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TI71  
READER-WRITER

```
#include<unistd.h>
#include<semaphore.h>
#include<pthread.h>
#include<stdio.h>
```

```
sem_t reader,writer;
int rdcnt=0;
```

```
void *reading(void*arg){

    int data= *(int*)arg;

    sem_wait(&reader);

    rdcnt++;

    if(rdcnt==1){
        sem_wait(&writer);
    }
    sem_post(&reader);
    printf("\nReader no=%d",data);
    sem_wait(&reader);
    rdcnt--;
    if(rdcnt==0){
        sem_post(&writer);
    }
    sem_post(&reader);

}
```

```
void *writing(void*arg){

    int data= *(int*)arg;

    sem_wait(&writer);
    printf("\nwriter no=%d",data);
    sem_post(&writer);

}
```

```
void main(){
```

```
sem_init(&reader,0,1);
sem_init(&writer,0,1);
```

```
pthread_t read[7],write[3];
```

```
for(int i=0;i<7;i++)
{
    pthread_create(&read[i],NULL,reading,(void*)&i);
}
```

```
for(int i=0;i<3;i++)
{
    pthread_create(&write[i],NULL,writing,(void*)&i);
}
```

```
for(int i=0;i<7;i++)
{
    pthread_join(read[i],NULL);
}
```

```
for(int i=0;i<3;i++)
{
    pthread_join(write[i],NULL);
}
```

```
}
```