

# 0107451 Laboratory 6: Reading a Directory in EXT4 file system

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## 1 Submission

Turn in:

1. your well-formatted and commented source code (**6 pt**)
2. a copy of the output (**4 pt**).

## 2 Introduction

In this lab, you will gain hands-on experience reading a folder contents in EXT4 file system. At anytime you should be able to obtain more info about any system call in the following by googling it or issuing a **man** command.

### 2.1 Useful system calls

- `DIR* opendir(const char* path)`  
Opens a directory in the given path and returns a descriptor. For example, `opendir("/tmp/myfolder")` opens an existing folder called myfolder in the tmp directory. It returns a descriptor that can be used like a handle to the open dir.
- `struct dirent* readdir(DIR* fd)`  
Reads an entry from the directory. Next read returns the next entry and so on. When there is no entries left a **NULL** is returned.
- `closedir(DIR* fd)`  
Closes the open directory.

## 3 Activity

- Create a new directory using `mkdir` command line.
- Inside the created directory, create some files.
- Write a C code that uses the above system calls to read the contents of the directory and displays the names and inode numbers of the contents.