

Dequeues → To delete front, delete rear, insert front, insert rear, display.

```

① #include <stdio.h>
#include <conio.h>
#include <process.h>
#define qsize 5
int f=0, r=-1, ch;
int item, q[10];
int isfull() {
    return (r==qsize-1)? 1:0;
}
int isempty() {
    return (f>r)? 1:0;
}
void insert_rear() {
    if (isfull()) {
        printf("Queue Overflow\n");
        return;
    }
    r=r+1;
    q[r]=item;
}
void delete_front() {
    if (isempty()) {
        printf("Queue Empty\n");
        f=0;
        r=-1;
        return;
    }
    printf("item deleted is %d\n", q[f++]);
}
void insert_front() {
    if (f!=0) {
        f=f-1;
        q[f]=item;
        return;
    }
}

```

```

else if ((f == 0) && (r == -1)) {

```

```

    q[f + (r)] = item;

```

```

    return;
}

```

```

else

```

```

    printf("Insertion is not possible");
}

```

```

void delete_rear() {

```

```

    if (is_empty()) {

```

```

        printf("Queue is empty\n");

```

```

        f = 0;

```

```

        r = -1;

```

```

        return;
}

```

```

printf("Item deleted is %d\n",
      q[r]--);
}

```

```

void display() {

```

```

    int i;

```

```

    if (is_empty()) {

```

```

        printf("Queue empty\n");

```

```

        return;
}

```

```

for (i = f; i <= r; i++) {

```

```

    printf("%d\n", q[i]);
}

```

```

int main() {

```

```

    for (;;) {

```

```

        printf("1. insert-rear\n 2. insert-front\n 3. delete-rear\n 4. delete-front\n 5. display\n 6. exit");

```

```

        printf("Enter choice\n");

```

```

        scanf("%d", &ch);

```


Date _____
Page _____

```
switch(ch) {
```

```
case 1: printf("Enter the item\n");  
        scanf("%d", &i);  
        insert_rear();  
        break;
```

```
case 2: printf("Enter the item\n");  
        scanf("%d", &i);  
        insert_front();  
        break;
```

```
case 3: delete_rear();  
        break;
```

```
case 4: delete_front();  
        break;
```

```
case 5: display();  
        break;
```

```
default: exit(0);  
}
```

```
}
```

```
return 0;
```

```
}
```

```
=
```