UML

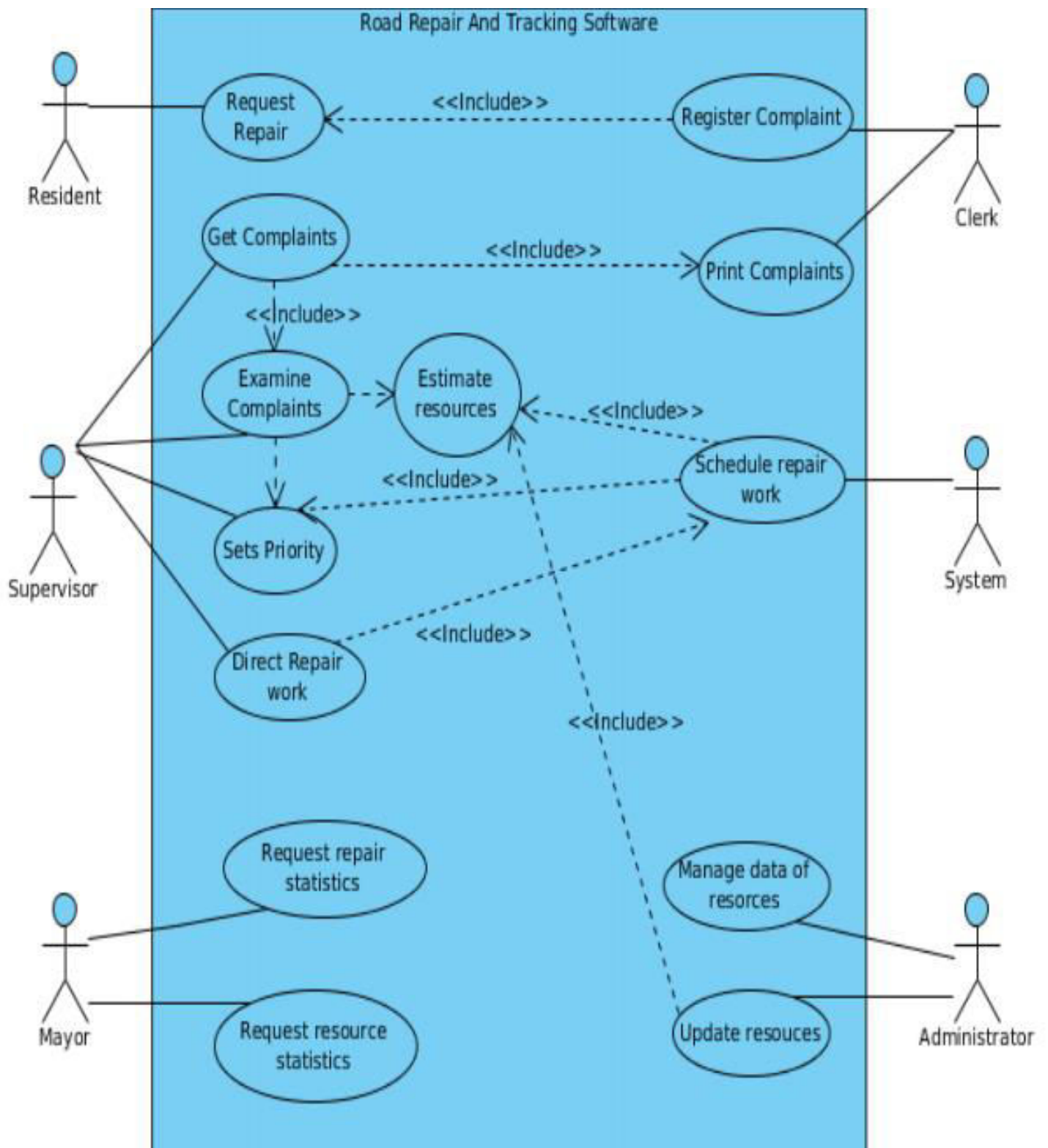1. ## Introduction :-

   We are building a Road Repair and Tracking System which shall be used by the Public Works Department (PWD) of the municipal corporation of a city. The software intends to ease the book keeping activities of PWD related to road repair.
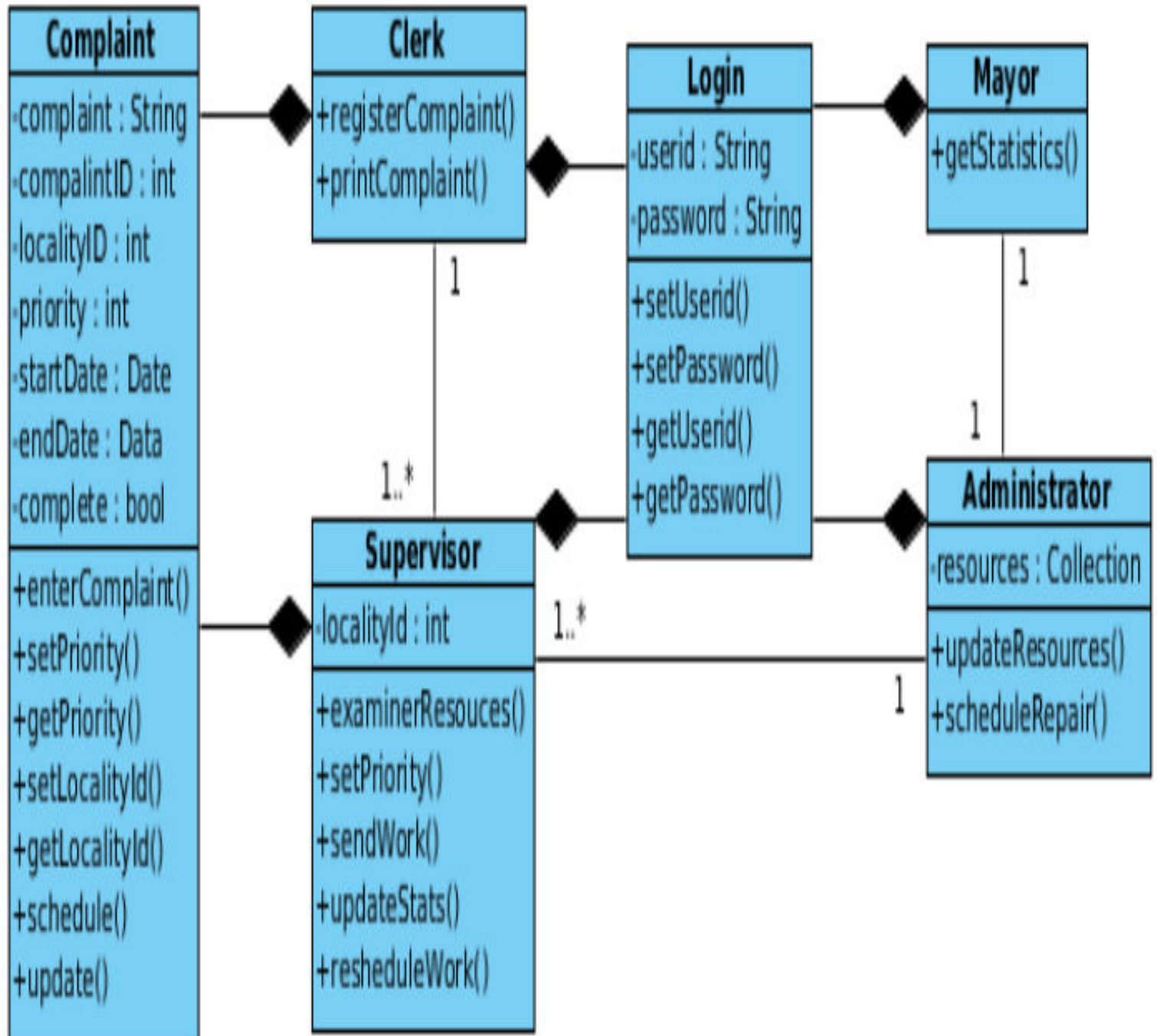
2. ## Product Perspective :-

   The Road Repair and Tracking software will be a desktop application built using JAVA. It will be platform independent and compatible with any of the operating systems. It will require a central server to store the database. Network connectivity will be required for communication between central server and individual systems. The software can be used by clerks, supervisors, administrators and the Mayor in the municipal corporation.

