**Assignment # 01**

**Software Design and Architecture**

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# Use Cases

***Note: As of the 1st deliverable our System resides the ‘Helpdesk’ Employee with the same functionalities as of the ‘Administrator’.***

## UC-01: Registration Application Evaluation

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Evaluating Property Registration Applications | |
| Scope | Employee Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Society Management Administrator | |
| Stakeholder and interest | House Owner | |
| Pre-condition | A Registration application against the property exists. | |
| Post Condition | Property is registered. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Administrator opens the list of Registration Applications.  3. The Administrator clicks on the oldest application he has received.  5. The Administrator examines the application data and submission of fee and verifies it.  6. The Administrator approves the application. | 2. Retrieves and Displays the list of all Applications that are unprocessed.  4. Displays the Application Data, previously entered by the Applicant.  7. Sends Success email message is sent to the applicant. |
| Extension (Alternate scenario) | (If any data is found false by the Administrator)  5a. Administrator fails the data verification. | 6a. Sends email to Applicant regarding resubmission of form. |
| Special Requirements |  | |
| Technology and Data Variations List | No | |
| Frequency of Occurrence | 10 times a day | |
| Miscellaneous |  | |

## UC-02: Transfer Ownership of property

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Transfer Ownership of property | |
| Scope | Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Society Management Administrator | |
| Stakeholder and interest | Administrator | |
| Pre-condition | The House should be registered in the Society.  The House should be clear of all dues and utility bills. | |
| Post Condition | The Application is evaluated, either rejected or accepted. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Administrator opens the list of Transfer Ownership Applications.  3. The Administrator clicks on the oldest application he has received.  5. The Administrator examines the application data and fee submission, and verifies it.  6. The Administrator approves the application. | 2. Retrieves and Displays the list of all Applications that are unprocessed.  4. Displays the Application Data to the Administrator.  7. Sends Success email message is sent to the applicant. |
| Extension (Alternate scenario) | If any data is found false by the Administrator | |
| 5a. Administrator fails the data verification. | 6a. Sends email to Applicant regarding resubmission of form. |
| Special Requirements | The Database should be online for verification purpose. | |
| Technology and Data Variations List |  | |
| Frequency of Occurrence | 5 times a day | |
| Miscellaneous |  | |

## UC-03: Complaint Registration

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Registering a Complaint | |
| Scope | The Resident Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | User that is a Resident of the specific Housing Society. | |
| Stakeholder and interest | Maintenance Department, Administrator, Residents. | |
| Pre-condition | The House should be registered in the Society.  The House should be clear of all dues and utility bills.  The Request maker should be logged in to the HSMS website. | |
| Post Condition | The Complaint is successfully registered in the HSMS and forwarded to the Complaints Department of the HSMS. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Complainant opens the ‘Complaints’ tab in the HSMS website.  2. The complainant selects ‘New Complaint’ from the options shown.  3.The complainant enters relevant information in the form.  6. The complainant exits the HSMS website. | 4.Registers the Complaint and Saves its description.  5. Emails a ‘Successful Registration of Complaint’ message to the Complainant, along with a Complaint ID and estimated time for solving the complaint. |
| Extension (Alternate scenario) | None. A Complaint will always be registered if the website user is a registered resident. | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | 25 times a day | |
| Miscellaneous | None. | |

## UC-04: Check Complaint Status

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Checking Complaint Status | |
| Scope | The Resident Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | The Complainant | |
| Stakeholder and interest | Maintenance Department, Administrator, Complainant. | |
| Pre-condition | A Complaint has to be already registered across the House and Complainant credentials. | |
| Post Condition | The Complainant must be able to view the live status of their Complaint. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Complainant opens the ‘Complaints’ tab in the HSMS website.  2. The Complainant selects ‘Check Complaint Status’ from the options shown.  4.The Complainant enters the Complaint ID. | 3.Prompts the Complainant to enter the Complaint ID.  5. Shows the Details of the Complaint and its Status to the Complainant. |
| Extension (Alternate scenario) | If the Complainant does not possess the Complaint ID. | |
| 4.The Complainant selects the ‘Do not have the Complaint ID’ option.  6. Enters the Resident ID. | 5. Prompts the Complainant to enter Resident ID  7. Shows the Details of all Complaints and their Status to the Query Maker. |
| Special Requirements | Complaint ID or Resident ID | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | 35 times a day | |
| Miscellaneous | None. | |

