**POST – LAB**

#include<iostream>

using namespace std;

template<class DT>

class als

{

DT\*arr;int size;int count;

public:

als(int);

bool insert(DT);

DT Delete();

void print();

void heapsort(DT);

};

template<class DT>

als<DT>::als(int noairplane )

{

count=0;

size=noairplane;

arr=new DT[size];

}

template<class DT>

bool als<DT>::insert(DT data)

{cout<<"Please enter the amount of fuel present in the aircraft: "<<endl;

cin>>data;

if(count==size)

{

return false;

}

count++;

int i=count;

while(true)

{

if(i==1)

{

break;

}

if(data<=arr[i/2])

{

break;}

arr[i]=arr[i/2];

i=i/2;

}

arr[i]=data;

}

template<class DT>

void als<DT>::heapsort(DT data)

{int i=0,j=0,n=0;

for(i=0; i<n; i++)

{

for(j=i+1; j<n; j++)

{

if(arr[j] <arr[i])

{

data = arr[i];

arr[i] = arr[j];

arr[j] = data;

}

}

}

}

template<class DT>

void als<DT>::print()

{

for(int i=0;i<size;i++)

{

cout<<arr[i]<<",";

}

}

int main()

{

int choice=0,amount=0,data=0;

als<int> \*ap=new als<int>(2);

cout<<"Welcome to Lahore airport civil aviation landing system"<<endl;

for(int i=0;i<5;i++)

{cout<<"Is there an aircraft in airspace requesting to land?"<<endl;

cin>>choice;

ap ->insert(data);

cout<<endl;

switch(choice)

{

case 1:

ap->print();

break;

case 2:

cout<<"no airplane wants to land "<<endl;

break;

}

}

cout<<endl;

cout<<"Grant access of runway to the aircrafts in the following order: "<<endl;

ap->heapsort(data);

ap->print();

system("pause");

return 0;

}

