OFFICE BUILDING VISITOR MANAGEMENT SYSTEM FUNCTIONAL REQUIREMENTS
DOCUMENT

BY

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1 User Management Process

1.1 Introduction

This involves defining user roles, implementing secure authentication methods, and specifying access permissions.

1.2 User Types

There are only three types of users with different privileges according to role.

    i.   Super Admin (Has all privileges)
    ii.   Building User(Has defined privileges)
    iii.   Host User(Has defined privileges)

1.3 User Data Dictionary

The following are key super Admin data fields that hold their information:

FIELD	Data Type	Size	Required	Description
Fullname	STRING	150	YES	User Full name
Username	STRING	150	YES	Unique username to access the system.
Role	DROPDOWN	150	YES	Select user role.
Email	STRING	50	YES	User email that will be used to reset password and confirm their account.
Phone	STRING	15	YES	Secondary verification method if user can't access their email at the moment. Also there will be a one time password before finalizing registration that requires the phone number.
Password	STRING	255	YES	i). Use a mix of uppercase and lowercase letters. ii). Include numbers and special characters. iii). Avoid using easily guessable information, such as your name or birthdate. iv). Make it at least 12 characters long. Use a combination of random words or a passphrase. v). Avoid using dictionary words or common phrases. vi). Create unique passwords for different accounts. Vii). Regularly update and change your passwords.

				Viii). Consider using a reputable password manager for added security.

1.4 Processes

1.4.1 Add new User.

The following section describes the User registration process.

Participating Actors

- Person Registering for User Role: provides the registration details.
- Super admin or User with same privileges that allows them to add new user.

Preconditions
Before adding any user to the system, it is essential to ensure that::
- The user have a valid email address
- The user have a working or active phone Number.
- The person adding the user must be logged in and have the necessary capabilities to do so.

Flow of Events
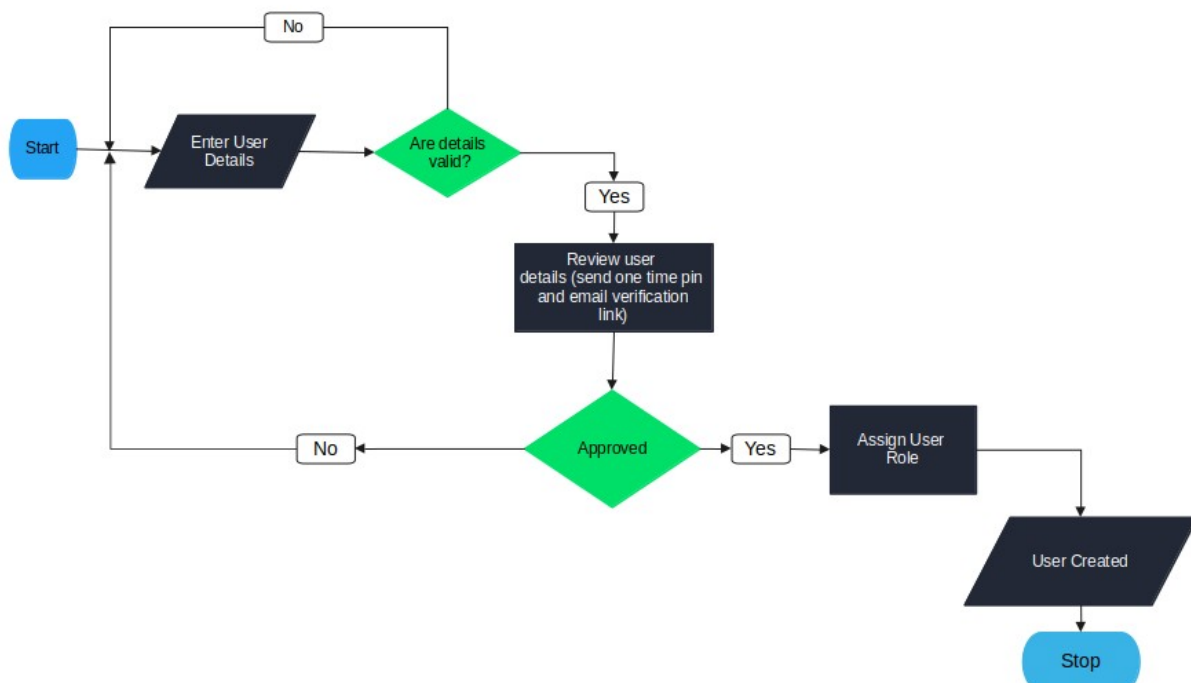
i. The system should allow user details to be entered.
ii. The system should check validity of Provided details.
iii. The system should send a one time pin to the user phone for verification purposes.
iv. The system should send a email verification code to User email.
v. The system should finally register the user.

Output

A user account with the specified privileges granted to that user.

1.4.2 User Data Update

The following section describes the User Details update process.

Participating Actors

- The person updating the details provides the information to be changed.

Preconditions

To change or update user details, the following conditions must be met:

- The user changing the details must be logged into the account.
- Alternatively, a user with edit privileges must be logged in.
- They must have access to the email they were registered with.

Flow of Events
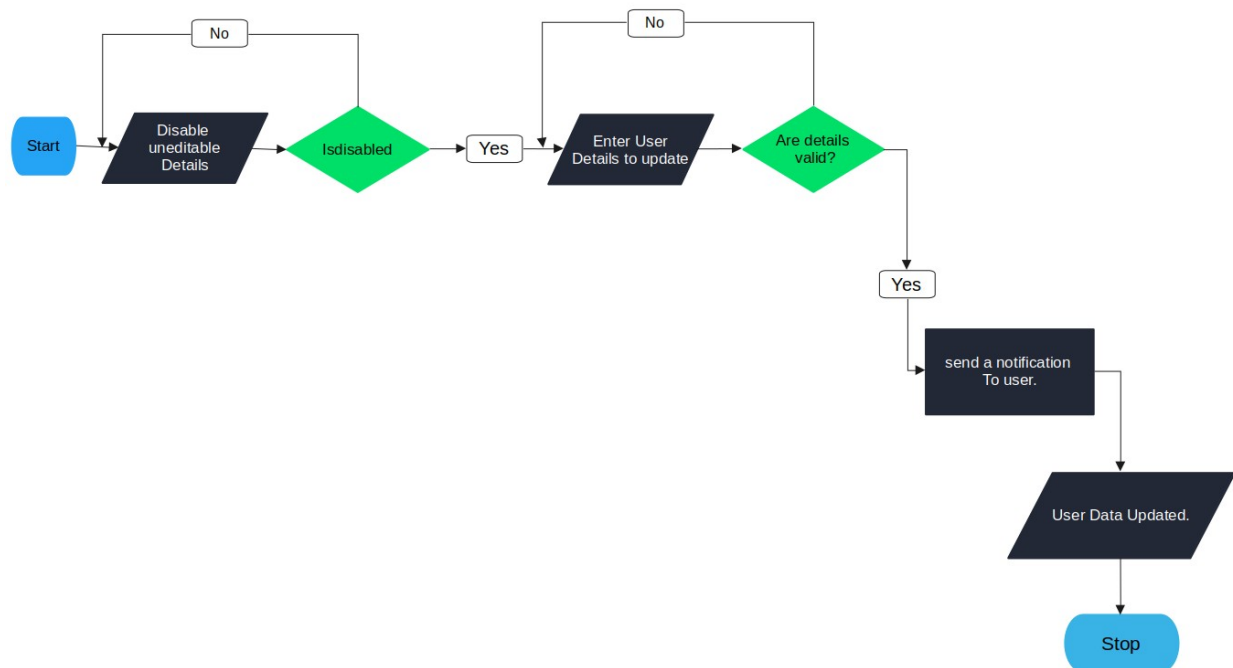
i. The system should permit either a logged-in user or a user with the necessary privileges to change and update user details.
ii. The system should send notification message to user who details has been changes notifying them about the same.
iii. The system should save the changed details to the database.
iv. The system should alert us that the data has been changed successfully.

1.4.3 User password change

The following section describes the User password change process.

Participating Actors

- The person changing the password.
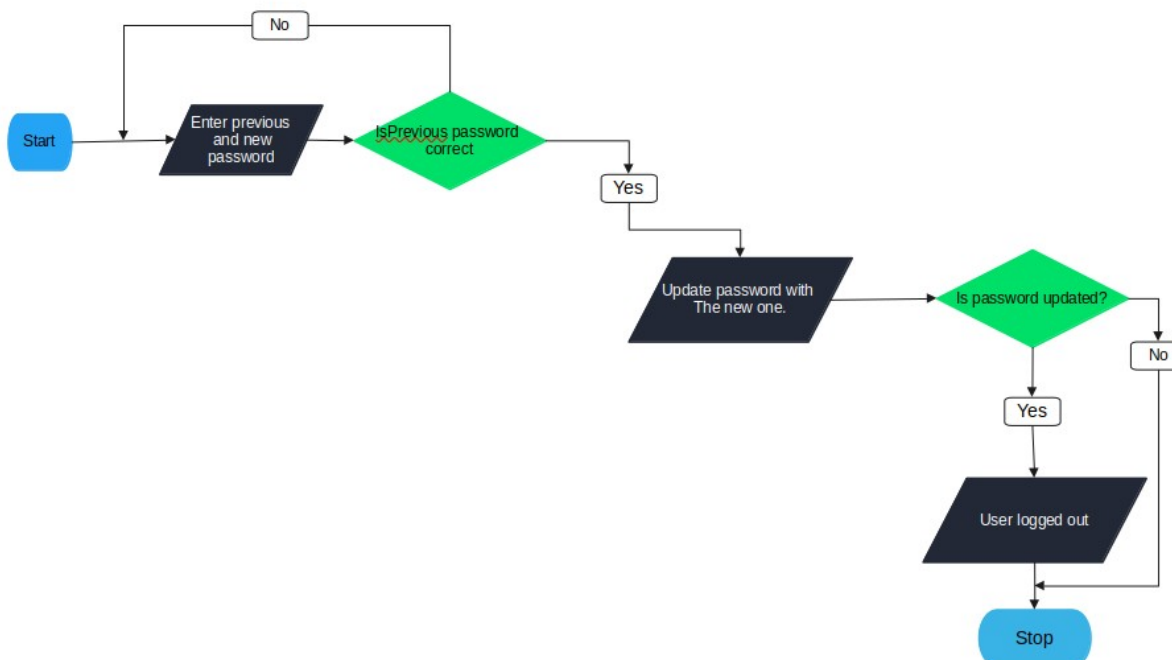
Preconditions

To change the user password, the following conditions must be met:

- The user changing the password must be logged into the account.

