

SOFTWARE ENGINEERING BCSE301P

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USE CASE DIAGRAM

Actors

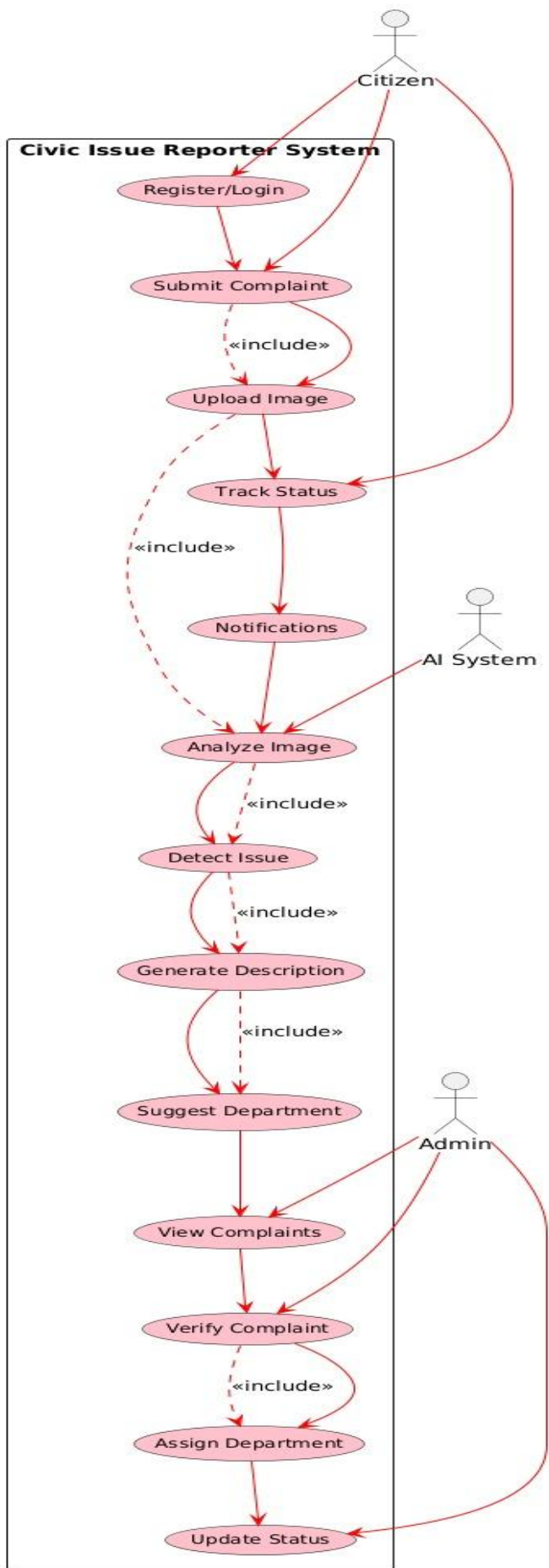
- **Citizen** – Registers in the system, submits complaints, and tracks complaint status.
- **Admin** – Verifies complaints, assigns departments, and updates complaint status.
- **AI System** – Analyzes uploaded images and identifies the issue type and department.

Main Use Cases

- **Register/Login** – Citizen accesses the system securely.
- **Submit Complaint** – Citizen reports civic issues.
- **Upload Image** – Citizen uploads issue image as evidence.
- **Track Complaint Status** – Citizen monitors complaint progress.
- **Receive Notifications** – User receives complaint updates.
- **Analyze Image** – AI processes uploaded image.
- **Detect Issue Type** – AI identifies problem category.
- **Generate Description** – AI creates issue description.
- **Suggest Department** – AI recommends responsible authority.
- **View Complaints** – Admin checks submitted complaints.
- **Verify Complaint** – Admin validates complaint authenticity.
- **Assign Department** – Complaint routed to proper department.
- **Update Complaint Status** – Admin updates resolution progress.

Relationships

- Complaint submission includes image upload and AI analysis.
- AI analysis includes issue detection and department suggestion.
- Admin verification includes department assignment.



CLASS DIAGRAM

Main Classes

User

Attributes

- userID
- name
- email
- password

Methods

- login()
- logout()
- submitComplaint()
- trackComplaint()
- signUp()

Admin

Attributes

- id
- email
- password

Methods

- verifyComplaint()
- assignDepartment()
- updateStatus()
- resolveComplaint()
- departmentID
- departmentName

Complaint

Attributes

- complaintID
- description
- imagePath

- location
- status

Methods

- createComplaint()
- updateStatus()

AIModel

Attributes

- modelVersion

Methods

- analyzeImage()
- detectIssue()
- suggestDepartment()

Class Relationships

- Citizen creates complaints.
- Admin manages complaints.
- Complaint uses AIModel for analysis.
- Complaint is assigned to a Department.

