

WEEK 3

```
#include<stdio.h>
#include<stdlib.h>
#define max 3

int queue[max];
int rear=-1;
int front=-1;

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

void insert()
{
    int value;
    if(rear==max-1 && front==0)
    {
        printf("Queue overflow \n");
    }
    else if(rear==max-1)
        printf("You cannot enter any value \n");
    else
    {
        if(front== -1)
            front=0;
        printf("Insert element in queue:");
        scanf("%d",&value);
        rear=rear+1;
        queue[rear]=value;
    }
}
```

```
}
```

```
void delete()
```

```
{
```

```
    if(front==-1||front>rear)
```

```
        printf("Queue is Empty \n");
```

```
    else if(front==rear)
```

```
    {
```

```
        front=-1;
```

```
        rear=-1;
```

```
    }
```

```
    else
```

```
    {
```

```
        queue[front++];
```

```
    }
```

```
}
```

```
void main()
```

```
{
```

```
    int ch;
```

```
    while(1)
```

```
    {
```

```
        printf("1.Insert \n2.Delete \n3.Display \n4.Exit \n");
```

```
        scanf("%d",&ch);
```

```
        printf("\n\n");
```

```
        switch(ch)
```

```
        {
```

```
            case 1: insert();
```

```
                break;
```

```
            case 2: delete();
```

```
                break;
```

```
            case 3: display();
```

```
                break;
```

```
            case 4: exit(0);
```

```
            default:printf("Invalid Input \n");
```

```
        }
```

```
    }
```

```
}
```