// pqueue1.cpp : Defines the entry point for the console application.

//

#include "stdafx.h"

#include<iostream>

#include<conio.h>

using namespace std;

class queue

{

int a[5];

int front;

int rear;

public:

queue()

{

front=rear=-1;

}

bool isempty()

{

if(rear==-1&&front==-1)

return true;

else

return false;

}

bool isfull()

{

if((rear+1)%5==front)

return true;

else

return false;

}

void enqueue()

{

if(isfull())

{

cout<<"error:full";

return;

}

int d;

cout<<"enter the data:";

cin>>d;

if(isempty())

{

rear=front=0;

a[rear]=d;

}

else

{

int i=rear;

while(a[i]>d)

{

a[i+1]=a[i];

i=(i-1)%5;

}

a[i+1]=d;

rear=(rear+1)%5;

}

cout<<d<<" has been enqueued";

}

void display()

{

if(isempty())

cout<<"error:empty";

else

{

int i=front;

for(;i!=rear;i=(i+1)%5)

cout<<a[i]<<" ";

cout<<a[i];

}

}

void dequeue()

{

if(isempty())

cout<<"error:empty";

else

{

cout<<a[front]<<" has been dequeued";

if(front==rear)

front=rear=-1;

else

front=(front+1)%5;

}

}

void frontfunc()

{

if(isempty())

cout<<"error:empty";

else

cout<<"number "<<a[front]<<" is on the front";

}

};

void main()

{

queue q;

char ch;

do

{

system("cls");

cout<<"\n1->Enqueue\n"

<<"2->Dequeue\n"

<<"3->front\n"

<<"4->display\n"

<<"5->EXIT\n";

cout<<"Enter your choice:";

cin>>ch;

switch(ch)

{

case '1':

q.enqueue();

break;

case '2':

q.dequeue();

break;

case '3':

q.frontfunc();

break;

case '4':

q.display();

break;

case '5':

break;

default:

cout<<"\a\a";

}

getch();

}

while(ch!='5');

}