

## Overview

1. A user will input an initial seed value and the max search number to **App** (front end). It will then pass this information through the **Query Servlet**
2. **Query Servlet** will tell **Crawler** to run at that given seed.
3. When **Crawler** finishes running, it will store its information into **Database** and notify **Query Servlet** that the data is ready.
4. **Query Servlet** then relays this information to **App**
5. **App** then runs **Chart View** and **Map View**
6. **Chart View** and **Map View** requests data from **Map/Chart View Servlet** respectively
7. **Map/Chart View Servlet** retrieves data from **Database** and then sends it back to the respective requester
8. **Map/Chart View** gets response from the servlets and then displays the data in their respective views

## CRC Cards

### Crawler

#### Responsibilities

- Crawls the Kijiji website with a starting seed value
- Parses data and input it to the database
- Terminates when max number of entries is reached or when it runs out of data

#### Collaborators

- Database

### Database

#### Responsibilities

- Stores the result of data extracted by crawler in a database
- Returns data when asked

#### Collaborators

- None

## **Query Servlet**

### Responsibilities

- Receives request from front end and triggers crawler to run at given seed
- Sends confirmation to App that the data is ready

### Collaborators

- Crawler

## **App**

### Responsibilities

- Interacts with the user
- Send user queries to Query Servlet
- When data is ready, trigger Chart View and Map View to run

### Collaborators

- Query Servlet
- Map View
- Chart View

## **Map View**

### Responsibilities

- Displays data in a map view

### Collaborators

- App

## **Chart View**

### Responsibilities

- Displays data in a chart view

### Collaborators

- App
- Query Servlet

### **Map View Servlet**

#### Responsibilities

- Receives request from Map View
- Retrieves data from database and directs it to Map View

#### Collaborators

- Database
- Map View

### **Chart View Servlet**

#### Responsibilities

- Receives request from Chart View
- Retrieves data from database and directs it to Chart View

#### Collaborators

- Database
- Chart View