- They must have access to the email they were registered with.

Flow of Events

i. The system should permit a logged-in user to change and update the user password.

ii. The System Should request for old password.

iii. The system should request for new password.

iv. The system should request a confirm password.

v. The system should verify if the old password is correct and the new password matches the confirm password.

vi. The system should send a notification message to users whose password has been changed notifying them about the same.

vii. The system should save the new password to the database.

viii. The system should alert us that the password has been changed successfully.

Alternate Flow of Events
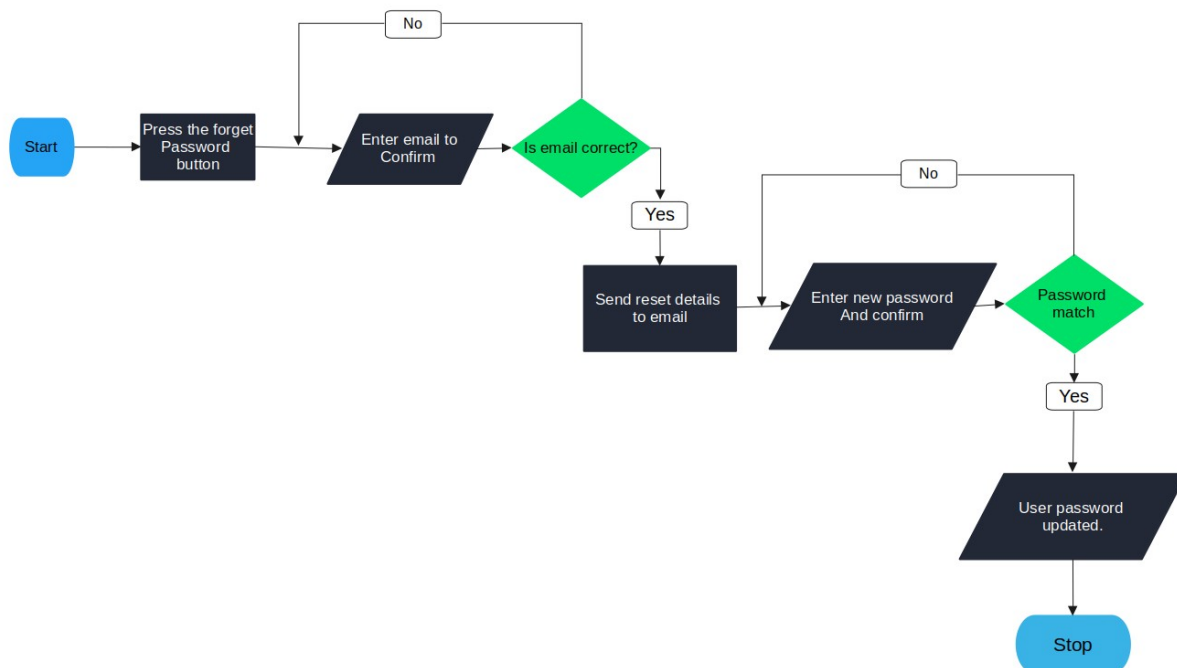
i. The user should press forgotten password button.

ii. The user should be asked for the email they registered.

iii. The system should check if password provided matches the one the user was registered with.

iv. A reset password link should be sent to the user.

v. When the user presses the link they should be redirected to a secure place where they are asked to enter a new password and confirm.

vi. The system checks if the passwords match.

vii. The system should save changes to db.

viii. The system should send a notification to users telling them their password has been modified.

Output

- A user account password changed.

1.4.4 Reset User password.

The following section describes the User password reset process.

Participating Actors

- The person whose password is been reset.

- Admin Resetting the password.

Preconditions

To Reset the user password, the following conditions must be met:

- The admin resetting the password must be logged into the account.

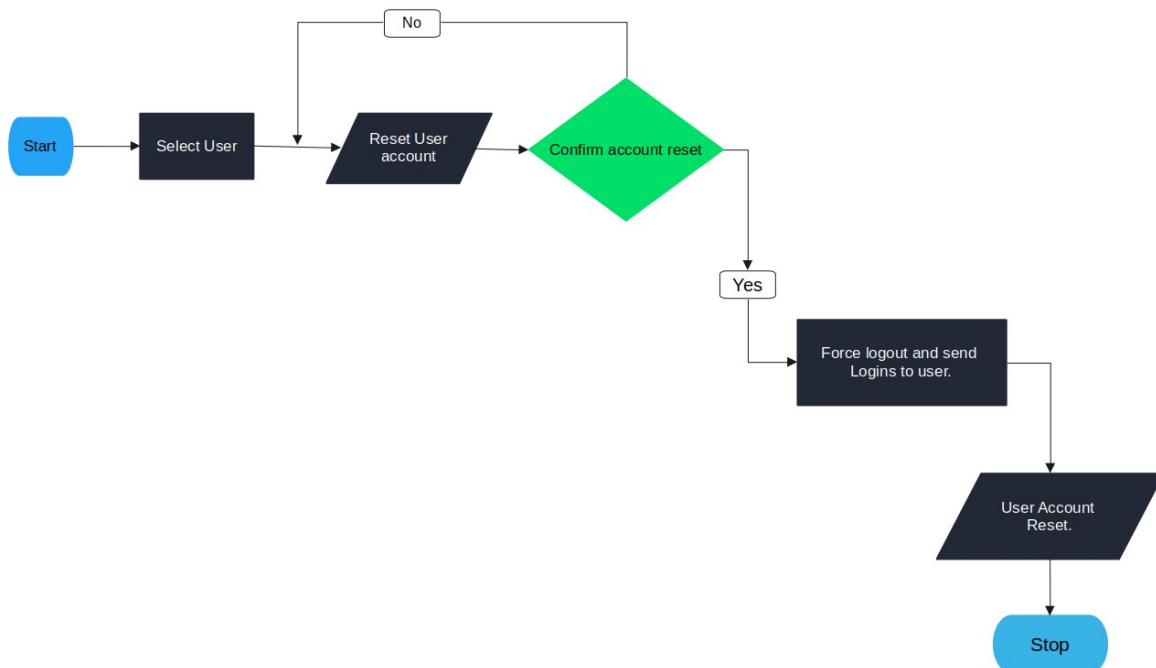**Flow of Events**

i. The system should permit a logged-in admin to reset a user password.

ii. The system should send a new password to the person whose account is being reset.

iii. The System Should request for old password which is the password that has been sent.

iv. The system should request for new password.

v. The system should request a confirm password.

vi. The system should verify if the old password is correct and the new password matches the confirm password.

vii. The system should send a notification message to users whose password has been changed notifying them about the same.

viii. The system should save the new password to the database.

ix. The system should alert us that the password has been changed successfully.

Output

- A user account password reset.

1.4.5 User account Deactivation.

The following section describes the User account deactivation process.

Participating Actors

- The person whose account is been deactivated.

- Admin deactivating the password.

Preconditions

To Deactivate the user Account, the following conditions must be met:

- The admin deactivating the password must be logged into the account.

Flow of Events
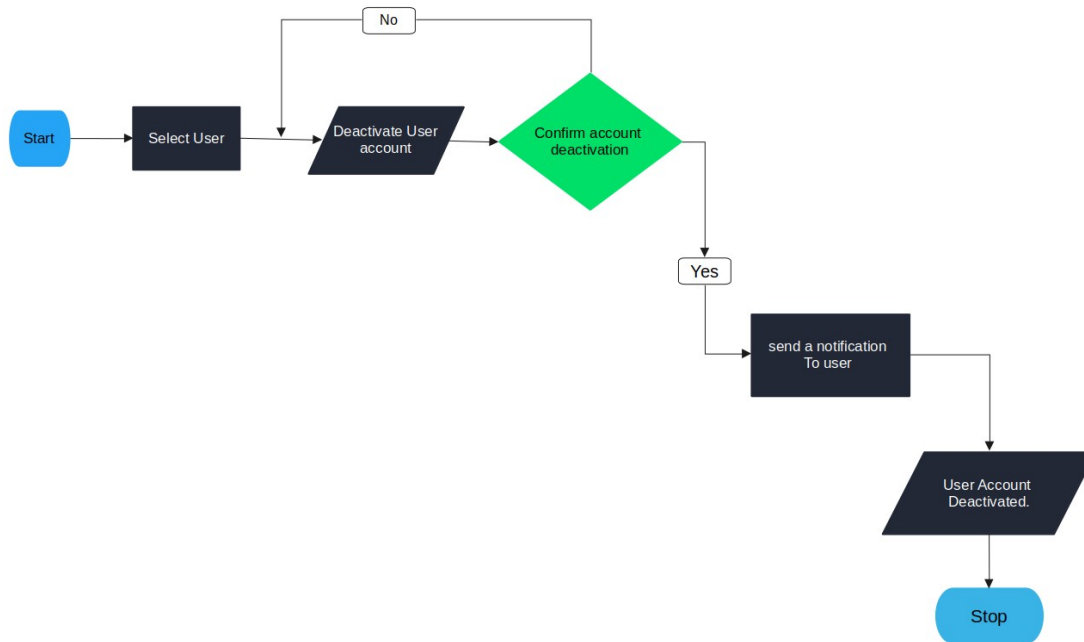
i.   The system should allow the admin to select the user to deactivate.

ii.   The system should change the user status from active to deactivated.

iii. The system should notify the user that their account has been deactivated.

iv.   The system should give the user whose account as being deactivated a procedure on how to gain access to their account again.

v.   If they follow the procedure well their account should be activated again.

Output

A user account deactivated.

2 Building Registration Process
2.1 Introduction

The building registration process involves registering a building to a system. This process includes gathering all necessary information about the building and inputting it into the system. This step is crucial because, to register anything or allocate any resource within the building, it must be identified with the building, making it a vital part of this system.

2.2 Building Data Dictionary

The following are key Building data fields that hold building information.

FIELD	Data Type	Size	Required	Description
Building name	STRING	150	YES	Building Name
Location	STRING	150	YES	Location of the building
Address	STRING	50	YES	Building address
Phone	STRING	15	YES	Phone number
Email	STRING	50	YES	Email for building owner
Website	STRING	50	YES	Building website if any

2.3 Processes

2.3.1 Add new building.

The following section describes how building is registered.

Participating Actors

- Admin or User with admin privilege.

