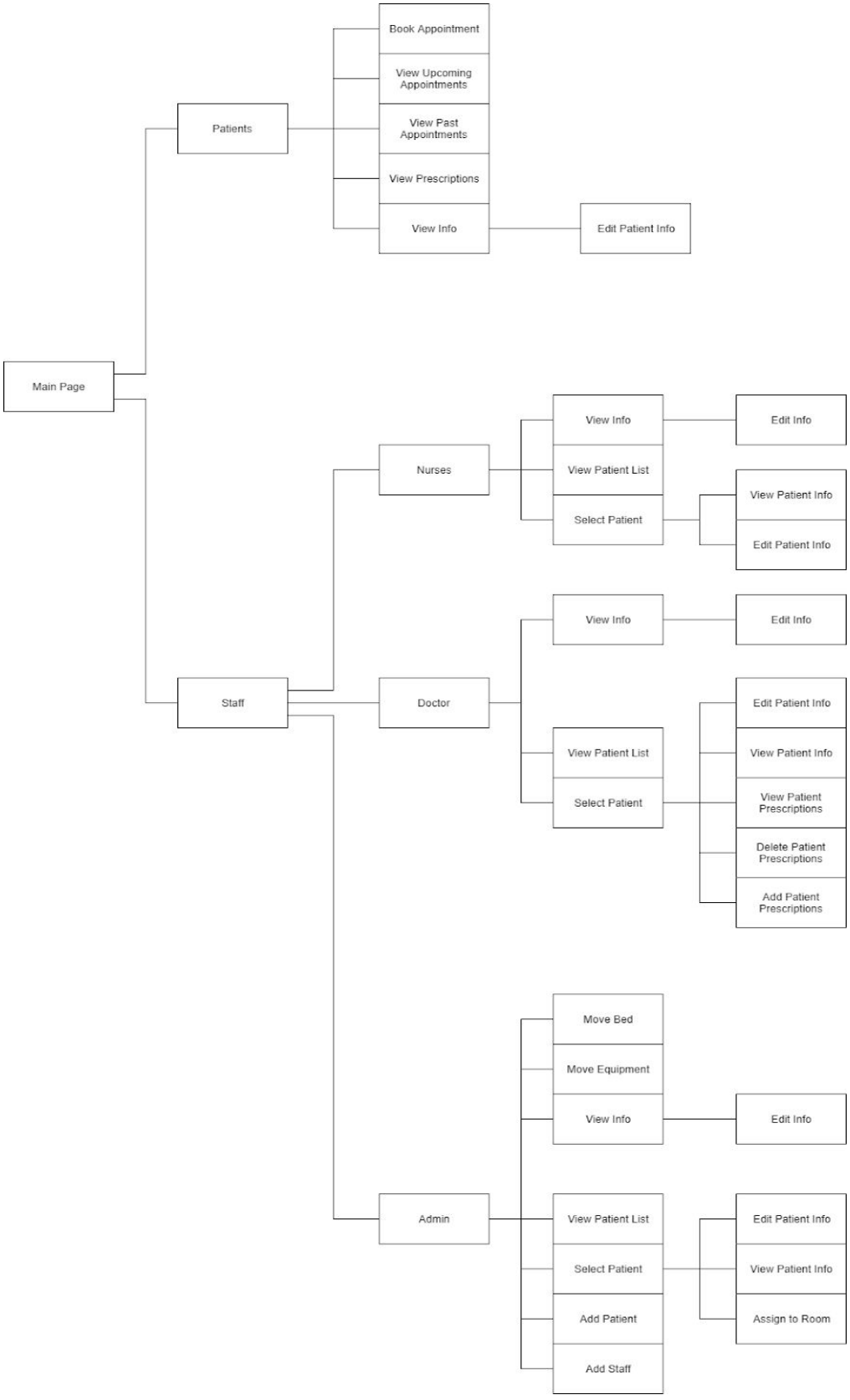
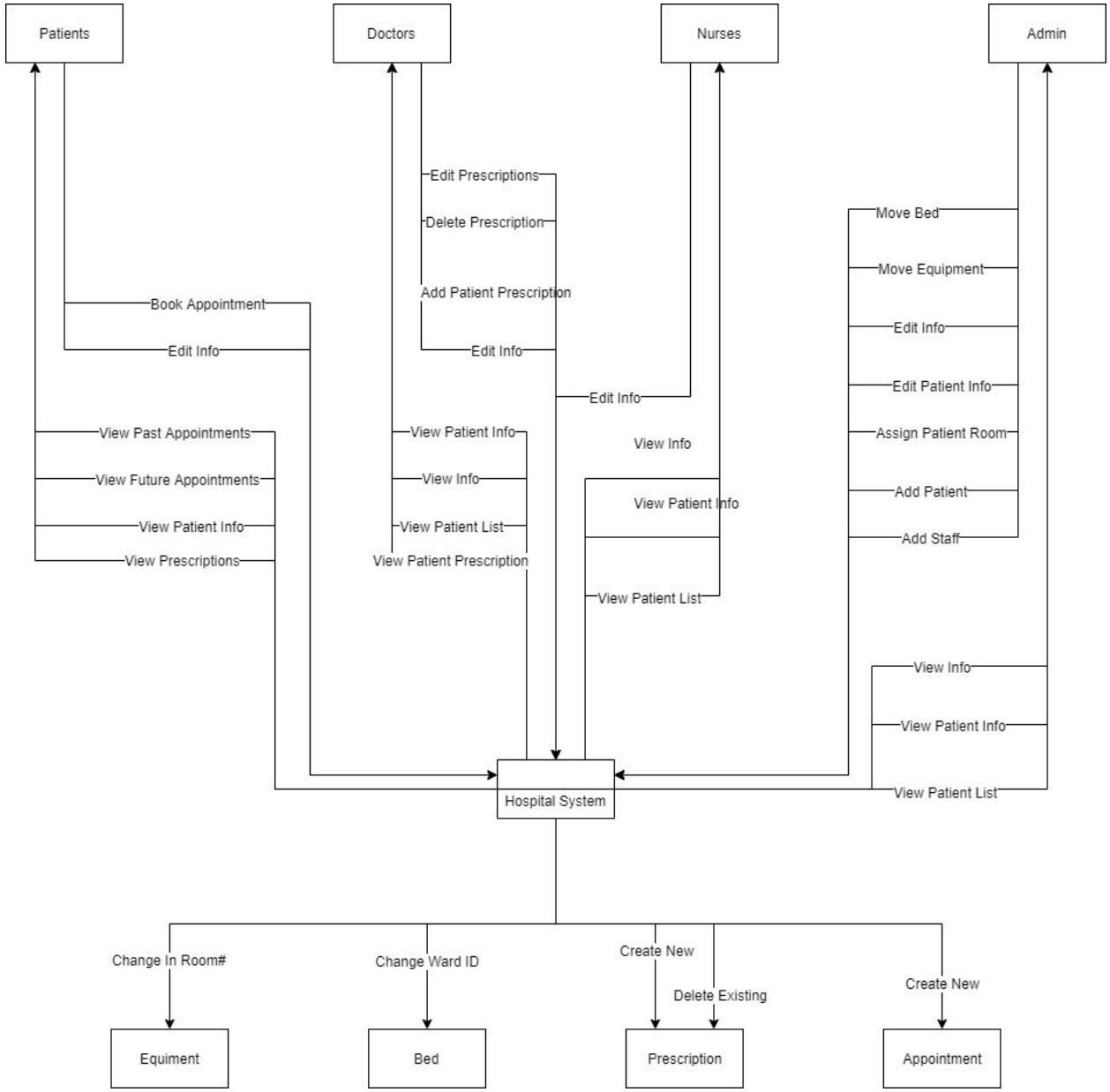
CPSC 471 Group 15
SQL Statements
HIPO
DFD

