

List of Use Cases [UML use cases, actors, systems, relationship]

Version	Date	Revision Summary	Author
2.0	04/19/2025	Reformatted and added additional Use Cases	Member D

1. Check Out Equipment

Actors: Maintenance Employee, Equipment Depot Staff **System:** ECS

Relationships:

- **Includes:** *Authenticate User* (employee must be verified before checkout)
- **Extends:** *Check Equipment Availability* (system verifies item is available)

Description:

- The employee scans their ID for authentication.
- The employee scans the barcode of the equipment.
- The system verifies availability and assigns the item to the employee.
- The system logs the transaction and updates the inventory.
- The system notifies the employee of the due date.

2. Check In Equipment

Actors: Maintenance Employee, Equipment Depot Staff **System:** ECS

Relationships:

- **Includes:** *Authenticate User* (to ensure valid return)
- **Extends:** *Generate Condition Report* (optional if damaged)

Description:

- The employee scans their ID for authentication.
- The employee scans the barcode of returning equipment.
- The system verifies return validity and updates inventory.
- If damaged, the system prompts for a condition report.

3. Generate Equipment Usage Report

Actors: Supervisor, IT Team **System:** ECS **Relationships:**

- **Includes:** *Check Out Equipment* and *Check In Equipment* (logs used for reporting)

Description:

- The supervisor logs into the system.
- The supervisor selects a reporting period.
- The system retrieves equipment transaction logs.
- The system generates a detailed usage report.
- The supervisor exports or prints the report.

4. Notify Overdue Equipment

Actors: ECS (Automated), Supervisor, Maintenance Employee **System:** ECS

Relationships:

- **Includes:** *Check Out Equipment* (overdue items from checkout records)
- **Extends:** *Escalate to Supervisor* (if overdue beyond threshold)

Description:

- The system scans the database for overdue checkouts.
- The system sends email reminders to employees.
- If overdue beyond the threshold, the system escalates to supervisors.

5. Manage User Access and Permissions

Actors: IT Team, Supervisor **System:** ECS **Relationships:**

- **Includes:** *Authenticate User* (ensures authorized modifications)

Description:

- The IT team logs into the system.
- The IT team adds/removes users or modifies roles.
- The system updates permissions.
- Changes are logged for auditing.

6. Generate Equipment Usage Report

Actors: Supervisor, IT Team

System: ECS

Relationships:

- Includes *Check Out Equipment* and *Check In Equipment* (logs used for reporting)

Description:

1. Supervisor logs into the system.
2. The supervisor selects a reporting period.
3. System retrieves equipment transaction logs.
4. The system generates a detailed usage report.
5. The supervisor exports or prints the report.

7. Remove/Terminate Employee

Actors: Supervisor, HR

System: ECS

Relationships:

- Extends *Employee Management*

Description:

1. Supervisor logs into the system.
2. Supervisor selects the employee to be terminated.
3. System verifies supervisor's authorization level.
4. Supervisor submits termination request with reason.
5. System notifies HR for final approval.
6. Upon approval, employee access is revoked, and equipment is flagged for return.
7. System logs the termination event in the audit log.

8. Check Employee Class Levels

Actors: Supervisor, HR

System: ECS

Relationships:

- Uses *Employee Database*

Description:

1. Supervisor logs into the system.
2. Supervisor selects *Employee Class Level* view.
3. System retrieves and displays employee roles, access levels, and seniority.
4. Supervisor filters or searches for specific employees.
5. System exports report if requested.

9. Generate Loss/Damage Report

Actors: Supervisor, Finance Team

System: ECS

Relationships:

- Extends *Equipment Management*

Description:

1. Supervisor logs into the system.
2. Supervisor selects *Loss/Damage Report*.
3. System retrieves records of lost, stolen, or damaged equipment.
4. Supervisor filters by date range or severity.
5. System generates a report with cost estimates and incident details.
6. Supervisor exports or prints the report for review.

10. Automatic Audit Logging

Actors: System (Automated), Supervisor, IT Team

System: ECS

Relationships:

- Triggered by *Employee Actions, Equipment Transactions, System Changes*

Description:

1. Any critical action (login, termination, checkout, etc.) is executed.
2. System automatically logs:
 - o User ID
 - o Timestamp
 - o Action performed
 - o Affected equipment/employee (if applicable)
3. Logs are stored securely and cannot be manually altered.
4. Supervisors/IT can generate audit reports when needed.