```
--------------------------------------------------------------------------
Assignment Name: Perform Sort on LL
Class: MCA I                                          Lab: CA Lab   (DS)
--------------------------------------------------------------------------

#include<iostream.h>
#include<conio.h>
#include<process.h>
class node
{
      int info,item,s;
      node *link;
public:
      void insert();
      void sort();
      void dis();
};

node *move,*start=NULL, *temp;

void node::insert()
{
      cout<<"\nEnter the item";
      cin>>item;
      node *node1=new node;
      node1->info=item;
      node1->link=NULL;
      if(start!=NULL)
            node1->link=start;
            start=node1;
}

void node::dis()
{
      node *x;
      x=start;
      cout<<"\n Element in LL are:";
      while(x!=NULL)
      {
            cout<<"\t"<<x->info;
            x=x->link;
      }
}

void node::sort()
{
      node *t=start;
      int c=0,j;
      while(t!=NULL)
      {
            c++;
            t=t->link;
      }

      for(j=1;j<=c;j++)
       for(t=start;t->link!=NULL;t=t->link)
            if((t->info)>(t->link)->info)
            {
                  int a;
                  a=t->info;
                  t->info=(t->link)->info;
                  (t->link)->info=a;
            }
      cout<<"\nAfter Sorting: ";
}
```

```
void main()
{
      clrscr();
      node n;
      int ch;
      cout<<"\n1.Insert 2.Display 3. Sort 4.Exit\n";
      while(ch!=4)
      {
            cout<<"\n Enter Choice\n";
            cin>>ch;
            switch(ch)
            {
                  case 1: n.insert(); break;
                  case 2: n.dis(); break;
                  case 3: n.sort(); break;
                  case 4: exit(0);
            }
      }
      getch();
}

*/ Output */


1.Insert 2.Display 3. Sort 4.Exit

 Enter Choice
1

Enter the item10

 Enter Choice
1

Enter the item-2

 Enter Choice
1

Enter the item-1

 Enter Choice
1

Enter the item4

 Enter Choice
2

 Element in LL are:     4       -1      -2      10
 Enter Choice
3

After Sorting:
 Enter Choice
2

 Element in LL are:     -2      -1      4       10
 Enter Choice
```

Assignment Name: Implement Reverse on LL
Class: MCA I Lab: CA Lab (DS)

```
#include<iostream.h>
#include<process.h>
#include<conio.h>
class node
{
      int info;
      node *link;
public:
      void insert();
      void dis();
      void reverse();
};

node *move=NULL,*start=NULL,*temp=NULL;

void node::insert()
{
      int item;
      cout<<"\nEnter item:";
      cin>>item;
      node *node1=new node;
      node1->link=NULL;
      node1->info=item;
      if(start==NULL)
            start=node1;
      else
      {
            move=start;
            while(move->link!=NULL)
            move=move->link;
            move->link=node1;
      }
}
void node::dis()
{
      node *x;
      x=start;
      while(x!=NULL)
      {
            cout<<"\t"<<x->info;
            x=x->link;
      }
}

void node::reverse()
{
      node *temp1,*temp2;
      temp=start;
      temp1=temp->link;
      temp2=temp1->link;
      temp->link=NULL;
      while(temp1!=NULL)
      {
            temp1->link=temp;
            temp=temp1;
            temp1=temp2;
            temp2=temp2->link;
      }
      start=temp;
      dis();
}
```

```
void main()
{
      clrscr();
      node n;
      int ch;
      cout<<"\n 1.Insert 2. Display 3.Reverse 4.Exit\n";
      while(ch!=4)
      {
            cout<<"\nEnte ch \n";
            cin>>ch;
            switch(ch)
            {
                  case 1: n.insert(); break;
                  case 2: n.dis(); break;
                  case 3: n.reverse(); break;
                  case 4: exit(0);
            }
      }
      getch();
}

*/ Output */


 1.Insert 2. Display 3.Reverse 4.Exit

Ente ch
1

Enter item:10

Ente ch
1

Enter item:20

Ente ch
1

Enter item:30

Ente ch
1

Enter item:40

Ente ch
2
        10      20      30      40
Ente ch
3
        40      30      20      10
Ente ch
4
```