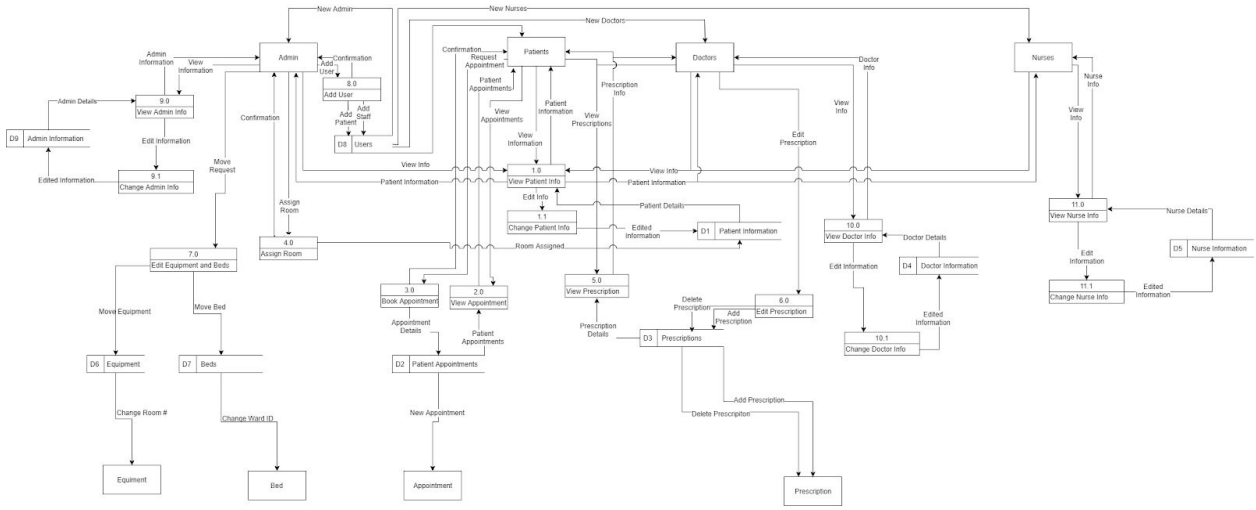
Noah Giustini, Nathan Darby, Erslan Salman

