**/\*Write a cpp program to implement Queue using array**

**sample**

input & output =

1.insert 2.delete 3.display 4.exit

Enter ur choice 2

Queue is empty

1.insert 2.delete 3.display 4.exit

Enter ur choice 3

Empty Queue

1.insert 2.delete 3.display 4.exit

Enter ur choice 1

enter the element 10

Inserted 10

1.insert 2.delete 3.display 4.exit

Enter ur choice 1

enter the element 20

Inserted 20

1.insert 2.delete 3.display 4.exit

Enter ur choice 1

enter the element 30

Inserted 30

1.insert 2.delete 3.display 4.exit

Enter ur choice 1

enter the element 40

Inserted 40

1.insert 2.delete 3.display 4.exit

Enter ur choice 3

Items -> 10 20 30 40

1.insert 2.delete 3.display 4.exit

Enter ur choice 1

enter the element 50

Inserted 50

1.insert 2.delete 3.display 4.exit

Enter ur choice 1

enter the element 60

Queue is full

1.insert 2.delete 3.display 4.exit

Enter ur choice 2

Deleted -> 10

1.insert 2.delete 3.display 4.exit

Enter ur choice 2

Deleted -> 20

1.insert 2.delete 3.display 4.exit

Enter ur choice 4

Exiting

\*/

#include<iostream>

#include<stdlib.h>

using namespace std;

#define SIZE 5

class Queue

{

private:

int items[SIZE], front, rear;

public:

Queue(){

front = -1;

rear = -1;

}

/\*bool isFull(){

if(front == 0 && rear == SIZE - 1){

return true;

}

return false;

}

bool isEmpty(){

if(front == -1) return true;

else return false;

}

\*/

void enQueue(int element){

if(front == 0 && rear == SIZE - 1){

cout << "Queue is full";

} else {

if(front == -1) front = 0;

rear++;

items[rear] = element;

cout <<"Inserted " << element << endl;

}

}

void deQueue(){

int element;

if(front == -1){

cout << "Queue is empty" << endl;

} else {

element = items[front];

if(front >= rear){

front = -1;

rear = -1;

} /\* Q has only one element, so we reset the queue after deleting it. \*/

else {

front++;

}

cout << "Deleted -> " << element << endl;

}

}

void display()

{

/\* Function to display elements of Queue \*/

int i;

if(front == -1) {

cout << "Empty Queue" << endl;

}

else

{

cout << "Items -> ";

for(i=front; i<=rear; i++)

cout << items[i] << "\t";

}

}

};

int main()

{

int ch,ele;

Queue qu;

while(1)

{

cout <<"\n1.insert 2.delete 3.display 4.exit\nEnter ur choice ";

cin >> ch;

switch(ch)

{

case 1: cout <<"enter the element ";

cin >> ele;

qu.enQueue(ele);

break;

case 2: qu.deQueue(); break;

case 3: qu.display();break;

case 4: cout<<"Exiting"<<endl;

exit(0);

}

}

return (0);

}