Introduction

The organization seeking a database application is a hospital system hoping to track mental health conditions in their patients. This involves tracking information regarding the providers, patients, mental health conditions, managements, as well as the social determinants of health for the patients. The objective of the organization is to provide access to quality care at a reasonable cost to people in their community.

There are many reasons for the creation of this database, one being the need to enhance patient care. Patients in general generate a large amount of data. The use of database applications to aggregate this data and extracting useful information to aid in decision making could drastically change patient outcomes. A survey conducted on drug use and health showed that 52.2% of the population in the United States was affected by either mental health problems or substance addiction, with an additional 30 million who reportedly suffer from panic attacks and anxiety disorders (Subrahmanya et al., 2021). A data analysis-focused treatment technique was developed to aid in the management of these patients. Health data from these patients was used to construct static and dynamic information, and the result was that stress rates were able to be predicted under multiple different scenarios (Subrahmanya et al., 2021). Important patterns can be recognized with the use of this health data that will aid in the diagnosis and treatment of patients, that will then lead to better patient outcomes.

A problem that the hospital system is facing currently is their current method of tracking their patients with mental health conditions is outdated and leading to many patients being lost to follow-up. The collection of health data for this purpose is not an easy feat. Barriers include privacy and security regulations, always-changing data, lack of review, and lack of uniformity in collection ("Academy," n.d.). With the use of the database tool we are creating, medical professionals can properly manage their patient data to allow for future analyses and report generation.

One constraint is that the hospital organization and its employees must abide by HIPAA guidelines when handling patient information. Additionally, the creation of this database will utilize hospital resources such as staff time and expertise, database management systems, data monitoring tools, etc. The hospital system also has limited availability of mental health care professionals and services. Clinicians will have different levels of experience with using different database systems. However, quality care can definitely be achieved with the development of a well-designed database application. The implementation of such a system has the potential to completely change the way patients with mental health conditions are cared for.

Requirement Specifications

The requirements specifications of this application are that a patient may have multiple mental health conditions, as well as multiple different medications for these conditions. A provider can provide care for a number of different mental health conditions, as well as treat multiple different patients. Additionally, a patient may have a number of associated social determinants of health.

Design

Entity Relationship Model
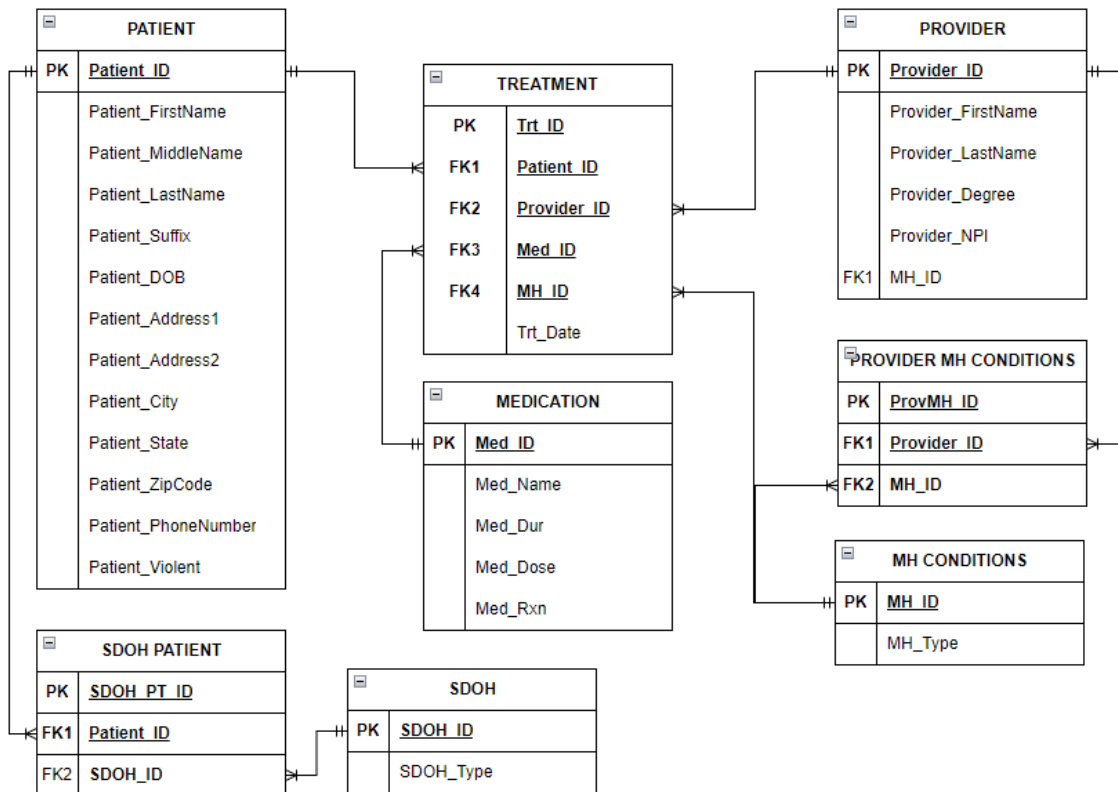
Data Dictionary

Data Dictionary

Table	Name	Description	Type	Format	Range	Required	PK/FK	FK Reference Table
PATIENT	Patient_ID	Patient's Identification Number	Integer (5)	99999	00001-99999	Yes	PK	
	Patient_FirstName	Patient's First Name	Character (50)	Xxxx				
	Patient_MiddleName	Patient's Middle Name	Character (50)	Xxxx				
	Patient_LastName	Patient's Last Name	Character (50)	Xxxx				
	Patient Sufix	Patient's Suffix	Character (10)	Xxxx				
	Patient_DOB	Patient's Date of Birth	Date	MM/DD/YYYY				
	Patient_Address1	Patient's Address	Character (100)	Xxxx				
	Patient_Address2	Patient's Address 2 (i.e., Apartment number, Suite Number, etc.)	Character (100)	Xxxx				