Pre-conditions

- Admin or User with admin privileges must be created first.
- They must be logged in.

Flow of Events

    i.   The system should allow building details to be entered.

   ii.   The System should check the validity of Building details.

  iii.   The System should save the Building Details.

Output

A new building created.

2.3.2 Updating building Details.

The following section describes how building details are changed.

Participating Actors

- Admin or User with admin privilege.

Pre-conditions

- Admin or User with admin privileges must be logged in.

Flow of Events.

i.   The system should allow building details to be changed to be entered.

ii. The System should check the validity of Building details.

iii. The System should save new changes to the Building Details.

Output

A Building details updated successfully.

2.3.3 Deactivating building.

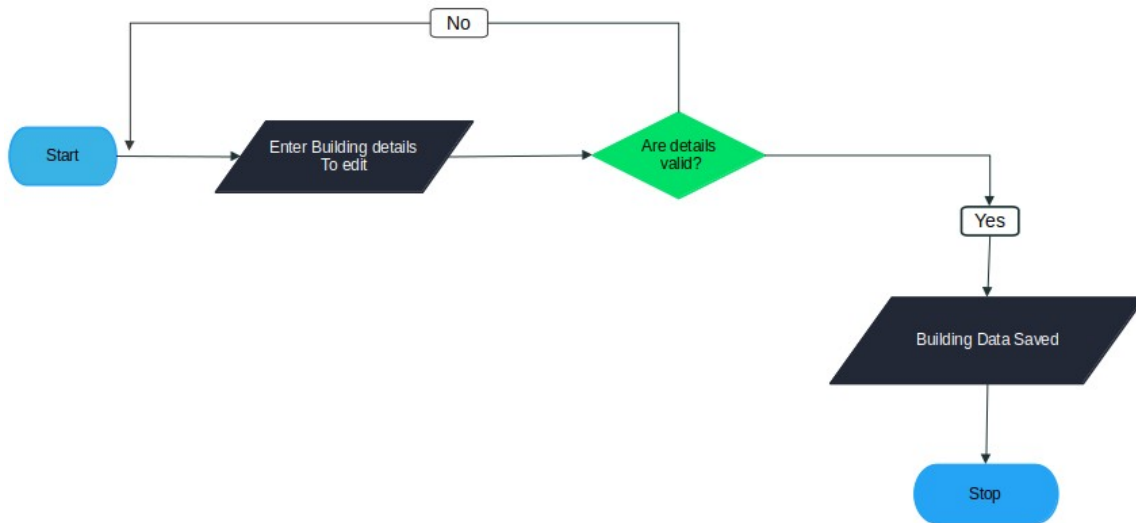The following section describes how building deactivation process.

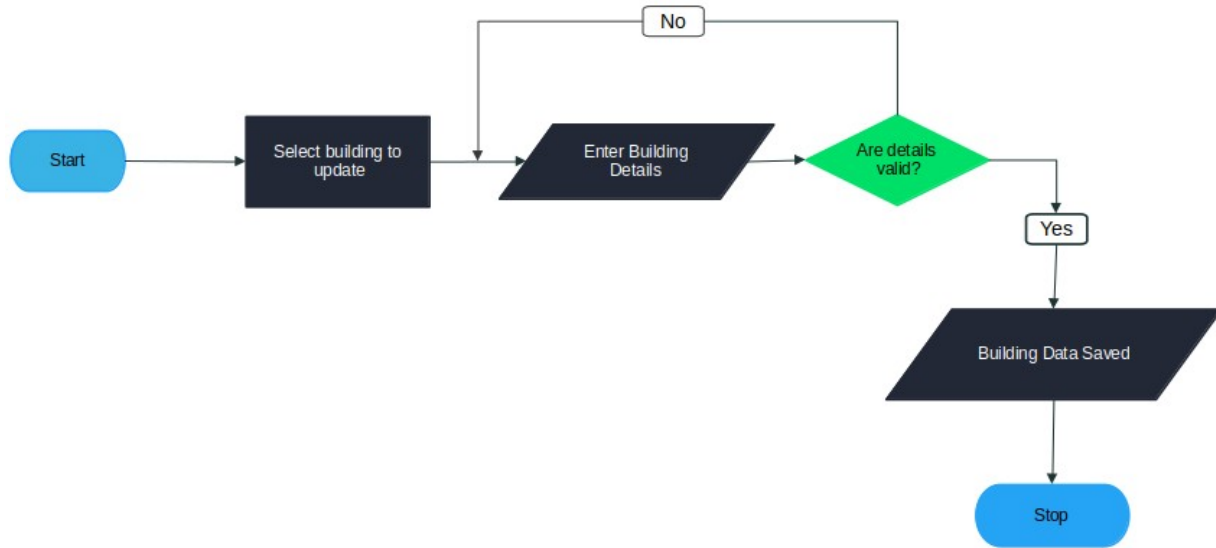**Participating Actors**

- Admin or User with admin privilege.

Pre-conditions

- Admin or User with admin privileges must be logged in.

Flow of Events
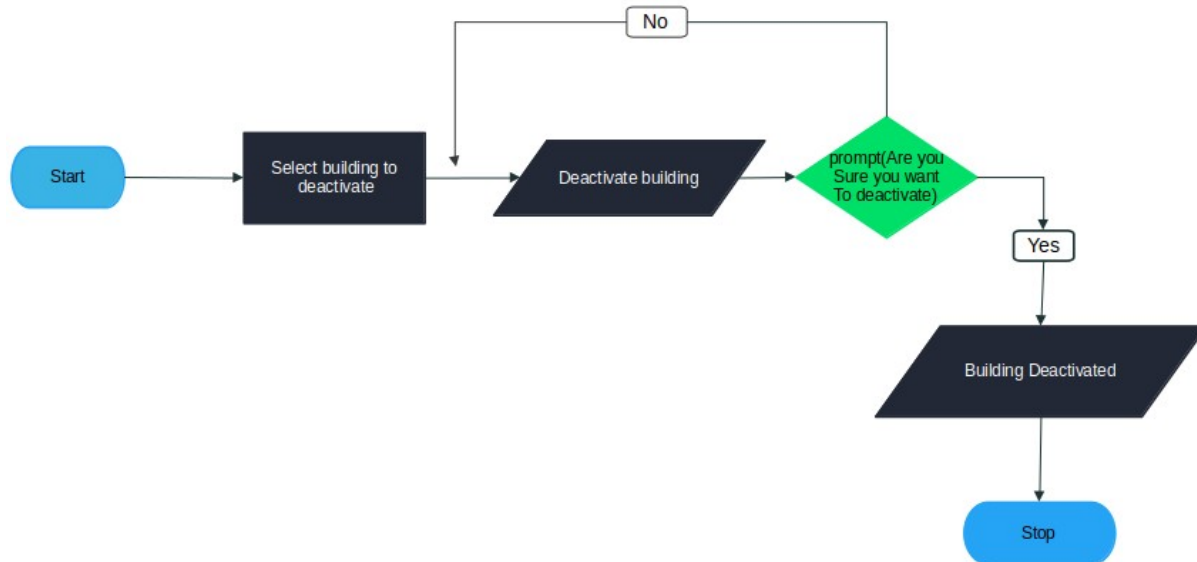
i. The system should allow you to select the building to deactivate.

ii. The system should prompt you to confirm if you want to continue with the deactivation.

iii. The System should deactivate the building.

iv. The system should send a notification that the building has been deactivated.

v. All user accounts that belong to the building should be deactivated also.

vi. The system should send notifications to users that their accounts have been deactivated.

Output

Building is deactivated.

3 Building Management Registration Process

3.1 Introduction

The Building Management User registration Process is where buildings users are created, and administrators or User roles are assigned to them. Administrators play a crucial role in overseeing building operations, ensuring smooth functionality and meeting occupant needs while other user may be participating in certain activities in the building.

3.2 Building Data Dictionary

The following are key User data fields that hold their information:

FIELD	Data Type	Size	Required	Description
Select User	DROPDOWN	150	YES	Select User form users table
Select Building	DROPDOWN	25	YES	Select building where the user belongs.
Select Role	DROPDOWN	25	YES	Select User Role

3.3 Processes

3.3.1 Add Building User.

The following section describes the building user registration process.

Participating Actors

- Person Registering for Building User Role: provides the registration details
- Admin adding the user.

Pre-conditions

- Building must be registered.
- We must have roles defined for users.
- User Must be registered.
- There must be a registered User with Super Privileges or The super Admin.
- Created email account.
- Have a working phone number.

Flow of Events
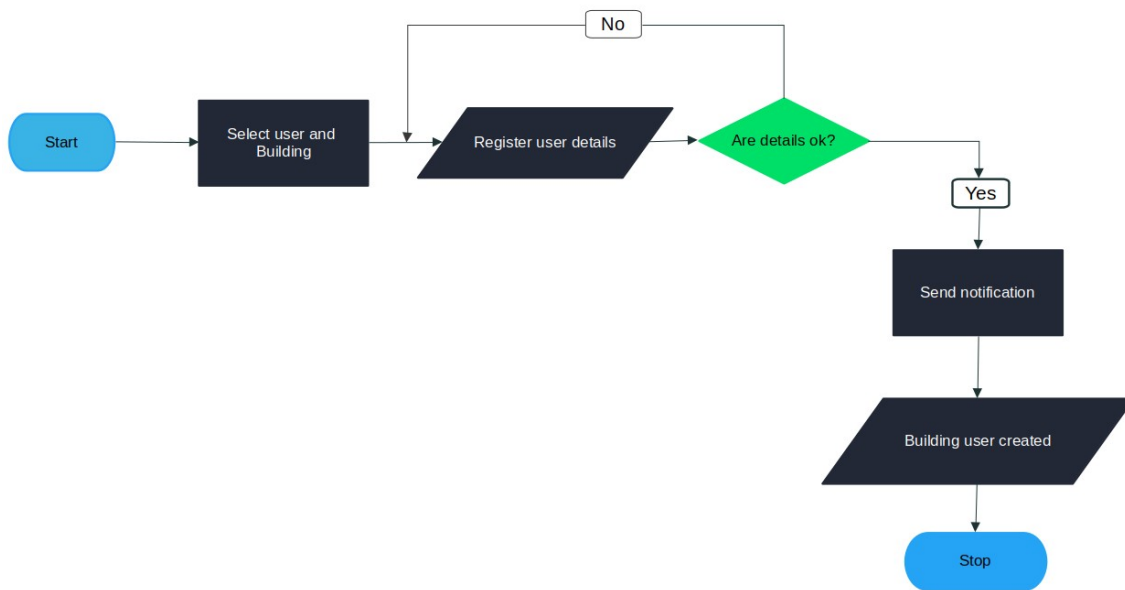
i. The system should allow User to be selected

ii. The Admin should assign a Role to the user.

iii. The system should notify the user that they have been added as building staff.

