Group 5 WOFS
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Milestone 1: Getting Started
October 12th - Complete (awaiting feedback)
By this point, we will have a well defined on-disk structure. This will allow us to work as concurrently as possible and realize potential implementation issues before we begin real development. Additionally, we will have the VM ready for development.

- *Deliverables:*
  - Well defined structure for the filesystem image file.
  - Data structure (*C structs*) to house the mastering information.
- *Group Members:* Since design is essential to the success of this project, all members will work together on this.
- *New Skills*: Understand the Unix file system and representation better.
- *Resources: Duke VM*

Milestone 2: Implement Mastering
October 20th - In progress
By this point, we will have implemented the basic mastering utility. This must come early in the project timeline, since it is the major dependency for the project.

- *Deliverable:*
  - Alpha implementation of WOFS mastering program
- *Group Members:* Leads – Nick and Matthew
- *New Skills: C (Potentially C++)*

Milestone 3: Implement Tree Command
October 23
By this point we will have implemented the tree command that gives the layout of the file image prior to mounting.

- *Deliverable:*
  - Tree command
- *Group Members:* Leads – Ryan and George

Milestone 4: Milestone Presentation
October 25
By this time, we should have a working mastering prototype and a working *tree* command. This will allow us to master our mastering and verify it is working (with the *tree* command).

- *Deliverable:*
  - An integrated, demonstrable implementation of mastering a WOFS image
  - 5 minute demo highlighting our current status
- *Group Members:* All

Milestone 5: Implement Mounting
Mid-November

- *Deliverable:*
  - Alpha implementation of WOFS mounting program
- *Group Members:* Leads – Ryan and George
- *New Skills:*
  - Libfuse, FUSE

Milestone 6: High-availability/Checksum extension
Late-November
If time permits this time will be dedicated to our extension, which entails implementing block level checksums.

- *Deliverable:*
  - Mounted file system that is capable of swapping between multiple copies of the image (one potentially through a NAS) on detection of block level checksum errors.

Milestone 7: Wrapping Up
November 31
We have left a week to complete any deliverables that are not completed by their desired date.

Milestone 8: Final Demo
December 7

- *Deliverables:*
  - Finished, fully polished final product with accompanying test suit
  - 15-minute rehearsed presentation

Testing Suit

We plan to test throughout our development process. The deliverables listed below will be provided at the time of the completed project (final demo).

- *Deliverables:*
  - Integration test pipeline for maintaining compatibility between both mastering and mounting programs, but also legacy versions of both programs
  - Unit test suite for mastering and mounting programs.
- *Division of Labor:*
  - Ryan and George: mounting unit and integration testing.
  - Matthew and Nick: mastering unit testing.
- *New Skills:*
  - JUnit
  - Catch