**Ben Waddell**

**CPSC 5130 – Checkpoint 3**

**1.1**

SELECT

r.RoomNumber,

p.FirstName,

p.LastName,

a.AdmissionDate

FROM

Admissions a

JOIN

Patients p ON a.PatientID = p.PatientID

JOIN

Rooms r ON a.RoomNumber = r.RoomNumber

WHERE

a.DischargeDate IS NULL;

**1.2**

SELECT

r.RoomNumber

FROM

Rooms r

LEFT JOIN

Admissions a ON r.RoomNumber = a.RoomNumber

AND a.DischargeDate IS NULL

WHERE

a.RoomNumber IS NULL;

**1.3**

SELECT

r.RoomNumber,

p.FirstName,

p.LastName,

a.AdmissionDate

FROM

Rooms r

LEFT JOIN

Admissions a ON r.RoomNumber = a.RoomNumber

AND a.DischargeDate IS NULL

LEFT JOIN

Patients p ON a.PatientID = p.PatientID;

**2.1**

SELECT \*

FROM Patients;

**2.2**

SELECT

p.PatientID,

p.FirstName,

p.LastName

FROM Patients p

JOIN

Admissions a ON p.PatientID = a.PatientID

WHERE

a.DischargeDate IS NULL;

**2.3**

SELECT DISTINCT

p.PatientID,

p.FirstName,

p.LastName

FROM Patients p

JOIN

Admissions a ON p.PatientID = a.PatientID

WHERE

a.DischargeDate BETWEEN ? AND ?;

**2.4**

SELECT DISTINCT

p.PatientID,

p.FirstName,

p.LastName

FROM Patients p

JOIN

Admissions a ON p.PatientID = a.PatientID

WHERE

a.AdmissionDate BETWEEN ? AND ?;

**2.5**

SELECT

a.AdmissionID,

a.AdmissionDate,

a.DischargeDate,

d.DiagnosisName

FROM

Admissions a

JOIN

Patients p ON a.PatientID = p.PatientID

JOIN

Diagnoses d ON a.DiagnosisID = d.DiagnosisID

WHERE

p.PatientID = ?

OR (p.FirstName = ? AND p.LastName = ?);

**2.6**

SELECT

a.AdmissionDate,

a.DischargeDate,

t.TreatmentName,

t.TreatmentType,

t.OrderedTime,

t.AdministeredTime

FROM

Admissions a

JOIN

Patients p ON a.PatientID = p.PatientID

JOIN

Treatments t ON a.TreatmentID = t.TreatmentID

WHERE

p.PatientID = ?

OR (p.FirstName = ? AND p.LastName = ?)

ORDER BY

a.AdmissionDate DESC,

t.TreatmentName ASC;

**2.7**

SELECT DISTINCT

p.PatientID,

p.FirstName,

p.LastName,

d.DiagnosisName,

CONCAT(e.FirstName, ' ', e.LastName) AS AdmittingDoctor

FROM

Admissions a

JOIN

Admissions a2 ON a.PatientID = a2.PatientID

AND a.AdmissionDate > a2.DischargeDate

AND a.AdmissionDate <= DATE\_ADD(a2.DischargeDate, INTERVAL 30 DAY)

JOIN

Patients p ON a.PatientID = p.PatientID

JOIN

Diagnoses d ON a.DiagnosisID = d.DiagnosisID

JOIN

Employees e ON a.PrimaryDoctorID = e.EmployeeID;

**2.8**

SELECT

p.PatientID,

p.FirstName,

p.LastName,

COUNT(a.AdmissionID) AS TotalAdmissions,

AVG(DATEDIFF(a.DischargeDate, a.AdmissionDate)) AS AvgDuration,

MAX(DATEDIFF(a.DischargeDate, a.AdmissionDate)) AS MaxDuration,

MAX(DATEDIFF(a.AdmissionDate, a2.DischargeDate)) AS LongestSpan,

MIN(DATEDIFF(a.AdmissionDate, a2.DischargeDate)) AS ShortestSpan,

AVG(DATEDIFF(a.AdmissionDate, a2.DischargeDate)) AS AverageSpan

FROM

Patients p

JOIN

Admissions a ON p.PatientID = a.PatientID

LEFT JOIN

Admissions a2 ON a.PatientID = a2.PatientID

AND a.AdmissionDate >= a2.DischargeDate

GROUP BY

p.PatientID;

