

Join Keyword Assignment

1. Patients admitted to hospital, their admitting physician, bed assigned and ward location, sorted by most recent date.

```
create proc PatientAdmitInfo
as

begin

select p.FirstName as 'PatientFN', p.LastName as 'PatientLN', d.FirstName as 'AdmitDoctorFN', d.LastName as 'AdmitDoctorLN',
b.BedID, b.BedSize, b.BedType, w.[Location] as 'WardLocation', ad.AdmitDate
from AdmitDischarge as ad

join patient as p
on p.PatientID = ad.PatientID

join Doctor as d
on d.DoctorID = ad.AdmitDoc

join Bed as b
on b.BedID = p.BedID

join Ward as w
on w.WardID = b.WardID

order by ad.AdmitDate desc
|
end
```

	PatientFN	PatientLN	AdmitDoctorFN	AdmitDoctorLN	BedID	BedSize	BedType	WardLocation	AdmitDate
1	Isabella	Taylor	Daniel	Martinez	8	S	M	St. Petersburg	2025-03-20
2	James	Miller	Ethan	Brown	9	M	E	Sarasota	2025-03-17
3	Ethan	Jones	Josh	Amarie	14	M	M	Orlando	2025-03-15
4	Olivia	Brown	Olivia	Johnson	12	L	M	Fort Lauderdale	2025-03-12
5	Mason	Williams	David	Smith	7	L	E	Fort Lauderdale	2025-03-11
6	Sophia	Davis	Emily	Wilson	3	L	E	Tampa	2025-03-10
7	Liam	Smith	Sophia	Taylor	5	XL	E	Tallahassee	2025-03-07
8	Emma	Johnson	Ethan	Brown	2	M	M	Orlando	2025-03-05
9	Kade	Kranjc	Alice	Green	15	S	M	Jacksonville	2025-03-01
10	Ava	Martinez	Josh	Amarie	1	M	M	Cape Coral	2025-02-28

2. Patient seen by which nurses on what dates, in which ward, and who was the charge nurse.

```
create proc PatientNurseInfo
as

begin

select p.FirstName as 'PatientFN', p.LastName as 'PatientLN', n.FirstName as 'NurseFN', n.LastName as 'NurseLN',
npc.[Date], w.[Name] as 'WardName', w.ChargeNurse
from NursePatientCare as npc

join Patient as p
on p.PatientID = npc.PatientID

join Nurse as n
on n.NurseID = npc.NurseID

join Ward as w
on n.NurseID = w.ChargeNurse

end
```

Results		Messages					
	PatientFN	PatientLN	NurseFN	NurseLN	Date	WardName	ChargeNurse
1	Ava	Martinez	Sarah	Davis	2025-03-30	Neurology	16
2	Kade	Kranjc	Sheri	Kline	2025-03-31	Pediatrics	2
3	Emma	Johnson	Eisen	Dwarving	2025-04-01	Surgical	5
4	Sophia	Davis	Danielle	Lane	2025-04-03	Trauma	9
5	James	Miller	Madara	Uchiha	2025-04-04	Psych	4
6	Isabella	Taylor	Kailey	Mesorana	2025-04-06	Neonatal	8
7	Ethan	Jones	Emily	Johnson	2025-04-07	Emergency	10
8	Olivia	Brown	John	Smith	2025-04-08	Neurology	11
9	Kade	Kranjc	Sheri	Kline	2025-03-31	Pediatrics	2
10	Emma	Johnson	Eisen	Dwarving	2025-04-01	Surgical	5
11	Sophia	Davis	Danielle	Lane	2025-04-03	Trauma	9
12	James	Miller	Madara	Uchiha	2025-04-04	Psych	4
13	Isabella	Taylor	Kailey	Mesorana	2025-04-06	Neonatal	8
14	Ethan	Jones	Emily	Johnson	2025-04-07	Emergency	10
15	Olivia	Brown	John	Smith	2025-04-08	Neurology	11

3. List all nurse-patient interaction events, the dates and nurse name and patient name

```
create proc NursePatientEvents
as

begin

select npc.EventType, npc.[Date], n.LastName as 'NurseLN', p.LastName as 'PatientLN'
from NursePatientCare as npc

inner join Patient as p
on p.PatientID = npc.PatientID

inner join Nurse as n
on n.NurseID = npc.NurseID

end
```