HIPO Diagram:



DFD Diagrams:




New Admin
New Nurses
New Doctors
Admin
Patients
Doctors
Nurses
Admin Information
View Information
Confirmation
Add User
8.0
Add User
Confirmation
Request Appointment
Patient Appointments
Prescription Info
Doctor Info
Nurse Info
Admin Details
9.0
View Admin Info
Add Patient
Add Staff
D8
Users
View Appointments
Patient Information
View Prescriptions
View Info
Edit Prescription
View Info
D9
Admin Information
Edit Information
Confirmation
View Information
1.0
View Patient Info
View Info
Edited Information
9.1
Change Admin Info
Move Request
Patient Information
Patient Information
Assign Room
Edit Info
Patient Details
1.1
Change Patient Info
Edited Information
D1
Patient Information
10.0
View Doctor Info
Doctor Details
11.0
View Nurse Info
Nurse Details
7.0
Edit Equipment and Beds
4.0
Assign Room
Room Assigned
Edit Information
D4
Doctor Information
Edit Information
D5
Nurse Information
3.0
Book Appointment
2.0
View Appointment
5.0
View Prescription
Delete Prescription
6.0
Edit Prescription
Add Prescription
Edited Information
11.1
Change Nurse Info
Edited Information
Move Equipment
Move Bed
Appointment Details
Patient Appointments
Prescription Details
D3
Prescriptions
10.1
Change Doctor Info
D6
Equipment
D7
Beds
D2
Patient Appointments
Add Prescription
Delete Prescripton
Change Room #
Change Ward ID
New Appointment
Equiment
Bed
Appointment
Prescription

SQL Statements:

Unique Functions:

- **Book Appointment**
- **View Appointments**
- **View Patient Prescriptions**
- **View Nurse Info**
- **Edit Nurse Info**
- **View Doctor Info**
- **Edit Doctor Info**
- **View Admin Info**
- **Edit Admin Info**
- **View Patient List**
- **View Patient Info**
- **Edit Patient Info**
- **Delete Patient Prescriptions**
- **Add Patient Prescriptions**
- **Move Bed**
- **Move Equipment**
- **Assign to Room**
- **Add Patient**
- **Add Staff**

