Practical 22:

/\*Program to show linked list implementation of queue\*/

#include<iostream.h>

#include<stdio.h>

#include<process.h>

#include<conio.h>

struct Node

{

intTno;

charPname[10];

Node \*link;

};

class Train

{

Node \*front,\*rear;

public:

Train()

{

front=NULL;

rear=NULL;

}

voidinserttrain()

{

Node \*temp;

temp = new Node;

cout<<"Enter Train Number : ";

cin>>temp->Tno;

cout<<"Enter Passenger Name : ";

gets(temp->Pname);

temp->link=NULL;

if(rear==NULL)

{

rear=temp;

front=rear;

}

else

{

rear->link=temp;

rear=temp;

}

}

voiddeletetrain()

{

Node \*temp;

if(front==NULL)

cout<<"Queue Empty.";

else

{

temp=front;

front=front->link;

temp->link=NULL;

delete temp;

}

if(front==NULL)

rear=front;

}

void display()

{

Node \*temp;

temp=front;

if(temp==NULL)

cout<<"Queue Empty.";

else

{

cout<<"The train information is : "<<endl;

while(temp!=NULL)

{

cout<<temp->Tno<<endl;

cout<<temp->Pname<<endl;

temp=temp->link;

}

}

}

};

void main()

{

int choice;

Train T;

charans='y';

do{

cout<<"\nMain menu!\n";

cout<<"\n1.Add Passenger.\n";

cout<<"\n2.Delete Passenger.\n";

cout<<"\n3.Display Passengers.\n";

cout<<"\n4.Exit.\n";

cout<<"Enter your choice: ";

cin>>choice;

switch(choice)

{

case 1:

do{

T.inserttrain();

cout<<"Do you want tocontinue?(y/n)";

cin>>ans;

}while(ans=='y');

break;

case 2:

ans='y';

do{

T.deletetrain();

cout<<"Wnat to delete more elements?(y/n)";

cin>>ans;

}while(ans=='y');

break;

case 3:

T.display();

break;

case 4:

exit(0);

}

}while(choice!=4);

}

Output:



