

## Assignment 9

Title - File Handling system calls

Problem Statement - Implement an assignment using File Handling system calls (low level system calls like open, read, write, etc).

Theory -

File description table -

It is collection of integer array indices that are file descriptors in which elements are provided to file table entries.

File table Entry - File table entries is a structure in-memory surrogate for an open file.

Std. file descriptors - When any process starts, then that process file description tables `fd` (file descriptor) open automatic.



There are 4 types of I/O system calls-

1) create: used to create a new empty file  
syntax: `int create (char* filename, mode_t mode)`  
returns: 1st unused fd.

2) open: used to open file for reading or writing or both  
syntax: `#include <sys/types.h>`

3) close: tells the OS you are done with fd and close the file which pointed by fd.  
syntax: `int close(int fd)`

returns: 0 on success, 1 on error.

4) read: from file indicated by file descriptor file fd.  
syntax: `size_t read (int fd, void *buf, size_t cnt);`

return: returns no. of bytes read on success  
return 0 for eof, -1 on error, -1 on signal interrupt.

Conclusion:

I understood and implemented an assignment using file handling system calls (low level system calls like open, read).