

**FU House finder**

**Software Design Document**

– Hanoi, Sep 2022–

**Table of Contents**

[III. Database Tables 3](#_Toc115429592)

[1. Campuses 3](#_Toc115429593)

[2. UserRoles 3](#_Toc115429594)

[3. Addresses 3](#_Toc115429595)

[4. Users 3](#_Toc115429596)

[5. Houses 4](#_Toc115429597)

[6. Rooms 4](#_Toc115429598)

[7. Rates 5](#_Toc115429599)

[8. ImagesOfHouse 5](#_Toc115429600)

[9. ImagesOfRoom 5](#_Toc115429601)

[10. Districts 6](#_Toc115429602)

[11. Communes 6](#_Toc115429603)

[12. Villages 6](#_Toc115429604)

[13. Statuses 6](#_Toc115429605)

[14. RoomTypes 6](#_Toc115429606)

[15. Reports 7](#_Toc115429607)

# III. Database Tables

## 1. Campuses

*Store the information of all campus for users*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | CampusId | int |  |  | Yes | PK |  |
| 2 | CampusName | nvarchar | 100 |  |  |  |  |
| 3 | AddressId | int |  |  | Yes |  | To Table *Addresses* |
| 4 | CreatedDate | datetime |  |  |  |  |  |

## 2. UserRoles

*Store the information of all roles of users*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | RoleId | int |  |  | Yes | PK |  |
| 2 | RoleName | nvarchar | 100 |  |  |  |  |
| 3 | CreatedDate | datetime |  |  |  |  |  |

## 3. Addresses

*Store the information of addresses for Users (Landlords) and Houses*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | AddressId | int |  |  | Yes | PK |  |
| 2 | Addresses | nvarchar | 1000 |  | Yes |  |  |
| 3 | GoogleMapLocation | nvarchar | MAX |  |  |  | Location on Google Map |
| 3 | CreatedDate | datetime |  |  |  |  |  |
| 4 | LastModifiedDate | datetime |  |  |  |  |  |

## 4. Users

*Store the information of all users*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | UserId | nchar | 30 |  | Yes | PK | Include student id, host id and admission id;  Has specific convention to make |
| 2 | FacebookUserId | nchar | 300 |  |  |  | For people login with Facebook |
| 3 | GoogleUserId | nchar | 300 |  |  |  | For people login with Google |
| 4 | Email | nvarchar | 100 |  |  |  |  |
| 5 | Password | nvarchar | 100 |  |  |  |  |
| 6 | DisplayName | nvarchar | 500 |  |  |  | For Landlord and Staff |
| 7 | Active | bit |  |  |  |  |  |
| 9 | ProfileImageLink | nvarchar | 500 |  | No |  | For Landlord and Staff |
| 10 | PhoneNumber | nvarchar | 50 |  | No |  | Only for Landlord |
| 11 | FacebookURL | nvarchar | 300 |  | No |  | Only for Landlord |
| 12 | IdentityCardFrontSideImageLink | nvarchar | 500 |  | No |  | Only for Landlord |
| 13 | IdentityCardBackSideImageLink | nvarchar | 500 |  | No |  | Only for Landlord |
| 14 | AddressId | int |  |  | No |  | Only for Landlord;  To Table *Addresses* |
| 15 | RoleId | int |  |  |  | FK | To Table *Roles* |
| 16 | CreatedDate | datetime |  |  |  |  |  |
| 17 | LastModifiedDate | datetime |  |  |  |  |  |
| 18 | CreatedBy | nchar | 30 |  |  | FK | To Table *Users* |
| 19 | LastModifiedBy | nchar | 30 |  |  | FK | To Table *Users* |

## 5. Houses

*Store the information of all houses*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | HouseId | int |  |  | Yes | PK |  |
| 2 | HouseName | nvarchar | 100 |  |  |  |  |
| 3 | Information | nvarchar | MAX |  |  |  |  |
| 4 | AddressId | int |  |  | Yes |  | To Table *Addresses* |
| 5 | VillageId | int |  |  |  | FK | To Table *Villages* |
| 6 | LandlordId | nchar | 30 |  |  | FK | To Table *Users* |
| 7 | PowerPrice | money |  |  | Yes |  |  |
| 8 | WaterPrice | money |  |  | Yes |  |  |
| 9 | CreatedDate | datetime |  |  |  |  |  |
| 10 | LastModifiedDate | datetime |  |  |  |  |  |
| 11 | CreatedBy | nchar | 30 |  |  | FK | To Table *Users* |
| 12 | LastModifiedBy | nchar | 30 |  |  | FK | To Table *Users* |

