```
#include <stdio.h>
#include <stdlib.h>
#define MAX 20
void insert();
void delete ();
void display();
int queue_array[MAX];
int rear = -1;
int front = -1;
main()
{
   int choice;
   while (1)
   {
      printf("\n1.Insert element to queue\n");
      printf("\n2.Delete element from queue\n");
      printf("\n3.Display all elements of queue\n");
      printf("\n4.Quit\n");
      printf("\nEnter your choice :");
      scanf("%d", &choice);
      switch (choice)
```

```
        {
        case 1:
           insert();
           break;
        case 2:
           delete ();
           break;
        case 3:
           display();
           break;
        case 4:
           exit(0);
        default:
           printf("\nWrong choice\n");
        }
    }
}
void insert()
{
    int add_item;
    if (rear == MAX - 1)
```

```
      printf("\nQueue overflow");
   else
   {
      if (front == -1)
         front = 0;
      printf("\nInsert the element in queue :");
      scanf("%d", &add_item);
      rear++;
      queue_array[rear] = add_item;
   }
}
void delete ()
{
   if ((front == -1) || (front > rear))
   {
      printf("\nQueue underflow");
      return;
   }
   else
   {
      printf("\nElement deleted from queue
is      :%d\n", queue_array[front]);
```

```
        front++;
    }
}
void display()
{
    int i;
    if (front == -1)
        printf("\nQueue is empty");
    else
    {
        printf("\nQueue is :\n");
        for (i = front; i <= rear; i++)
            printf("%d\t", queue_array[i]);
        printf("\n");
    }
}
```