

Implementation of File Tagging System Using Android

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ABSTRACT

In the following paper, we describe and discuss experiment in organizing files using tags. Today, the world is of mobile phones and a majority of the phones use an Android operating system which uses a traditional hierarchical file system for organizing large amount of personal files. There is no doubt that the traditional file system is effective, but it gets quiet difficult to search a file in hierarchical system when the number of files increases. Recently tagging had grown popularity in the web which allows user to tag photographs and other personal content because tags make it easier to search something quickly. On this idea we have developed file tagging system for android which reduces the time to search a file from a heap of files once the searched file is being added under a tag.

Keywords : Tagging, Files, Hierarchical, Information, Organizing.

I. INTRODUCTION

The activities performed by people in order to organize, acquire, retrieve, maintain and use personal information[3] which includes items such as web pages, documents digital and paper-based) and email messages for fulfilling a person's various roles and everyday use to complete tasks (work-related or not) all this can be termed as personal information management. More simply, it is the art of getting things done in our lives through management of information effectively. Personal information management is the study of how people maintain and organize personal information [3] and related methods that can help people doing so. Everyone manages information in different settings, for a different reason and with a variety of types of information. For example, a parent might collect and organize photographs of their children into a photo album using a temporal organization scheme, or might tag digital photos with the names of the children.

A term or keyword assigned to piece of information (such as a digital image, computer file, Internet bookmark Or database record) is called tagging [4-6]. So by searching or browsing for this kind of metadata (tag) helps describe an item and makes it's a lot easier to be found again without specifically remembering about the name of the file or its location. Generally tags are named personally and informally by its viewer or by the item's creator, depending on the user, although they may also be named from a controlled vocabulary tags are used by people to indicate identity, mark ownership, note boundaries and aid classification. In the physical world museum object tagging is an analogous example of tags. Long before computers we were using textual keywords to classify objects and information. Searching anything using tags is a very rapid way of exploring related records i.e. why computer based algorithms made the use of such keywords. Popularity of tagging increased due to the use of tags in social networking websites, image sharing and social bookmarking images.

Classification of the tagging system can be done into two kinds: bottom-up and top-down. Bottom-up taxonomies (called folksonomies) are created by all users and an authorized group of designers create Top-down taxonomies (sometimes in the form of a controlled vocabulary). This definition of "bottom up" and "top down" should not be confused with the distinction between multiple non-hierarchical sets (in which there are multiple ways to classify an item) versus a single hierarchical tree structure (in which there is one correct way to classify each item); the structure of both bottom-up and top-down taxonomies may be either hierarchical, non-hierarchical, or a combination of both. Hierarchical and non-hierarchical tagging has been combined together by some researchers and applications as an experiment to aid in information retrieval.

II. RELATED WORK

2.1 ALPHACODERS-STYLE IMAGE BOARDS

AlphaCoders [2], Gelbooru, Konachan etc. host lots of anime pictures that are categorized in numerous ways: by character, by look, by series, by writer etc. They offer these groupings without resorting to hierarchies and in its place depend on tagging. The data model works like this: Each uploaded image is saved with its MD5 hash as file name, and is also given a chronological serial number (e.g. #9376349) for smallness. Each image can have any number of tags involved, where each tag is a simple string; examples of tags include "Brown Hair", "Girl", "Guitar", "Long Hair", "Sunset".

