

# Readers Writers

➡ allow multiple readers but only one writer in the critical section

```
void writer () {  
    while(1) {  
        write(file, data);  
    }  
}
```

```
void reader () {  
    while(1) {  
        data:= read(file);  
    }  
}
```

# Solution

1. **readcount** (variable) to keep track of the number of readers currently reading
2. **mutex** (binary semaphore) to synchronize the access to `readcount`
3. **writer\_or\_readers** (binary semaphore) to provide exclusive access to each writer or all readers
  - writer should wait before writing and signal after
  - readers should wait when `readcount` goes from 0 to 1 and signal when `readcount` goes from 1 to 0