

## //Linear Queue Program.

```
#include <stdio.h>
#include <stdio.h>
#define QW_SIZE 3
int item, front = 0, rear = -1, q[QW_SIZE];

void insertrear()
{
    if (rear == QW_SIZE - 1)
    {
        printf("Queue overflow\n");
        return;
    }
    rear = rear + 1;
    q[rear] = item;
}

int deletefront()
{
    if (front > rear)
    {
        front = 0;
        rear = -1;
        return -1;
    }
    return q[front++];
}

void display()
{
    int i;
```



```
if (front > rear)
```

```
printf("Queue is empty\n");
return;
```

```
printf("Contents of queue\n");
for(i = front; i <= rear; i++)
```

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

```
int main()
```

```
{
    int choice;
```

```
    for(;;)
```

```
        printf("1. insert rear 2. delete front 3. display\n");
```

```
        printf("enter the choice\n");
```

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

```
        switch(choice)
```

```
        {
            case 1: printf("enter the item to be\n");
```

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

```
                    insertrear();
```

```
                    break;
```

```
            case 2: item = deletefront();
```

```
                    if (item == -1)
```

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

```
                    else
```

```
                        printf("Item deleted = %d\n", item);
```

```
                        break;
```

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

```
        }
```

```
    }
```

```
    return 0;
```