3.3.2 Updating Building User.

The following section describes the building user update process.

Participating Actors

- Person updating their Details: provides the updating details
- Admin updating the user.

Pre-conditions

- User or Admin changing the details must be logged in.

Flow of Events

i. The system should allow user logged in to change details.

ii. The system should save the changed details.

Alternative Flow of Events
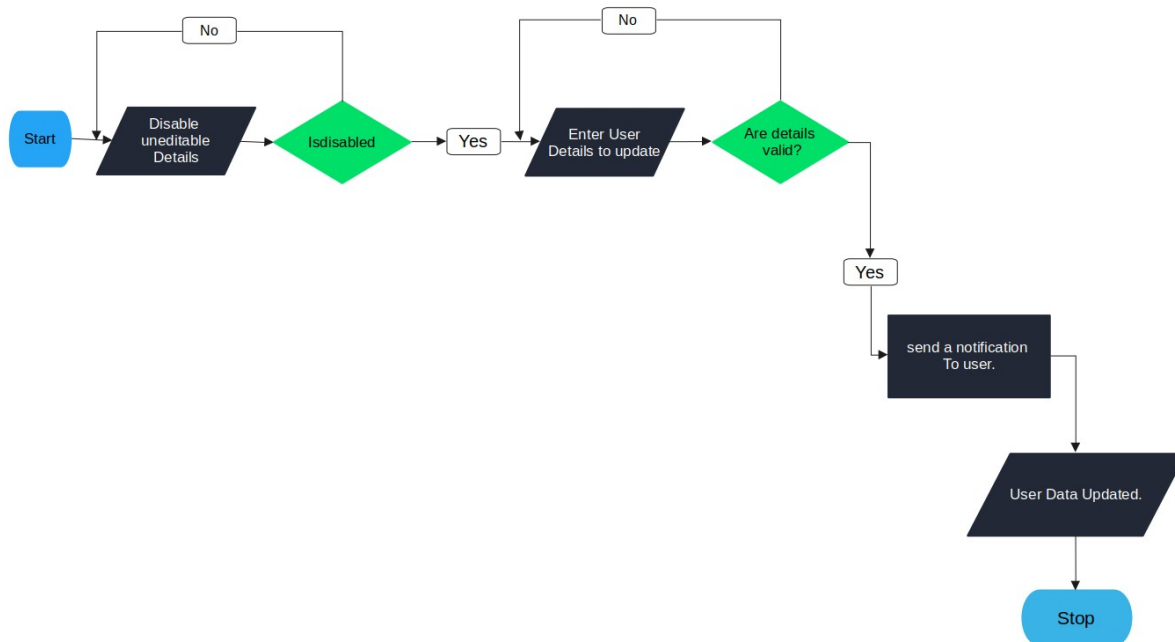
i. The system should allow Admin logged in to change user details.

ii. The system should send notification to user that their details have been modified.

iii. The system should save changes.

3.3.3 Deactivating Building User.

The following section describes the building user deactivation process.

Participating Actors

- Person whose account is been deactivated: provides the details of account to be deactivated
- Admin deactivating the user account.

Pre-conditions

- User with same privileges as Admin or Admin deactivating the account must be logged in.

Flow of Events
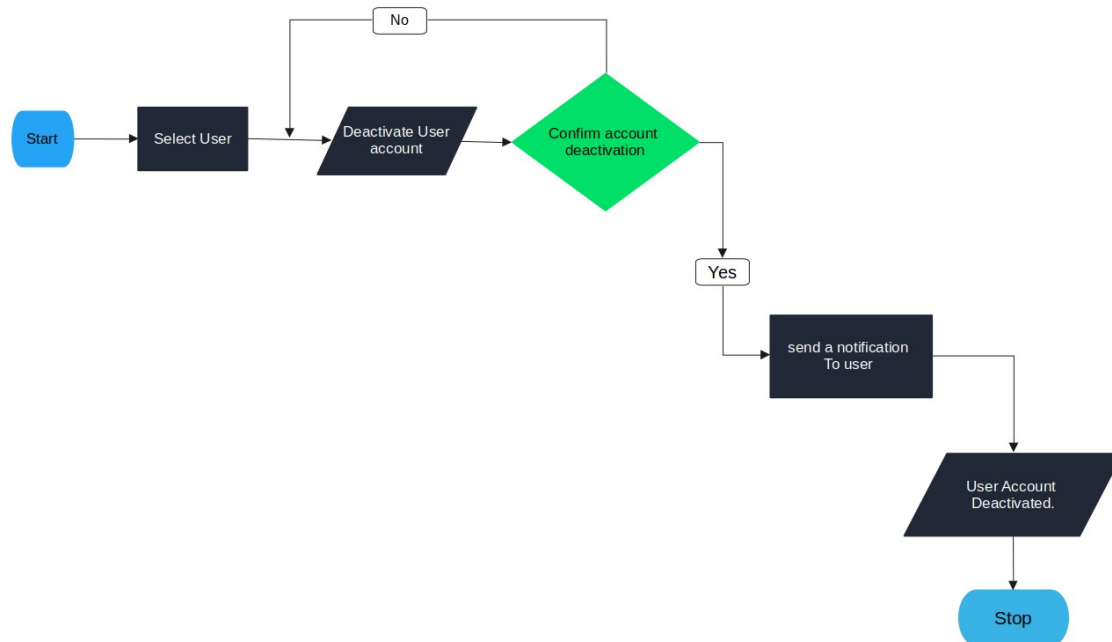
  i. The system should allow user logged in to deactivate user account.

  ii. The system should send notification to the user telling them there account have been deactivated and give them procedure to recover the account.

  iii. The system should save the changes made.

Output

User deactivated.

4 Building Floor Registration Process
4.1 Introduction

Building floor registration is a vital process in our system. It involves entering each floor of our building into the system. The primary purpose is to simplify room registration. Since every floor in a building has rooms, registering each floor is essential to identify the location of each room.

4.2 Floor Data Dictionary

The following are key Building floor data fields that hold floor information.

FIELD	Data Type	Size	Required	Description
Flour_number	STRING	25	YES	Floor number
Building	DROPDOWN	50	YES	Select building the floor belongs to.

4.3 Processes

4.3.1 Add Floor Details.

The following section describes the building floor registration process.

Participating Actors

- Registered Building.
- Admin or User with privileges to register the building floor.

Pre-conditions

- Building must be registered.
- Admin or User with privilege to register the building room must be logged in.

Flow of Events

    i.   The system should allow Floor details to be entered.

ii. The System should allow building to be selected.

iii. The system should save floor details.

Output

Building floor created successfully.

4.3.2 Update Floor Details.

The following section describes the building floor update process.

Participating Actors

- Registered Building.
- Admin or User with privileges to update the building floor.

Pre-conditions

- Building must be registered.
- Admin or User with privilege to update the building floor must be logged in.
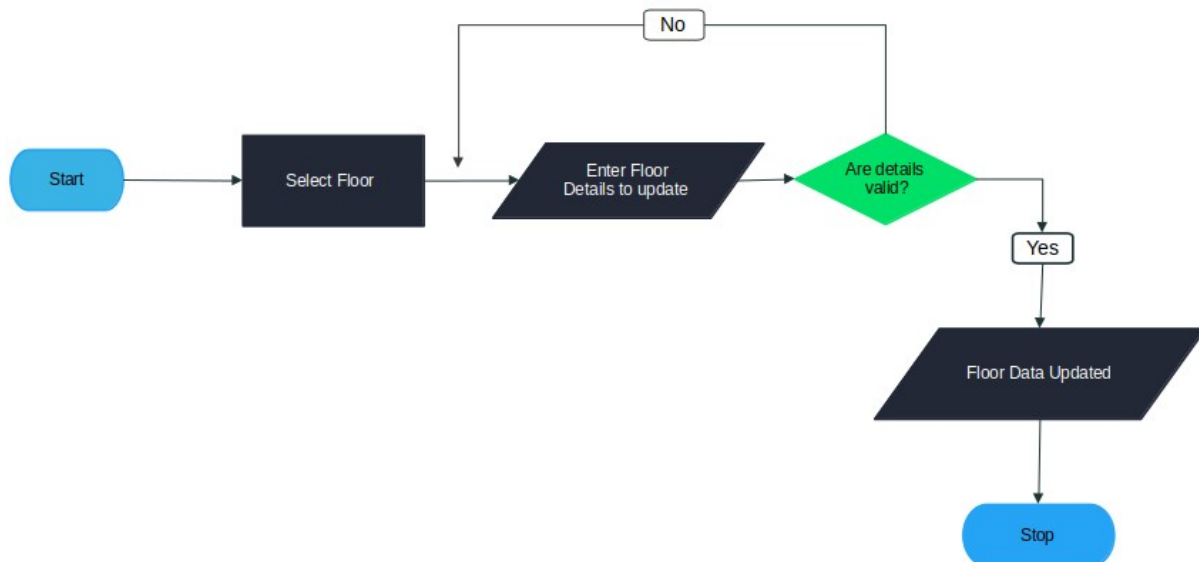
Flow of Events

i. The System should allow building to be selected.

ii. The system should allow Floor details to be updated.

iii. The system should save floor details.

Output

Building floor details updated.

