

```
void *func(void *arg);
```

```
sem_t sem;
```

```
#define BUFSIZE 1024
```

```
char buf[BUFSIZE];
```

```
int main() {
```

```
    pthread_t t;
```

```
    if( sem_init(&sem, 0, 0) != 0 ) {
```

```
        perror("Semaphore initialization failed");
```

```
        exit(EXIT_FAILURE);
```

```
    }
```

```
    if( pthread_create(&t, NULL, func, NULL) != 0 ) {
```

```
        perror("Thread creation failed");
```

```
        exit(EXIT_FAILURE);
```

```
    }
```

```
    puts("Please input some text. Ctrl-d to quit.");
```

```
    while( fgets(buf, BUFSIZE, stdin) )
```

```
        sem_post(&sem);
```

```
    sem_post(&sem);                                /* in case of Ctrl-d */
```

```
    if( pthread_join(t, NULL) != 0 ) {
```

```
        perror("Thread join failed");
```

```
        exit(EXIT_FAILURE);
```

```
    }
```

```
    sem_destroy(&sem);
```

```
    exit(EXIT_SUCCESS);
```

```
}
```

```
void *func(void *arg) {
```

```
    sem_wait(&sem);
```

```
    while( buf[0] != '\0' ) {
```

```
        printf("You input %ld characters\n", strlen(buf)-1);
```

```
        buf[0] = '\0';                                /* in case of Ctrl-d */
```

```
        sem_wait(&sem);
```

```
    }
```

```
    pthread_exit(NULL);
```

```
}
```