```
#include <stdlib.h>
#include <string.h>
#include <ctype.h>

#define MAXPAROLA 30
#define MAXRIGA 80

int main(int argc, char *argv[])
{
   int freq[MAXPAROLA] ; /* vettore di contatori
   delle frequenze delle lunghezze delle parole */
   char riga[MAXRIGA] ;
   int i, inizio, lunghezza ;
   FILE * f ;

   for(i=0; i<MAXPAROLA; i++)
      freq[i]=0 ;

   if(argc != 2)
   {
      fprintf(stderr, "ERRORE, serve un parametro con il nome del file\n");
      exit(1);
   }
   f = fopen(argv[1], "rt") ;
   if(f==NULL)
   {
      fprintf(stderr, "ERRORE, impossibile aprire il file %s\n", argv[1]);
      exit(1);
   }

   while( fgets( riga, MAXRIGA, f ) != NULL )
```

Multi-Threading

Multi-Threading in C

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Threads

- The C11 standard introduces concurrency in C
  - Very similar to POSIX (Portable Operating System Interface for UNIX)
  - Defined in **threads.h**, i..e., insert in all *.c files
    - #include <threads.h>
  - The type **thrd_t** is the type if an object identifying a thread
  - All fuynctions stard with the prefix **thrd_**

POSIX versus C

For more detail see the reference documentation

POSIX	C
pthread_equal	int thrd_equal (thrd_t, thrd_t);
pthread_self	thrd_t thrd_current (void);
pthread_create	int thrd_create (thrd_t *, thrd_start_t, void *);
pthread_exit	_Noreturn void thrd_exit (int);
pthread_join	int thrd_join (thrd_t, int *);
pthread_yeld	int thrd_yeld (void);
pthread_detach	int thrd_detach (thrd_t);
pthread_cancel	-
sleep	int thrd_sleep (const struct timespc *, struct timespec *);