	Patient_City	Patient's City	Character (100)	Xxxx				
	Patient_State	Patient's State	Character (2)	XX				
	Patient_ZipCode	Patient's Zip Code	Integer (5)	99999				
	Patient_PhoneNumber	Patient's Phone Number	Integer (9)	999 999 9999				
	Patient_Violent	Does the patient have a history of violence or is the patient violent	Character (10)	Xxxx				
	SDOH_ID	Social Determinant of Health Identification Number	Integer (5)	99999	000 01-9 999 9		FK	SDOH
PROVIDER	Provider_ID	Provider's Identification Number	Integer (5)	99999	000 01-9 999 9	Yes	PK	
	Provider_FirstName	Provider's First Name	Character (50)	Xxxx				

	Provider_LastName e	Provider's Last Name	Character (50)	Xxxx				
	Provider_Degree	Provider's Degree (i.e., MD, DO, NP, etc.)	Character (50)	XX				
	Provider_NPI	Provider's National Provider Identification (NPI) Number	Integer (10)	9999999999				
	MH_ID	Mental Health Identification Number	Integer (5)	99999	00001-99999		FK	MH_CONDIT IONS
MEDICATI ON	Med_ID	Medication Identification Number	Integer (5)	99999	00001-99999	Yes	PK	
	Med_Name	Medication Name	Character (200)	Xxxx				
	Med_Dur	Medication Duration (i.e, 1 time per day for 30 days)	Character (100)	Xxxx				
	Med_Dose	Medication Dosage	Character (100)	Xxxx				
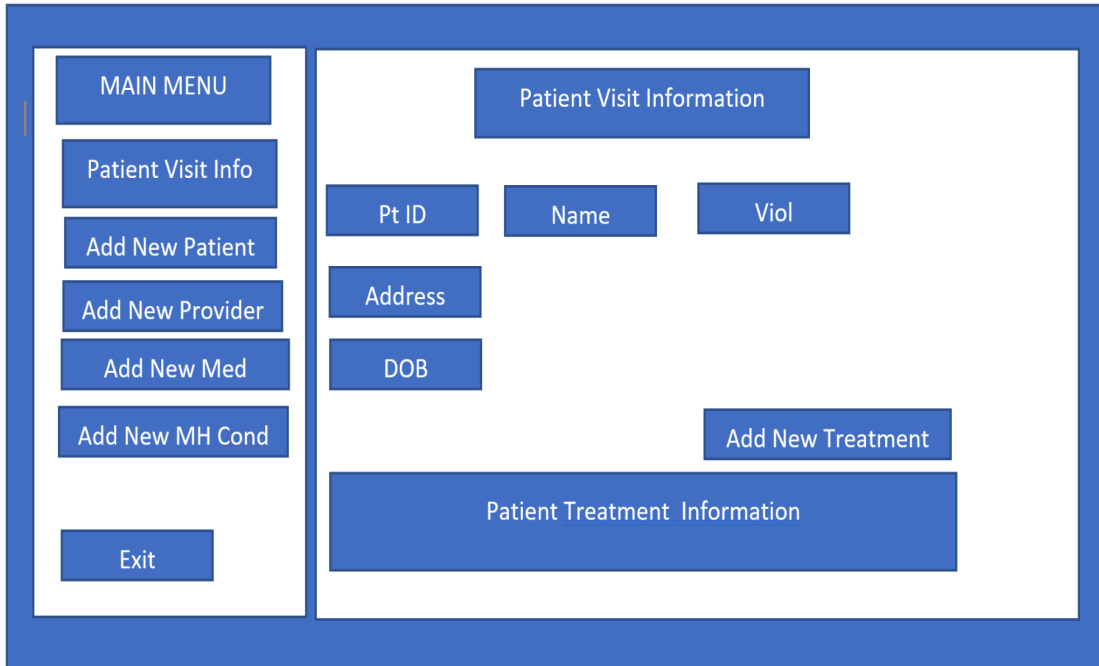
	Med_Rxn	Medication Reasoning	Character (500)	Xxxx				
SDOH	SDOH_ID	Social Determinants of Health Identification Number	Integer (5)	99999	00001-99999	Yes	PK	
	SDOH_Type	Social Determinants of Health type (i.e, transportation, education, employment, etc.)	Character (500)	Xxxx, Xxxx				
MH_CONDITIONS	MH_ID	Mental Health Identification number	Integer (5)	99999	00001-99999	Yes	PK	
	MH_Type	Mental Health Type (i.e., depression, anxiety, substance abuse, etc.)	Character (500)	Xxxx, Xxxx				
TREATMENT	Trt_ID	Treatment Identificati	Integer (5)	99999	00001-9	Yes	PK	

		on Number			9999			
	Patient_ID	Patient Identification Number	Integer (5)	99999	00001-99999	Yes	FK	PATIENT
	Provider_ID	Provider Identification Number	Integer (5)	99999	00001-99999	Yes	FK	PROVIDER
	Med_ID	Medication Identification Number	Integer (5)	99999	00001-99999		FK	MEDICATION
	Trt_Date	Treatment Date	Date	MM/DD/YYYY				

Draft Designs User Interface

The user interface was designed to allow the user to create a new appointment or to check on a patient's current medication and/or provider. The user interface can also look at a patient's treatment information. There is a report directory to present data such as a patient list, show

follow-up visit due dates, as well as a link to the Power BI reports from the database.

