**4. DATABASE DESIGN**

**4.1 Introduction**

This document describes the tables that are used to design software. Its attributes, data types, constraints and relationship among their tables. Database is a collection of data in the table or relation. The data stored in a relation are arranged in tables or records. Each record consists of a set of attributes. This data model contains all the needed logical design and physical design choices and physical storage parameter needed to generate a design in a data definition language. This can be used to create database.

**4.2 Description of the table and fields**

**Auth\_group :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| id | INTEGER | NA | Primary Key | Group Id |
| name | VARCHAR | 150 | Not Null | Group Name |

**Auth\_group\_permission:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| id | INTEGER | NA | Primary key | Id |
| group\_id | INTEGER | NA | Foreign Key | Group Id |
| permission\_id | INTEGER | NA | Foreign key | Permission Id |

**Auth\_Permission :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| Id | INTEGER | NA | Primary key | Id |
| content\_type\_Id | INTEGER | NA | Foreign Key | Content Type Id |
| codename | VARCHAR | 100 | Not Null | Codename |
| name | VARCHAR | 255 | Not Null | Name |

**Django\_admin\_log :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| Id | INTEGER | NA | Primary key | Id |
| action\_time | DATETIME | NA | Not Null | Action Time |
| object\_id | TEXT | NA |  | Object ID |
| object\_repr | VARCHAR | 200 | Not Null | Object represent |
| change\_message | TEXT | NA | Not Null | Change Message |
| content\_type\_id | INTEGER | NA |  | Content Type Id |
| user\_id | INTEGER | NA | Foreign key | User ID(id) |
| actionflag | SMALLINT | AF>=0 | Foreign key | Action Flag(user\_id) |

**Django\_content\_type :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| id | INTEGER | NA | Primary key | Id |
| app\_label | VARCHAR | 100 | Not Null | App Label |
| model | VARCHAR | 100 | Not Null | Model |

**Django\_migration :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| id | INTEGER | NA | Not Null | Id |
| app | VARCHAR | 255 | Not Null | App |
| applied | DATETIME | NA | Not Null | Applied |
| name | VARCHAR | 255 | Not Null | Name |

**Django\_session :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| session\_key | VARCHAR | 40 | Not Null | Session Key |
| session\_data | TEXT | NA | Not Null | Session Date |
| expire\_date | DATETIME | NA | Not Null | Expire Date |

**Myapp\_complaints :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| complaints\_id | INTEGER | NA | Primary key | Complaints\_id |
| firstname | VARCHAR | 122 | Not null | First Name |
| lastname | VARCHAR | 250 | Not Null | Last Name |
| email | VARCHAR | 30 | Not null | Email ID |
| gender | TEXT | NA | Not Null | Complaint |
| wardno | INTEGER | NA | Not Null | Ward Number |
| grampanchayat | VARCHAR | 40 | Not Null | Grampanchayat name |
| complaint | TEXT | NA | Not Null | Complaints |
| date | DATE | NA | Not Null | Date |
| user\_id | INTEGER | NA | Foreign key | User\_id |

**My\_app\_contact**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| contact\_id | INTEGER | NA | Not Null | Id |
| name | VARCHAR | 122 | Foreign Key | Name |
| email | VARCHAR | 250 | Not Null | Phone Number |
| gender | VARCHAR | 20 | Not Null | gender |
| phone | VARCHAR | 12 | Foreign Key | Email ID |
| grampanchayat | VARCHAR | 50 | Not Null | Information |
| wardno | INTEGER | NA | Not Null | Admin information |
| info | TEXT | NA | Not Null | Date |
| adinfo | TEXT | NA | Not Null | Gram Panchayat |
| date | DATE | NA | Not Null | date |
| user\_id | INTEGER | NA | Not Null | User\_id |

My\_app\_feedback :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| feedback\_id | INTEGER | NA | Primary key | Feedback\_Id |
| Name | VARCHAR | 122 | Not Null | Name |
| Email | VARCHAR | 250 | Not Null | Email ID |
| Phone | VARCHAR | 12 | Not Null | Phone Number |
| wardno | INTEGER | NA | Not Null | Ward number |
| Grampanchayat | VARCHAR | 50 | Not Null | Gram Panchayat |
| Rate | TEXT | 50 | Not Null | Rate |
| adinfo | TEXT | 50 | Not Null | Add information |
| date | DATE | NA | Not Null | Date |
| user\_id | INTEGER | NA | Foreign key | User\_ID |

