Local Reports

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Description

Local Reports allows users to report issues with local roads, like potholes, missing street signs, flooded streets, and so on. Each report has a location attached and an urgency level to indicate the immediacy of the issue. Users can view a map populated with locations of all current issues so they can avoid these issues if needed.

Features

- Secure user authentication & authorization
- Submit a report with location attached
- View all reports and the map populated with corresponding locations
- Sort reports by date or urgency level

Planning - User Stories

A logged-in user can submit a report that is connected to a specific point on the map to show exactly where the problem with the road is.

Users can view the list of reports separated into pages and sorted by date or by urgency level.

Users can see a map with markers for all locations of reports submitted thus far.

Planning - Database

The database includes the following tables:

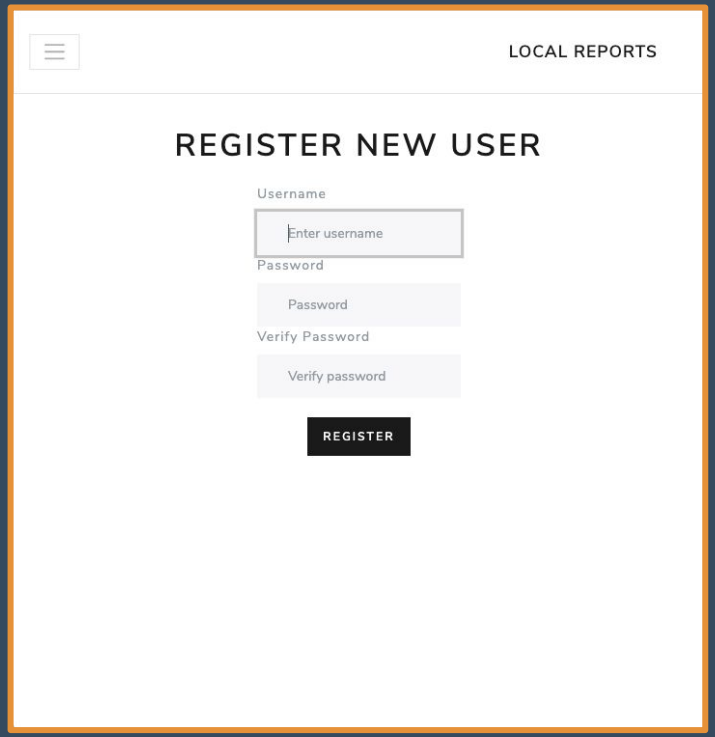
- User -- id, username, password (encrypted), collection of Reports
- Report -- id, title, description, urgency level, Location, User, date-time created, date-time of last edit
- Location -- id, latitude & longitude, Report

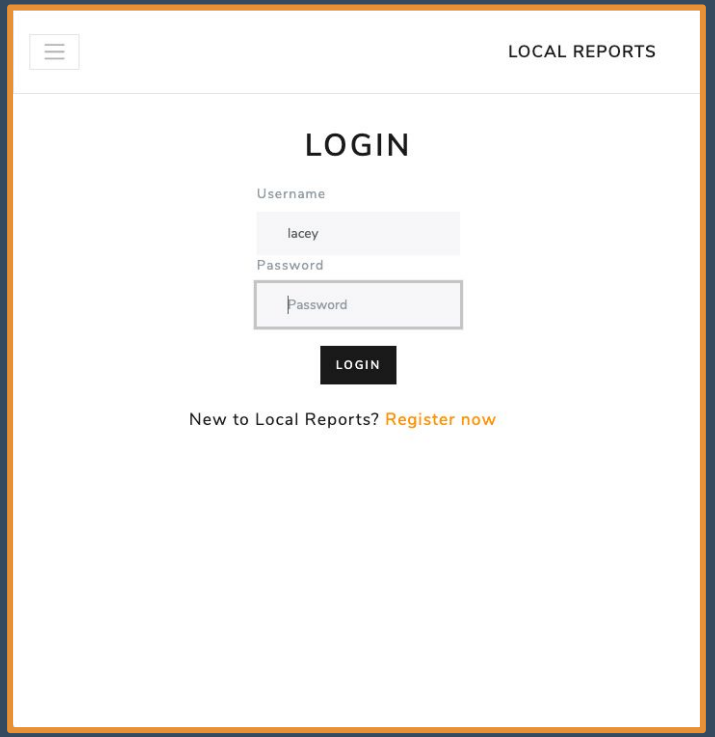
Reports have a one-to-one relationship with Locations
Reports have a many-to-one relationship with Users

