Pseudo code for queue implimentation.

```
int AC SIZE]
front <- -1
rear <- -1

Enqueue (x)
{
    if ( IsFull())
        pintf(" Queue is full")
    else if
        {
            front <- read <- 0
        }
    else
        {
            rear <- rear+1
        }
        AC rear] <- x
}

Dequeue ()
{
    if ( IsEmpty())
        printf ("queue is Empty")
    else if (front == rear)
        {
            front <- read <- -1
        }
    else
        {
            front <- front +1
        }
```

```
IsFull ()
{
    if (real == size(a)-1)
        return True
    else
        return False
}
Is Empty ()
{
    if (front==-1 && real == -1)
        return True
    else
        return False
}


                    Program

#include <stdio.h>
#include <stdlib.h>
#define max 50

void insert ();
void delete ();
void display ();

int queue_array [max];

int real =-1;
int front =-1;
int main ()
{
    int choice;
    while (1)
```

```c
{
    printf("1. Insert element to queue \n");
    printf("2. Delete element from from queue \n");
    printf("3. Display all elements of queue \n");
    printf("4. Quit \n");
    printf("Enter your choice :");
    scanf("%d", &choice);
    switch(choice)
    {
        case 1:
        insert();
        break;
        case 2:
        delete();
        break;
        case 3:
        display();
        break;
        case 4:
        exit(1);
        default:
        printf("wrong choice \n");
    }
}

void insert()
{
    int item;
    if(rear == MAX -1)
    printf("queue overflow \n");
    else
    if(front == -1)
    front = 0;
```

```c
        printf (" Enter the element in queue :");
        scanf ("%d", &item);
        rear = rear +1;
        queue_array (rear)= item;
    }
}

void delete()
{
    if ( front== -1 || front> rear)
    {
        printf (" queue underflow\n");
        return;
    }
    else
    {
        printf (" Element deleted from queue is : %d\n",
                            queue_array (front));
        front= front +1;
    }
}
void display ()
{
    int i;
    if ( front== -1)
    printf (" Queue is empty \n");
    else
    {
        printf (" Queue is :\n");
        for (i =front; i<= rear; i++)
        printf ("%d", queue_array (i));
        printf (".\n");
    }
}
```