

```
/*queue using arrays */
```

```
#include <stdio.h>
#include <conio.h>
#include <malloc.h>
#include <stdlib.h>
```

```
#define MAX 10
```

```
int q[MAX];
int rear=0;
int front=0;
int full=0;
int empty=1;
```

```
void ins(int);
void print(void);
int del(void);
```

```
void main(void)
```

```
{    int opt,ch,y;
    clrscr();
    do
    {
        clrscr();
        printf("\n1. Insert\n");
        printf("\n2. Delete\n");
        printf("\n3. Print\n");
        printf("\n4. Exit\n");
        printf("\n\n\t Enter your Choice\n");
        scanf("%d",&opt);
```

```
switch(opt)
```

```
{
```

```
    case 1:
```

```
        printf("\nEnter item to Push\n");
        scanf("%d", &y);
        ins(y);
        break;
```

```
    case 2:
```

```
        y=del();
        printf("Deleted item is : %d" ,y);
        break;
```

```
    case 3:
```

```
        printf("\nThe Given List is\n");
        print();
```

```
}
```

```
    printf("\n Continue 1/0");
    scanf("%d",&ch);
```

```
}while(ch==1);
```

```
}
```

```
void print(void)
```

```
{
```

```
    int i;
    for(i=front; i<=rear; i++)
        printf("%d  ",q[i]);
```

```
}
```

```
void ins(int x)
{
    if(full)
    {
        printf("\nQueue Full");
        return;
    }
    else
    {
        q[rear]=x;
        rear++;
        empty=0;
        if(rear==MAX)
            full=1;
    }
    return;
}
```

```
int del(void)
{
    int x;

    if(empty)
    {
        printf("\nQueue is Empty");
        exit(0);
    }
    else
    {
        x=q[front];
        front++;
        full=0;
        if(front==rear)
            empty=1;
    }
    return(x);
}
```