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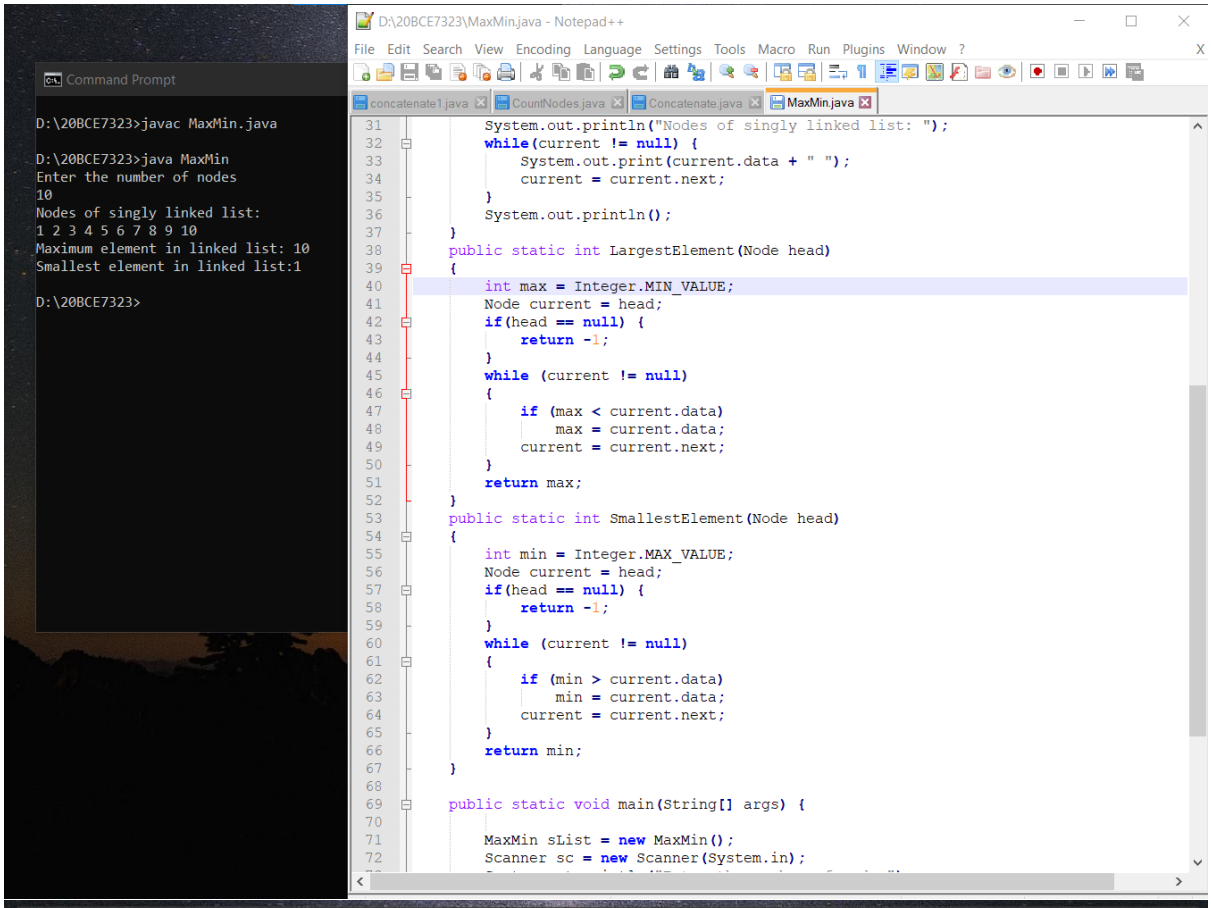
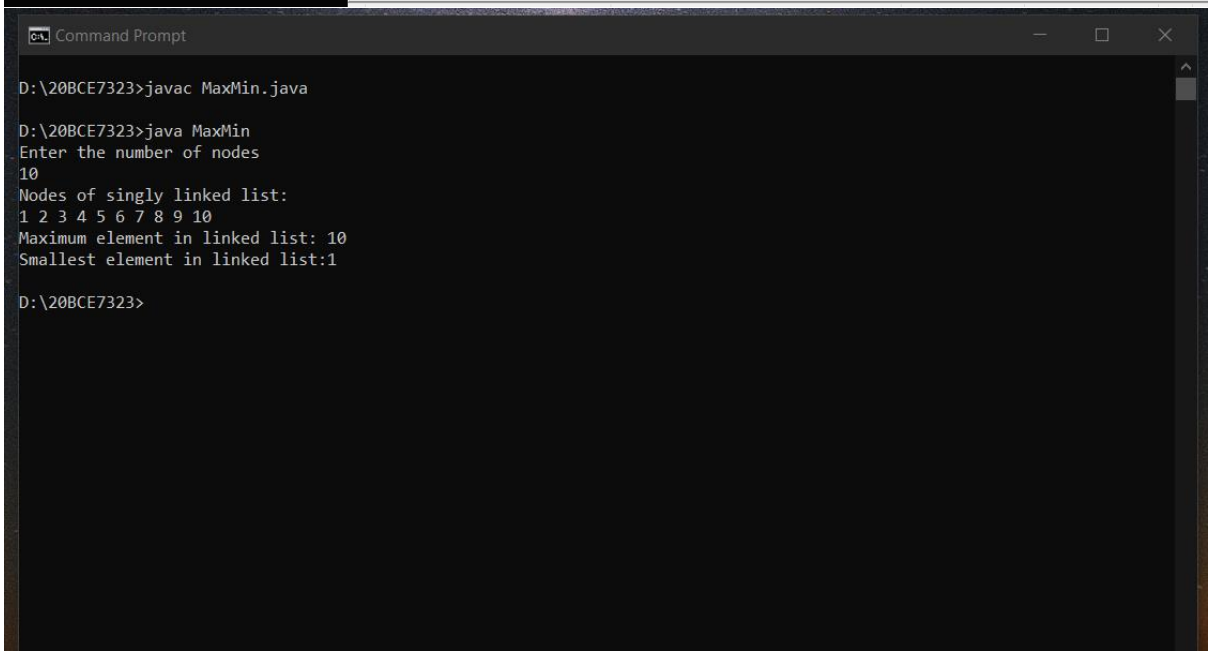
Write a program to create a single linked list with 'n' nodes and perform following.
i) Find max element from list
ii) Find min element from list
iii) display list of items in list
Code

```
import java.util.*;
public class MaxMin {
   class Node{
      int data;
      Node next;

      public Node(int data) {
         this.data = data;
         this.next = null;
      }
   }
        public Node addNode(int data, Node head) {
      Node newNode = new Node(data);
                Node temp = head;
      if(head == null) {
         head = newNode;
                        return head;
      }
                while(temp.next != null) {
                        temp = temp.next;
                }
                temp.next = newNode;
                return head;
   }
   public void display(Node head) {
      Node current = head;
      if(head == null) {
         System.out.println("List is empty");
         return;
      }
      System.out.println("Nodes of singly linked list: ");
```

```
   while(current != null) {
      System.out.print(current.data + " ");
      current = current.next;
   }
   System.out.println();
}
      public static int LargestElement(Node head)
      {
            int max = Integer.MIN_VALUE;
            Node current = head;
            if(head == null) {
                  return -1;
            }
            while (current != null)
            {
                  if (max < current.data)
                        max = current.data;
                  current = current.next;
            }
            return max;
      }
      public static int SmallestElement(Node head)
      {
            int min = Integer.MAX_VALUE;
            Node current = head;
            if(head == null) {
                  return -1;
            }
            while (current != null)
            {
                  if (min > current.data)
