Announcements

- Office hours begin on Aug 29th – check out details on class website

- Project Team creation due Aug 30th

- Assignment 1 out on Aug 30th

- Assignment 1 is a group submission

- Attendance will be taken from next class onwards

CS3300 Introduction to Software Engineering

Lecture 02: Project 1 Overview

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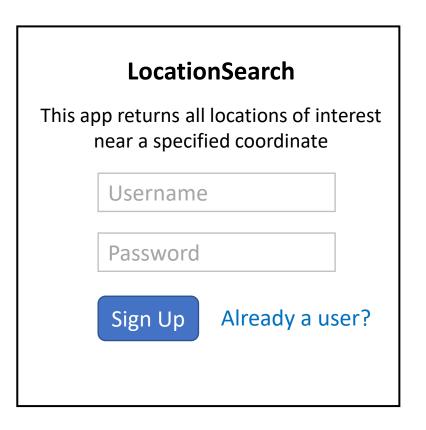# LocationSearch Web Application using SpringBoot and Google Cloud Platform

Problem Statement

Give me all interesting nearby locations (could be restaurants/tourist attractions etc.) around a given coordinate

LANDING PAGE

LANDING PAGE

LocationSearch

This app returns all locations of interest near a specified coordinate

Username

Password

Log In   Not a user?

LocationSearch

This app returns all locations of interest near a specified coordinate

Username

Password

Sign Up   Already a user?

Problem Statement

Select a Search Area

Latitude: [_____]   Longitude: [_____]   Search radius: [_____]

Find Places!

Search Results

Show [10 ⬍] entries   Search [_____]

Name	Distance to Point (ft)	Address	Rating	Price Level
JCT Kitchen & Bar	1815	1198 Howell Mill Rd #18, Atlanta, GA 30318	4/5	$$
Piju Belly	...	...	...	...
Miller Union	...	...	...	...
West Egg Cafe	...	...	...	...

Log Out

Technology Suggestions

GOOGLE CLOUD PLATFORM*

Offers services for compute, storage, networking, big data, machine learning and the internet of things (IoT), as well as cloud management, security and developer tools.

BACKEND SERVER ARCHITECTURE

- SpringBoot* – Framework for developing the backend server architecture and to run the server application easily
- Maven* - Used for dependency injection and management as a Java package manager. Provided as a part of central repository in Spring
- Mockito – Test stub method for unit testing SpringBoot application
- Eclipse/IntelliJ - IDE

DATABASE

- GCP DataStore
- MySQL
- Google Storage

* Must use

Technology Suggestions

API

- Google Places API - To implement an interactive, searchable map
- Google Distance Matrix API/ OpenStreetMap API

FRONTEND

- Thymeleaf - Java template engine for both web and standalone environments. Set of Spring integrations.
- Leaflet - Open-source JavaScript library for creating interactive maps
- jQuery - JS Library for implementing HTML document traversal and manipulation, event handling, animation, and Ajax.
- Bootstrap – CSS framework to create modern websites and web apps
- React.JS - open-source JavaScript library used for building user interfaces for single-page applications

VERSION CONTROL

GitHub*

* Must use

Some Considerations/Functionalities

Password Security

- Salting & Hashing Passwords
- JWT – Validity of Tokens (optional)

Database

- Google DataStore is recommended.
- Google storage has some problem: 2 people simultaneous logging in may cause overwrite

Webjars

Use webjars - client-side web libraries packaged into JAR (Java Archive) files to easily manage web dependencies

Testing

Important. Modules Included in Google App Engine.

Next Class

- TOOLS OF THE TRADE#1
- Demo- Java, Eclipse, Maven
- Bring your Laptops !!