System File API

Standard C library

- A set of standard functions for handling files are defined in a C library.

- Internally, the calls are buffered.

- Instead of file descriptors, the standard I/O library uses pointers to file metadata; these pointers are of type FILE.

- The three files supplied by the system when a program starts becomes:
  ```
  #include <stdio.h>
  extern FILE *stdin; /* Standard input
    (descriptor 0) */
  extern FILE *stdout; /* Standard output
    (descriptor 1) */
  extern FILE *stderr; /* Standard error
    (descriptor 2) */
  ```

- The standard I/O library contains many functions, including:
  ```
  fopen()
  fread()
  fwrite()
  fclose()
  ```
  and others.

- Two important C functions in this library are designed for formatted input and output:
  ```
  fprintf
  fscanf
  ```

- Versions of these functions that use stdout and stdin, respectively, are:
  ```
  printf
  scanf
  ```

- A good reference can be found at
  http://www.cplusplus.com/reference/cstdio/