```
#include<stdio.h>
#include<string.h>
#include<stdlib.h>
# define max 5
int insq(char queue[max][80], int *rear, char data[80])
{
    if(*rear == max -1)
        return(-1);
    else
    {
        *rear = *rear + 1;
        strcpy(queue[*rear], data);
        return(1);
    }
}
int delq(char queue[max][80], int *front, int *rear, char data[80])
{
    if(*front == *rear)
        return(-1);
    else
    {
        (*front)++;
        strcpy(data, queue[*front]);
        return(1);
    }
```

```
}
int main()
{
    char queue[max][80], data[80];
    int front, rear, reply;
    int count=0;
    int ch;
    front = rear = -1; //... Initialize a Queue
    printf("<----------ABC---------->\n");
    printf("\tMenu");
    printf("\n-----------------------------");
    printf("\n 1. Insert details of a customer ");
    printf("\n 2. Delete details from of a customer");
    printf("\n 3. Display all details of customers");
    printf("\n 4. Exit");
    printf("\n-----------------------------\n");
    while(1)
    {
        printf("Choose operation : ");
        scanf("%d", &ch);
        switch(ch)
        {
            case 1 : // insert
                printf("\nEnter string : ");
                scanf("%s",data);
```

```
        count++;
        reply = insq(queue, &rear, data);
        if(reply == -1 )
            printf("\nQueue is Full \n");
        else
            printf("\n'%s' is inserted in queue.\n\n",data);
        break;
    case 2 : // delete
        reply = delq(queue, &front, &rear, data);
        if( reply == -1 )
            printf("\nQueue is Empty \n");
        else
            printf("\nDeleted String from Queue is : %s\n", data);
            count--;
            printf("\n");
        break;
  case 3:
        {
         printf("\n You have choosed to display a queue\n");
         printf(" QUEUE::>\t");
         if(count==0)
         {
           printf(" warning:  \t Queue is already  empty !!!");
           break;
           }
```

```
                    for(int k=0;k<count;k++)
                    {
                     int show=queue[k];
                    printf("%s",show);
                     printf("\n\n");
                    }
                    printf("\n\n");
                    break;
                }
            case 4 : exit(0);
            default: printf("Invalid operation \n");
        }
    }
    return 0;
}
```