3. Use Case Diagram:-

Road Repair And Tracking Software

Resident — Request Repair

Clerk — Register Complaint

Request Repair <<Include>> Register Complaint

Get Complaints

Get Complaints <<Include>> Print Complaints

Get Complaints <<Include>> Examine Complaints

Examine Complaints → Estimate resources

Estimate resources <<Include>> Schedule repair work

<<Include>> Sets Priority

Sets Priority

Direct Repair work <<Include>> Schedule repair work

Supervisor

System

Mayor — Request repair statistics

Mayor — Request resource statistics

Manage data of resorces — Administrator

Update resouces — Administrator

<<Include>>

4. Class Diagram:-

Complaint

-complaint : String
-compalintID : int
-localityID : int
-priority : int
-startDate : Date
-endDate : Data
-complete : bool

+enterComplaint()
+setPriority()
+getPriority()
+setLocalityId()
+getLocalityId()
+schedule()
+update()

Clerk

+registerComplaint()
+printComplaint()

Login

-userid : String
-password : String

+setUserid()
+setPassword()
+getUserid()
+getPassword()

Mayor

+getStatistics()

Supervisor

-localityId : int

+examinerResouces()
+setPriority()
+sendWork()
+updateStats()
+resheduleWork()

Administrator

-resources : Collection

+updateResources()
+scheduleRepair()