MAIN MENU
Patient Visit Info
Add New Patient
Add New Provider
Add New Med
Add New MH Cond
Exit

Patient Visit Information

| Pt ID | Name | Viol |

Address

DOB

Add New Treatment

Patient Treatment Information

Reports

Patient Report
Follow-up Visit Report
Link to Power BI Reports

Draft Designs Reports

Report 1

Report Name	Provider Info
Number of Patients	Number of Treatments

Number patients prescribed medication area chart

Number of times medication prescribed donut chart
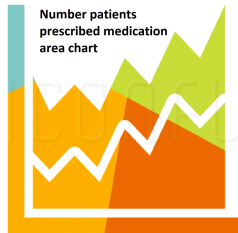
Report 2

Report Name	Count SDOH
Slicer Tool	Patient Count
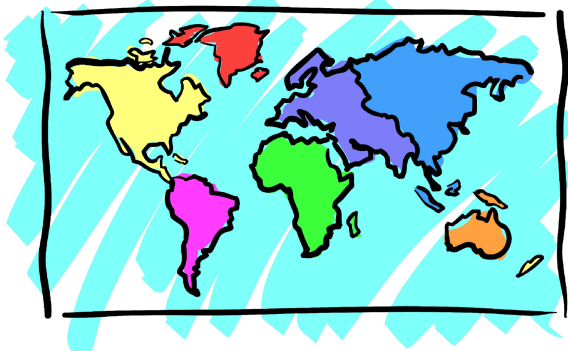
Detailed System Specifications

Purpose:
- To store and manage patient data for a healthcare facility.
- To allow healthcare providers to access and modify patient data.
- To provide reports and analytics on patient health outcomes and trends.

Data structure:
- Tables for patient demographics, medical history, allergies, medications, and laboratory test results.
- The demographics table includes fields for patient ID, name, date of birth, gender, address, and contact information.

- The medical history table includes fields for medical conditions, surgeries, and family medical history.
- One-to-many relationships on patient ID link tables.

Scalability:
- The database must be able to handle a large number of patients and their associated medical data.
- The system must handle concurrent access by multiple healthcare providers without performance degradation.

Security:
- Access to the database is restricted to authorized users only.
- User authentication and authorization are implemented using industry-standard protocols.
- Patient data is encrypted in transit and at rest.
- Regular backups of the database are taken and stored securely offsite.

Performance:
- Indexes are created on frequently accessed fields for faster query performance.
- Caching is implemented to reduce database round-trips and improve performance.
- The database is tuned for optimal performance based on usage patterns.

Compatibility:
- The database is designed to work on a modern cloud platform.
- The database management system is compatible with the chosen cloud platform.

Maintenance:
- The database is monitored 24/7 for performance and availability.
- Regular database maintenance tasks, such as index rebuilding and optimization, are scheduled.
- User support is provided via a help desk system.

Usability:
- The user interface is designed to be intuitive and user-friendly.
- Documentation and training materials are provided to healthcare providers.

Data backup and recovery:
- Regular backups of the database are taken and stored securely offsite.
- A disaster recovery plan is in place in case of catastrophic failure.

Plan:
  - Identify critical data: The first step is identifying the data critical to the operations. This may include financial records, customer data, and other sensitive information.

- Establish backup procedures: Determine the appropriate backup procedures for each critical system or data set, including regularly scheduled backups, incremental backups, or full backups.

- Test backups: Regularly test the backups to ensure the data can be recovered during a disaster. This includes testing the restoration process and verifying the integrity of the data.
- Establish recovery procedures: Develop procedures for recovering data during a disaster. This may include procedures for restoring data from backups, recovering data from damaged media, or rebuilding systems.
- Determine recovery time objectives (RTOs) and recovery point objectives (RPOs): Set RTOs and RPOs for each critical system or data set. RTOs specify the maximum time a system or data set can be down before it affects operations. In contrast, RPOs specify the maximum amount of data that can be lost before it affects operations.
- Establish communication procedures: Develop procedures for communicating with stakeholders during a disaster. This may include procedures for notifying employees, customers, vendors, and other stakeholders.
- Establish roles and responsibilities: Define the roles and responsibilities of each member of the data recovery team. This includes identifying who will be responsible for managing the recovery process, who will be responsible for restoring data from backups, and who will be responsible for testing the restored data.
- Develop a testing plan: Regularly test the data recovery plan to ensure it is effective and up-to-date. This includes testing the recovery procedures, communication procedures, and backup and recovery systems.
- Train employees: Train employees on the data recovery plan and their roles and responsibilities in the event of a disaster.
- Regularly review and update the plan: Regularly review and update the data recovery plan to ensure it remains effective and current. This includes updating the plan in response to changes in technology, the organization's operations, or the threat landscape.

Compliance:
- The database complies with relevant data privacy laws and regulations, such as HIPAA.
- Industry-specific standards, such as Meaningful Use, are adhered to for electronic health record (EHR) certification.

Maintenance Plan of Application

As the application contains sensitive patient information, it is imperative that the data is backed up regularly to prevent major loss. The database will be updated any time a patient or provider joins the service or leaves. For this application, backups will be biweekly to account for new patients and providers. These backups will be stored on Microsoft Azure, which is a cloud provider. This will also provide load balancing and control network traffic. Azure Site Recovery will also allow data to be replicated to a secondary location in different geographic locations in case of a disaster. Azure also provides multi-factor authentication and access control for

security. Transport Layer Security (TLS) is used for data encryption. The application can only be accessed on hospital owned and issued desktops and laptops. These machines will have a firewall installed and can only be accessed by the user logging in with their employee number and unique password. After logging in, users will be asked to input a one-time PIN sent to their mobile device. Security audits will be performed monthly to ensure that protections are operating smoothing.