Src: <https://wall.alphacoders.com/big.php?i=904591>

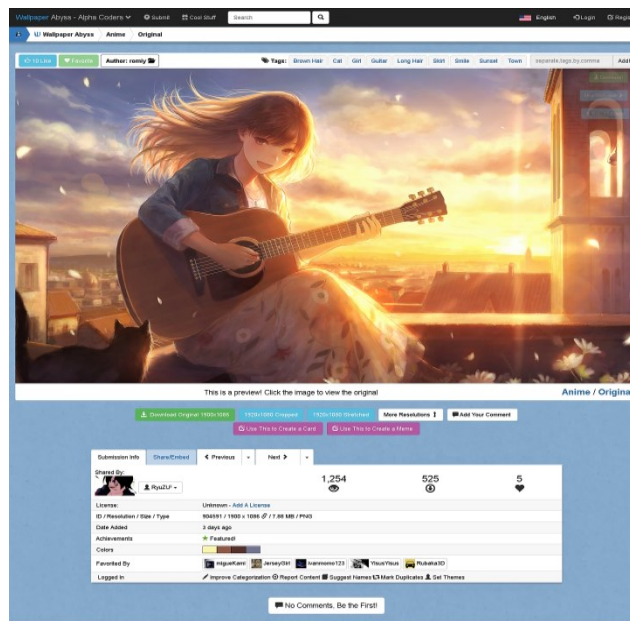


Figure 1: Screenshot of the website AlphaCoders

When you open an image, the page also demonstrates what tags are related with that image. You can also query a tag and see the list of all images that have the tag. This double-sided query is an appropriate feature that hierarchical file classifications are not considered to support. Reminder that further than the hash and serial number, individually image doesn't have title in the traditional sense. No one forces you to name a set of pictures like "Picture 1.png", "Picture 2.png", "Picture 3.png", etc. The list of tags is not mandatory to be distinctive either (i.e. two dissimilar images can finish up with the similar tags), and in fact no tags are rigorously required at all (but it would make the image somewhat problematic to salvage). These notions are a broad reversal of what we are familiarised to in hierarchical file arrangements.

The AlphaCoders image tagging system is truly better-off than defined so far, for the reason that tags are not just simple strings. For each tag has a type characteristic, which can be either common, character, series, or artiste – this makes it probable to differentiate among a tag for a fictitious character titled Yuki versus an artiste called Yuki. In addition each tag has an explanation page devoted to it, permitting more data to be added to explain what the tag means (e.g. describing the word zettai ryouiki and setting the judgement benchmarks).

Some time ago I tried to curate a set of anime pictures on a native hierarchical file structure, but unsuccessful to preserve decent organization as the amount of files increase. I kept running into the difficulties of distinctive file names and solitary sorting. The presence of AlphaCoders established to me that Hierarchical file systems are a lost cause and it is pointless to continue working beneath the hierarchical model.

Flickr is a picture sharing web-site where pictures can be salvaged / categorized by tags like on AlphaCoders, but also by main colour, full text exploration, geographical location, and copyright authorizing. Nevertheless, I selected AlphaCoders as the primary example because tag browsing is a compulsory part of the user experience; however Flickr [1] has fewer tags per picture and more highlights looking by author in its place of by tag.

2.2 MUSIC LIBRARIES

The minute I mention the instance of how hierarchical file system washout at music organization [2], most individuals will give a confused expression for the reason that their beloved media player has an in-built archive to cope the metadata and requests. For instance, the software media player barfoo2500, Ampwin, Windows Media Player, and iTunes all have a music library as a feature. To select a song (or songs) to play, consumers can either use their system-level file manager (Finder, Explorer etc.) or use the library UI within the media player platform. A music archive can be viewed as a table with one row per song and one column per attribute (title, artist, album, length, rating, format, etc.). By default, the music archive shows each song that a consumer is known to possess. Then one can sort and filter on arbitrary columns – for instance examining Hamasaki Ayumi as the artiste, inspecting the outcomes, then more constricting it to ratings of 3+ stars. The ability to examine and filter results in malleable ways is light years ahead of what a hierarchical file arrangement alone can deliver, and takes far less effort both when

storing songs (no need to create multiple crazy hierarchies) and when retrieving songs (no need to navigate down a tree of folders).

A main problem with music archives and file archives in overall is that they are exclusive and restrained. It can be taken for granted that foobar2000 and Ampwin will track your music collection independently – so any alterations made to one library need to be manually executed in the other library. A file record can hold minutiae about your music collection that are not put in storage in the music records themselves, such as evaluation or play count, but be problematic to distribute to an open format (e.g. CSV text file). As for constriction, an analogous notion applies to photo collections [2]. Adobe Lightroom and undoubtedly many other photo editing/catalogue software, sustains a library of all the photos you own, no matter where on disk they are stored. The library allows queries like by date, by camera, by rating, by text tags, etc. But again they are data silos and interact poorly with the outside world.

Media archives are brilliant and have revealed us how powerful and practical they are. But their boundaries suggest that we should design a structure where media archives are collective (applies to any file), singular (so all music player software on a computer will share the same archive), and trivial (so an application developer relies on the system-level media library instead of developing his own from scratch).

2.3 RELATIONAL DATABASE MODEL

The relational prototypical along with RDBMS software is a standard and prevailing way to collection and access data. Relational databanks command many web services and company-internal facilities similarly. Relational databases are strictly more easy-to-read than hierarchical file systems; you can emulate an HFS through an RDBMS, and still have room left over to add non-hierarchical features like cyclical references. The data model of the

AlphaCoders image board can easily be reverse-engineered as a set of tables:

Tags:

int tagId (primary)	int type	string des	string name
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Comments:

int imageId (foreign)	string message	int sequence
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ImageTags:

int imageId (foreign)	Int tagId (foreign)
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III. IMPLEMENTATION AND WORKING PRINCIPLE

Our project is implementation of file tagging system in Android Smartphone.

