ASSIGNMENT NO 03

#include<iostream>

#define SIZE 8

using namespace std;

class queue

{

int arr[SIZE];

int f,r;

public:

queue()

{

f=-1;

r=-1;

}

int is\_empty();

int is\_full();

void enqueue(int);

int dequeue();

void display();

};

int queue::is\_empty()

{

if(f==-1)

{

return 1;

}

else

{

return 0;

}

}

int queue::is\_full()

{

if(f==(r+1)%SIZE)

{

return 1;

}

else

{

return 0;

}

}

void queue::enqueue(int x)

{

if(is\_full())

{

cout<<"QUEUE IS FULL"<<endl;

}

else

{

if(f==-1)

f=r=0;

else

r=(r+1)%SIZE;

arr[r]=x;

}

}

int queue::dequeue()

{

int x;

if(is\_empty())

{

cout<<"QUEUE IS EMPTY"<<endl;

return -1;

}

else

{

x=arr[f];

f=(f+1)%SIZE;

if(f==(r+1))

r=f=-1;

return x;

}

}

void queue::display()

{

int i;

for(i=f;i<=r;i++)

{

cout<<arr[i]<<endl;

}

}

int main()

{

queue l;

int ch;

cout<<"\*\*\*\*\*MENU\*\*\*\*\*"<<endl;

do

{

cout<<"\n1. ENQUEUE \n2. DEQUEUE \n3. DISPLAY \n4. EXIT"<<endl;

cin>>ch;

switch(ch)

{

case 1:

int x;

cin>>x;

l.enqueue(x);

break;

case 2:

l.dequeue();

break;

case 3:

l.display();

break;

case 4:exit(0);

}

}while(1);

}

OUTPUT :

\*\*\*\*\*MENU\*\*\*\*\*

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

10

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

20

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

30

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

40

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

50

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

60

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

70

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

80

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

1

90

QUEUE IS FULL

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

3

10

20

30

40

50

60

70

80

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

2

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

2

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

2

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

3

40

50

60

70

80

1. ENQUEUE

2. DEQUEUE

3. DISPLAY

4. EXIT

4

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