Function: View Patient Info
Inputs: @UserID
Outputs: @UserID, @HealthCare#, @FName, @LName
Pseudocode:
Connect to the database
Query =
SELECT *
FROM Patient AS P
WHERE P.UserID = @UserID

Parse Query
Execute Query
Close connection to the database

Function: Edit Patient Info
Inputs: @UserID, @HealthCare#, @FName, @LName
Outputs: None
Pseudocode:
Connect to the database
Query =
UPDATE Patient as P
SET P.HealthCare# = @HealthCare#, P.FName = @FName, P.LName = @LName
WHERE P.UserID = @UserID

Parse Query
Execute Query
Close connection to the database

Function: View Nurse Info
Inputs: @UserID
Outputs: @UserID, @SSN, @FName, @LName, @Salary, @JobTitle, @StartDate, @WardID, @Certificates
Pseudocode:
Connect to the database
Query =
SELECT *
FROM Staff AS S, Nurse AS N, Nurses_Certification as NC
WHERE S.UserID = @UserID AND N.UserID=S.UserID AND NC.UserID = N.UserID

Parse Query
Execute Query
Close connection to the database

Function: Edit Nurse Info
Inputs: @UserID, @SSN, @FName, @LName, @Salary, @JobTitle, @StartDate, @WardID, @Certificates
Outputs: None
Pseudocode:
Connect to the database
Query =
UPDATE Nurse AS N
SET N.FName = @FName, N.LName = @LName, N.Salary = @Salary, N.WardID = @WardID, N.Certificates = @Certificates
WHERE S.UserID = @UserID AND N.UserID=S.UserID AND NC.UserID = N.UserID

Parse Query
Execute Query
Close connection to the database

Function: View Doctor Info
Inputs: @UserID
Outputs: @UserID, @SSN, @FName, @LName, @Salary, @JobTitle, @StartDate, @isSpecialist, @Specialty, @WardID
Pseudocode:
Connect to the database
Query =
SELECT *
FROM Staff AS S, Doctor AS D, Doctor_Is_In_Ward as DW
WHERE S.UserID = @UserID AND D.UserID=S.UserID AND DW.UserID = D.UserID

Parse Query
Execute Query
Close connection to the database

Function: Edit Doctor Info
Inputs: @UserID, @SSN, @FName, @LName, @Salary, @JobTitle, @StartDate, @isSpecialist, @Specialty, @WardID
Outputs: None
Pseudocode:
Connect to the database
Query =
UPDATE Doctor AS D
SET D.FName = @FName, D.LName = @LName, D.Salary = @Salary, D.JobTitle = @JobTitle, D.isSpecialist = @Specialist, D.Specialty = @Specialty, D.WardID = @WardID
WHERE S.UserID = @UserID AND D.UserID=S.UserID AND DW.UserID = D.UserID

Parse Query
Execute Query
Close connection to the database

Function: View Admin Info
Inputs: @UserID
Outputs: @UserID, @SSN, @FName, @LName, @Salary, @JobTitle, @StartDate, @ClearanceLevel
Pseudocode:
Connect to the database
Query =
SELECT *
FROM Staff AS S, Admin AS A
WHERE S.UserID = @UserID AND A.UserID = S.UserID

Parse Query
Execute Query
Close connection to the database

Function: Edit Admin Info
Inputs: @UserID, @SSN, @FName, @LName, @Salary, @JobTitle, @StartDate, @ClearanceLevel
Outputs: None
Pseudocode:
Connect to the database
Query =
UPDATE Admin AS A
SET A.FName = @FName, A.LName = @LName, A.Salary = @Salart, A.JobTitle = @JobTitle, A.ClearanceLevel = @ClearanceLevel
WHERE S.UserID = @UserID AND A.UserID = S.UserID