4.3.3 Deactivate Floor .

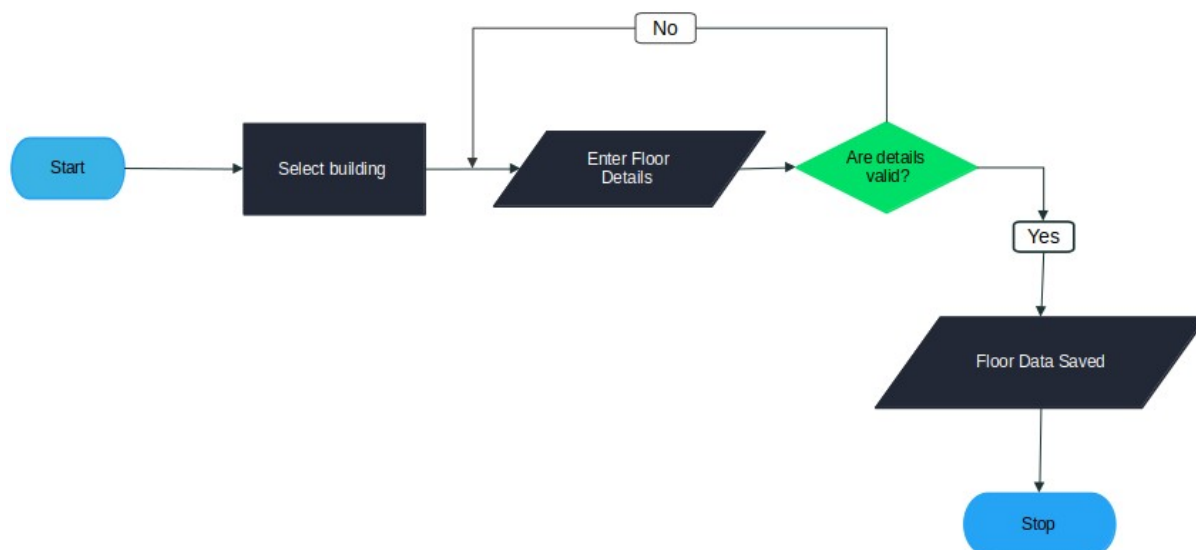The following section describes the building deactivation process.

Participating Actors

- Registered Building.
- Admin or User with privileges to deactivate the building floor.

Pre-conditions

- Building must be registered.
- Admin or User with privilege to deactivate the building floor must be logged in.

Flow of Events
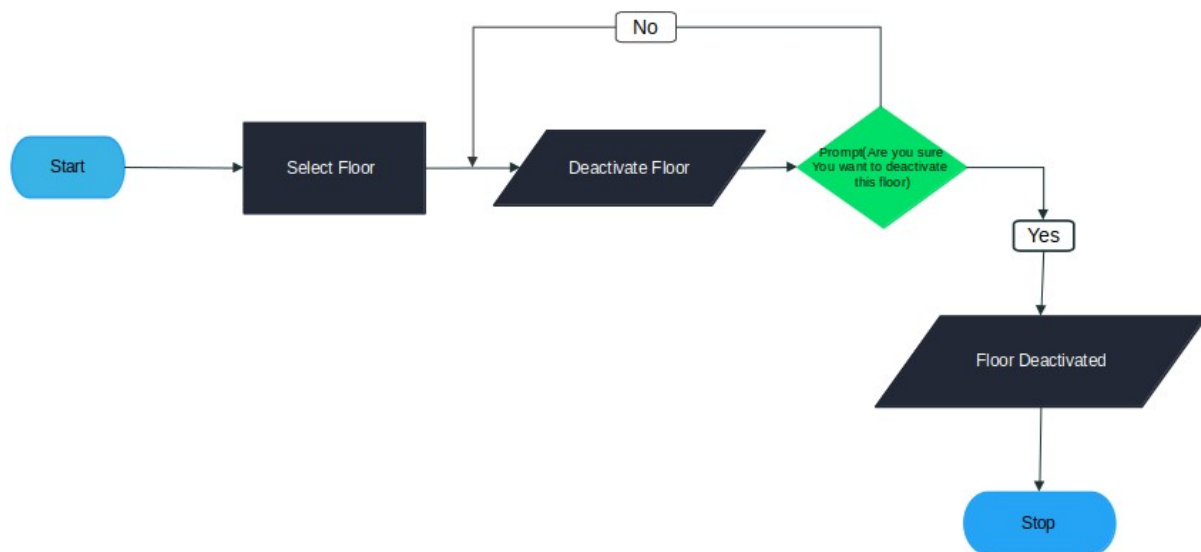
i. The System should allow building to be selected.

ii. The system should allow Floor to be selected.

iii. The system should deactivate all offices in the floor.

iv. The system should deactivate all host accounts for users in those offices.

v. The system should allow Floor to be deactivated.

vi.   The system should save floor details.

Output

Building floor deactivated.

5 Office Registration Process

5.1 Introduction

The office registration process is crucial within our system. It serves the purpose of facilitating office allocation and monitoring. When an office is registered, it becomes easy for building management to identify unoccupied offices and makes the allocation process simple.

5.2 Office Data Dictionary

The following are key office data fields that hold office information.

FIELD	Data Type	Size	Required	Description
Office	STRING	150	YES	Assign office number.
Floor	DROPDOWN	25	YES	Select floor where the office is located.

5.3 Processes

5.3.1 Add Office.

The following section describes the building offices registration process.

Participating Actors

- office Details.
- Admin or User with privilege to add offices.

Pre-conditions

- Registered Building
- Registered Floor
- Admin or User with privilege to add offices must be logged in.

Flow of Events

    i.   The system should allow you to Enter Office details.

    ii.   The system should allow you to select the building.

    iii.   The system should allow you to Select Floor where the Office is located.

    iv.   The system should save office details.

Output

Office created successfully.

5.3.2 Update Office.

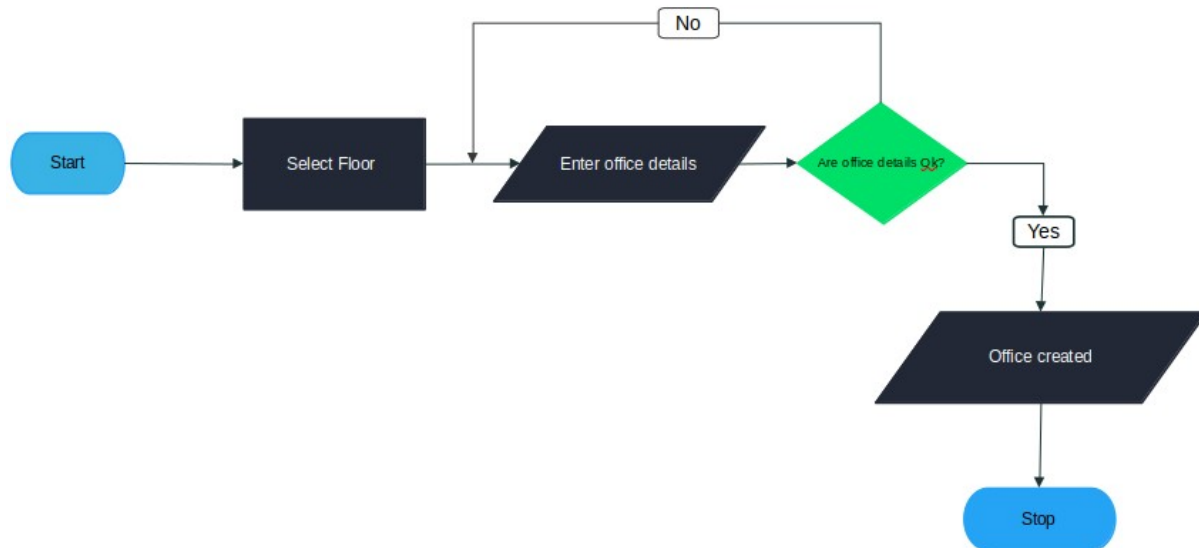The following section describes the building offices registration process.

Participating Actors

- office Details.
- Admin or User with privilege to add offices.

Pre-conditions

- Registered Office
- Admin or User with privilege to update offices must be logged in.

Flow of Events

i. The system should allow you to select the building.

ii. The system should allow you to Select Floor where the Office is located.

iii. The system should allow you to select the office to update .

iv. The system Should allow you to update office details.

v. The system should save office changed details.

Output

Office updated successfully.

5.3.3 Changing Of Status Office.

The following section describes the building offices status changing process. In this process a building office can be marked as occupied, unoccupied ,deactivated or any other status.
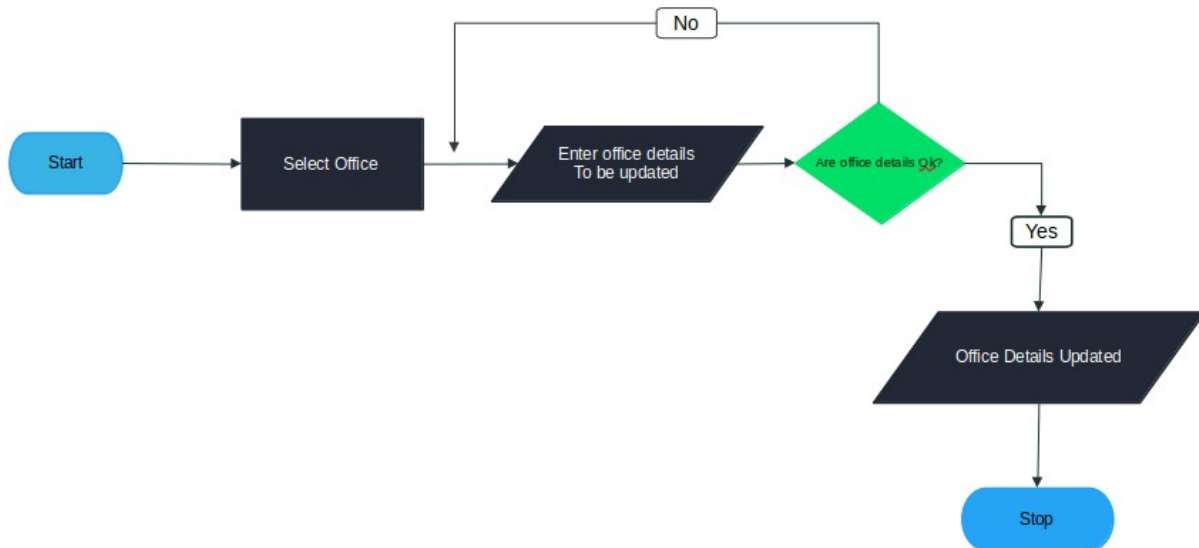
Participating Actors

- office Details.
- Admin or User with privilege to change office status.

Pre-conditions

- Registered Office.
- Admin or User with privilege to add offices must be logged in.

