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Course: Android Application Development II

Date: May 11, 2019

Class Summary

In the class of the date shown above we learned about making requests to servers using Volley. Volley is an http module for android applications. Making requests to servers are not instant and as such the request has to be done asynchronously in order to prevent the application’s main thread from hanging. Data returned form servers were in json form which is incompatible with Java. As such we were introduced to GSON, a module which is used to convert JSON into Java objects by using a class as a template.

The class exercise consisted of building the app and understanding the app. The flicker fetcher app fetched data from a server and presented that data in a grid view. It was important that we understood this because we had to implement a similar application. Once this was completed we has to create an android application that fetched data from the flask web service that was done in another lecture (An API offered by another server was used to represent this step for convenience). Once the data was fetched from the server the fromJson() method of the GSON library was used to convert the JSON string to a Java Object. Once converted, the result was logged in log cat and presented on the user interface.

For the class exercise we were required to:

1. Try to build, run, and understand the app

The app was build and analyzed

1. Search and understand how various websites use REST web API

Various websites utilize various REST API methods to help users navigate around. The most common request type is GET and the second most common type is POST. GET requests are in most cases made each time a user requests a particular webpage whereas POST requests are made when signing in or sign up on a website.

1. Design an app retrieving tasks info from your Flask web service, realize the core functions in sequence:

* HTTP connection to get JSON data
* Deserialize JSON data to object structure
* Put object data to widgets for display

This application (Task Fetcher) was developed and included in the project directory

1. Design an app with basic login/register features (HTTP/REST/SQLite/MySQL)

The Task Fetcher app required login before tasks can be fetched for that account

1. Think about Gson, which maps JSON data to Java objects automatically

GSON would be useful in Java applications because it provides a quick method of serializing and deserializing JSON strings.