	EventType	Date	NurseLN	PatientLN
1	WC	2025-03-30	Davis	Martinez
2	MED	2025-03-31	Kline	Kranjc
3	FS	2025-04-01	Dwarving	Johnson
4	OTH	2025-04-03	Lane	Davis
5	MED	2025-04-04	Uchiha	Miller
6	FS	2025-04-06	Mesorana	Taylor
7	AST	2025-04-07	Johnson	Jones
8	OTH	2025-04-08	Smith	Brown
9	MED	2025-03-31	Kline	Kranjc
10	FS	2025-04-01	Dwarving	Johnson
11	OTH	2025-04-03	Lane	Davis
12	MED	2025-04-04	Uchiha	Miller
13	FS	2025-04-06	Mesorana	Taylor
14	AST	2025-04-07	Johnson	Jones
15	OTH	2025-04-08	Smith	Brown

4. Find missing values for beds with and without patients, and for patients with and without beds.

```
create proc BedsWPatients
as

begin

select b.BedID, p.PatientID
from Bed as b

left join Patient as p
on b.BedID = p.BedID

/*
11 beds and
10 patients
1 bed doesn't have a patient
*/

select b.BedID, p.PatientID
from Bed as b

right join Patient as p
on b.BedID = p.BedID
/*
10 beds and
10 patients
All patients have a bed
*/

end
```

	BedID	PatientID
1	1	14
2	2	4
3	3	6
4	5	5
5	7	7
6	8	12
7	9	11
8	12	8
9	13	NULL
10	14	9
11	15	3

	BedID	PatientID
1	15	3
2	2	4
3	5	5
4	3	6
5	7	7
6	12	8
7	14	9
8	9	11
9	8	12
10	1	14

5. Find missing values of nurses who have not seen a patient and patients that have not seen a nurse.

```
create proc MissingNursePatients
as

begin

|select n.NurseID, p.PatientID
from NursePatientCare as npc

full join Nurse as n
on n.NurseID = npc.NurseID

full join Patient as p|
on p.PatientID = npc.PatientID

/*
2 patients have not seen nurses
2 nurses have not seen patients
*/

end
```

	NurseID	PatientID
1	16	14
2	2	3
3	5	4
4	9	6
5	4	11
6	8	12
7	10	9
8	11	8
9	2	3
10	5	4
11	9	6
12	4	11
13	8	12
14	10	9
15	11	8
16	1	NULL
17	3	NULL
18	NULL	7
19	NULL	5

6. List of treatments administered to a patient and their physician.

```
create proc TreatPatientDoctor
as

begin

select p.LastName as 'PatientLN',
d.LastName as 'DoctorLN', t.TreatmentInfo
from TreatmentAdmin as ta

inner join Treatment as t
on t.TreatmentID = ta.TreatmentID

inner join Patient as p
on p.PatientID = ta.PatientID

inner join Doctor as d
on d.DoctorID = ta.DoctorID

end
```

	PatientLN	DoctorLN	TreatmentInfo
1	Kranjc	Smith	Administration of general anesthesia
2	Davis	Johnson	Skin biopsy to assess malignant mole on the back
3	Taylor	Martinez	Electrocardiogram (ECG) to evaluate heart function
4	Johnson	Green	Electrocardiogram to evaluate heart function
5	Smith	Amarie	MRI scan
6	Williams	Brown	Post-surgery physical therapy
7	Brown	Taylor	Therapy session
8	Jones	Davis	Routine vaccination
9	Miller	Wilson	X-ray of the left arm to detect fractures
10	Martinez	Hernandez	Appendectomy performed to remove inflamed appendix

7. List of items and charges for a patient.

```
create proc PatientItems  
as
```

```
begin
```

```
select p.LastName as 'PatientLN', i.ItemName, i.Charge, ic.Quantity  
from ItemCharged as ic
```

```
join Item as i  
on i.itemID = ic.ItemID
```

```
join Patient as p  
on p.PatientID = ic.PatientID
```

```
end
```

	PatientLN	ItemName	Charge	Quantity
1	Martinez	Hydrochlorothiazide	25.00	20
2	Kranjc	Penicillin	40.00	15
3	Johnson	Aspirin	15.00	30
4	Smith	Morphine	120.00	10
5	Davis	Atorvastatin	90.00	25
6	Williams	Acetaminophen	20.00	18
7	Brown	Insulin	80.00	12
8	Jones	ibuprofen	30.00	22
9	Miller	Lorazepam	60.00	5
10	Taylor	Amoxicillin	50.00	40