Flow of Events
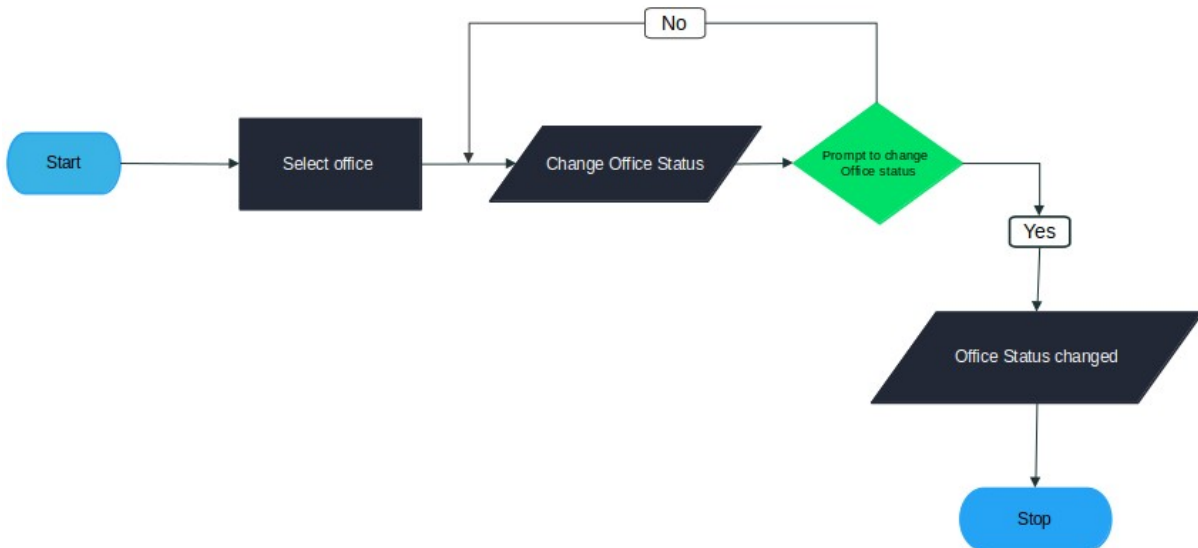
i. The system should allow you to select the building.

ii. The system should allow you to Select Floor where the Office is located.

iii. The system should allow you to Select Office to change status.

iv. The system should save office status.

Output

Office Status changed successfully.

6 Host Registration Process
6.1 Introduction

Host is the company or person who will occupy the office. This registration process is important because we have to understand who is in our building and where they are located. Also by assigning office to Host we know which offices are free and which are occupied.

6.2 Host Data Dictionary

The following are key Host data fields that hold host information.

FIELD	Data Type	Size	Required	Description
Company name	STRING	150	YES	Enter Companies Name
Select office	DROP DOWN	150	YES	Select office for the host.
Phone	STRING	15	YES	Phone number to call when building needs to communicate to the office.
Email	STRING	50	YES	Email to send reports and

				announcements.
Website	STRING	50	YES	Optional field.

6.3 Processes

6.3.1 Add Host.

The following section describes the HOST registration process.

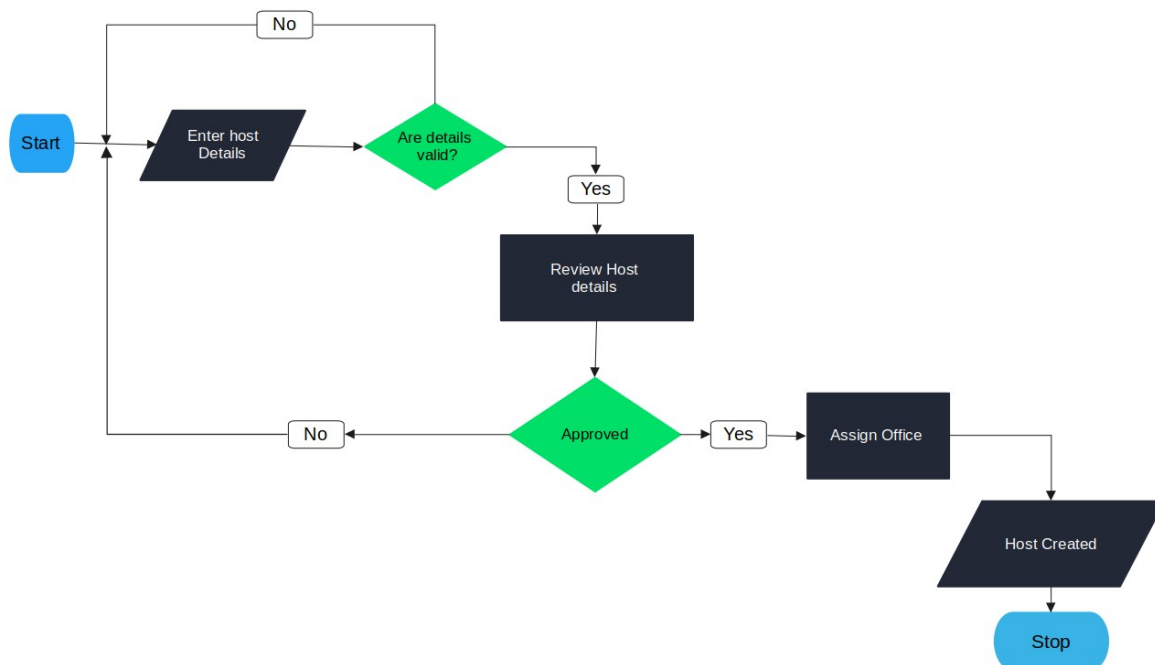**Participating Actors**

- Host details
- Admin or User with privileges to add host.

Pre-conditions

- Office must be registered and occupancy status must be false.
- Admin or user with privilege to add host must be logged in.

Flow of Events

```
            ┌─────── No ───────┐
            │                  │
         ┌──┴──┐  ┌───────┐  ┌─◆─────┐
Start ──▶│     │─▶│Enter  │─▶│ Are   │
         │     │  │host   │  │details│
         │     │  │Details│  │valid? │
         └─────┘  └───────┘  └───┬───┘
            ▲                    │ Yes
            │                    ▼
            │               ┌─────────┐
            │               │Review   │
            │               │Host     │
            │               │details  │
            │               └────┬────┘
            │                    │
            │                    ▼
            │   No          ┌─────────┐  Yes  ┌────────┐
            └───────────────┤Approved ├──────▶│Assign  │
                            └─────────┘       │Office  │
                                              └───┬────┘
                                                  │
                                                  ▼
                                            ┌──────────┐
                                            │Host      │
                                            │Created   │
                                            └────┬─────┘
                                                 ▼
                                              ┌─────┐
                                              │Stop │
                                              └─────┘
```

i. The system should allow host details to be entered.

ii. The System should check the validity of host details.

iii. The Should allow selection of unoccupied office.

iv. The system should save office details.

Output

Host created and Assigned office.

6.3.2 Update Host.
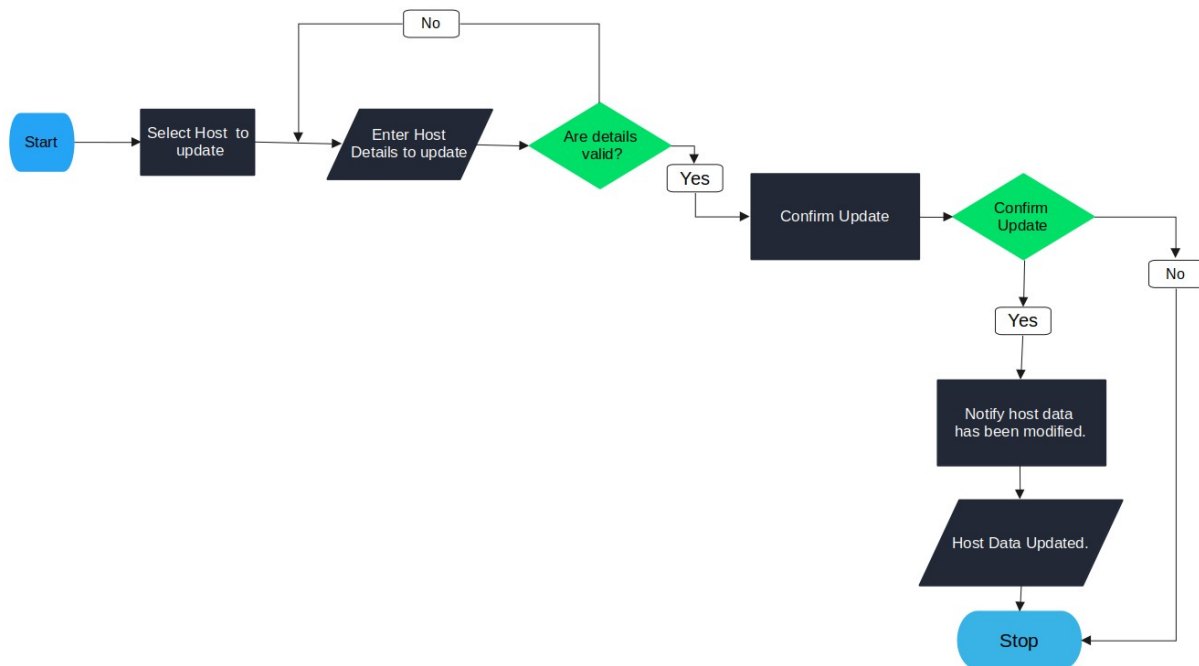
The following section describes the HOST update process.

Participating Actors

- Host details
- Admin or User with privileges to update host.

Pre-conditions

- Host must be registered .

- Admin or User with privileges to update host must be logged in.

Flow of Events

i. The system should allow host details to be entered.

ii. The System should check the validity of host details.

iii. The Should allow selection of unoccupied office.

iv. The system should save office details.

Output

Host Details updated .