Software updates will be performed as necessary per Azure. Updates will be tested on a dummy server prior to being implemented on the primary production system.

New users will be trained in person so that hands-on guidance and troubleshooting can be provided in real-time. Trainers should be well-versed and experienced with the application.Training can be supplemented by video tutorials. As new users will likely be providers joining the service for the first time, training will be in-depth and extensive, and should be part of onboarding procedures. Training will include an overview of HIPAA regulations, as well as means to protect patient confidentiality.

Limitation of the application/project

There are some limitations to creating a database of this size. The first is the amount of data that is entered. This database could be expanded to be integrated into other systems at a clinic or hospital. For instance, if a hospital currently has a patient scheduling system, this information could be integrated with that system.After integration, hospital staff would have to be trained on the additional software added.

Another limitation would be adding data security to the application. In order to comply with HIPAA laws and keep patient health data protected, security software would have to be added to prevent any HIPAA violations or data leaks. There would be a cost for keeping this software up to date.

A third limitation would be cost. There would be many additional costs for the maintenance and the upkeep of the system. Some servers would be added in order to perform timely back-ups of the data and keep the database running smoothly and prevent catastrophic failures. Additional personnel may have to be added to maintain these servers.

Programmers would be hired to improve/upgrade the system as more users come online. The programmers would also be tasked with integrating the current data with any additional systems. Data may have to be transformed in order to make the systems work together.

Potential Future development and implementation discussion for the application - Alison

The mental health field has seen a significant increase in the use of technology when it comes to improving patient care as well as patient outcomes. There are several potential areas for future development and implementation of this mental health application that include predictive analytics, expansion of the existing reports as well as new reports, and natural language processing.

Moving to a cloud based back end would allow for flexibility of the database. This would allow for saving and reduce costs to manage the hardware for the database in house.This would also provide more flexibility for integration with other data systems. Automated processes could be implemented to automatically pull data from other systems instead of manual entry. For example, the treatment data schedule could be updated by the main hospital scheduler. This would reduce errors in data entry. Automated processes could be set up on a daily, weekly or monthly schedule, or based on a trigger in the database.

By leveraging predictive analytics, it is possible to anticipate potential adverse outcomes for patients, such as the risk of suicide, and provide timely information to a patient's healthcare team. With this knowledge, proactive measures can be taken to ensure that patients receive the necessary care and medication to mitigate such risks.

Existing reports will receive regular updates and maintenance, and also aim to expand upon each report to further enhance patient outcomes. For example, the medication report can be enhanced by examining medication usage data from specific years. By doing so, we can gain valuable insights into the effectiveness of various medications and dosages for treating specific conditions, which can inform and improve future treatment decisions. A new report can be generated that looks at the prevalent mental health conditions diagnosed by each provider, the number of patients, and the most successful treatments/medications used for each condition. This report can improve the understanding of mental health conditions and aid providers in delivering effective treatments.

Lastly, natural language processing (NLP) can be leveraged to analyze unstructured data in patient notes and identify patterns and insights that can potentially enhance treatment outcomes and improve patient care.

Appendix

--CREATE DATABASE FinalProject;

```sql
--Create PATIENT table;
CREATE TABLE PATIENT (
    Patient_ID  int NOT NULL PRIMARY KEY,
    Patient_FirstName varchar(50),
    Patient_MiddleName varchar(50),
    Patient_LastName varchar(50),
    Patient_Sufix varchar(10),
    Patient_DOB DATE,
        Patient_Address1 varchar(100),
    Patient_Address2 varchar(100),
    Patient_City varchar(100),
    Patient_State varchar(2),
    Patient_ZipCode int,
        Patient_PhoneNumber varchar(10),
        Patient_Violent varchar(10)
);

--Create Provider table;
CREATE TABLE PROVIDER (
    Provider_ID int  NOT NULL   PRIMARY KEY,
        Provider_FirstName varchar(50),
        Provider_LastName varchar(50),
        Provider_Degree varchar(50),
        Provider_NPI varchar(10)

);

--Create SDOH table;
CREATE TABLE SDOH (
        SDOH_ID int NOT NULL  PRIMARY KEY,
        SDOH_Type char(500)
);
--Create SDOH_PT table;
CREATE TABLE SDOH_PT (
        SDOH_PT_ID int NOT NULL  PRIMARY KEY,
        SDOH_ID int FOREIGN KEY REFERENCES SDOH(SDOH_ID) ,
    Patient_ID int FOREIGN KEY REFERENCES PATIENT(Patient_ID)
);


--Create MEDICATION table;
CREATE TABLE MEDICATION (
        Med_ID int NOT NULL  PRIMARY KEY,
```

```sql
        Med_Name varchar(200),
        Med_Dur varchar(100),
        Med_Dose varchar(100),
        Med_Rxn char(500)
);


--Create MH_CONDITIONS table;

CREATE TABLE MH_CONDITIONS (
        MH_ID int NOT NULL  PRIMARY KEY,
        MH_Type char(500)
);




--Create Prov_MH table;

CREATE TABLE PROV_MH(
        ProvMH_ID int NOT NULL  PRIMARY KEY,
        MH_ID int  FOREIGN KEY REFERENCES MH_CONDITIONS(MH_ID),
        Provider_ID int  FOREIGN KEY REFERENCES PROVIDER(Provider_ID)

);

--Create Treatment table;

CREATE TABLE TREATMENT (
        Trt_ID int NOT NULL  IDENTITY(1,1) PRIMARY KEY,
        Patient_ID int  FOREIGN KEY REFERENCES PATIENT(Patient_ID),
        Provider_ID int  FOREIGN KEY REFERENCES PROVIDER(Provider_ID),
        Med_ID int  FOREIGN KEY REFERENCES MEDICATION(Med_ID),
        MH_ID int  FOREIGN KEY REFERENCES MH_CONDITIONS(MH_ID),
        Trt_Date DATE
);




--INSERT  DATA INTO PATIENT TABLE;
```

```sql
INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_Address2,Patient_City,Patient_State,
Patient_ZipCode ,Patient_PhoneNumber,Patient_Violent)
VALUES(48513, 'Emily', 'Rose', 'Johnson', 'Jr','03/15/1978', '123 Main St',' Apt 4A', '', 'PA',
15106, '5555551212', 'No');

INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(58613,'Michael','David','Lee','NULL','11-21-1992','456 Elm
St','Pittsburgh','PA',15205,'5555552323','No');

INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(58964,'Sarah','Anne','Brown          ','NULL','1985-07-02','789 Oak
Ave','Pittsburgh','PA',45678,'5555553434','No');

INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(25489,'David','Patrick','Kim','III','1973-09-10','321 Pine
St','Pittsburgh','PA',90123,'5555554545','Yes');

INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(34689,'Rachel','Marie','Davis','NULL','2000-05-17','654 Cedar Ln','Pittsburgh','PA',
23456,'5555555656','No');

INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(10239,'Jason','Christopher','Robinson','NULL','1989-02-28','987 High
St','Pittsburgh','PA',45678,'5555556767','No');

INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
```

Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(43975,'Olivia','Grace','Nguyen','NULL','1996-08-07','234 Park
Ave','Pittsburgh','PA',90123,'5555557878','Yes');

INSERT INTO PATIENT (Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(75931,'William','Anthony','Hernandez','NULL','1980-11-14','567 Lake
Rd','Pittsburgh','PA',34567,'5555558989','No');

INSERT INTO PATIENT (Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(97853,'Sophia','Elizabeth','Garcia','1975-04-23','890 River
St','Pittsburgh','PA',67890,'5555550101','Yes');

INSERT INTO PATIENT (Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(64896,'Benjamin','Thomas','Kim','NULL','1998-12-31','321 Forest
Ave','Pittsburgh','PA',12345,'5555551212','No');

INSERT INTO PATIENT (Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_DOB, Patient_Address1, Patient_Address2,Patient_City,Patient_State,
Patient_ZipCode ,Patient_PhoneNumber,Patient_Violent)
VALUES(32335,'Emma','Nicole','Wilson','02/14/2005','654 Ocean Blvd','Apt 3B','Pittsburgh','PA',
15120,'5555552323','Yes');

INSERT INTO PATIENT (Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(22434,'Ethan','Alexander','Baker','II','06-18-1990','789 Hillside
Dr','Pittsburgh','PA',45678,'5555553434','No');

