Krista Bacungan
Homework 1
Project Ideas

Project Idea 1

Description (or name of the suggested project): RSS feeds from specified news media websites (local news, world news, ect.) would be gathered and indexed in weekly intervals (if the article is older than 7 days, they are purged from the system). The articles would be tagged by the topic they speak to (art, crime, environmental, politics, ect.) which would be found by the tags of the original article. An interface will allow the user to search by date, category, location, keywords, ect. and the results will appear with part of the text from the article, location, date and time, the link to the original article, links to related articles, and possibly a thumbnail. A KML file (a file format used to display geographic data in Google Earth) will also be generated that the user can download and view in Google Earth that would display the articles as placemarks with part of the text from the article, date and time, the link to the original article, links to related articles, and possibly a thumbnail. This way users can view the news they want on a globe and have the option to filter out certain attributes.

- What would the final demo look like? Showing that the latest articles from the specified sites are ingested, demonstrating all of the search features and that the links to the articles work, downloading and displaying the KML in Google Earth and demonstrating all of the information shown for the articles. Different filters for keywords or categories will be shown so that the audience can see all of the benefits of this application.
- What are similar projects/products? I do not believe that a product that combines news and Google Earth exist. I have seen emergency/advisory services use Google Earth to show where the areas of interest are. But there are many news feed aggregators.
- What tools or hardware would be needed, and how much do they cost? Google Earth, a IDE, and SQLite. All free. Data would be from RSS feeds from news media sites.
- What skills would you need to pursue the project? Knowledge in KML generation, reading and analyzing RSS feeds, and database management. I have worked with these functions from my internships.
- What do you see as the technical challenges? Determining the attributes of each article may be hard since pulling from different feeds means that their structures are different. Determining which category to place in articles, find trends that can be exploited in the search, as well as finding/determining the article's locational data will be challenges.

Project Idea 2

Description (or name of the suggested project): An application that would allow users to index images from their file system (most likely using EXIF metadata files) and allow users to add more metadata to their images such as tags and location data (coordinates or name of location, if not already provided by the metadata of images from cameras that geotag automatically). The user can then search their system for images by file name, date (or over a certain period of time), type, tags, location, and other features that EXIF metadata contains. The results from the search

can then be downloaded as a KML file (a file format used to display geographic data in Google Earth) and displayed in Google Earth as placemarks that would also contain a thumbnail/s of the picture/s and metadata for that specific placemark.

- What would the final demo look like? A demo of indexing photos and adding tags and location metadata to the photos, showing all of the search options, downloading and displaying the KML in Google Earth and then showing what happens if files are modified.
- What are similar projects/products? Flickr, picaso, and EXIF metadata editors. But this would be an application that the user would run locally and be able to share their KML files (with thumbnails and data) without having to upload to all of their images to the internet. Also something that would be nice for people who travel a lot and want to keep a record of their photos, or for photographers that want to pinpoint where a certain picture has been taken in case they want to take a picture there again. It is also a different type of way for searching through pictures that lay on a users computer.
- What tools or hardware would be needed, and how much do they cost? Google Earth, a IDE, and SQLite. All free. Test data would have to be created.
- What skills would you need to pursue the project? Knowledge in image metadata extraction, KML generation, database management, and file system monitoring. I have had experience in all of these subjects from my internship experiences.
- What do you see as the technical challenges? File monitoring and storing links to the images. I have not worked with EXIF files before, but I have worked with other image metadata files. Also, creating an intuitive and user friendly search application.