                        min = current.data;
                  current = current.next;
            }
            return min;
      }

   public static void main(String[] args) {

      MaxMin sList = new MaxMin();
```

```
        Scanner sc = new Scanner(System.in);
                System.out.println("Enter the number of nodes");
                int n= sc.nextInt();
                Node head = null;
                for(int i=1;i<=n;i++)
                {
                        head = sList.addNode(i, head);
                }

        sList.display(head);
                System.out.print("Maximum element in linked list: ");
        System.out.println(LargestElement(head));
                System.out.println( "Smallest element in linked list:" +
SmallestElement(head));
    }
}
```


Command Prompt
D:\20BCE7323>javac MaxMin.java
D:\20BCE7323>java MaxMin
Enter the number of nodes
10
Nodes of singly linked list:
1 2 3 4 5 6 7 8 9 10
Maximum element in linked list: 10
Smallest element in linked list:1
D:\20BCE7323>
D:\20BCE7323\MaxMin.java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
concatenate1.java
CountNodes.java
Concatenate.java
MaxMin.java
System.out.println("Nodes of singly linked list: ");
while(current != null) {
System.out.print(current.data + " ");
current = current.next;
}
System.out.println();
}
public static int LargestElement(Node head)
{
int max = Integer.MIN_VALUE;
Node current = head;
if(head == null) {
return -1;
}
while (current != null)
{
if (max < current.data)
max = current.data;
current = current.next;
}
return max;
}
public static int SmallestElement(Node head)
{
int min = Integer.MAX_VALUE;
Node current = head;
if(head == null) {
return -1;
}
while (current != null)
{
if (min > current.data)
min = current.data;
current = current.next;
}
return min;
}
public static void main(String[] args) {
MaxMin sList = new MaxMin();
Scanner sc = new Scanner(System.in);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