

# Using Condition Variable

## ■ Example:

- A threads is designed to **take action when x=0**
- Another thread is responsible for decrementing the counter

```
pthread_cond_t  cond;  
pthread_cond_init (cond, NULL);
```

```
pthread_mutex_t  mutex;  
pthread_mutex_init (mutex, NULL);
```

```
action() {  
    pthread_mutex_lock (&mutex)  
    if (x != 0)  
        pthread_cond_wait (cond, mutex);  
    pthread_mutex_unlock (&mutex);  
    take_action();  
}
```

```
counter() {  
    pthread_mutex_lock (&mutex)  
    x--;  
    if (x==0)  
        pthread_cond_signal (cond);  
    pthread_mutex_unlock (&mutex);  
}
```

- All condition variable operation **MUST** be performed while a **mutex is locked!!!**