The traditional hierarchical file system in an android phone uses folders to organize the files in a phone. Every folder consists of a specific type of files or files that are related to each other in some manner. This is a very effective way of organizing files but as the number of files increases the time to find a particular file also increases among different directories. So this is how traditional file organizing is done in and android phone. So what does our application do, to answer that you have to firstly understand that there is no doubt that the traditional hierarchical file system is a very effective method to organize them. But still there are some grounds that it does not cover. To say that this, the best method of organizing files in a phone would be wrong as it's not an effective method.

So the solution that the file tagging system provide to the user is that it helps to save time by providing shortcut access to files. traditional file organizing system is in no doubt a good way to organize files, but in current times the user has so much files on their phone that if they have to find a particular file in a

folder it will take some time and our application saves this time.

1. Homepage of the Application contains all the tags that are created by the user. Selecting any one of them would open an activity that will show the files that are attached under that tag.

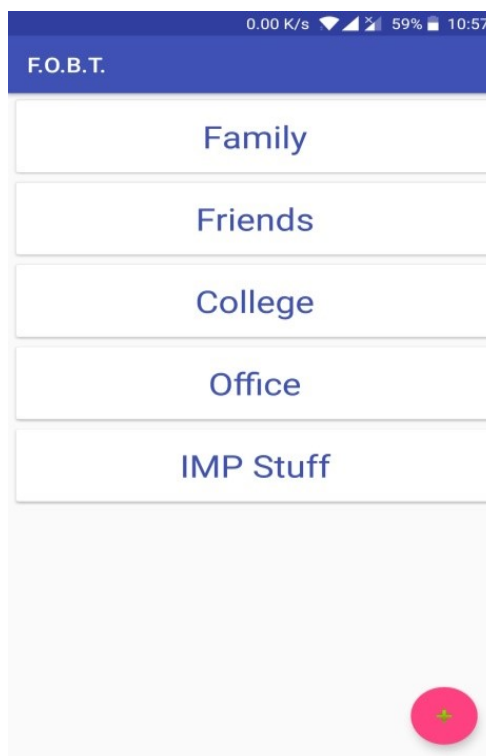


Figure 2: Homepage containing all the tags created

2. When the floating action button with the plus sign is clicked it opens up a dialog box that has a text field and in this text field the user enters the desired tag name and selects the yes or no depending upon his choice. After selecting yes the tag is created. The application has two tables one table holds all the tag names and the other table consist of the path of the file. So when the user creates a tag the name of the tag is stored in the first table.

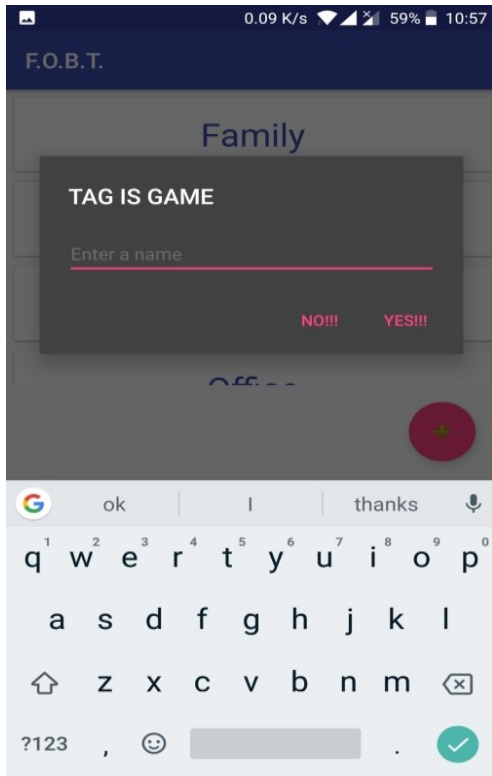


Figure 3: Dialog box for creating a new tag

3. When the first activity that contains the list of tags is clicked on any of the tag it opens the list of files that are attached with the tag from the second database table. it filters out all the files under that tag. This files could be further opened on click.