Parse Query
Execute Query
Close connection to the database

Function: View Patient List
Inputs: @UserID
Outputs: @Patients
Pseudocode:
Connect to the database
Query =
SELECT P.UserID, P.FName, P.LName, P.HealthCare#
FROM Patient AS P, Doctor_Is_In_Ward AS DW, Patient_Is_In_Ward AS PW
WHERE DW.UserID = @UserID AND DW.WARD_WardID = PW.WARD_WardID AND PW.PATIENT_UserID = P.UserID

Parse Query
Execute Query
Close connection to the database

Function: Add Patient
Inputs: @UserID, @Password, @HealthCare#, @FName, @LName
Outputs: None
Pseudocode:
Connect to the database
Query =
INSERT INTO Patient
VALUES (@UserID, @Password, @FName, @LName, @HealthCare#)

Parse Query
Execute Query
Close connection to the database

Function: Add Staff
Inputs: @UserID, @Password, @SSN, @FName, @LName, @Salary, @JobTitle, @StartDate
Outputs: None
Pseudocode:
Connect to the database
Query =
INSERT INTO Staff
VALUES (@UserID, @Password, @SSN, @FName, @LName, @Salary, @JobTitle, @StartDate)

Parse Query
Execute Query
Close connection to the database

Function: Assign to Room
Inputs: @UserID, @Room#
Outputs: None
Pseudocode:
Connect to the database
Query =
UPDATE Patient_Is_In_Room AS P
SET P.ROOM_Room# = @Room#
WHERE P.PATIENT_UserID = @UserID
Parse Query
Execute Query
Close connection to the database

Function: Move Bed
Inputs: @Bed#, @WardID
Outputs: None
Pseudocode:
Connect to the database
Query =
UPDATE Bed
SET WARD_Ward_ID = @WardID
WHERE Bed# = @Bed#
Parse Query
Execute Query
Close connection to the database

Function: Move Equipment
Inputs: @EquipmentID, @Room#
Outputs: None
Pseudocode:
Connect to the database
Query =
UPDATE Equipment
SET ROOM_Room# = @Room#
WHERE Equipment_ID = @EquipmentID
Parse Query
Execute Query
Close connection to the database

Function: View Appointments
Inputs: @UserID
Outputs: @Appointment
Pseudocode:
Connect to the database
Query = SELECT P.Time,P.Date,P.Reason,S.FName,S.LName
FROM Appointment AS P, Staff as S
WHERE P.UserID = @UserID
INNER JOIN S ON S.UserID = P.DOCTOR_UserID
Parse Query
Execute Query
Close connection to the database

Function: View Patient Prescriptions
Inputs: @UserID
Outputs: @Prescribed
Pseudocode:
Connect to the database
Query = SELECT M.MedicineName, P.Dosage,P.Frequency,P.IsRefillable
FROM Prescribed AS P, Medicine AS M
WHERE P.PATIENT_UserID = @UserID
INNER JOIN M ON M.MedicineID = P.MEDICINE_MedicineID
Parse Query
Execute Query
Close connection to the database

Function: Add Patient Prescriptions
Inputs: @PatientUserID,@DoctorUserID,@MedicineID,@Dosage,@Frequency,@Refillable
Outputs: None
Pseudocode:
Connect to the database
Query =
INSERT INTO Prescribed
VALUES (@PatientUserID,@DoctorUserID,@MedicineID,@Dosage,@Frequency,@Refillable)
Parse Query
Execute Query
Close connection to the database

Function: Book Appointments
Inputs: @PaitentUserID, @DoctorUserID, @Time, @Date, @Reason
Outputs: None
Pseudocode:
Connect to database
Query =
INSERT INTO Appointment
VALUES (@PaitentUserID, @DoctorUserID, @Time, @Date, @Reason);
Parse Query
Execute Query
Close connection to the database

Function: Delete Patient Prescriptions
Inputs: @PaitentUserID, @DoctorUserID, @MedicineID
Outputs: None
Pseudocode:
Connect to database
Query =
DELETE FROM Appointment AS A
WHERE A.PAITENT_UserID = @PaitentUserID
AND A.DOCTOR_UserID = @DoctorUserID
AND A.MedicineID = @MedicineID;
Parse Query
Execute Query
Close connection to the database