EAST WEST UNIVERSITY

Fall-2019

Course Code: CSE207

Section: 6

Submitted To:
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```cpp
#include<bits/stdc++.h>
using namespace std;
struct node
{
    int data;
    node *n;
    node *p;
};
struct node *nw,*head=NULL,*temp;
void create()
{
    int n;
    cout<<"How many? :";
    cin>>n;
    for(int i=1; i<=n; i++)
    {
        nw=(node*)malloc(sizeof(node));
        cin>>nw->data;
        nw->p=NULL;
        nw->n=NULL;
        if(head==NULL)
        {
            head=nw;
            temp=nw;
        }
```

```cpp
        else
        {
            temp->n=nw;
            nw->p=temp;
            temp=nw;
        }
    }
}
void add_first()
{
    node *temp2=head;
    nw=(node*)malloc(sizeof(node));
    cout<<"Which number you want to add first? :";
    cin>>nw->data;
    nw->n=temp2;
    nw->p=NULL;
    head=nw;
}
void add_any_posi()
{
    int x;
    node *temp=head,*temp1;
    cout<<"Which position you want to add? :";
    cin>>x;
    cout<<endl;
```

```cpp
    nw=(node*)malloc(sizeof(node));

    cout<<"Which number you want to add? :";

    cin>>nw->data;

    for(int i=1; i<x; i++)

    {

        temp1=temp;

        temp=temp->n;

    }

    nw->n=temp;

    nw->p=temp1;

    temp1->n=nw;

    temp->p=nw;


}
void add_last()
{

    node *temp=head;

    nw=(node*)malloc(sizeof(node));

    cout<<"Which number you want to add last? :";

    cin>>nw->data;

    nw->n=NULL;

    while(temp->n!=NULL)

    {

        temp=temp->n;

    }
```

```cpp
        nw->p=temp;

        temp->n=nw;

}
void del_first()

{

    node *temp=head;

    head=temp->n;

    head->p=NULL;

    free(temp);

}
void del_any_posi()

{

    node *temp=head,*temp1;

    int x;

    cout<<"Which position you want to add delete? :";

    cin>>x;

    for(int i=1; i<x; i++)

    {

        temp1=temp;

        temp=temp->n;

    }

    temp1->n=temp->n;

    temp->n->p=temp1;

    free(temp);
```

```cpp
}
void del_last()
{
    node *temp=head,*temp1;
    while(temp->n!=NULL)
    {
        temp1=temp;
        temp=temp->n;
    }
    temp1->n=NULL;
    free(temp);
}
void display()
{
    node *temp1=head;
    while(temp1!=NULL)
    {
        cout<<temp1->data<<endl;
        temp1=temp1->n;
    }
}
int main()
{
    int k=0,w,p;
    cout<<"At first you have create a linked list for create press any number:"<<endl;
```

```cpp
cin>>k;
if(k)
{
    create();
    system("CLS");
    while(1)
    {
        cout<<"Press 1 for add first"<<endl;
        cout<<"Press 2 for add any position"<<endl;
        cout<<"Press 3 for add last"<<endl;
        cout<<"Press 4 for delete first"<<endl;
        cout<<"Press 5 for delete any position"<<endl;
        cout<<"Press 6 for delete last"<<endl;
        cout<<"Press 7 for display"<<endl;
        cout<<"Press 8 for exit"<<endl;
        cin>>w;
        system("CLS");
        if(w==1)
        {
            add_first();
            cout<<"Press any number for continue"<<endl;
            cin>>p;
            system("CLS");
            continue;
        }
```

```cpp
if(w==2)
{
    add_any_posi();
    cout<<"Press any number for continue"<<endl;
    cin>>p;
    system("CLS");
    continue;
}
if(w==3)
{
    add_last();
    cout<<"Press any number for continue"<<endl;
    cin>>p;
    system("CLS");
    continue;
}
if(w==4)
{
    del_first();
    cout<<"Press any number for continue"<<endl;
    cin>>p;
    system("CLS");
    continue;
}
if(w==5)
```

```cpp
{
    del_any_posi();
    cout<<"Press any number for continue"<<endl;
    cin>>p;
    system("CLS");
    continue;
}
if(w==6)
{
    del_last();
    cout<<"Press any number for continue"<<endl;
    cin>>p;
    system("CLS");
    continue;
}
if(w==7)
{
    display();
    cout<<"Press any number for continue"<<endl;
    cin>>p;
    system("CLS");
    continue;
}
if(w==8)
{
```

```
        return 0;
      }
    }
  }


}
```

Source code link: shorturl.at/JUV67