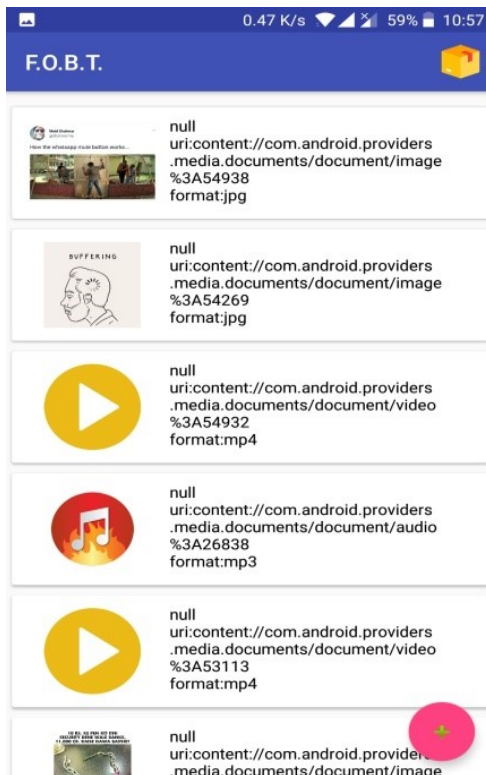


Figure 4: List of all the contents tagged under a tag

4. In the second activity there is a Floating action button that on click opens a dialog box which has types of files that the user can select as per its choice and add that file into the second database along with that tag's name .

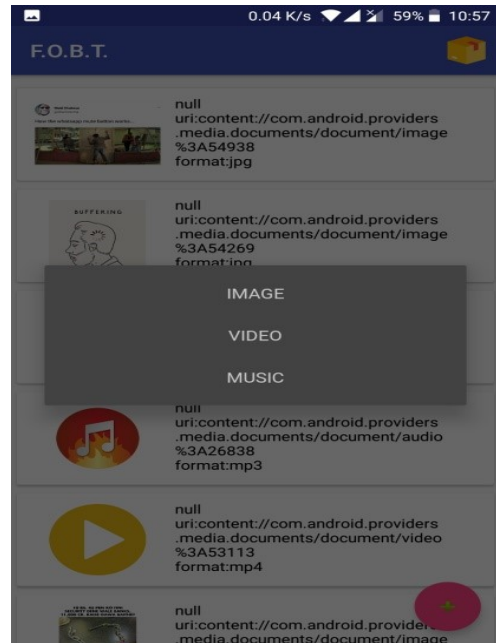


Figure 5: Dialog box for selecting which type of file to add

5. After clicking on the image following activity opens which shows all the images of the phone.

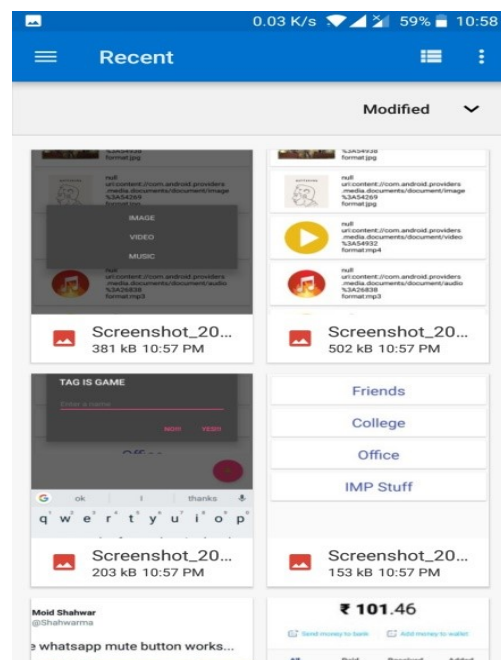


Figure 6: Grid view of all the images present in Phone

Or on selecting the Video following activity opens which shows all the videos of the phone. And after selecting the desired file it gets added under that tag's name.

IV. RESULTS

Hence the implementation of file tagging system in android Smartphone is just a hack to save the time that is being spent on searching the files. I can surely say that this application helps the user to save time by providing a shortcut to the required files.

V. CONCLUSION

We have witnessed that hierarchies are common because they aid a beneficial purpose. They do organize files to a definite level, and are better than having nothing at all. With the profits of hierarchical file systems out of the way, let's discuss how they completely fall short in serving us organize files – or more roughly speaking, how they illustrate and retrieve knowledge. A tricky aspect about the upcoming arguments is that hierarchical file system appear to behave okay at the small scale (say 100 to 1000 files), but they become increasingly painful to use at the large scale (say 100 000 files). This gap is fulfilled by the file tagging application in android phones and helps to save users time and decrease the hazel of day to day life.

VI. REFERENCES

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