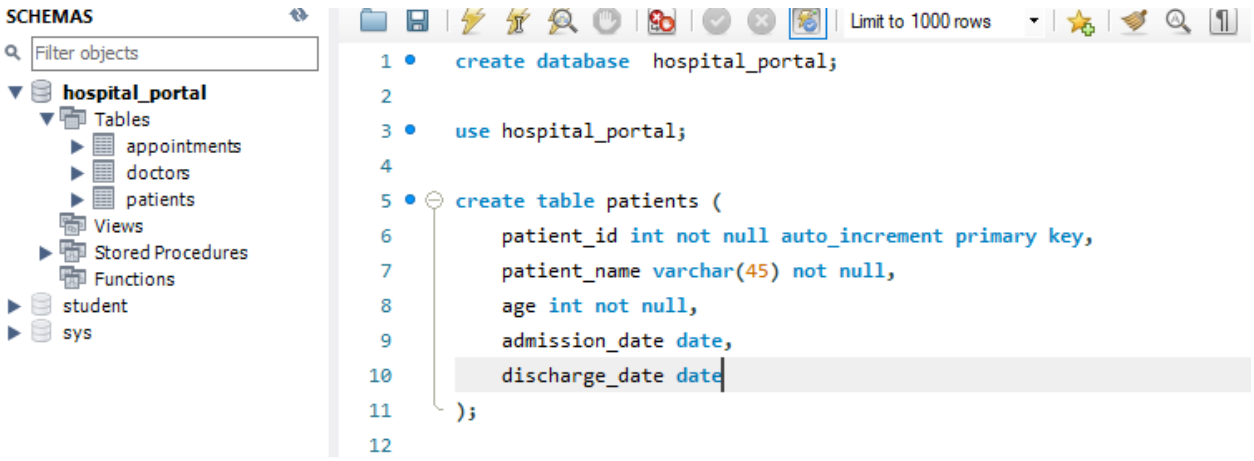
This report outlines the Hospital Portal database using MySQLWorkBench and the linked SQL procedures, along with the functionality of Python portal Database and portal server.

MySQLWorkbench Structure

Tables

1. Patients
    - patient_id (Primary Key)
    - patient_name
    - age
    - admission_date
    - discharge_date



2. Appointments
    - appointment_id (Primary Key)
    - patient_id (Foreign Key referencing Patients)
    - doctor_id (Foreign Key referencing Doctors)
    - appointment_date
    - appointment_time

```sql
create table appointments (
    appointment_id int not null auto_increment primary key,
    patient_id int not null,
    doctor_id int not null,
    appointment_date date not null,
    appointment_time decimal not null,
    FOREIGN KEY (patient_id) REFERENCES patients(patient_id),
    FOREIGN KEY (doctor_id) REFERENCES doctors(doctor_id)
);
```

3. Doctors
    - doctor_id (Primary Key)
    - doctor_name

```sql
create table doctors (
    doctor_id int not null auto_increment primary key,
    doctor_name varchar(45) not null
);

INSERT INTO doctors (doctor_name) VALUES
    ('Dr. Jose'),
    ('Dr. Alex'),
    ('Dr. Chris');
```

Procedures

1. **ScheduleAppointment**
    - Constraints: p_patient_id, p_doctor_id, p_appointment_date, p_appointment_time
    - This Inserts a new appointment into the Appointments table.

```
31    delimiter //
32
33    create procedure ScheduleAppointment(
34        IN p_patient_id INT,
35        IN p_doctor_id INT,
36        IN p_appointment_date DATE,
37        IN p_appointment_time DECIMAL
38    )
39    begin
40        insert into appointments (patient_id, doctor_id, appointment_date, appointment_time)
41        VALUES (p_patient_id, p_doctor_id, p_appointment_date, p_appointment_time);
42    end //
43
44    delimiter ;
45
```

2. **DischargePatient**
    - Constraints: p_patient_id
    - Updates the discharge date for a patient in the Patients table.

```
43
44    delimiter ;
45
46    delimiter //
47
48    create procedure DischargePatient(IN p_patient_id INT)
49    begin
50        update patients SET discharge_date = current_date where patient_id = p_patient_id;
51    end //
52
53    delimiter ;
54
```

ViewAppoinments

appointment_view

- Rows: appointment_id, patient_name, age, appointment_date, appointment_time, doctor_name
- A view combining data from Appointments, Patients, and Doctors tables for easy appointment information recover.

Python Structure

hospital Database

- Defines the Database for interacting with the MySQL database.

portal Database

- Includes ways for adding patients, scheduling appointments, viewing appointments, and discharging patients.

hospital Portal Server

- It handles requests and interacts with the database.

Functionality

1. Adding Patients
    - Patients can be added using the do_POST method.
2. Scheduling Appointments
    - Appointments can be scheduled using the do_POST method.
3. Viewing Appointments
    - All appointments can be viewed using the do_GET method.
4. Discharging Patients
    - Patients can be discharged using the do_POST method.