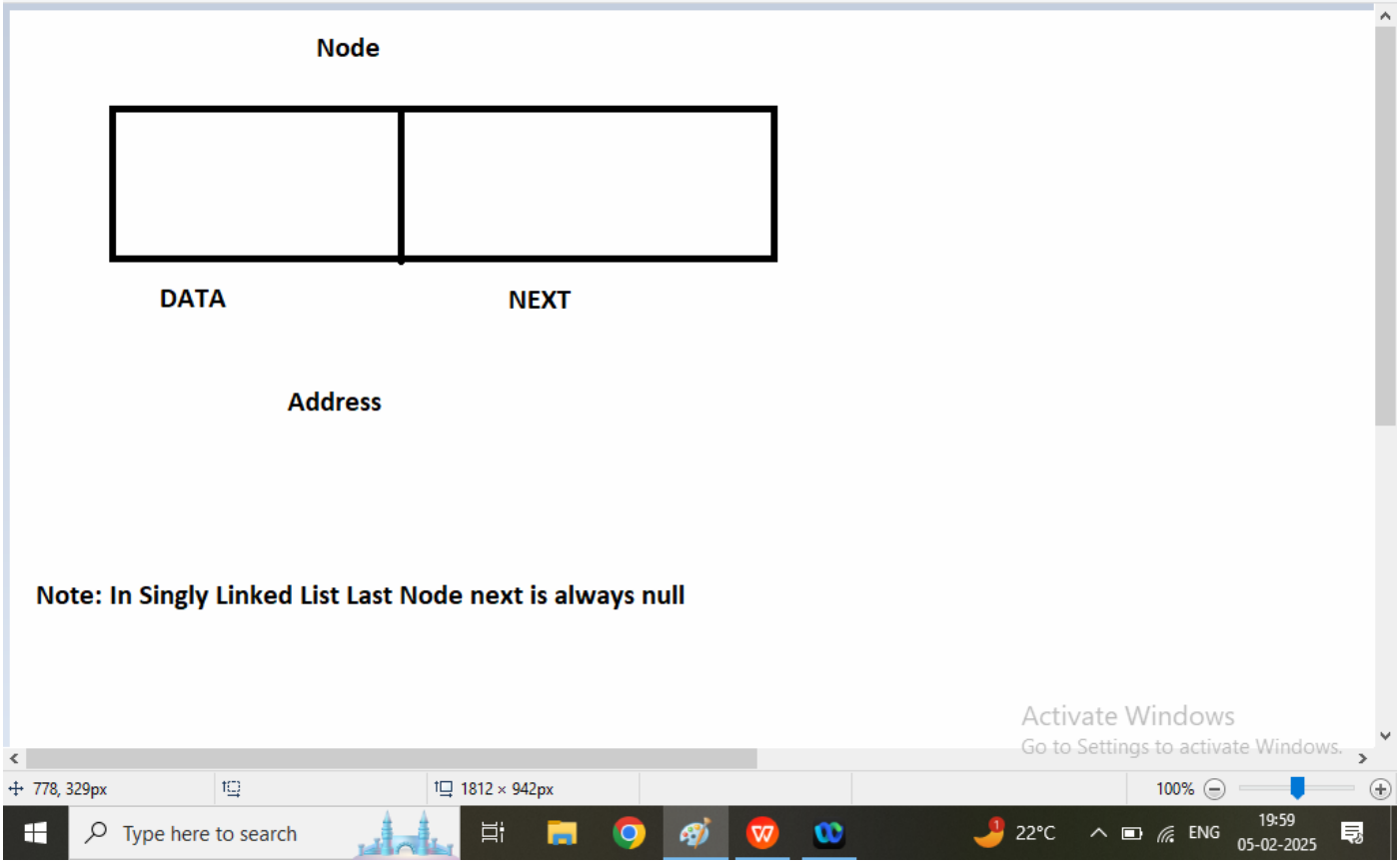

Note: In Singly Linked List Last Node next is always null

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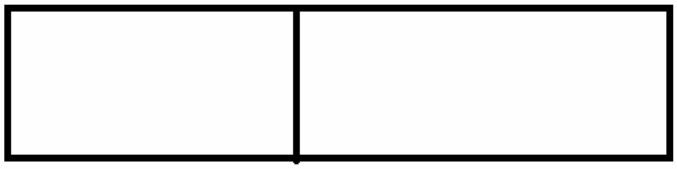
Node



DATA **NEXT**

Address

Note: In Singly Linked List Last Node next is always null

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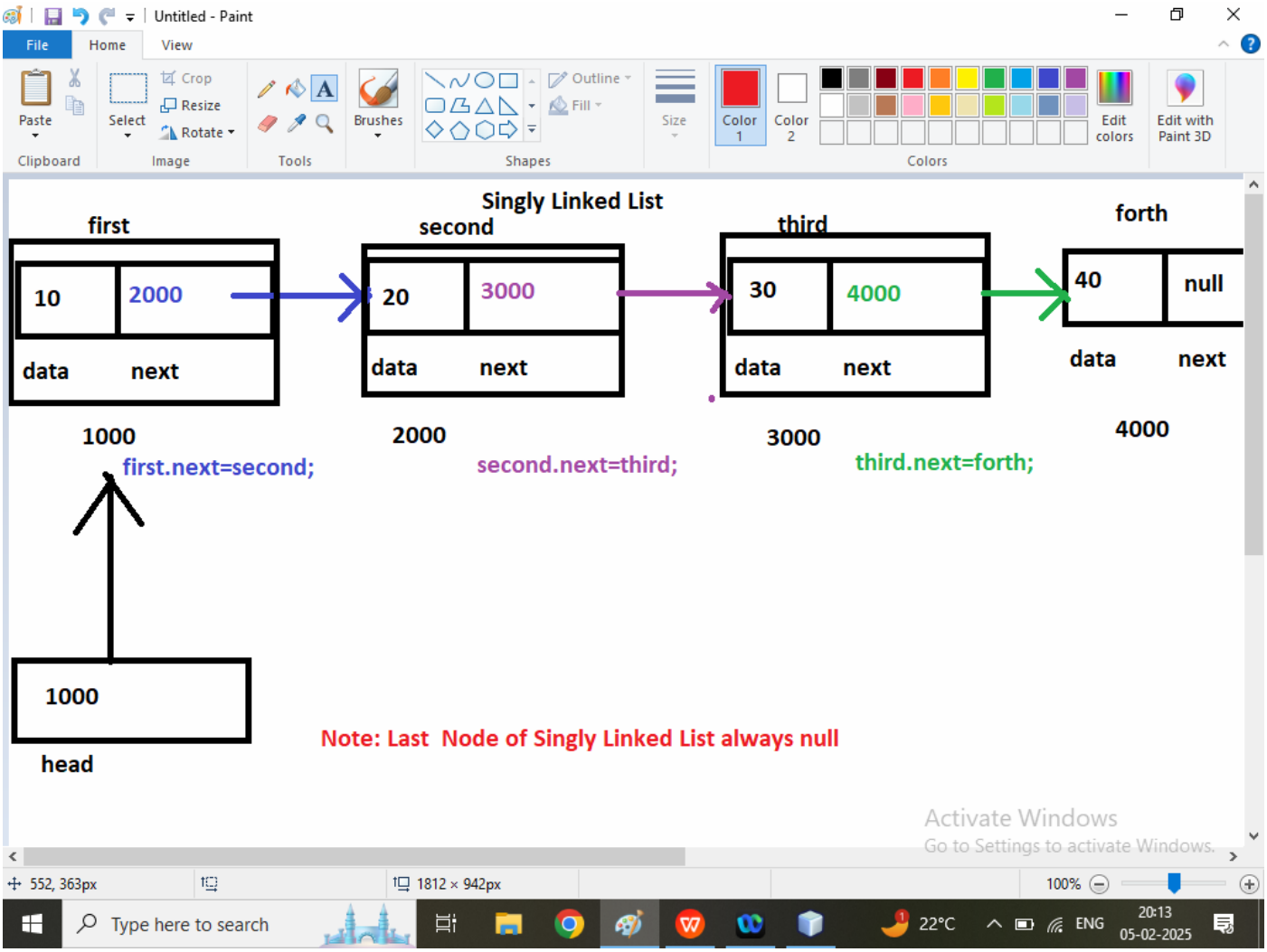
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File
Home
View
Singly Linked List
first
second
third
forth
10
2000
20
3000
30
4000
40
null
data
next
1000
2000
3000