INSERT INTO PATIENT (Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)

```sql
VALUES(12116,'Mia','Isabella','Taylor','NULL','1983-09-27','123 Meadow
Ln','Pittsburgh','PA',23456,'5555554545','No');

INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(85889,'Daniel','Ryan','Martinez','Jr','1977-01-08','456 Birch
Rd','Pittsburgh','PA',56789,'5555555656','No');

INSERT INTO  PATIENT ( Patient_ID,Patient_FirstName, Patient_MiddleName,
Patient_LastName,
Patient_Sufix, Patient_DOB, Patient_Address1, Patient_City,Patient_State, Patient_ZipCode
,Patient_PhoneNumber,Patient_Violent)
VALUES(98364,'Harper','Victoria','Anderson','NULL','1999-07-24','789 Maple
St','Pittsburgh','PA',23456,'5555556767','No');




--INSERT  DATA INTO PROVIDER TABLE;

INSERT INTO  PROVIDER VALUES(12482,'John','Smith','MD','1234567890');
INSERT INTO  PROVIDER VALUES(87592,'Sarah','Johnson','PhD','2345678901');
INSERT INTO  PROVIDER VALUES(43658,'Michael','Williams','DO','3456789012');
INSERT INTO  PROVIDER VALUES(25765,'Emily','Brown','LPC','4567890123');
INSERT INTO  PROVIDER VALUES(31458,'David','Jones','MSW','5678901234');
INSERT INTO  PROVIDER VALUES(67821,'Samantha','Garcia','MD','6789012345');
INSERT INTO  PROVIDER VALUES(95158,'Christopher','Martinez','PsyD','7890123456');










--INSERT  DATA INTO SDOH TABLE;
```

```
INSERT INTO  SDOH VALUES(12510,'Mental Health')
INSERT INTO  SDOH VALUES(31566,'Spiritual Health')
INSERT INTO  SDOH VALUES(32125,'Language Barriers')
INSERT INTO  SDOH VALUES(32789,'Physical Activity')
INSERT INTO  SDOH VALUES(48631,'Food Insecurity')
INSERT INTO  SDOH VALUES(53147,'Transportation')
INSERT INTO  SDOH VALUES(56456,'Neighborhood Safety')
INSERT INTO  SDOH VALUES(65128,'Addiction')
INSERT INTO  SDOH VALUES(65456,'Access to Healthcare')
INSERT INTO  SDOH VALUES(65881,'Income')
INSERT INTO  SDOH VALUES(74135,'Housing Stability')
INSERT INTO  SDOH VALUES(85203,'Education')
INSERT INTO  SDOH VALUES(87365,'Discrimination')
INSERT INTO  SDOH VALUES(96751,'Social Support')
INSERT INTO  SDOH VALUES(98255,'Environmental Health')


--INSERT  DATA INTO SDOH_PT TABLE;

INSERT INTO  SDOH_PT VALUES(1,12510,10239)
INSERT INTO  SDOH_PT VALUES(2,32789,10239)
INSERT INTO  SDOH_PT VALUES(3,65128,10239)
INSERT INTO  SDOH_PT VALUES(4,65456,10239)
INSERT INTO  SDOH_PT VALUES(5,65881,10239)
INSERT INTO  SDOH_PT VALUES(6,74135,10239)
INSERT INTO  SDOH_PT VALUES(7,85203,10239)
INSERT INTO  SDOH_PT VALUES(8,87365,10239)
INSERT INTO  SDOH_PT VALUES(9,12510,12116)
INSERT INTO  SDOH_PT VALUES(10,32125,12116)
INSERT INTO  SDOH_PT VALUES(11,32789,12116)
INSERT INTO  SDOH_PT VALUES(12,56456,12116)
INSERT INTO  SDOH_PT VALUES(13,12510,22434)
INSERT INTO  SDOH_PT VALUES(14,32125,22434)
INSERT INTO  SDOH_PT VALUES(15,53147,22434)
INSERT INTO  SDOH_PT VALUES(16,65456,22434)
INSERT INTO  SDOH_PT VALUES(17,85203,22434)
INSERT INTO  SDOH_PT VALUES(18,96751,22434)
INSERT INTO  SDOH_PT VALUES(19,12510,25489)
INSERT INTO  SDOH_PT VALUES(20,48631,25489)
INSERT INTO  SDOH_PT VALUES(21,53147,25489)
INSERT INTO  SDOH_PT VALUES(22,74135,25489)
INSERT INTO  SDOH_PT VALUES(23,31566,32335)
INSERT INTO  SDOH_PT VALUES(24,87365,32335)
INSERT INTO  SDOH_PT VALUES(25,96751,32335)
```

```sql
INSERT INTO  SDOH_PT VALUES(26,12510,34689)
INSERT INTO  SDOH_PT VALUES(27,32125,34689)
INSERT INTO  SDOH_PT VALUES(28,56456,34689)
INSERT INTO  SDOH_PT VALUES(29,87365,34689)
INSERT INTO  SDOH_PT VALUES(30,96751,34689)
INSERT INTO  SDOH_PT VALUES(31,12510,43975)
INSERT INTO  SDOH_PT VALUES(32,32125,43975)
INSERT INTO  SDOH_PT VALUES(33,65128,43975)
INSERT INTO  SDOH_PT VALUES(34,87365,43975)
INSERT INTO  SDOH_PT VALUES(35,96751,43975)
INSERT INTO  SDOH_PT VALUES(36,12510,48513)
INSERT INTO  SDOH_PT VALUES(37,31566,48513)
INSERT INTO  SDOH_PT VALUES(38,65128,48513)
INSERT INTO  SDOH_PT VALUES(39,65456,48513)
INSERT INTO  SDOH_PT VALUES(40,85203,48513)
INSERT INTO  SDOH_PT VALUES(41,12510,58613)
INSERT INTO  SDOH_PT VALUES(42,31566,58613)
INSERT INTO  SDOH_PT VALUES(43,65128,58613)
INSERT INTO  SDOH_PT VALUES(44,65456,58613)
INSERT INTO  SDOH_PT VALUES(45,85203,58613)
INSERT INTO  SDOH_PT VALUES(46,32125,58964)
INSERT INTO  SDOH_PT VALUES(47,12510,64896)
INSERT INTO  SDOH_PT VALUES(48,32789,64896)
INSERT INTO  SDOH_PT VALUES(49,48631,64896)
INSERT INTO  SDOH_PT VALUES(50,56456,64896)
INSERT INTO  SDOH_PT VALUES(51,65881,64896)
