**Database Design Document**

A screenshot of a computer

Description automatically generated

**A diagram of a computer program

Description automatically generated with medium confidence**

**Users Table**

|  |  |  |
| --- | --- | --- |
| **Column** | **Data type** | **Description** |
| **UserID{PK}** | INT | Primary Key for the Users Table. It is used to identify each user. Foreign key to Doctors, Patients, ActivityLog, Messages and Appointments. |
| Username | Varchar(50) | This is what the user uses to login into the GP System and is created from the first letter of the first name and the first letter of the surname name with the UserID at the end. Has a unique KEY constraint |
| Password | Varchar(255) | Stores the password of the user. Essential for the user so that the system can authenticate that it is them |
| UserType | Varchar(50) | Identifiers what type of user they are. Essential for allowing specific features to be used by specific UserType. There is a constraint that the User types are Doctor, Admin and Patient |

**Doctors Table**

|  |  |  |
| --- | --- | --- |
| **Column** | **Data type** | **Description** |
| **DoctorID{PK}** | INT | Primary Key for the Doctors Table. It is used to identify each doctor. Foreign key to Patients and Appointments Table |
| FirstName | Varchar(100) | Stores the first name of the doctor |
| LastName | Varchar(100) | Stores the last name of the doctor |
| DOB | DATE | Stores the date of birth of the doctor. There is a check to see if the doctor is older than 21 |
| PhoneNumber | Varchar(50) | Stores the phone number of the doctor |
| Specialisation | Varchar(100) | Stores the specialisation of the doctor. There are a set amount of specialisation and more can be added in the future easily |
| Gender | Varchar(50) | Stores the gender of the doctor. There is a check so the only values that can be entered is Female, Male and Other |
| Email | Varchar(100) | Stores the email of the doctor |
| Availability | Varchar(255) | Stores the days the doctor can work on. This is stores as a list in the database |

**Message Table**

|  |  |  |
| --- | --- | --- |
| **Column** | **Data type** | **Description** |
| **MessageId{PK}** | INT | Primary key of the Message table. This is an auto incremented field. |
| *UserID{FK}* | INT | Foreign key from the User table that allows for easy identification of what message belongs to a certain user |
| message | TEXT | Stores the message |
| IsRead | Tinyint(1) | 0 = not read 1 = Read  This is used to track if a message has been read or not. If it has been read, then the message will not be shown |

**Patients Table**

|  |  |  |
| --- | --- | --- |
| **Column** | **Data type** | **Description** |
| PatientID{PK} | INT | Primary Key for the Patient Table. It is used to identify each Patient. Foreign key to Appointments Table |
| FirstName | Varchar(100) | Stores the first name of the patient |
| LastName | Varchar(100) | Stores the last name of the patient |
| DOB | DATE | Stores the date of birth of a patient |
| Gender | Varchar(50) | Stores the phone number of the doctor |
| PhoneNumber | Varchar(100) | Stores the specialisation of the doctor. There are a set amount of specialisation and more can be added in the future easily |
| Email | Varchar(50) | Stores the email of the patient |
| DoctorID{FK} | INT | Stores the ID of the Doctor the patient has been assigned to. This can be used in queries to find out the name and specialty of a doctor |

**ActivityLog Table**

|  |  |  |
| --- | --- | --- |
| **Column** | **Data type** | **Description** |
| **LogID{PK}** | INT | Primary key of the ActivityLog Table. Used to identify each logged activity |
| UserID{FK} | INT | Foreign key from the User table that allows for easy identification of what users accessed certain feature |
| TimeAccessed | Datetime | Stores the datetime of when the user used a specific feature |
| FeatureAccessed | Varchar(50) | Stores the name of the feature that was accessed |

**Appointment Table**

|  |  |  |
| --- | --- | --- |
| **Column** | **Data type** | **Description** |
| **AppointmentID{PK}** | INT | Primary key of the Appointment Table. Used to identify each appointment |
| *PatientID{FK}* | INT | Foreign key from the Patient table to identify who is the patient |
| *DoctorID{FK}* | INT | Foreign key from the Doctor table to identify who is the doctor |
| AppointmentDate | DATE | Stores the date of the appointment |
| AppointmentTime | TIME | Stores the time of the appointment. Doctors work from 9am to 6pm and have an appointment slot every 15min |

Additional Notes:

There is a constraint in the database, where each appointment has to be unique or else it will not be stored in the database

**Admins Table**

|  |  |  |
| --- | --- | --- |
| **Column** | **Data type** | **Description** |
| **AdminID{PK}** | INT | Primary key of the Appointment Table. Used to identify each appointment |
| FirstName | INT | Stores the first name of the admin |
| LastName | INT | Stores the last name of the admin |
| DOB | DATE | Stores the date of the appointment |
| PhoneNumber | TIME | Stores the Phone number of the admin |
| Email | VARCHAR(100) | Stores the email of the admin |