## UC-05: Make Announcements

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Make Announcements | |
| Scope | Chairman Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Society Chairman | |
| Stakeholder and interest | Administrator, Homeowner, Tenant. | |
| Pre-condition | The user (Chairman) is logged in.  The use case gets triggered when the user (Chairman) intends to make an announcement for general or specified audience. | |
| Post Condition | The Announcement is visible to the targeted audience. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1.The User initiates the Make Announcement Option  3. The User writes the description of the announcement.   4. The User publishes the announcement. | 2. Displays a text field to the user.    6. Publishes the announcement.   7. Makes announcement visible to the audience. |
| Extension (Alternate scenario) |  | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | 2 times in 7 days | |
| Miscellaneous | None. | |

## UC-06: Search Property

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Search Property | |
| Scope | The User Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | User | |
| Stakeholder and interest | Homeowner | |
| Pre-condition | The user is logged in. | |
| Post Condition | The search results with details were displayed on screen. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1.User initiates Property Search Option  3. User applies filters for specific search.  2. The user clicks on the desired property in the screen. | 2.Displays Property Records with limited details.  4. The system narrows down the search to specific properties.  5. The system displays result on screen with details. |
| Extension (Alternate scenario) | If the User has an id of Property. | |
| 4. The user enters the id of property in the search bar | 5. returns result associated with it.  6. Displays details of Result. |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | 100 times in a day. | |
| Miscellaneous | None. | |

## UC-07: Seeking Resident Care Services

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Seeking Resident Care Services | |
| Scope | The User Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Resident | |
| Stakeholder and interest | Homeowner, Administrator, Maintenance Department. | |
| Pre-condition | The user is logged in. | |
| Post Condition | The user has been provided with the customer care services. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The user chooses to call maintenance.  3. The user fills the form according to the particular maintenance issue.  4. The user submits the form.  6. A notification appears to the customer care.  8. The customer care handles the issue by sending their team/worker.  9. The customer care updates the status.  10. The user may provide feedback after the procedure mentioned above. | 2. Displays a query form to call for maintenance.  5. confirms the submission.  7. transfers the query form to the customer care.        11. The system records the feedbacks and makes it visible to Administrator. |
| Exception Scenario | The system is down and not accepting query forms. | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once in a month. | |
| Miscellaneous | None. | |

## UC-08: Renting Application Evaluation

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Rent Property | |
| Scope | The User Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Property Owner | |
| Stakeholder and interest | Applicant, Owner, Administrator | |
| Pre-condition | The user is logged in. | |
| Post Condition | The user has taken a house on rent. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Property Owner opens the ‘Applications tab’  3. The Property Owner Selects the application by clicking on it  5. The user accepts the application. | 2. Retrieves and Displays the list of all Applications that are unprocessed.  4. Displays Application Data.  6. Sends the copy of the document to both parties through email. |
| Extension | (If user rejects the application)  5a. The House Owner Rejects the Rent Application. | 6a. Notifies the Applicant of the Rejection through Email. |
| Exception Scenario | The HSM will reject the user if the house has unresolved issues. | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once in a year. | |
| Miscellaneous | None. | |

## UC-9: Vehicle E-tag Application Evaluation

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Vehicle E-tag Application Evaluation | |
| Scope | The Resident Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Employee | |
| Stakeholders and interest | Resident | |
| Pre-condition | Vehicle to be Registered for E-tag is owned and registered by any family member of the registered household. | |
| Post Condition | The user receives the E-tag for their vehicle. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. Employee opens E-tag registration Applications.  3. Selects any one of the Applications from the list.  4. Accepts E-tag Registration Application. | 2. Displays pending E-tag Registration Applications.    4. Displays the Application Data to the Employee.    5. Generates and sends email to Resident (Applicant) consisting of E-tag document. |
| Extension |  |  |
| Exception Scenario |  | |
| Special Requirements | None. | |
| Technology and Data Variations List |  | |
| Frequency of Occurrence | Tens of times a day. | |
| Miscellaneous | None. | |

