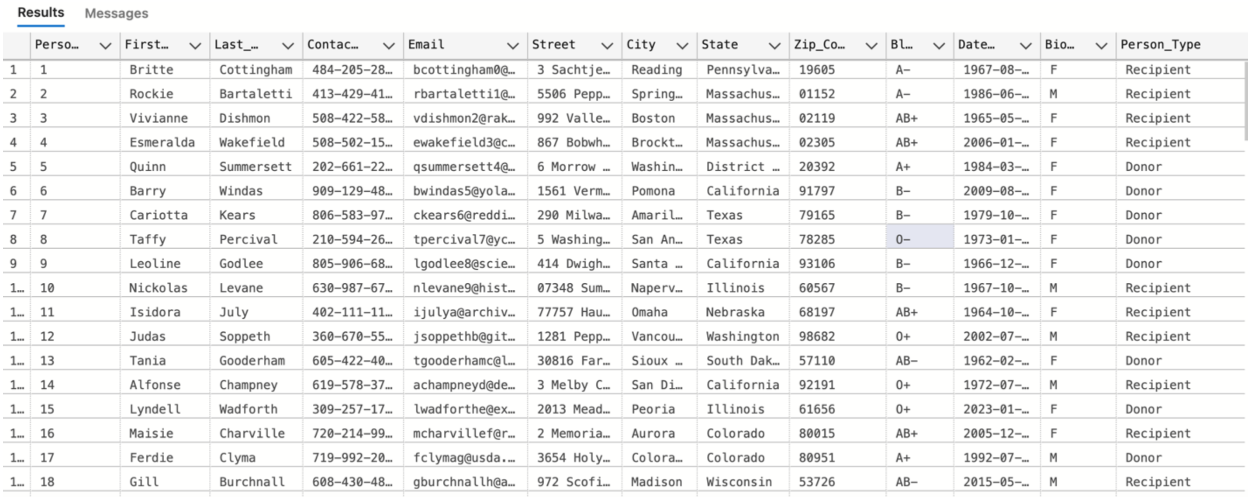
SQL Queries

Create Table Queries

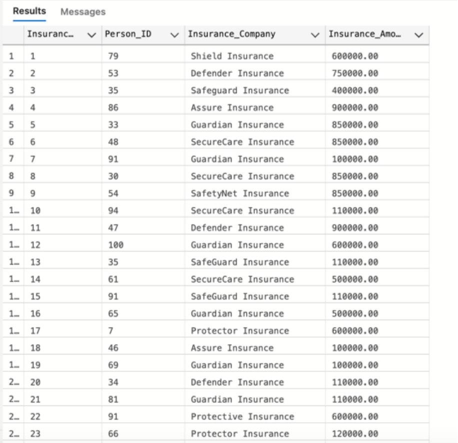
```
-- Person Table
CREATE TABLE Person
(
Person_ID INT PRIMARY KEY IDENTITY(1,1),
First_Name VARCHAR(100) NOT NULL,
Last_Name VARCHAR(100) NOT NULL,
Contact_Number VARCHAR(50) UNIQUE,
Email VARCHAR(100) UNIQUE,
Street VARCHAR(100) NOT NULL,
City VARCHAR(100) NOT NULL,
State VARCHAR(100) NOT NULL,
Zip_Code VARCHAR(10) NOT NULL ,
Blood_Type VARCHAR(3) CHECK (Blood_Type IN ('A+','A-','B+','B-','O+','O-','AB+','AB-')) NOT NULL,
Date_of_Birth DATE NOT NULL,
Biological_Gender VARCHAR(1) CHECK (Biological_Gender IN ('F','M')) NOT NULL,
Person_Type VARCHAR(10) CHECK (Person_Type IN ('Donor','Recipient'))NOT NULL
);
```



