Commit log

---

commit 85a5b9fe2eb551c44f4194b501b345374d9e1e41

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:09 2017 +0100

Add example Example2_ReadFile

---

commit 59a524da6299a73482ab0600ddca96d1d8280a44

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:09 2017 +0100

Overhaul of API

Summary of changes:
 * Implement file I/O
 * Fix directory API
 * General code cleanup

---

commit 62a44db8b8408ee65ad24521d17a12440e4be841

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:09 2017 +0100

Add example Example1_ReadDir which lists the contents of a directory

Also fix bugs in directory system

---

commit 88aa712bf2e5878725356d9b6c6d8246c2d069d7

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Add module header to Example0_Mount/Main

---

commit 9208bcd26b1e4320aff0fd960b7c9b03c7a1be48

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: `Wed May 10 10:35:08 2017 +0100`

Add bytestring size checks to Volume and Block

1. Volume will error if the bytestring is less than 2048 bytes long. This is be
2. Block will error if the bytestring is not a multiple of the block size, or i

---

commit `eff98edaa4254c10dd1f7a32ad4a8ead0e990ee9`

Author: `Chris Swinchatt` chrisswinchatt@gmail.com

Date: `Wed May 10 10:35:08 2017 +0100`

Add new example

Example0_Mount shows how to mount a filesystem and print information about it o

---

commit `ed31f7586ae2cb7f581a05da48e5d9d7306bc3ae`

Author: `Chris Swinchatt` chrisswinchatt@gmail.com

Date: `Wed May 10 10:35:08 2017 +0100`

Bug fixes

* Show instances added for all FS objects
* Fixed bug in Ext2.Volume.getInode

---

commit `3e3049dbb37fba1389576660c81c21c513d2b416`

Author: `Chris Swinchatt` chrisswinchatt@gmail.com

Date: `Wed May 10 10:35:08 2017 +0100`

Add Show instances for filesystem dump

---

commit `a7e5ec8d445762a74981765e6b3ff51de1c4dab9`

Author: `Chris Swinchatt` chrisswinchatt@gmail.com

Date: `Wed May 10 10:35:08 2017 +0100`

Implement directory open and read with user & group permissions

File permissions checked when opening directories using user ID and groups agai
always having owner permissions.

---

commit 7d78754d182db1ff268754e622d6ccf89965a24c

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Add build dependencies in Cabal file
```

---

commit 699dddfe84e44aa83207d570573e3fc355e1c448

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Improve code style

Code style improved based on hints from hlint
```

---

commit 32f2d0757072c21713d48ad0ecb725023b3acb4d

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Implement file paths

Directories search for child nodes along /-delimited paths
```

---

commit 51aff08d4edcbf564427657b4965667e624b9029

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Implement directory tree abstraction
```

---

commit f5e253a0a51e1c0b02e69ec394a80ed33e42449b

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Implement reading from nodes across block boundaries
```

---

commit 3f572eb47ae5839a425ef5ed92661c44946e9244

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Implement inode search

Ext2.Block has been moved back into Ext2.LowLevel
```

---

commit 1afbe3820fbec3211887763a7bb1e741f707f278

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Implement UUIDs using uuid library
```

---

commit efeb8eaca9f6c648009a49bcf182735f5615b598

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Implement UNIX timestamps
```

---

commit d95575abcd1a255680069b46bfd0605045ebc394

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Implement block-based I/O with object serialisation/deserialisation
```

---

commit 316f726909e5d0b16654c0034cda1f7d9205d8df

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Restructure Ext2.LowLevel
```

---

commit 94fef9a52d109acbb54c383f8e5014a4caab0b63

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Minor change to Inode structure

Indirect blocks are now separate fields, not elements in the iBlock
array.

---

commit 3e112e3cf25cc26e65839aaee79543ec5f4dd73a

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Create SizeOf typeclass to compute the size of objects

Ext2.LowLevel.Structures.struct now generates an instance of SizeOf
automatically

---

commit b07b57c1fbdb7410928bfcd61aab1f3b009ae544

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Remove Ext2.LowLevel.IO

The functionality of IO has been moved into Ext2.LowLevel.Block

---

commit 3b1b168f082370d8a76a73d04e182de2f5751c98

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Allow Structs to specify their own deriving instances

Previously all Structs were forced to derive Show, meaning this instance
could not be overridden

---

commit 49a0877bc47997cdb067017b10ec8701091b2130

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Implement low-level block device I/O

---

commit 0f82764e83376bd42688e55df295d298000e017e

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Add predefined error strings

---

commit ac030439ec83b06e7ed93595b6b1315c219d9818

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Add QuickCheck test for Serialisable

---

commit c6bb40e60968402143da6b9cfdbf2c5cb85b4e93

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Generate data structures with Template Haskell

---

commit 48b112475311b38dd4ab3a345a5f57a9bb59f717

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

```
Remove code generator
 * Implement WordArray type
 * Implement Serialisable typeclass
 * Convert generated data structures into static Haskell code
 * Create Serialisable instances for structures
```

---

commit c23da06647a5a5be95f0c15b44e1b8d9630fbee1

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Create data structure generator

---

commit c2f86857458db3c47e45760abe1f0e7162245da6

Author: Chris Swinchatt chrisswinchatt@gmail.com

Date: Wed May 10 10:35:08 2017 +0100

Initial commit