# User stories

## Citizens

As a citizen, I want to be able to quickly find out where I can dispose of my garbage close to my current location. I want to see an overview of the containers near me and their fill level. I also want to be notified when the nearest container to me is full.

## Government

As the government, we want to be able to monitor the state of all the equipped containers in the city. We want to see their fill levels, locations, time till they are expected to be full, and the optimal route between full containers.

# Use cases

## Citizens

* Look up containers near me
* Receive fill level notification

## Government

* Monitor garbage state in city
* Calculate optimal route

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| Identifier | U1.1 |
| Description | Look up the fill levels of nearby containers as a citizen |
| Actor | Citizen |
| Prerequisites | * User has location detection enabled |
| Steps | 1. User opens application 2. User navigates to the containers near me page 3. User is shown an overview of the available containers in a 500m Radius around him on a map. |
| Result | User now knows which containers near him are available |
| Alternate flow | * 1. No containers in a 500m radius are available      1. User is shown an empty map around his location   3.2 No empty containers in a 500m radius are available  3.2.1 User is shown a map with the full containers on it |
| exceptions |  |

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| Identifier | U1.2 |
| Description | Receive an email notification about the fill level of a nearby container as a citizen |
| Actor | Citizen |
| Prerequisites | * User has enabled notifications * User has an internet connection * User has access to their mail account |
| Steps | 1. The system refreshes the fill levels of containers 2. A container has reached a near full status 3. The system notifies all users that are registered as “closest to this container” that the container is nearly full. |
| Result | User is notified about the container |
| Alternate flow |  |
| exceptions |  |

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| Identifier | U2.1 |
| Description | Monitor the current state of the containers throughout the city as government |
| Actor | Government worker |
| Prerequisites | * Worker works in a city with the system in place |
| Steps | 1. User navigates to overview page 2. Page containing a map with all containers is shown. This page contains information about the location, fill levels, and the time till filled of each container. |
| Result | User has an overview of all key information about the containers in the city |
| Alternate flow |  |
| exceptions |  |

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| Identifier | U2.2 |
| Description | Generate the collection route for the container collection |
| Actor | Government worker |
| Prerequisites | * There are full containers * No more than 20 containers are full |
| Steps | 1. User navigates to the garbage collection overview 2. User prompts system to generate the optimal collection route 3. System generates the optimal collection route between the containers that currently have a fill level above 80% 4. The optimal collection route is displayed on the application |
| Result | The optimal collection route is displayed on the application |
| Alternate flow |  |
| exceptions |  |