.TH Reptilian Project Report P3(7)

.SH NAME

.B Edwin Carvajal - Project 3 - File Systems

.SH Synopsis

.PP

This project created a file system structure from a given WAD file, taking in all appropriate information.

.SH DESCRIPTION

.B wadfs/wad.h

The header file was constructed to instantiate the various functions that I would later be using in my wad.cpp file. Helper functions were

created to help with parsing and tree creation, to be later used by the functions specified in the spec. Structs were developed to be used in

the wad.cpp file for constructing the tree.

.B wadfs/wad.cpp

The loadWad proceeds to create a Wad object using the constructor and returning the object created, for user use. The constructor function proceeds

to call parseFileHeader, parseDescriptor, and createTree helper functions. The parseFileHeader proceeds to read the first 12bytes of the WAD file, and

split the information into designated holsters. The parseDescriptor functions uses the stored descriptorOffset&numerDescriptors to go through the WAD file

to store and holster the information. CreateTree uses the holstered descriptors to construct an n-ary tree, representing the entire fileStructure. GetMagic

returns the holstered magic classMembered gathered in parseFileHeader. IsContent&IsDirectory use iterative-level-order helper-searching-algorithms to traverse

the tree to find the length. GetSize also uses helper-searching-algorithms to return the size of the element. GetContents populates a buffer with the

elementData of the foundElement from helper-searching-algorithms. GetDirectory pushes onto the vector the found file&directory names from the current level of

the tree. Deconstructor frees all vectors and nodes from the fileTree.

.B wadfs/wadfs.cpp

GetAttributes assigns 1link to directories and 2links to files, and assigns the getSize to files and read-only to both files&directories. Open&Opendir respectively

check if isContent&isDirectory to return success or error. Read checks if isContent and then populates the buffer from getContents with buffer passed, returns error

if notContent. Readdir checks isDirectory and populates vector with getDirectory info, and populates buffer with info from vector, returns error if notDirectory.

Release&Releasedir respectively check isContent&isDirectory to then return success, if not return error. Main function assigns fuse\_opertion members to functions, and

creates wad object, to pass into fuse\_main for directory mounting. Later deletes all allocated memory.

.SH TESTING

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.SH BUGS

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.SH LINK

The link to the screencast video:

.SH REFERENCE/CITATIONS

.SH AUTHOR

Edwin Carvajal