

Project 3
FUSE file system



- **Project goal**
 - Implement a simple FUSE file system using libfuse
- **Due:** 19th June, 23:59 (*option: 14th June*)
- **Baseline**
 - Implement root directory (no subdirectory)
 - **File read/write:** run IOzone to prove it working
 - **File allocation:** sequential (no fragmented) block allocation
- **You need to implement**
 - getattr, readdir, open, read, write



File system layout

- **Use a 1 GB file as a storage media**

```
$ truncate -s 1G disk.img
```

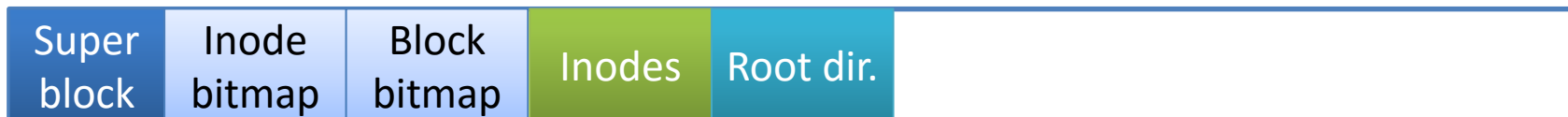
- **Layout**

- 4 KB blocks

- Block bitmap size: 32 KB (8 blocks)

- Inode bitmap size: 1 block ← you define # of inodes

- Array-based directory (max length: 100 bytes)





Report and presentation

- Submit your report and presentation material to:
scobyseo@gmail.com
- **Progress presentation:** 8th June
 - Mounting fuse file system (doc/kernel.txt)
 - API <fuse_operations> (doxygen/structfuse_operations.html)
 - Example file system (examples/hello.c)
- **Final presentation:** 20th June (15th June)
- **Report must contain**
 - Full source code of your file system (attachment)
 - File system specification
 - Iozone benchmark methods and results