INSERT INTO  SDOH_PT VALUES(52,31566,75931)
INSERT INTO  SDOH_PT VALUES(53,98255,75931)
INSERT INTO  SDOH_PT VALUES(54,53147,85889)
INSERT INTO  SDOH_PT VALUES(55,56456,85889)
INSERT INTO  SDOH_PT VALUES(56,65881,85889)
INSERT INTO  SDOH_PT VALUES(57,74135,85889)
INSERT INTO  SDOH_PT VALUES(58,48631,97853)
INSERT INTO  SDOH_PT VALUES(59,53147,97853)
INSERT INTO  SDOH_PT VALUES(60,74135,97853)
INSERT INTO  SDOH_PT VALUES(61,12510,98364)
INSERT INTO  SDOH_PT VALUES(62,32125,98364)
INSERT INTO  SDOH_PT VALUES(63,32789,98364)
INSERT INTO  SDOH_PT VALUES(64,48631,98364)


--INSERT  DATA INTO MEDICATION TABLE;
```

```
INSERT INTO  MEDICATION VALUES(67890,'Xanax',30,'1mg','Anxiety Disorder')
INSERT INTO  MEDICATION VALUES(78901,'Valium',30,'5mg','Anxiety Disorder')
INSERT INTO  MEDICATION VALUES(23555,'Wellbutrin,',30,'200mg','Biopolar Disorder')
INSERT INTO  MEDICATION VALUES(89012,'Lithobid',30,'750mg','Biopolar Disorder')
INSERT INTO  MEDICATION VALUES(34567,'Lexapro',30,'20mg','Depression Disorder')
INSERT INTO  MEDICATION VALUES(45678,'Elavil',30,'90mg','Depression Disorder')
INSERT INTO  MEDICATION VALUES(23456,'Zoloft',30,'70mg','Depression/Anxiety Disorder')
INSERT INTO  MEDICATION VALUES(12345,'Prozac',30,'20mg','Depression/Anxiety Disorder')
INSERT INTO  MEDICATION VALUES(12234,'Seroquel',30,'200mg','Major Depressive
Disorder')
INSERT INTO  MEDICATION VALUES(12435,'Pristiq',30,'75mg','Major Depressive Disorder')
INSERT INTO  MEDICATION VALUES(90123,'Tofranil',30,'75mg','Major Depressive Disorder')
INSERT INTO  MEDICATION VALUES(14890,'Luvox',30,'60mg','Obsessive-Compulive
Disorder')
INSERT INTO  MEDICATION VALUES(38904,'Paxil',30,'30mg','Obsessive-Compulive Disorder')
INSERT INTO  MEDICATION VALUES(56789,'Cymbalta',30,'55mg','Post-traumatic stress
disorder (PTSD)')
INSERT INTO  MEDICATION VALUES(85023,'Risperdal',30,'1mg','Post-traumatic stress
disorder (PTSD)')
INSERT INTO  MEDICATION VALUES(55788,'Zyprexa',30,'10mg','Psychotic Disorder')
INSERT INTO  MEDICATION VALUES(98588,'Depakote',30,'800mg','Psychotic Disorder')
INSERT INTO  MEDICATION VALUES(46904,'Abilify        ',30,'15mg','Schizophrenia Disorder')
INSERT INTO  MEDICATION VALUES(59021,'Chlorpromazine',30,'150mg','Schizophrenia
Disorder')


--INSERT  DATA INTO MH_CONDITIONS TABLE;

INSERT INTO  MH_CONDITIONS VALUES(34855,'Anxiety Disorder')
INSERT INTO  MH_CONDITIONS VALUES(32548,'Bipolar Disorder')
INSERT INTO  MH_CONDITIONS VALUES(36484,'Depression Disorder')
INSERT INTO  MH_CONDITIONS VALUES(55635,'Depression/Anxiety Disorder')
INSERT INTO  MH_CONDITIONS VALUES(75877,'Major Depression Disorder')
INSERT INTO  MH_CONDITIONS VALUES(45218,'Obsessive-Compulsive Disorder')
INSERT INTO  MH_CONDITIONS VALUES(62589,'Post-traumatic stress disorder (PTSD)')
INSERT INTO  MH_CONDITIONS VALUES(13579,'Psychotic Disorder')
INSERT INTO  MH_CONDITIONS VALUES(13526,'Schizophrenia Disorder')


--INSERT  DATA INTO PROV_MH TABLE;
```

```sql
INSERT INTO  PROV_MH VALUES(1,34855,12482)
INSERT INTO  PROV_MH VALUES(2,34855,25765)
INSERT INTO  PROV_MH VALUES(3,34855,31458)
INSERT INTO  PROV_MH VALUES(4,34855,95158)
INSERT INTO  PROV_MH VALUES(5,32548,12482)
INSERT INTO  PROV_MH VALUES(6,32548,25765)
INSERT INTO  PROV_MH VALUES(7,32548,31458)
INSERT INTO  PROV_MH VALUES(8,32548,95158)
INSERT INTO  PROV_MH VALUES(9,36484,12482)
INSERT INTO  PROV_MH VALUES(10,36484,25765)
INSERT INTO  PROV_MH VALUES(11,36484,31458)
INSERT INTO  PROV_MH VALUES(12,36484,95158)
INSERT INTO  PROV_MH VALUES(13,55635,12482)
INSERT INTO  PROV_MH VALUES(14,55635,25765)
INSERT INTO  PROV_MH VALUES(15,55635,31458)
INSERT INTO  PROV_MH VALUES(16,55635,95158)
INSERT INTO  PROV_MH VALUES(17,75877,12482)
INSERT INTO  PROV_MH VALUES(18,75877,25765)
INSERT INTO  PROV_MH VALUES(19,75877,31458)
INSERT INTO  PROV_MH VALUES(20,75877,95158)
INSERT INTO  PROV_MH VALUES(21,45218,25765)
INSERT INTO  PROV_MH VALUES(22,45218,43658)
INSERT INTO  PROV_MH VALUES(23,45218,87592)
INSERT INTO  PROV_MH VALUES(24,45218,95158)
INSERT INTO  PROV_MH VALUES(25,62589,25765)
INSERT INTO  PROV_MH VALUES(26,62589,43658)
INSERT INTO  PROV_MH VALUES(27,62589,87592)
INSERT INTO  PROV_MH VALUES(28,62589,95158)
INSERT INTO  PROV_MH VALUES(29,13579,12482)
INSERT INTO  PROV_MH VALUES(30,13579,25765)
INSERT INTO  PROV_MH VALUES(31,13579,67821)
INSERT INTO  PROV_MH VALUES(32,13579,95158)
INSERT INTO  PROV_MH VALUES(33,13526,12482)