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5. Activity Diagram:-

6. Sequence Diagram:-

6.1. Sequence Diagram for allocation of repair work:-

Clerk | **Supervisor** | **System** | **Administrator**

1: Receive Complaint

2: Print Complaint

3: Sets priority

4: Estimate Resources

5: Gives Data

6: Schedules Repair Work

7: Provides data

8: Updates resources

9: Allocates resources

10: Directs work and update work status
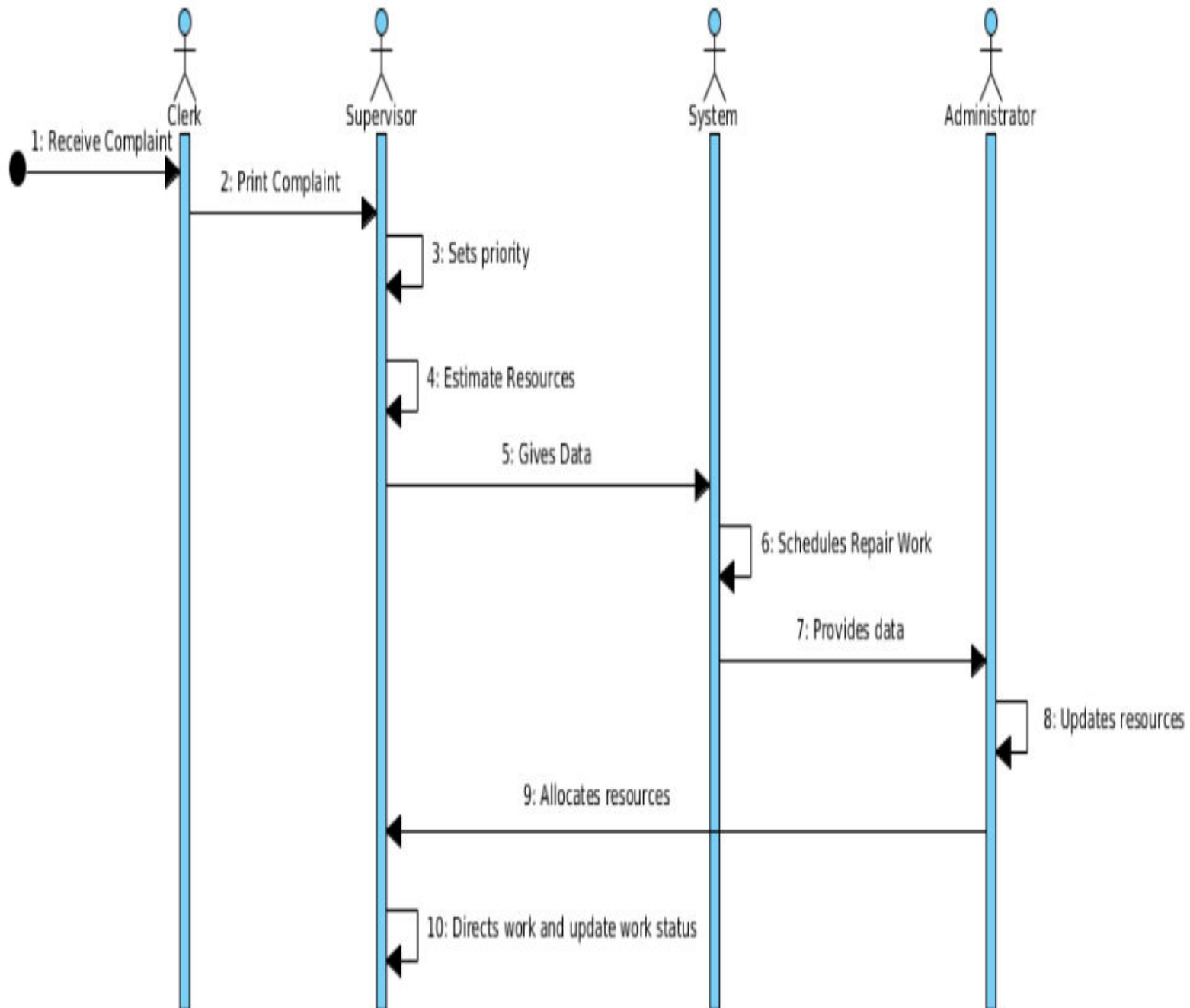
6.2. Sequence Diagram for mayor asking statistics:-
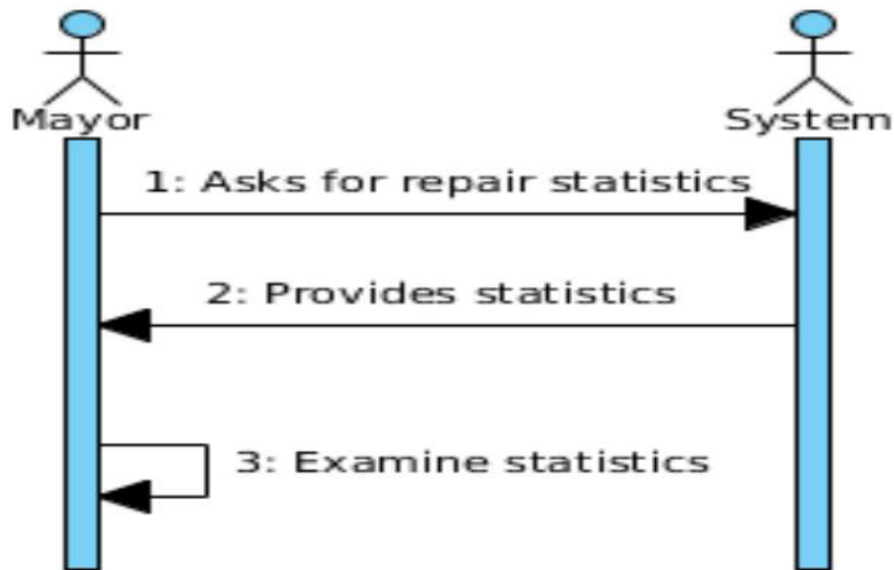
6.3. Sequence Diagram for Resource Management:-