## UC-10: Bills Initiation

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Bills Initiation | |
| Scope | Employee Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Administrator | |
| Stakeholder and interest | Residents, Bank | |
| Pre-condition | Bills have not been deployed previously, in the same month. | |
| Post Condition | Resident Bills are deployed to every qualified Resident. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Administrator Launches the Billing tab of the HSMS.  2. The Administrator initiates the ‘Generate Bill’ option.  4. The Administrator Deploys the Bills by clicking on ‘Deploy Bill Option”  5. The Administrator repeats this process for all Utility entities. | 3. Calculates Bill Fee and Generates Bill Challan for every qualified Resident.  4. Notifies all qualified residents of the deployment of the bill through email. |
| Extension |  |  |
| Exception Scenario | The bills are rollbacked and re-deployed for any reason. | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once a month. | |
| Miscellaneous | None. | |

## UC-11: Password Change

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Password Change | |
| Scope | HSMS | |
| Level | User Goal | |
| Primary Actor | Resident User | |
| Stakeholder and interest |  | |
| Pre-condition | The Resident should have an existing Account on the HSMS. | |
| Post Condition | The account password is successfully changed. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The User launches the HSMS web portal and accesses ‘User Account’  2. The User initiates the Password Changing process by clicking on ‘Change Password’ option.  4. The User enters the current password.  6. User enters the new Password. | 3. Prompts the User to enter the current password to confirm user’s security.  5. Verifies and prompts the User to enter the new Password.  7. Password is updated in the User Database. |
| Extension | (If the User does not remember the current password.)  4a. User clicks on ‘Forgot Password’  6a. User clicks on the link sent through the email.  7a. User enters the new Password. | 5a. An email regarding a Password reset is sent to the User on the registered email.  8a. Password is updated in the User Database. |
| Exception Scenario | User does not have access to the registered email. | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once a month. | |
| Miscellaneous | None. | |

## UC-12 Property Registration Application

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Applying for Property Registration | |
| Scope | HSMS | |
| Level | User Goal | |
| Primary Actor | Resident User | |
| Stakeholder and interest | Administrator | |
| Pre-condition | Applicant shall be the Owner of the property | |
| Post Condition | The Application is successfully submitted to the Administrator. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. Resident Initiates Property Registration Application.  3. Enters details and submits to create applicant.    6. Fills the displayed form accordingly and submits.  8. Pays Fee | 2. Displays Applicant Creation form.  4.Creates new Applicant against the specific Resident.  5. Displays Property Registration Form.  7. Generates and Displays Transaction ID for Registration Fee Payment.  8. Displays Success Message.  7. Updates Administrator Application list. |
| Extension |  |  |
| Exception Scenario | Applicant cannot be created. | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once a month. | |
| Miscellaneous | None. | |

## UC-13: Ownership Transfer Application

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Applying Ownership Transfer of Property | |
| Scope | Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Society Management Administrator | |
| Stakeholder and interest | Seller | |
| Pre-condition | The House should be registered in the Society.  The House should be clear of all dues and utility bills. | |
| Post Condition | An application is generated and submitted regarding the Ownership Transfer. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Seller will initiate Ownership Transfer Form.  3. Enters details and submits to create applicant.  6. Fills the displayed form accordingly and submits.  9. Pays Fee | 2. Displays Applicant Creation form.  4.Creates new Applicant against the specific Resident.  5. Displays Ownership Transfer Form.  7. Verifies that the PropertyID entered is existent in the Society.  8. Generates and Displays Transaction ID for Registration Fee Payment.  10. Displays Success Message.  11. Updates Administrator Application list. |
| Extension (Alternate scenario) |  | |
|  | |
| Special Requirements | The Database should be online for verification purpose. | |
| Technology and Data Variations List |  | |
| Frequency of Occurrence | 5 times a day | |
| Miscellaneous |  | |

