#include "stdafx.h"

#include <iostream>

#include <string>

using namespace std;

class student

{

private:

int id;

float cgpa;

string name;

student \*n;

student \*start;

public:

student()

{

start = NULL;

}

1. void insertatfront ()

{

student \*t1 =new student();

t1->n = start;

start = t1;

cout<<"Please Enter Id Cgpa and Name";

cin>>t1->id;

cin>>t1->cgpa;

cin>>t1->name;

}

2) void display ()

{

if (start == NULL)

cout<<"list is empty";

else

{

student \*t = start;int j=1;

while(t != NULL)

{

cout<<"---------------------------------------------------------------------"<<endl;

cout<<"Record No : "<<j<<endl;

cout<<"ID : "<<t->id<<endl;

cout<<"CGPA : "<<t->cgpa<<endl;

cout<<"NAME : "<<t->name<<endl;

t=t->n;

j++;

}

}

}

3) void insertatend()

{

student \*t1 = new student();

if(start == NULL)

{

start = t1;

t1->n = NULL;

cout<<"Please Enter Id Cgpa and Name";

cin>>t1->id;

cin>>t1->cgpa;

cin>>t1->name;

}

else

{

student \*t = start;

while(t->n != NULL)

t=t->n;

t->n = t1;

t1->n = NULL;

cout<<"Please Enter Id Cgpa and Name";

cin>>t1->id;

cin>>t1->cgpa;

cin>>t1->name;

}

}

4) void insertatfirst ()

{

student \*t1 =new student();

t1->n = start;

start = t1;

cout<<"Please Enter Id Cgpa and Name";

cin>>t1->id;

cin>>t1->cgpa;

cin>>t1->name;

}

5) void searchbyid ()

{

int id;int j=0;int k=0;

cout<<"Enter the Id please : ";

cin>>id;

if(start == NULL)

{

cout<<"LIST IS EMPTY AND INVALID ID"<<endl;

}

else

{

student \* t = start;

while(t!=NULL)

{

if(t->id == id)

{

j++;

cout<<"Id matches and node found."<<endl;

cout<<"---------------------------------------------------------------------"<<endl;

cout<<"Record No : "<<j<<endl;

cout<<"ID : "<<t->id<<endl;

cout<<"CGPA : "<<t->cgpa<<endl;

cout<<"NAME : "<<t->name<<endl;

k=1;

break;

}

else

{

t=t->n;

}

}

if (k==0)

{

cout<<"Node is not found because of invalid Id."<<endl;

}

}

}