8. *BONUS

```
create proc DisAdmitDocPatient
as
begin
select p.LastName as 'PatientLN', da.LastName as 'AdmitDocLN',
ad.AdmitDate, dd.LastName as 'DischargeDocLN', ad.DischargeDate
from AdmitDischarge as ad

join Patient as p
on p.PatientID = ad.PatientID

join Doctor as da
on da.DoctorID = ad.AdmitDoc

join Doctor as dd
on dd.DoctorID = ad.DischargeDoc

end
```

	PatientLN	AdmitDocLN	AdmitDate	DischargeDocLN	DischargeDate
1	Martinez	Amarie	2025-02-28	Amarie	2025-03-30
2	Kranjc	Green	2025-03-01	Johnson	2025-03-20
3	Johnson	Brown	2025-03-05	Smith	2025-03-25
4	Smith	Taylor	2025-03-07	Davis	2025-03-22
5	Davis	Wilson	2025-03-10	Martinez	2025-03-28
6	Williams	Smith	2025-03-11	Green	2025-03-31
7	Brown	Johnson	2025-03-12	Taylor	2025-03-26
8	Jones	Amarie	2025-03-15	Hernandez	2025-03-29
9	Miller	Brown	2025-03-17	Wilson	2025-03-30
10	Taylor	Martinez	2025-03-20	Johnson	2025-03-27

9. *BONUS

```
create proc Bonus9
as
begin
select npc.[Date], npc.EventType, p.lastname as 'PatientLN', p.age 'Age',
b.bedID as 'Bed Number', w.[Location], n.lastname as 'NurseLN',
c.certification as 'Certification', d.lastname as 'AdmitDoc', s.specialty,
n2.lastname as 'ChargeNurse'
from patient as p

join NursePatientCare as npc
on p.PatientID = npc.PatientID
join nurse as n
on npc.NurseID = n.NurseID
join NurseCert as nc
on n.NurseID = nc.NurseID
join Certification as c
on c.CertID = nc.CertID
join AdmitDischarge as ad
on p.PatientID = ad.PatientID
join Doctor as d
on ad.AdmitDoc = d.DoctorID
join DoctorSpec as ds
on ds.DoctorID = d.DoctorID
join Specialty as s
on s.SpecID = ds.SpecID
join bed as b
on p.BedID = b.Bedid
join ward as w
on w.WardID = b.WardID
join nurse as n2
on n2.NurseID = w.ChargeNurse

end
```

	Date	EventType	PatientLN	Age	Bed Number	Location	NurseLN	Certification	AdmitDoc	specialty	ChargeNurse
1	2025-03-31	MED	Kranjc	21	15	Jacksonville	Kline	colon	Green	Pediatrics	Dwarving
2	2025-03-31	MED	Kranjc	21	15	Jacksonville	Kline	Pancreas	Green	Pediatrics	Dwarving
3	2025-04-01	FS	Johnson	33	2	Orlando	Dwarving	Chemistry	Brown	Surgery	Kline
4	2025-04-06	FS	Taylor	32	8	St. Petersburg	Mesorana	Nutrition	Martinez	Psychiatry	Lane
5	2025-04-08	OTH	Brown	35	12	Fort Lauderdale	Smith	Pancreas	Johnson	Cardiology	Mesorana
6	2025-04-08	OTH	Brown	35	12	Fort Lauderdale	Smith	Heart	Johnson	Cardiology	Mesorana
7	2025-04-08	OTH	Brown	35	12	Fort Lauderdale	Smith	Nutrition	Johnson	Cardiology	Mesorana
8	2025-03-31	MED	Kranjc	21	15	Jacksonville	Kline	colon	Green	Pediatrics	Dwarving
9	2025-03-31	MED	Kranjc	21	15	Jacksonville	Kline	Pancreas	Green	Pediatrics	Dwarving
10	2025-04-01	FS	Johnson	33	2	Orlando	Dwarving	Chemistry	Brown	Surgery	Kline
11	2025-04-06	FS	Taylor	32	8	St. Petersburg	Mesorana	Nutrition	Martinez	Psychiatry	Lane
12	2025-04-08	OTH	Brown	35	12	Fort Lauderdale	Smith	Pancreas	Johnson	Cardiology	Mesorana
13	2025-04-08	OTH	Brown	35	12	Fort Lauderdale	Smith	Heart	Johnson	Cardiology	Mesorana
14	2025-04-08	OTH	Brown	35	12	Fort Lauderdale	Smith	Nutrition	Johnson	Cardiology	Mesorana