**TASK-08**

Create a menu driven program for Queues.  
Use class based implementation for Queues. Take inputs from user.

**Code:**

* **queue.h file**

#include<iostream>

using namespace std;

class doubleQueue

{

private:

double \*queueArray;

int queuesize;

int front;

int rear;

public:

doubleQueue(int size)

{

queueArray=new double(size);//double[size]

queuesize=size;

front=-1;

rear=-1;

}

~doubleQueue()

{

delete []queueArray;

}

bool isFull()

{

if(rear == queuesize-1)

{

return true;

}

else

{

return false;

}

}

bool isEmpty()

{

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

{

return true;

}

else

{

return false;

}

}

void ENQUEUE(double value)

{

if(isFull())

{

cout<<"Queue is full :"<<endl;

}

else

{

if(front==-1)

{

front=0;

}

rear++;

cout<<"Insert number:";

cin>>queueArray[rear];

}

}

void DEQUEUE()

{

if(isEmpty())

{

cout<<"Queue is Empty"<<endl;

}

else

{

cout<<queueArray[front]<<"value is delete from queue"<<endl;

if(front==rear)//only one item in queue

{

front=rear=-1;

}

else

{

front++;

}

}

}

void DISPLAY()

{

if(isEmpty())

{

cout<<"list is empty"<<endl;

}

else

{

cout<<"values in Queue are"<<endl;

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

{

cout<<queueArray[i]<<"\t"<<endl;

}

}

}

};

* **queue.cpp file**

#include "queue.h"

#include <iostream>

using namespace std;

int main()

{

int size, num, choice, value;

cout << "Enter the Size of Queue: ";

cin >> size;

doubleQueue dq(size);

do {

cout << "\n\nPress 1 to insert the number into the Queue.\n";

cout << "Press 2 to delete the number from the Queue.\n";

cout << "Press 3 to DISPLAY the Queue.\n";

cout << "Press 4 to Exit.\n";

cout << "\n\nEnter Your Choice: ";

cin >> choice;

if (choice == 1)

{

cout << "Enter the total numbers you want to inert: ";

cin >> num;

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

{

dq.ENQUEUE(value);

}

}

else if (choice == 2)

{

dq.DEQUEUE();

}

else if (choice == 3)

{

dq.DISPLAY();

}

else if (choice == 4)

{

break;

}

else

{

cout << "Invalid Choice...!!";

}

}

while (true);

}