6.3.3 Deactivate Host.

The following section describes the HOST registration process.
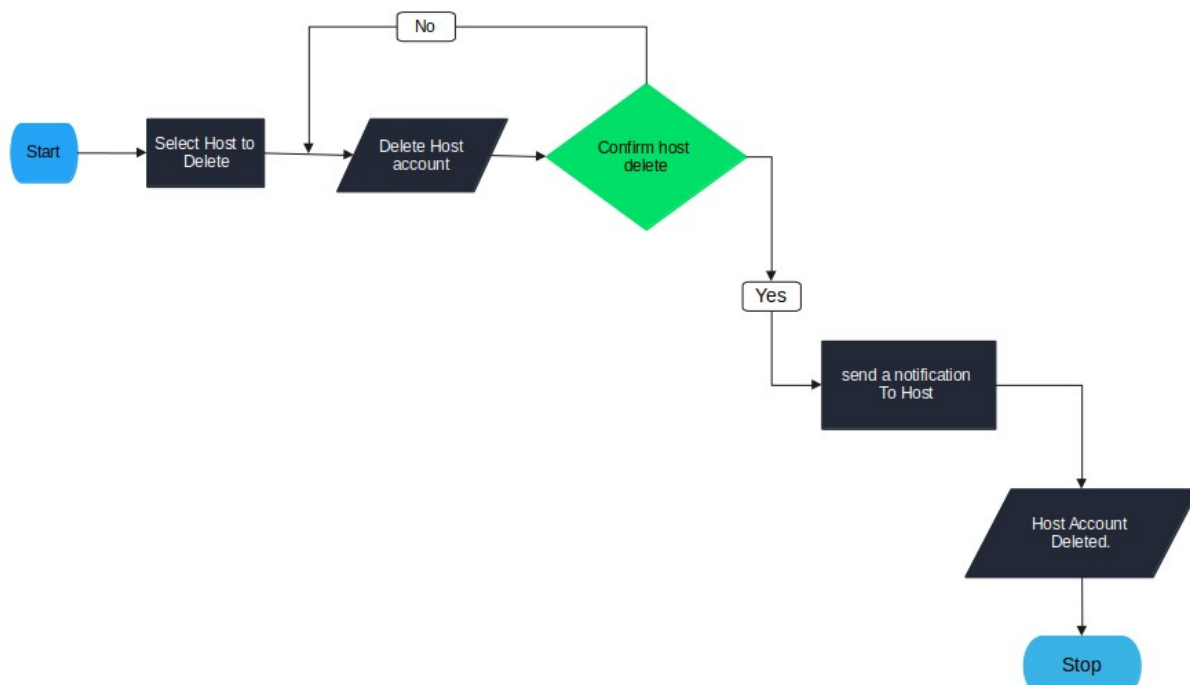
Participating Actors

- Host details
- Admin or User with privileges to deactivate host.

Pre-conditions

- Office must be registered and occupancy status must be false.
- Admin or User with privileges to deactivate host must be logged in.

Flow of Events

i. The system should allow you to select the host to deactivate.

ii. The system should ask you to confirm if you want to continue to deactivate the host.

iii. The System Should then deactivate the host account.

Output

Host account deactivated.

7 Host Management Registration Process

7.1 Introduction

The Host Management User registration Process is where host users are created, and administrators or User roles are assigned to them.

7.2 Host Management Data Dictionary

The following are key User data fields that hold their information:

FIELD	Data Type	Size	Required	Description
Select User	DROPDOWN	150	YES	Select user
Select Host	DROPDOWN	150	YES	Select host .
Assign Role	Assign Role	50	YES	Assign user role.

7.3 Processes

7.3.1 Register Host User.

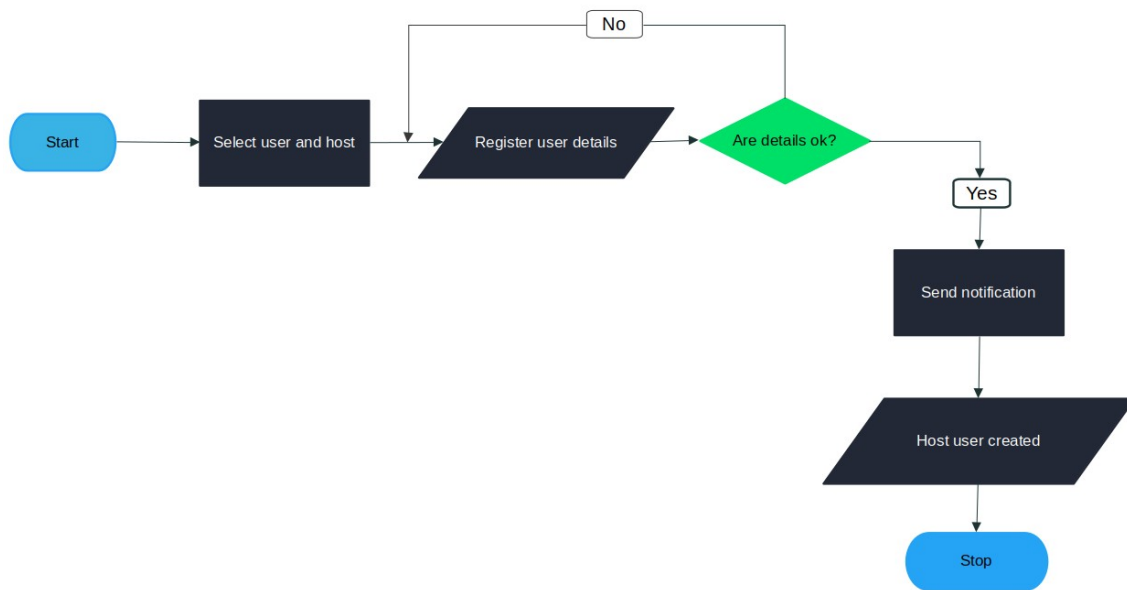The following section describes the host user registration process.

Participating Actors

- Person Registering for host management Role: provides the registration details.
- Admin or User with admin Privileges.

Pre-conditions

- Host must be registered.
- We must have roles defined for users.
- User with Super Privileges to add Host or The Admin must be logged in.
- Created email account.
- Have a working phone number.

Flow of Events

i.   The system should allow User to be selected.

ii. The system should allow Host to be selected.

iii. The system should save the host user.

Output

Host user created.

7.3.2 Update Host User.

The following section describes the host user update process.
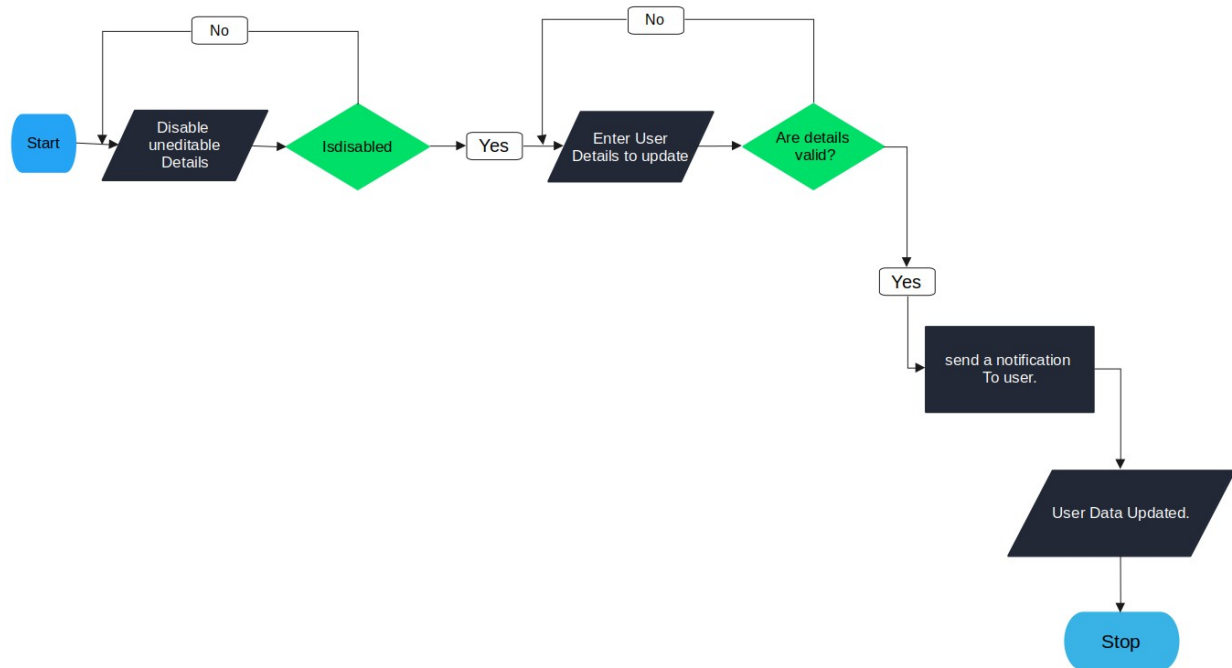
Participating Actors

- Person Registering for host management Role: provides the registration details.
- Admin or User with admin Privileges.

Pre-conditions

- Must have a user Account to update.
- User must be logged in.
- If Admin is updating the user details the admin must be logged in.

Flow of Events

i. The system should allow you to select User to update.

ii. The system should allow User details to be updated.

iii. The System should check the validity of User details.

iv. The system should update the host user details.

Alternate Flow of Events

i. The system should allow logged in admin to select User to update.

ii. The system should allow User details to be updated.

iii. The System should check the validity of User details.

iv. The system should update the host user details.

v. The system should send notification to the user that their account details have been updated.

Output

Host user Updated.

7.3.3 Deactivate Host User.

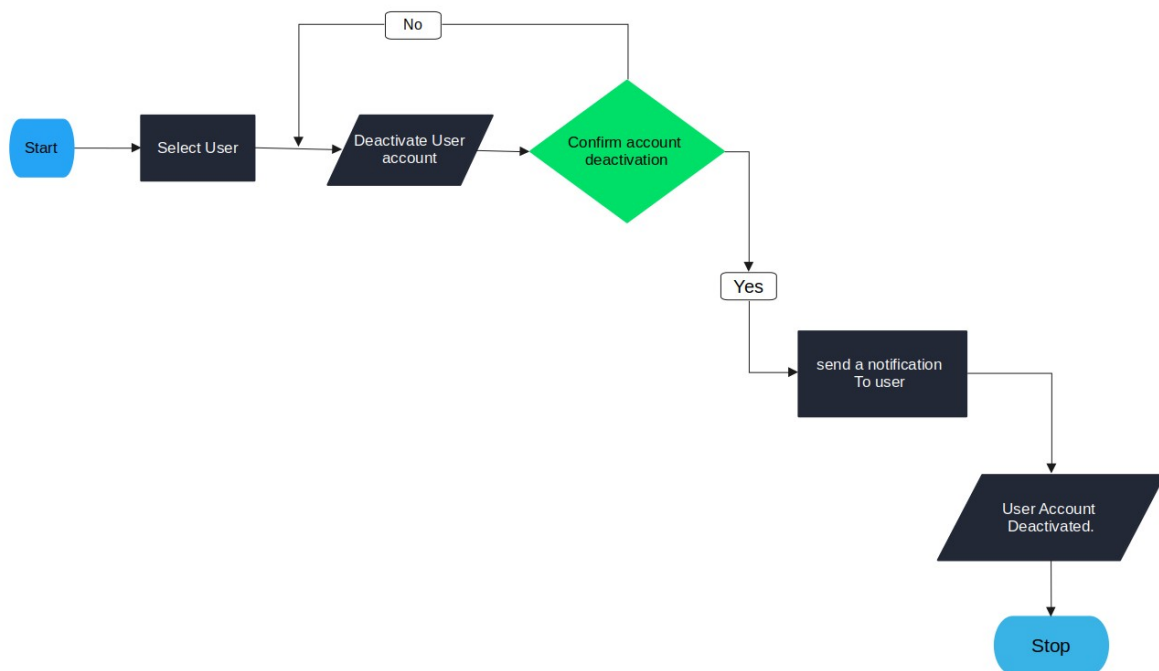The following section describes the host user deactivation process.

