

```
class Client:
```

```
    def __init__(self, rate, data = []):
        self.rate = rate
        self.data = data
```

```
    def __str__(self):
        return str([str(self.rate), str(self.data)])
```

```
class Buffer:
```

```
    def __init__(self, buffer size, buffer = []):
        self.buffer size = buffer size
        self.buffer = buffer
```

```
    def checkstate(self):
        if len(self.buffer) == 0:
            return True
```

```
    def __str__(self):
        return str([str(self.buffer size),
                    str(self.buffer)])
```

```
while True
```

```
    data to send = input("Enter string to send")
```

```
    if i < client.rate
```

```
        client.data.append(data to send[i])
```

```
    else:
```

```
        if count < buffer.buffer size:
```

```
            buffer.buffer.append(data to send[i])
```

```
        else
```

```
            print("Data loss" + data to send[i])
```

else

$j = 0$

for i in range(0, len(data_send) + len(buffer)):

if $i < \text{client.rate}$:

if len(buffer):

client.data.append(buffer[0])

del buffer[0]

else

client.data.append(data_send[i])

$j++$

else:

if len(buffer) <= buffer_size:

if $j < (\text{data_to_send})$

buffer.append(data_send[i])

$j++$

else:

if $j < \text{len(data_to_send)}$:

print("Data loss" + data_send[i])

$j++$

print(buffer)
print(client)