**3.1**

SELECT

d.DiagnosisID,

d.DiagnosisName,

COUNT(d.DiagnosisName) AS TotalOccurances

FROM

Admissions a

JOIN

Diagnoses d ON a.DiagnosisID = d.DiagnosisID

GROUP BY

d.DiagnosisID

ORDER BY

TotalOccurances DESC;

**3.2**

SELECT

d.DiagnosisID,

d.DiagnosisName,

COUNT(d.DiagnosisName) AS TotalOccurances

FROM

Admissions a

JOIN

Diagnoses d ON a.DiagnosisID = d.DiagnosisID

WHERE

a.DischargeDate IS NULL

GROUP BY

d.DiagnosisID

ORDER BY

TotalOccurances DESC;

**3.3**

SELECT

t.TreatmentID,

t.TreatmentName,

COUNT(t.TreatmentName) AS TotalOccurances

FROM

Admissions a

JOIN

Treatments t ON a.TreatmentID = t.TreatmentID

GROUP BY

t.TreatmentID

ORDER BY

TotalOccurances DESC;

**3.4**

SELECT

p.PatientID,

p.FirstName,

p.LastName,

d.DiagnosisID,

d.DiagnosisName,

COUNT(d.DiagnosisName) AS TotalOccurances

FROM

Admissions a

JOIN

Diagnoses d ON a.DiagnosisID = d.DiagnosisID

JOIN

Patients p ON a.PatientID = p.PatientID

GROUP BY

p.PatientID,

d.DiagnosisID

ORDER BY

TotalOccurances ASC;

**3.5**

SELECT

t.TreatmentID,

t.TreatmentName,

p.FirstName,

p.LastName,

CONCAT(e.FirstName, ' ', e.LastName) AS DoctorName

FROM

Admissions a

JOIN

Patients p ON a.PatientID = p.PatientID

JOIN

Treatments t ON a.TreatmentID = t.TreatmentID

JOIN

Employees e ON t.OrderedBy = e.EmployeeID

WHERE

t.TreatmentID = ?;

**4.1**

SELECT

e.EmployeeID,

e.FirstName,

e.LastName,

e.Role

FROM

Employees e

ORDER BY

e.LastName ASC, e.FirstName ASC;

**4.2**

SELECT DISTINCT

e.EmployeeID,

e.FirstName,

e.LastName,

e.Role

FROM

Employees e

JOIN

Admissions a ON e.EmployeeID = a.PrimaryDoctorID

WHERE

a.PatientID IN (

SELECT

PatientID

FROM

Admissions

GROUP BY

PatientID, YEAR(AdmissionDate)

HAVING

COUNT(AdmissionID) >= 4

)

ORDER BY

e.LastName ASC, e.FirstName ASC;

**4.3**

SELECT

d.DiagnosisID,

d.DiagnosisName,

COUNT(d.DiagnosisName) AS TotalOccurances

FROM

Admissions a

JOIN

Employees e ON a.PrimaryDoctorID = e.EmployeeID

JOIN

Diagnoses d ON a.DiagnosisID = d.DiagnosisID

WHERE

e.employeeID = ?

GROUP BY

d.DiagnosisID

ORDER BY

TotalOccurances DESC;

**4.4**

SELECT

t.TreatmentID,

t.TreatmentName,

COUNT(t.TreatmentName) AS TotalOccurances

FROM

Treatments t

JOIN

Employees e ON t.OrderedBy = e.EmployeeID

WHERE

e.employeeID = ?

GROUP BY

t.TreatmentID

ORDER BY

TotalOccurances DESC;

**4.5**

SELECT

e.EmployeeID,

e.FirstName,

e.LastName,

e.Role

FROM

Employees e

WHERE

NOT EXISTS (

SELECT 1

FROM Admissions a

WHERE NOT EXISTS (

SELECT 1

FROM Treatments t

WHERE (t.OrderedBy = e.EmployeeID OR t.AdministeredBy = e.EmployeeID)

AND t.TreatmentID = a.TreatmentID

)

)

ORDER BY

e.LastName ASC, e.FirstName ASC;