Participating Actors

- Person's Account to be deactivated.
- Admin or User with admin Privileges.

Pre-conditions

- User with Super Privileges to add Host or The Admin must be logged in.

Flow of Events

i.   The system should allow User to be selected.

ii.   The system should prompt you if you are sure you want to deactivate that user.

iii. The system should deactivate the user.

iv.   The system should send message to the user notifying them their account hava been deactivated and giving the procedure to recover it.

Output

Host user Deactivated.

8 Visitor Check In Process

8.1 Introduction

Before a visitor enters the building, their information is collected to determine their destination and the reason for their visit.

8.2 Visitor Data Dictionary

The following are key Building data fields that hold building information.

FIELD	Data Type	Size	Required	Description
Name	STRING	150	YES	Visitors Full name.
ID Number	STRING	150	YES	Visitors ID number to confirm his/her identity.
Office	DROP DOWN	50	YES	Name of office you are visiting
Phone	STRING	15	YES	Phone Number for one time verification pin.
Purpose	DROP DOWN	50	YES	Purpose of visit.

8.2.1 Check In.
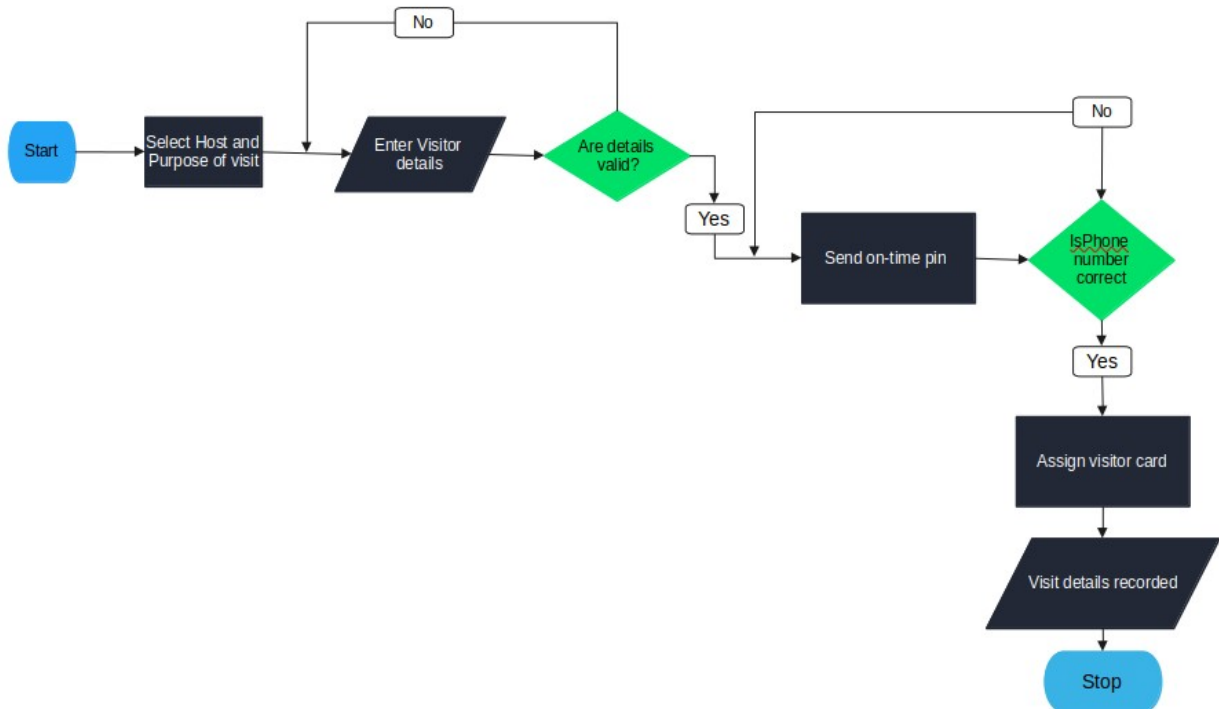
The following section describes visitors check-in process.

Participating Actors

- Visitor: provides the registration details
- Security officer letting them in.

Pre-conditions

- Have a National ID or Copy.
- Have a working phone number.

Flow of Events

i. The system should allow visitor details to be entered.

ii. The System should check the validity of Visitors details.

iii. The Should send one-time verification pin to Provided user Phone.

iv. The system should notify the host that there is a visitor visiting their office.

v. The building security assigns card to the visitor.

vi. System opens a visit log for the visitor.

vii. System allows the visitor to swipe the card and access the building.

viii. The system should send a notification to house management that the visitor has entered the building.
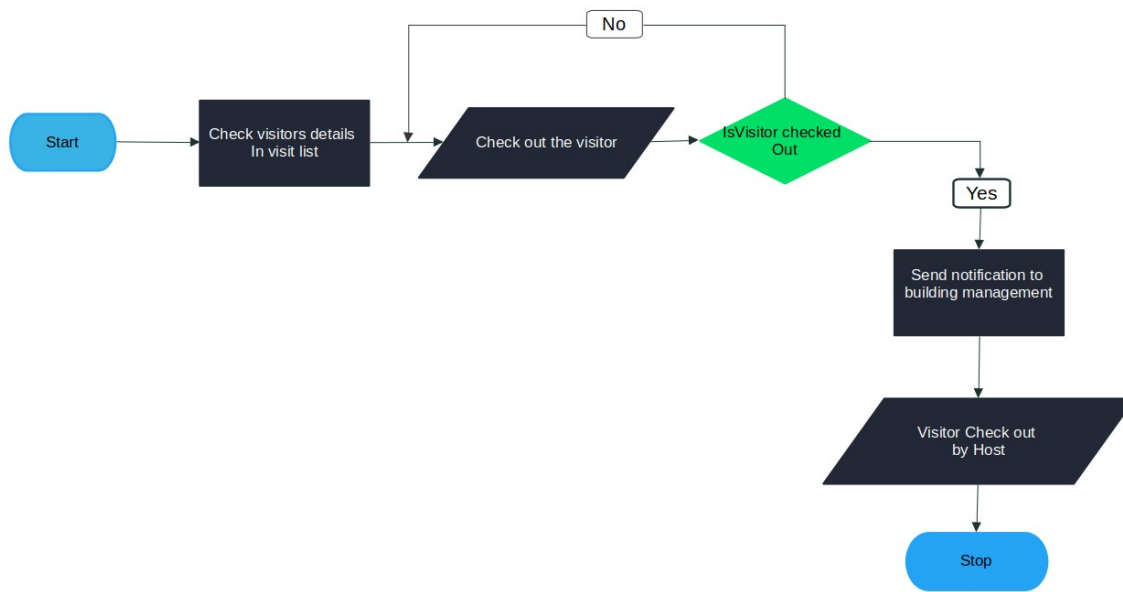
8.2.2 Check out process.

The following section describes visitors check-out process.

Participating Actors

- Visitor
- Host
- Security Officer.

8.2.2.1   Office check Out.

Flow of Events

i. The system should allow host to initiate visitor Check out .

ii. The system should save the time that user was released from the Host.

iii. The system should send a notification to the building management that the user has been checked out by the host.

iv. The system should allow host to check out .

Output

Visitor Check in.

8.2.2.2 Visitor check Out

Flow of Events
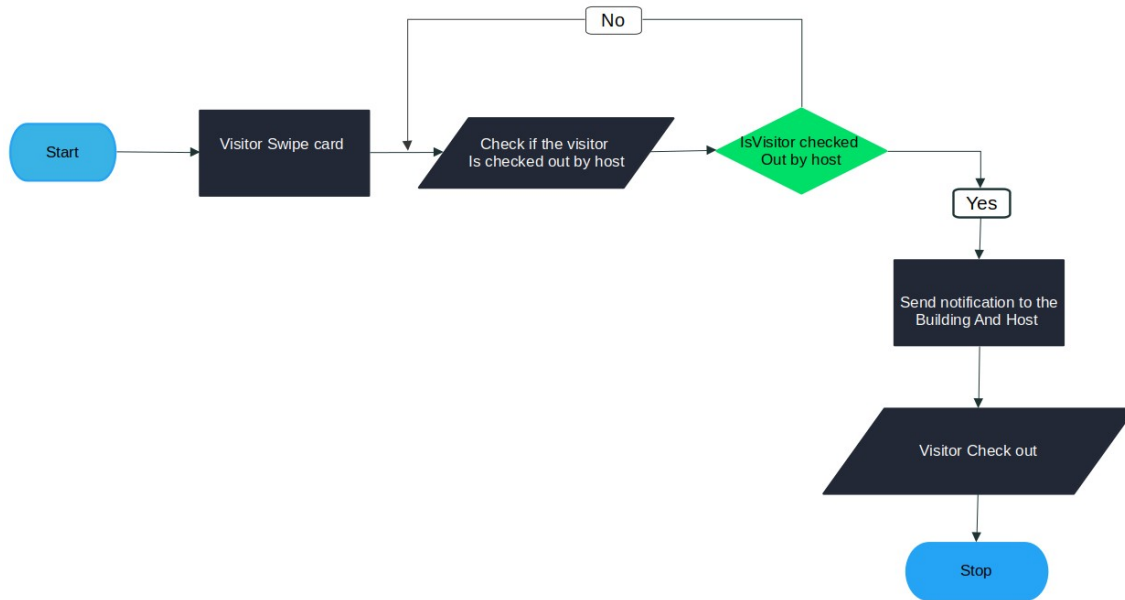
i. The system should allow visitors to check out of the building .

ii. The system should check the different in time between when the user was release and when they checked out.

iii. The System should alert send an alert if the time take to between host check out and building check out is suspicious.

iv. The management should pick back visitors card.

v. The system should close the visitor visit log.

vi. The system should send a notification That the visitor has exited the building.

Output

Visitor checked Out.