INSERT INTO  PROV_MH VALUES(34,13526,25765)
INSERT INTO  PROV_MH VALUES(35,13526,67821)
INSERT INTO  PROV_MH VALUES(36,13526,95158)


--INSERT  DATA INTO TREATMENT TABLE;
```

```sql
INSERT INTO  TREATMENT VALUES(10239,31458,23456,55635,'04/18/22')
INSERT INTO  TREATMENT VALUES(10239,31458,23456,55635,'06/10/22')
INSERT INTO  TREATMENT VALUES(10239,31458,12345,55635,'10/01/22')
INSERT INTO  TREATMENT VALUES(10239,31458,12345,55635,'10/17/22')
INSERT INTO  TREATMENT VALUES(10239,31458,12345,55635,'11/17/22')
INSERT INTO  TREATMENT VALUES(10239,31458,12345,55635,'03/17/23')
INSERT INTO  TREATMENT VALUES(12116,31458,45678,36484,'06/02/21')
INSERT INTO  TREATMENT VALUES(12116,31458,12234,75877,'06/08/21')
INSERT INTO  TREATMENT VALUES(12116,31458,12234,75877,'08/09/21')
INSERT INTO  TREATMENT VALUES(22434,43658,38904,45218,'02/22/21')
INSERT INTO  TREATMENT VALUES(22434,43658,38904,45218,'08/01/21')
INSERT INTO  TREATMENT VALUES(22434,43658,14890,45218,'03/19/22')
INSERT INTO  TREATMENT VALUES(22434,43658,14890,45218,'04/19/22')
INSERT INTO  TREATMENT VALUES(22434,43658,14890,45218,'11/30/22')
INSERT INTO  TREATMENT VALUES(25489,67821,59021,13526,'05/06/21')
INSERT INTO  TREATMENT VALUES(25489,67821,59021,13526,'11/27/21')
INSERT INTO  TREATMENT VALUES(32335,25765,12435,75877,'09/28/21')
INSERT INTO  TREATMENT VALUES(32335,25765,12435,75877,'10/17/21')
INSERT INTO  TREATMENT VALUES(32335,25765,90123,75877,'11/24/21')
INSERT INTO  TREATMENT VALUES(32335,25765,12345,55635,'08/23/22')
INSERT INTO  TREATMENT VALUES(34689,95158,59021,13526,'02/21/21')
INSERT INTO  TREATMENT VALUES(34689,95158,59021,13526,'03/29/21')
INSERT INTO  TREATMENT VALUES(34689,95158,59021,13526,'10/30/21')
INSERT INTO  TREATMENT VALUES(34689,95158,46904,13526,'04/24/22')
INSERT INTO  TREATMENT VALUES(43975,12482,23555,32548,'01/18/21')
INSERT INTO  TREATMENT VALUES(43975,12482,23555,32548,'12/25/21')
INSERT INTO  TREATMENT VALUES(43975,25765,23555,32548,'01/20/22')
INSERT INTO  TREATMENT VALUES(43975,12482,23555,32548,'02/13/22')
INSERT INTO  TREATMENT VALUES(48513,12482,78901,34855,'08/12/21')
INSERT INTO  TREATMENT VALUES(48513,25765,12345,55635,'11/02/21')
INSERT INTO  TREATMENT VALUES(48513,25765,12345,55635,'11/21/22')
INSERT INTO  TREATMENT VALUES(48513,12482,67890,34855,'12/31/22')
INSERT INTO  TREATMENT VALUES(58613,12482,89012,32548,'01/05/21')
INSERT INTO  TREATMENT VALUES(58613,25765,45678,36484,'01/29/21')
INSERT INTO  TREATMENT VALUES(58613,25765,45678,36484,'06/14/21')
INSERT INTO  TREATMENT VALUES(58613,25765,45678,36484,'11/20/22')
INSERT INTO  TREATMENT VALUES(58964,25765,56789,62589,'01/28/21')
INSERT INTO  TREATMENT VALUES(58964,25765,56789,62589,'05/28/21')
INSERT INTO  TREATMENT VALUES(58964,67821,55788,13579,'06/28/21')
INSERT INTO  TREATMENT VALUES(58964,67821,55788,13579,'07/15/21')
INSERT INTO  TREATMENT VALUES(58964,67821,98588,13579,'08/03/21')
INSERT INTO  TREATMENT VALUES(58964,12482,98588,13579,'09/07/21')
INSERT INTO  TREATMENT VALUES(58964,12482,98588,13579,'10/11/21')
INSERT INTO  TREATMENT VALUES(64896,43658,38904,45218,'06/14/21')
```

```
INSERT INTO  TREATMENT VALUES(64896,87592,38904,45218,'11/19/21')
INSERT INTO  TREATMENT VALUES(64896,95158,38904,45218,'04/05/22')
INSERT INTO  TREATMENT VALUES(64896,43658,38904,45218,'11/26/22')
INSERT INTO  TREATMENT VALUES(75931,87592,14890,45218,'09/16/21')
INSERT INTO  TREATMENT VALUES(75931,87592,38904,45218,'10/27/21')
INSERT INTO  TREATMENT VALUES(75931,87592,38904,45218,'09/06/22')
INSERT INTO  TREATMENT VALUES(75931,87592,38904,45218,'10/22/22')
INSERT INTO  TREATMENT VALUES(85889,67821,46904,13526,'01/20/21')
INSERT INTO  TREATMENT VALUES(85889,95158,46904,13526,'05/05/22')
INSERT INTO  TREATMENT VALUES(85889,67821,46904,13526,'11/06/22')
INSERT INTO  TREATMENT VALUES(85889,95158,59021,13526,'12/06/22')
INSERT INTO  TREATMENT VALUES(97853,87592,56789,62589,'06/23/21')
INSERT INTO  TREATMENT VALUES(97853,87592,85023,62589,'05/08/22')
INSERT INTO  TREATMENT VALUES(97853,87592,85023,62589,'05/20/22')
INSERT INTO  TREATMENT VALUES(97853,87592,56789,62589,'07/02/22')
INSERT INTO  TREATMENT VALUES(98364,95158,85023,62589,'02/24/21')
INSERT INTO  TREATMENT VALUES(98364,95158,85023,62589,'03/16/21')
INSERT INTO  TREATMENT VALUES(98364,95158,85023,62589,'01/31/22')
INSERT INTO  TREATMENT VALUES(98364,95158,85023,62589,'12/29/22')
```