## UC-14: Renting Property Application

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Application to Rent Property | |
| Scope | The User Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Applicant | |
| Stakeholder and interest | Tenant, Owner, Administrator | |
| Pre-condition | The applicant is aware of the PropertyID, Property Owner Name of the Prospective land he is going to become the tenant of. | |
| Post Condition | Application is generated and successfully submitted | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Prospective Tenant Initiates the ‘Rent Property’ Option.  3. Enters details and submits to create applicant.    6. Fills the form accordingly and submits. | 2. Displays Applicant Creation form.  4.Creates new Applicant against the specific Resident.  5. Displays Rent Property Form.  7. Verifies the Property is existent and is available for rent by the House Owner.  8. Displays Success Message.  9. Updates House Owner’s Application list. |
| Extension |  |  |
| Exception Scenario |  | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once in a year. | |
| Miscellaneous | None. | |

## UC-15: Vehicle E-tag Application

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Application to Rent Property | |
| Scope | The User Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Resident | |
| Stakeholder and interest | Resident, Management Employee | |
| Pre-condition | The user is logged in. | |
| Post Condition | The user has taken a house on rent. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Resident initiates the E-tag Registration option.  2. Fills the form accordingly and submits.  5. Pays fee. | 2. Displays the E-tag Registration Form.  3. Validates that the Resident Id entered in the form exists in the database.  4. Generates and Displays Transaction ID for Registration Fee Payment.  6. Displays Success Message.  7. Updates Managing Employee Application list. |
| Extension |  |  |
| Exception Scenario | The HSM will reject the user if the house has unresolved issues. | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once in a year. | |
| Miscellaneous | None. | |

## UC-16: Manage Resident Records

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Manage Resident Records | |
| Scope | The Employee Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Administrator | |
| Stakeholder and interest | Resident, Administrator | |
| Pre-condition | - | |
| Post Condition | Resident Records are manipulated accordingly. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Administrator opens the ‘Manage Residents’ tab from the Administration Home Page.  3. Selects the record that is to be edited, deleted.  4. Edits/Deletes accordingly.  6. Exits the Tab. | 2. Displays list of Residents Records present in Database.  3. Displays full Resident Information.  5. Updates/Deletes Record |
| Extension |  |  |
| Exception Scenario |  | |
| Special Requirements | Database should be online. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once a day. | |
| Miscellaneous | None. | |

## UC-17: Manage Property Records

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Manage Property Records | |
| Scope | The Employee Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Administrator | |
| Stakeholder and interest | Property Owner, Administrator | |
| Pre-condition | - | |
| Post Condition | Resident Records are manipulated accordingly. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The Administrator opens the ‘Manage Property Records’ tab from the Administration Home Page.  3. Selects the record that is to be edited, deleted.  4. Edits/Deletes accordingly.  6. Exits the Tab. | 2. Displays list of Property Records present in Database.  3. Displays full Property Information.  5. Updates/Deletes Record |
| Extension | (If a property record is edited) | 6a. Sends Property Owner Email that their property’s record was edited. |
| Exception Scenario |  | |
| Special Requirements | Database should be online. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Once a day. | |
| Miscellaneous | None. | |

## UC-18: Post Property for Rent

|  |  |  |
| --- | --- | --- |
| Use Case Attribute | Description | |
| Name | Post Property for Rent | |
| Scope | The User Module of Housing Society Management System | |
| Level | User Goal | |
| Primary Actor | Resident User | |
| Stakeholder and interest | Resident User | |
| Pre-condition | Property should be registered in the HSMS | |
| Post Condition | Property is posted up for Rent. | |
| Main Success Scenario | **Actor** | **System Responsibility** |
|  | 1. The User chooses the ‘Post Rental’ option from the Home Page  3. Enters details and submits.    6. The User confirms to post. | 2. Displays Rental Post Creation form.  4.Verifies if Property is registered in the HSMS.  5. Prompt ‘Confirm Post’.  7. Publishes the Post created. |
| Extension |  |  |
| Exception Scenario |  | |
| Special Requirements | None. | |
| Technology and Data Variations List | None. | |
| Frequency of Occurrence | Twice in a year. | |
| Miscellaneous | None. | |

# Use Case Diagram:

Diagram

Description automatically generated