Rajvaibhav Rahane

17u283 223045

SE-C Comp,Viit,Pune

***CODE:***

***The Code is Divided into 3 files-***

*1)UI File-employeeUI.cpp,*

*2)Class File-employee.cpp and*

*3) the DLL Library file created by me-linked\_list.cpp*

*\*The DLL Library is implemented as a double-Ended-Queue STL*

*UI File-*

#include "employee.cpp"

void printMenu(){

cout<<"1)Insert Employee Data at Begin\t";

cout<<"2)Insert Employee Data at Index\t";

cout<<"3)Insert Employee Data at End\n";

cout<<"4)Delete Employee at Start\t";

cout<<"5)Delete Employee at Index\t";

cout<<"6)Delete Employee at End\n";

cout<<"7)Print Number of Employees\t";

cout<<"8)Display Employee Details\t";

cout<<"9)Exit. Choice : ";

}

int main(){

int choice,index;

Employee \*employee;

LinkedList<Employee> myCompany;

do{

printMenu();

scanf("%d%\*c",&choice);

switch(choice){

case 1:{

employee=new Employee();

cin>>\*employee;

myCompany.addFirst(employee);

break;

}

case 2:{

cout<<"Index : ";scanf("%d%\*c",&index);

employee=new Employee();

cin>>\*employee;

try{

myCompany.add(index,employee);

}catch(exception &e){

delete employee;

cout<<e.what()<<" was thrown\n";

}

break;

}

case 3:{

employee=new Employee();

cin>>\*employee;

myCompany.addLast(employee);

break;

}

case 4:{

try{

employee=myCompany.removeFirst();

cout<<"Employee removed : "<<\*employee<<endl;

delete employee;

}catch(NoSuchElementException &e){

cout<<e.what()<<" was thrown\n";

}

break;

}

case 5:{

try{

cout<<"Index : ";cin>>index;

employee=myCompany.remove(index);

cout<<"Employee removed : "<<\*employee<<endl;

delete employee;

}catch(exception &e){

cout<<e.what()<<" was thrown\n";

}

break;

}

case 6:{

try{

employee=myCompany.removeLast();

cout<<"Employee removed : "<<\*employee<<endl;

delete employee;

}catch(NoSuchElementException &e){

cout<<e.what()<<" was thrown\n";

}

break;

}

case 7:{

cout<<"Number of Employees:"<<myCompany.size()<<endl;

break;

}

case 8:{

cout<<myCompany<<endl;

break;

}

case 9:{

while(myCompany.size()>0){

Employee\* emp=myCompany.removeFirst();

delete emp;

}

break;

}

default:cout<<"Invalid Input Re-enter\n";

}

}while(choice!=9);

return 0;

}

*Class File-*

#include "linked\_list.cpp"

//----------------------class Employee-----------------------------

class Employee{

char \*name;

unsigned int empId;

char \*department;

char \*designation;

char \*phone;

public:

Employee(){

name=department=designation=phone=NULL;

empId=-1;

}

friend istream & operator>>(istream &in,Employee&);

friend ostream & operator<<(ostream &,const Employee&);

~Employee(){

cout<<"destructor called\n";

}

};

int calculateLength(char \*str){

int i=0;

if(str!=NULL){

for(i=0;str[i]!='\0';i++);

}

return i;

}

istream & operator>>(istream &in,Employee & s){

s.name=new char[30];

s.department=new char[11];

s.designation=new char[11];

s.phone=new char[11];

cout<<"Name : ";scanf("%[^\n]%\*c",s.name); //scan name

s.name[calculateLength(s.name)]='\0';

cout<<"ID : ";scanf("%u%\*c",&s.empId); //scan empId

cout<<"Department : ";scanf("%[^\n]%\*c",s.department);s.department[10]='\0'; //scan department

s.department[calculateLength(s.department)]='\0';

cout<<"Designation : ";scanf("%[^\n]%\*c",s.designation);s.designation[10]='\0'; //scan designation

s.designation[calculateLength(s.designation)]='\0';

cout<<"Phone : ";scanf("%10c",s.phone);s.phone[10]='\0'; //scan phone number

s.phone[calculateLength(s.phone)]='\0';

return in;

}

ostream & operator<<(ostream &out,const Employee& s){

out<<s.name<<" ";

out<<s.empId<<" ";

out<<s.department<<" ";

out<<s.designation<<" ";

cout<<s.phone;

return out;

}

*Library File-*

*The Library File Code is included in a separate file-DLL\_Library.docx.Pl have a look at it.*

***Output:***





