Team Project: Recycling app

CT30A8903 - Software Systems as a Service: Technology and Engineering

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Idea

- People are throwing away copious amounts of recyclable materials
- We wanted to help people find the correct place for all this garbage
- Design goals
  - Make it easy to search for the nearest recycling centers
  - Present the information in a easily understandable way

Architecture

- Two main modules
  - User interface
  - GarbageApi

- User interface
  - Provides users with a way to use the API with their location
    - HTML5 Geolocation and Google Maps address geocoding
    - Latitude and longitude for the API
  - Allows users to refine their search terms
  - Displays information in a clear and concise way

GarbageApi: The heart and soul of the application

- **Try it out!** https://soa-teamproject-arskapalli.c9users.io/
- Utilizes the Kierrätys.info recycling center database API
  - Improves upon it by allowing users to search for multiple material types

- API contract:
  - /api?lat=&lng=&types=&user=
  - Accepted parameter types for the search function:
    - lat : float = latitude of the user (GWS)
    - lng : float = longitude of the user (GWS)
    - types : [integer] = array of the material types that user has
    - user : integer = user type (1 = private individual, 2 = organization)

GarbageApi cont’d.

- API returns (most important fields)
  - name : string = name of the location
  - address : string = location's street address
  - distance : float = distance to the location
  - types : [integer] = array of the material types that this location accepts
  - matchScore : integer = how many types match with what user requested

- Entries are sorted by matchScore and distance
  - The user sees the most relevant information first!

Development tools

- Cloud9 IDE http://c9.io
- Node.js
  - Express framework
  - xml2js XML parser
- jQuery
- List.js

Questions?

Thank you for your time.

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