Technology Stack

- Java
- JavaScript
- Google Maps API
- HTML
- CSS
- Spring Boot
- Spring Security
- Thymeleaf
- MySQL

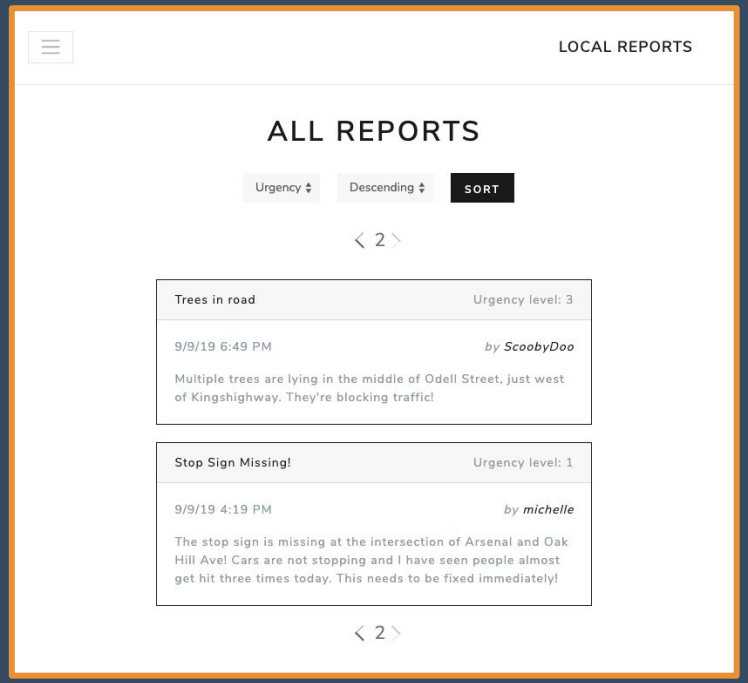
Demo - register & login



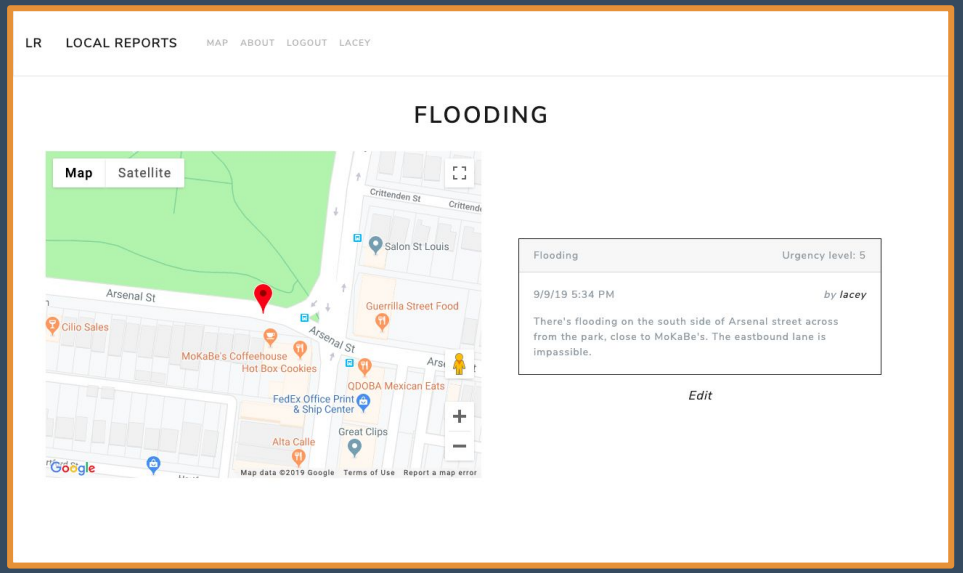


Demo - read the reports

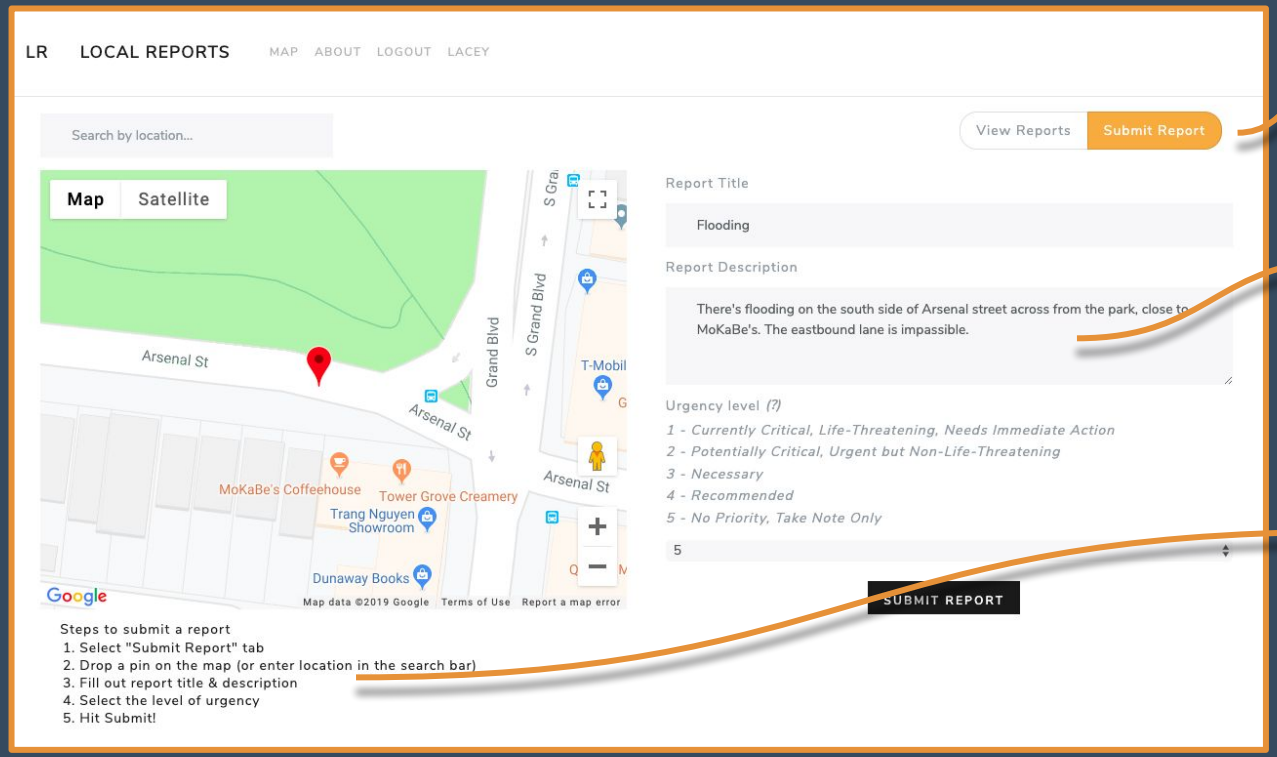
As a list, sorted & paginated



As a single report



Demo - submit report

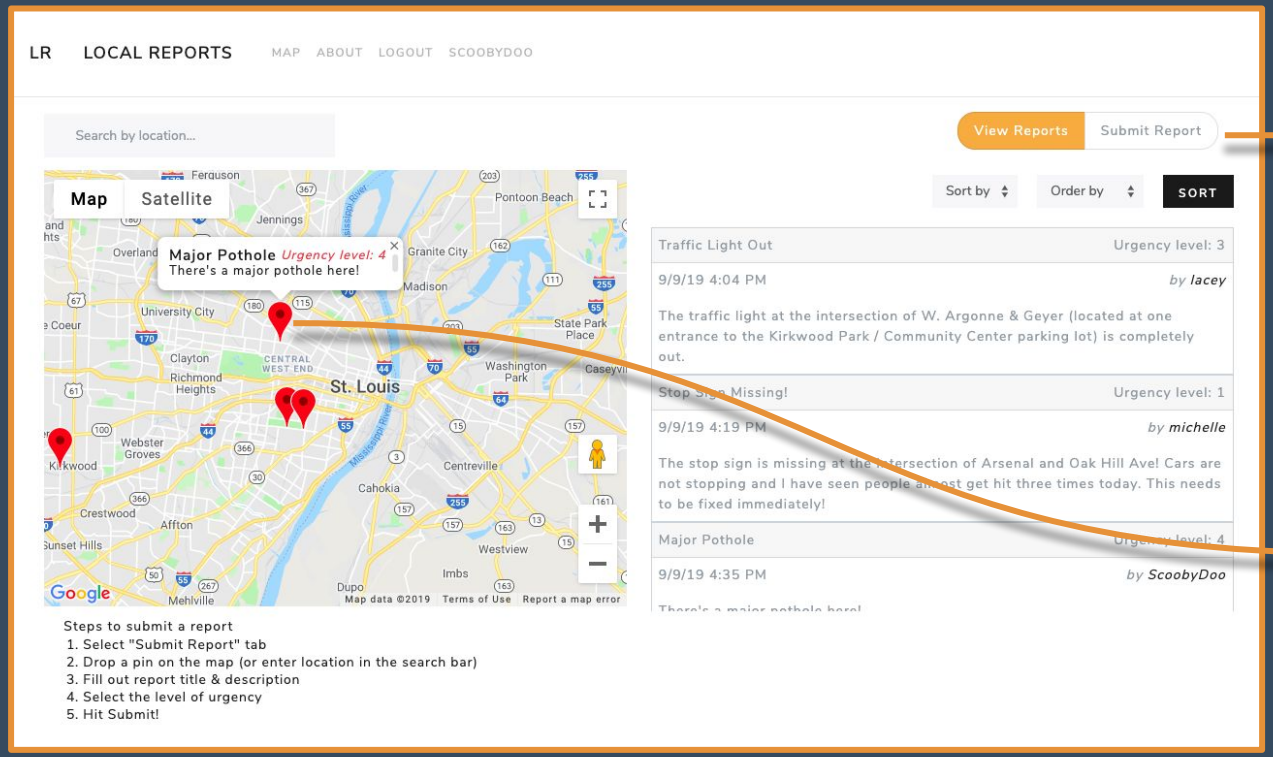


Toggle switch

Fill in all the details of the road issue here

Helpful step-by-step instructions

Demo - explore map & reports



Toggle to switch between list of reports & new report form

Click on a marker to view the report info or to be taken to this report page

What I Learned

- Spring Security for secure user login
- Learned some JavaScript to connect my app to the Google Maps API
- Integration with the Google Maps API
- Pagination of and sorting data

What's Next

- Give the admin purpose -- in the future, an admin will be able to:
  - Mark a report as open / closed / spam
  - Mark a report as duplicate if the problem has already been reported
  - Edit the urgency level of any report even if they didn't create it
- Create an admin dashboard to give the admin an easy screen to work from
- Deploy the application