

Readers/Writers Monitor Solution

monitor ReadersWriters

```
int nr := 0, nw := 0
```

```
cond *okToRead, *okToWrite;
```

```
readEnter() {
```

```
    while (nw > 0) // writer is in
```

```
        okToRead→Wait(); // block
```

```
    nr++; // mark that reader is in
```

```
}
```

```
readExit() {
```

```
    nr--; // one reader is out
```

```
    okToWrite→Signal(); // hint to writers that maybe one can get in
```

```
}
```

```
writeEnter() {
```

```
    while (nw > 0 or nr > 0) // someone is in
```

```
        okToWrite→Wait(); // block
```

```
    nw++; // mark that writer is in
```

```
}
```

```
writeExit() {
```

```
    nw--; // one writer is out
```

```
    okToWrite→Signal(); // hint to writers that maybe one can get in
```

```
    okToRead→Broadcast(); // hint to readers that maybe they can get in
```

```
}
```

```
end monitor
```