4000
first.next=second;
second.next=third;
third.next=forth;
1000
head
Note: Last Node of Singly Linked List always null
Activate Windows
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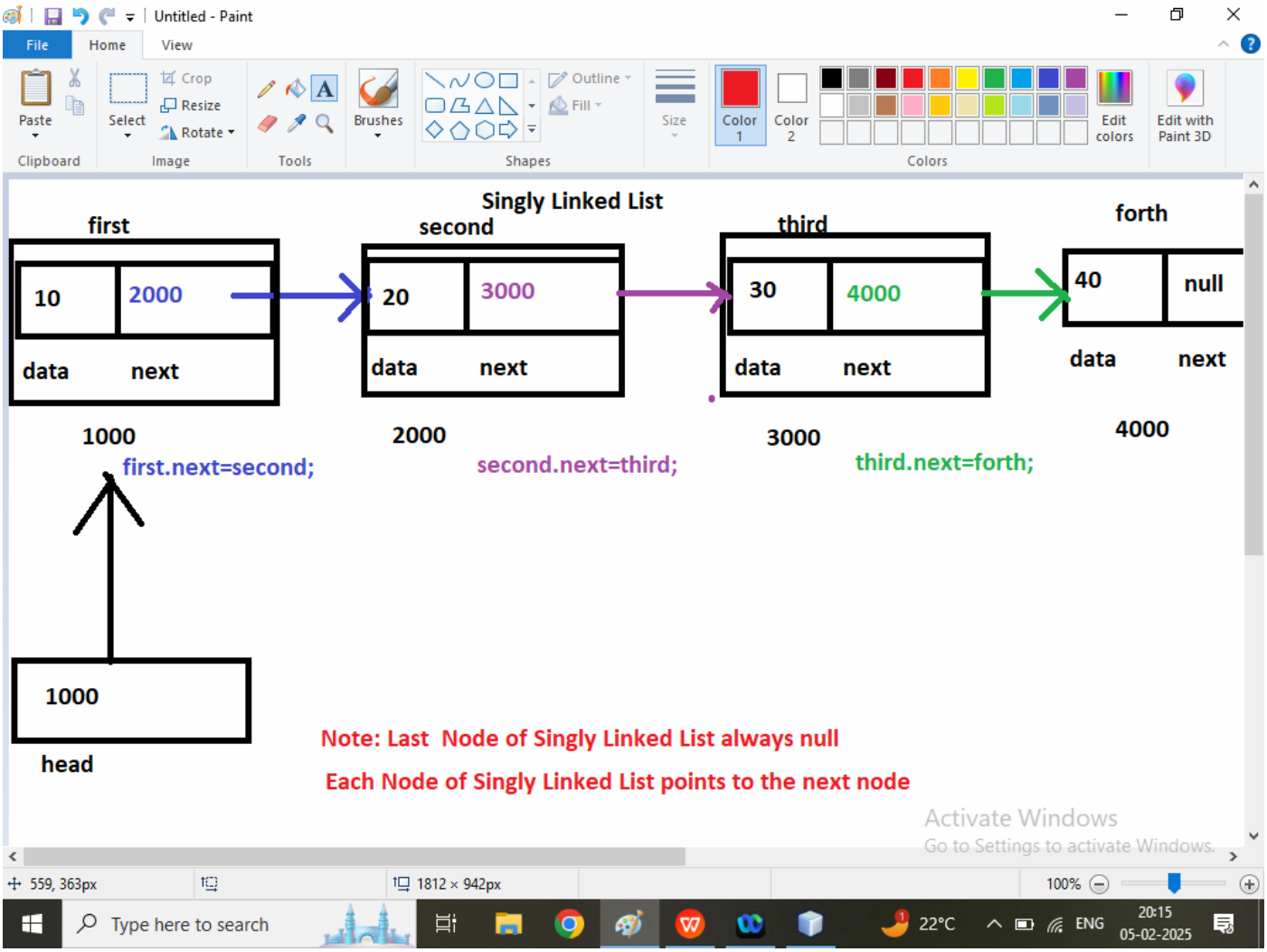
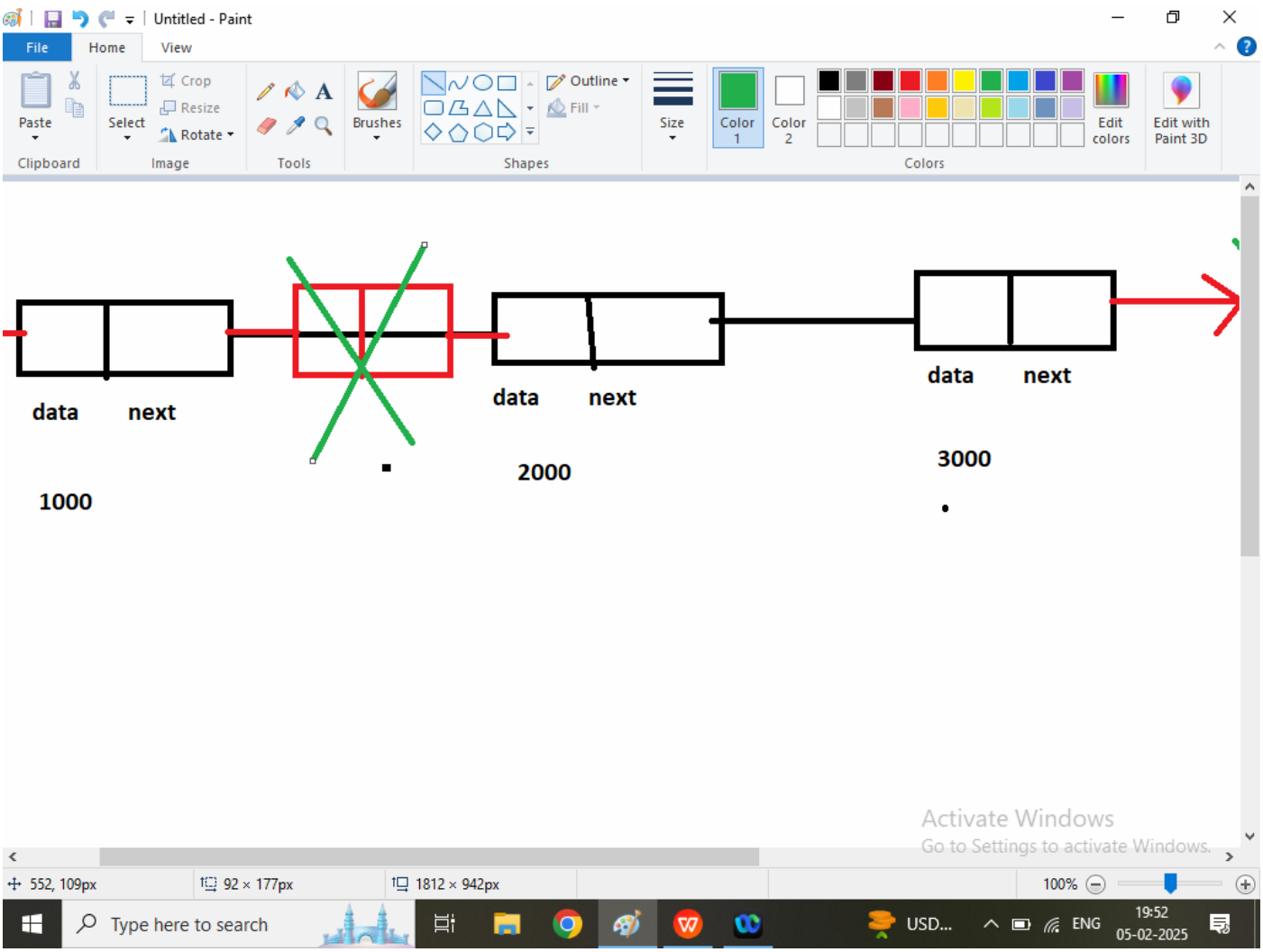
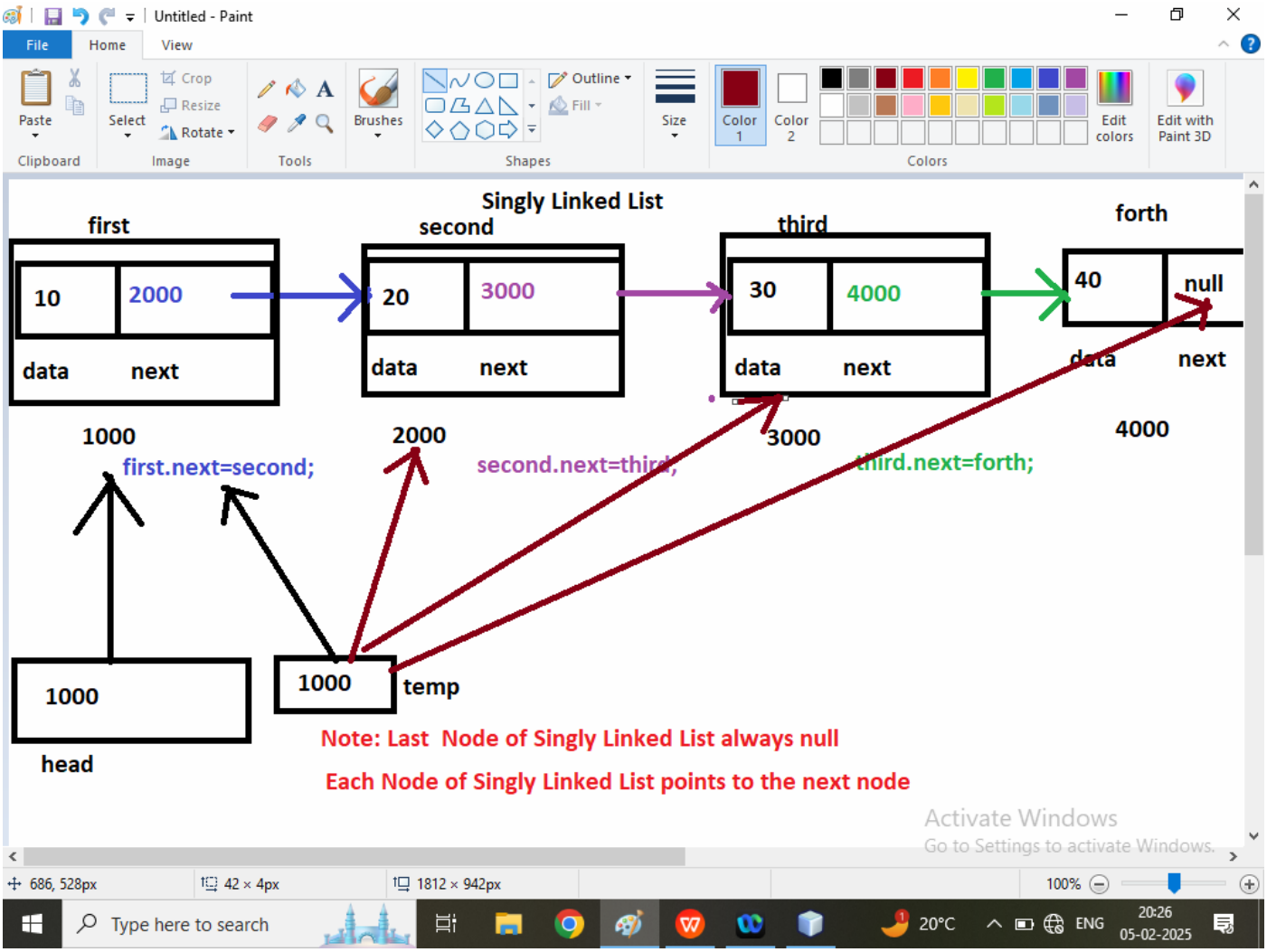



```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package dsafeb2025;

/**
 *
 * @author Admin
 */
public class Node {

   int data;
   Node next;

   public Node(int data) {
      this.data = data;
      next = null;
