

C System Calls Cheat Sheet with Examples

1. open()

Opens or creates a file.

Example: Usage: `int fd = open("filename.txt", O_CREAT | O_WRONLY, 0644);`

2. write()

Writes data to the file descriptor.

Example: Usage: `write(fd, "Hello", 5);`

3. read()

Reads data from the file descriptor.

Example: Usage: `read(fd, buffer, size);`

4. close()

Closes the file descriptor.

Example: Usage: `close(fd);`

5. fork()

Creates a new process (child process).

Example: Usage: `pid_t pid = fork();`

6. getpid()

Returns the process ID of the calling process.

Example: Usage: `pid_t pid = getpid();`

7. exit()

Terminates the process and returns control to OS.

Example: Usage: `exit(0);`

8. exec()

Replaces the current process image with a new one.

Example: Usage: `execvp("/bin/ls", args);`

9. wait()

Waits for a child process to finish.

Example: Usage: wait(&status);

10. kill()

Sends a signal to a process (e.g., terminate it).

Example: Usage: kill(pid, SIGKILL);