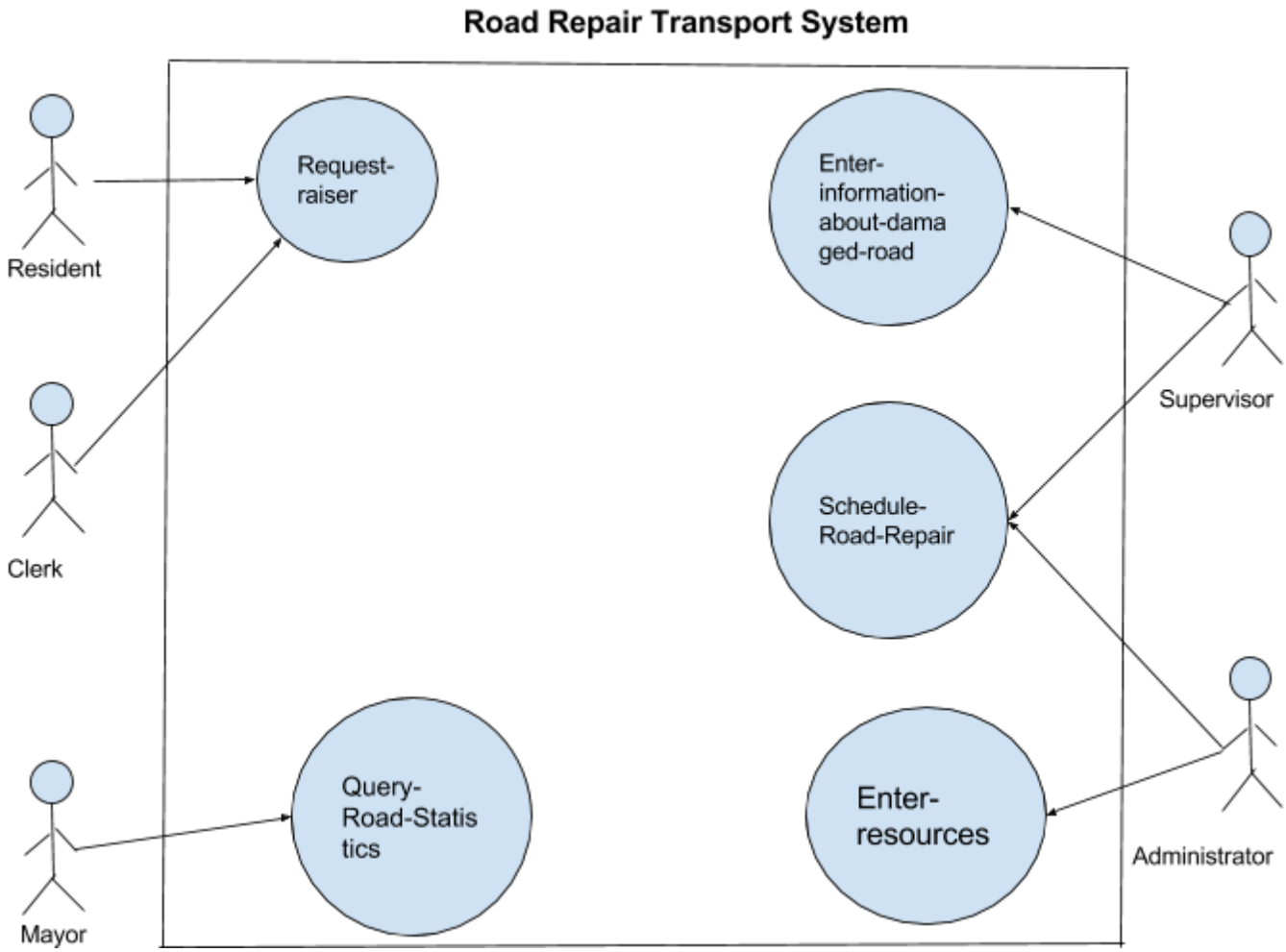

Use Case Diagram

Description of Use Case Model

Use Case 1:

Request-Raiser:
The residents can raise road repair requests by directly interacting with the RRTS or they can raise the request as an offline request by asking a clerk with the required information. The system prints the Road Repair Request ID and returns the success status(True/False) of the request.

Scenario 1: Main line sequence

1. Resident/Clerk: Choose “Raise Road Repair Request”
2. System: Asks for relevant details
3. Resident/Clerk: Enters information about the road repair, i.e location of road, start point of road, end point of road, name of resident, address and contact details of resident, Unique Government issued ID Card number.
4. System: Displays the Road Repair Request ID and returns success value(True) of request.

Scenario 2: Alternate sequence 1

At step 4 of main line sequence:

4. System: Displays error message due to invalid input and returns failure status(False) of request.

Scenario 3: Alternate sequence 2

At step 4 of main line sequence:

4. System: Displays error message due to ongoing repair work of the road and returns failure status(False) of request.

Use Case 2:

Query-Road-Statistics:
The mayor can query statistics about the road repair project by entering the road repair ID.

Scenario 1: Main line sequence

1. Mayor: Select “Request Statistics about Road Repair” option.
2. System: Asks for Road Repair ID or Time period or No input.
3. Mayor: Enters relevant details.
4. System: Prints the statistics about road repair i.e, repair work outstanding or number, type of repairs during the time period or utilization statistics of resources.

Scenario 2: Alternate sequence

At step 4 of main line sequence:

4.System: Returns error if road repair ID not found or if time period is invalid.

Use Case 3:

Enter-Information-About-Damaged-Road:

The supervisor can analyze the road and enter relevant information about the road repair in the system.

Scenario 1: Main line sequence

1. Supervisor: Choose “Enter information about road repair”
2. System: Asks for relevant details
3. Resident/Clerk: Enters information about the road repair, i.e road repair ID, priority of road repair, raw materials required, machines required, personnel required for repair.
4. System: Displays the summary of information and returns success value(True) of request.

Scenario 2: Alternate sequence

At step 4 of main line sequence:

4. System: Displays error message due to invalid input and returns failure status(False) of request.

Use Case 4:

Schedule-Road-Repair:

The supervisor can ask the system to schedule the road repair projects accoding to their priorities.

Scenario 1: Main line sequence

1. Supervisor: Choose “Schedule Road Repair”
2. System: Outputs the schedule of road repair projects.

Use Case 5:

Enter-Resources:

The administrator can update the manpower and machines available for manpower using this use-case.

Scenario 1: Main line sequence

1. Administrator: Choose “Enter information about available resources”
2. System: Asks for relevant details
3. Resident/Clerk: Enters information about the available resources i.e manpower and machines available.
4. System: Displays the summary of information. Triggers the Schedule-Road-Repair use case and returns success value(True) of request.