IOS Assignment – Hackathon

# Problem Statement:

Display the names of all the files with the same name regardless of the extension name across the current active file system. Recommended schema <Filename,Path>

# Design:

The design flow goes like this:

1. The file paths of all the files in a particular directory or in the root itself (according to user’s requirement), is dumped into a text file. The file paths are found by the command:

*“file > xyz.txt”*

1. The text file is loaded into the program and each line is split.
2. The filename is extracted from the path of the file and each path is linked to their particular file name.
3. A function is performed to sort all the file paths according to their filename.
4. The file names are printed with all the repeated file paths.

# Implementation:

The following methods were tried before implementing for best accuracy:

1. KVS
2. Hash Maps

# Drawbacks of other methods:

# In-built commands:

*ls –R –l | sort*  This method doesn’t list the absolute path of a file

*find .type=f | sort*  This method doesn’t sort the files consistently between the sub-directories and parent directory.

# KVS

Only the previous value of the key is stored and all the values mapping to the same key are omitted. To overcome this, concatenation has to be done in every step of finding values.

The string processing should be done to remove all the separate values.

# Hashmaps

Only the previous value of the key is stored and all the values mapping to the same key are omitted. To overcome this, chaining can be done via implementing linked lists.

By:-

Pruthvish Eshwar - PES1201701629

Harish P B - PES1201701435

Ashrith S - PES1201700649