## 6. Rooms

*Store the information of all rooms of houses*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | RoomId | int |  |  | Yes | PK |  |
| 2 | RoomName | nvarchar | 50 |  |  |  |  |
| 3 | PricePerMonth | money |  |  |  |  |  |
| 6 | Information | nvarchar | MAX |  |  |  |  |
| 7 | AreaByMeters | float |  |  |  |  |  |
| 8 | AirCon | bit |  |  | Yes |  | Air Conditioner |
| 9 | MaxAmountOfPeople | int |  |  |  |  |  |
| 10 | CurrentAmountOfPeople | int |  |  |  |  |  |
| 11 | BuildingNumber | int |  |  |  |  |  |
| 12 | FloorNumber | int |  |  |  |  |  |
| 13 | StatusId | int |  |  |  | FK | To Table *Statuses* |
| 14 | RoomTypeId | int |  |  |  | FK | To Table *RoomTypes* |
| 15 | HouseId | int |  |  |  | FK | To Table *Houses* |
| 16 | CampusId | int |  |  |  | FK | To Table *Campuses* |
| 17 | CreatedDate | datetime |  |  |  |  |  |
| 18 | LastModifiedDate | datetime |  |  |  |  |  |
| 19 | CreatedBy | nchar | 30 |  |  | FK | To Table *Users* |
| 20 | LastModifiedBy | nchar | 30 |  |  | FK | To Table *Users* |

## 7. Rates

*Store the information of all rates and comments of users*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | RateId | int |  |  | Yes | PK |  |
| 2 | Star | int |  |  |  |  |  |
| 3 | Comment | nvarchar | MAX |  |  |  |  |
| 4 | LandlordReply | nvarchar | MAX |  |  |  |  |
| 5 | HouseId | int |  |  |  | FK | To Table *Houses* |
| 6 | StudentId | nchar | 30 |  |  | FK | To Table *Users* |
| 7 | CreatedDate | datetime |  |  |  |  |  |
| 8 | LastModifiedDate | datetime |  |  |  |  |  |
| 9 | CreatedBy | nchar | 30 |  |  | FK | To Table *Users* |
| 10 | LastModifiedBy | nchar | 30 |  |  | FK | To Table *Users* |

## 8. ImagesOfHouse

*Store the information of all pictures of house*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | ImageId | int |  |  | Yes | PK |  |
| 2 | ImageLink | nvarchar | 500 |  |  |  |  |
| 3 | HouseId | int |  |  |  | FK | To Table *Houses* |
| 4 | CreatedDate | datetime |  |  |  |  |  |
| 5 | LastModifiedDate | datetime |  |  |  |  |  |
| 6 | CreatedBy | nchar | 30 |  |  | FK | To Table *Users* |
| 7 | LastModifiedBy | nchar | 30 |  |  | FK | To Table *Users* |

## 9. ImagesOfRoom

*Store the information of all pictures of room*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | ID | int |  |  | Yes | PK |  |
| 2 | ImageLink | nvarchar | 500 |  |  |  |  |
| 3 | RoomId | int |  |  |  | FK | To Table *Rooms* |
| 4 | CreatedDate | datetime |  |  |  |  |  |
| 5 | LastModifiedDate | datetime |  |  |  |  |  |
| 6 | CreatedBy | nchar | 30 |  |  | FK | To Table *Users* |
| 7 | LastModifiedBy | nchar | 30 |  |  | FK | To Table *Users* |

## 10. Districts

*Store the information of all districts (for identifying house address)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | DistrictId | int |  |  | Yes | PK |  |
| 2 | DistrictName | nvarchar | 100 |  |  |  |  |
| 3 | CreatedDate | datetime |  |  |  |  |  |

## 11. Communes

*Store the information of all communes (for identifying house address)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | CommuneId | int |  |  | Yes | PK |  |
| 2 | CommunetName | nvarchar | 100 |  |  |  |  |
| 3 | DistrictId | int |  |  |  | FK | To Table *Districts* |
| 4 | CreatedDate | datetime |  |  |  |  |  |

## 12. Villages

*Store the information of all villages (for identifying house address)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | VillageId | int |  |  | Yes | PK |  |
| 2 | VillageName | nvarchar | 100 |  |  |  |  |
| 3 | CommuneId | int |  |  |  | FK | To Table *Communes* |
| 4 | CreatedDate | datetime |  |  |  |  |  |

## 13. Statuses

*Store the information of all status of a Room*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | StatusId | int |  |  | Yes | PK |  |
| 2 | StatusName | nvarchar | 300 |  |  |  |  |
| 3 | CreatedDate | datetime |  |  |  |  |  |

## 14. RoomTypes

*Store the information of all types of a Room*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | RoomTypeId | int |  |  | Yes | PK |  |
| 2 | RoomTypeName | nvarchar | 300 |  |  |  |  |
| 3 | CreatedDate | datetime |  |  |  |  |  |

## 15. Reports

*Store the information of all Reports of Students to Houses*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | ReportId | int |  |  | Yes | PK |  |
| 2 | ReportContent | nvarchar | MAX |  |  |  |  |
| 3 | StudentId | nchar | 30 |  |  | FK | To Table *Users* |
| 4 | HouseId | int |  |  |  | FK | To Table *Houses* |
| 5 | CreatedDate | datetime |  |  |  |  |  |
| 6 | LastModifiedDate | datetime |  |  |  |  |  |
| 7 | CreatedBy | nchar | 30 |  |  | FK | To Table *Users* |
| 8 | LastModifiedBy | nchar | 30 |  |  | FK | To Table *Users* |