**Service\_table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| Ser\_id | INTEGER | NA | Primary Key | Service ID |
| Ser\_name | VARCHAR | 50 | Not Null | Service Name |
| Category | VARCHAR | 50 | Not Null | Category |
| Eligibility | INTEGER | 11 | Not Null | Eligibility |
| Timelimit | VARCHAR | 50 | Not Null | Time Limit |
| Rdocuments | VARCHAR | 50 | Not Null | Require Document |

**Appl\_table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| App\_id | INT | 11 | Primary Key | Application ID |
| Ser\_id | INT | 11 | Foreign Key | Service ID |
| Uid | INT | 11 | Foreign Key | User ID |
| Udocuments | VARCHAR | 50 | Not Null | User Documents |

myapp\_user :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| user\_id | INTEGER | NA | Primary key | User\_id |
| password | VARCHAR | 128 | Not Null | Password |
| last\_login | DATETIME | NA | - | Last Login |
| is\_superuser | BOOLEAN | NA | Not Null | Is Super User |
| user Name | VARCHAR | 30 | Not Null(unique) | User Name |
| first\_name | VARCHAR | 150 | Not Null | First Name |
| last\_name | VARCHAR | 150 | Not Null | Last Name |
| date\_joined | DATETIME | NA | Not Null | Date joined |
| email | VARCHAR | 255 | Not Null(unique) | Email ID |
| is\_staff | BOOLEAN | 50 | Not Null | Is staff |
| is\_active | BOOLEAN | 50 | Not Null | Is Active |
| date\_joined | DATE | NA | Not Null | Joined Date |
| gender | VARCHAR | 20 | Not Null | Gender |
| birth\_date | DATE | NA | Not Null | Date of Birth |
| grampanchayat | VARCHAR | 40 | Not Null | Gram Panchayat |
| wardno | INTEGER | NA | Not Null | Ward number |
| phone | INTEGER | NA | Not Null | Phone Number |

**myapp\_user\_group :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| Id | INTEGER | NA | Primary key | Id |
| user\_id | INTEGER | NA | Foreign key | User Id |
| group\_id | INTEGER | NA | Foreign key | Group Id |

**myapp\_user\_user\_permission :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| Id | INT | 11 | Primary key | Id |
| Group\_Id | INT | 11 | Foreign key | Group Id |
| Permission\_Id | INT | 11 | Foreign key | Permission Id |

**myapp\_userprofile :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| Id | INT | 11 | Not Null | Id |
| phone | NUMERIC | (18,0) | Not Null | Phone Number |
| wardno | INT | 11 | Not Null | Ward Number |
| Birth\_date | DATE | - | Not Null | Date of Birth |
| Grampanchayat | VARCHAR | 50 | Not Null | Gram Panchayat |
| User\_id | INT | 11 | Not Null | User Id |

**Sqlite\_sequence :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Constraints** | **Description** |
| Name | VARCHAR | 50 | Not Null | Name |
| seq | VARCHAR | 50 | Not Null | Sqlite |

**4.3 E-R (Entity Relationship Diagram and Database Design)**

The relationships among the table are designed by E-R diagram. A diagrammatically representation of relationship between an entity and its attributes is referred to as an E-R diagram. An entity may be an object with physical or conceptual existence. The properties that are used to describe the entity are called attributes. Symbols notifications and their description used in drawing.

|  |  |
| --- | --- |
| **Name** | **Convention** |
|  | Entity or Strong Entity |
|  | Weak Entity |
|  | Relation |
|  | Identity relation |
|  | Attribute |
|  | Key Attribute |
| E1  E2  R | Total Participation |
| E1  E2  R  1  1 | Cardinality ratio 1:1 from E1:E2 in R |
| E1  E2  R  N  1 | Cardinality ratio 1:N from E1:E2 in R |
|  | Derived Attribute |
|  | Composite Attribute |