      System.out.println("Node created Success");
   }
public void display(Node head){
   Node temp=head;
   while(temp!=null){
      System.out.print("---->"+temp.data);//10--->20--->30--->40
      temp=temp.next;
   }
}
   public static void main(String[] args) {
      Node first = new Node(10);
```

```
        Node second = new Node(20);
        Node third = new Node(30);
        Node forth = new Node(40);
        //Head point the first node of singly Linked List
        Node head=first;
        first.next=second;
        second.next=third;
        third.next=forth;
        System.out.println("Print Data of Singly Linked List");
        System.out.println("===>"+first.data+"===>"+second.data+"===>"+third.data+"===>"+forth.data);
        System.out.println("Print Data of Singly Linked List Using head");
        System.out.print("===>"+head.data);
        System.out.print("===>"+head.next.data);
        System.out.print("===>"+head.next.next.data);
        System.out.print("===>"+head.next.next.next.data);
        System.out.println("Print Data of Singly Linked List Using Method");
        head.display(head);




    }
}
```




Untitled - Paint
File
Home
View
Singly Linked List
first
second
third
forth
10
2000
20
3000
30
4000
40
null
data
next
1000
2000
3000
4000
first.next=second;
second.next=third;
third.next=forth;
1000
temp
1000
head
Note: Last Node of Singly Linked List always null
Each Node of Singly Linked List points to the next node
Activate Windows
Go to Settings to activate Windows.
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42 × 4px
1812 × 942px
100%
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