Results Messages

	Perso…	First…	Last_…	Contac…	Email	Street	City	State	Zip_Co…	Bl…	Date…	Bio…	Person_Type
1	1	Britte	Cottingham	484-205-28…	bcottingham0@…	3 Sachtje…	Reading	Pennsylva…	19605	A-	1967-08-…	F	Recipient
2	2	Rockie	Bartaletti	413-429-41…	rbartaletti1@…	5506 Pepp…	Spring…	Massachus…	01152	A-	1986-06-…	M	Recipient
3	3	Vivianne	Dishmon	508-422-58…	vdishmon2@rak…	992 Valle…	Boston	Massachus…	02119	AB+	1965-05-…	F	Recipient
4	4	Esmeralda	Wakefield	508-502-15…	ewakefield3@c…	867 Bobwh…	Brockt…	Massachus…	02305	AB+	2006-01-…	F	Recipient
5	5	Quinn	Summersett	202-661-22…	qsummersett4@…	6 Morrow …	Washin…	District …	20392	A+	1984-03-…	F	Donor
6	6	Barry	Windas	909-129-48…	bwindas5@yola…	1561 Verm…	Pomona	California	91797	B-	2009-08-…	F	Donor
7	7	Cariotta	Kears	806-583-97…	ckears6@reddi…	290 Milwa…	Amaril…	Texas	79165	B-	1979-10-…	F	Donor
8	8	Taffy	Percival	210-594-26…	tpercival7@yc…	5 Washing…	San An…	Texas	78285	O-	1973-01-…	F	Donor
9	9	Leoline	Godlee	805-906-68…	lgodlee8@scie…	414 Dwigh…	Santa …	California	93106	B-	1966-12-…	F	Donor
1…	10	Nickolas	Levane	630-987-67…	nlevane9@hist…	07348 Sum…	Naperv…	Illinois	60567	B-	1967-10-…	M	Recipient
1…	11	Isidora	July	402-111-11…	ijulya@archiv…	77757 Hau…	Omaha	Nebraska	68197	AB+	1964-10-…	F	Recipient
1…	12	Judas	Soppeth	360-670-55…	jsoppethb@git…	1281 Pepp…	Vancou…	Washington	98682	O+	2002-07-…	M	Recipient
1…	13	Tania	Gooderham	605-422-40…	tgooderhamc@l…	30816 Far…	Sioux …	South Dak…	57110	AB-	1962-02-…	F	Donor
1…	14	Alfonse	Champney	619-578-37…	achampneyd@de…	3 Melby C…	San Di…	California	92191	O+	1972-07-…	M	Recipient
1…	15	Lyndell	Wadforth	309-257-17…	lwadforthe@ex…	2013 Mead…	Peoria	Illinois	61656	O+	2023-01-…	F	Donor
1…	16	Maisie	Charville	720-214-99…	mcharvillef@r…	2 Memoria…	Aurora	Colorado	80015	AB+	2005-12-…	F	Recipient
1…	17	Ferdie	Clyma	719-992-20…	fclymag@usda.…	3654 Holy…	Colora…	Colorado	80951	A+	1992-07-…	M	Donor
1…	18	Gill	Burchnall	608-430-48…	gburchnallh@a…	972 Scofi…	Madison	Wisconsin	53726	AB-	2015-05-…	M	Recipient

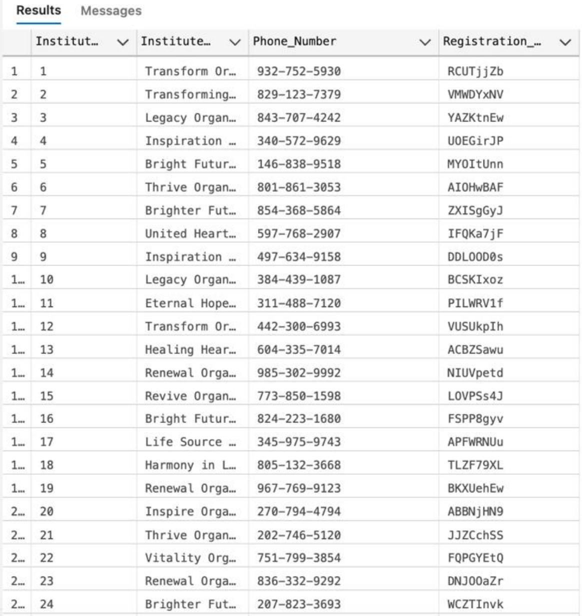
```
-- Medical Insurance Table
CREATE TABLE Medical_Insurance
(
Insurance_ID INT PRIMARY KEY NOT NULL,
Person_ID INT NOT NULL,
Insurance_Company VARCHAR(255) NOT NULL,
Insurance_Amount DECIMAL(18,2) NOT NULL,
CONSTRAINT FK_Person_Medical_Insurance FOREIGN KEY (Person_ID) REFERENCES
Person(Person_ID)
);
```



Results Messages

	Insuranc…	Person_ID	Insurance_Company	Insurance_Amo…
1	1	79	Shield Insurance	600000.00
2	2	53	Defender Insurance	750000.00
3	3	35	Safeguard Insurance	400000.00
4	4	86	Assure Insurance	900000.00
5	5	33	Guardian Insurance	850000.00
6	6	48	SecureCare Insurance	850000.00
7	7	91	Guardian Insurance	100000.00
8	8	30	SecureCare Insurance	850000.00
9	9	54	SafetyNet Insurance	850000.00
1…	10	94	SecureCare Insurance	110000.00
1…	11	47	Defender Insurance	900000.00
1…	12	100	Guardian Insurance	600000.00
1…	13	35	SafeGuard Insurance	110000.00
1…	14	61	SecureCare Insurance	500000.00
1…	15	91	SafeGuard Insurance	110000.00
1…	16	65	Guardian Insurance	500000.00
1…	17	7	Protector Insurance	600000.00
1…	18	46	Assure Insurance	100000.00
1…	19	69	Guardian Insurance	100000.00
2…	20	34	Defender Insurance	110000.00
2…	21	81	Guardian Insurance	110000.00
2…	22	91	Protective Insurance	600000.00
2…	23	66	Protector Insurance	120000.00

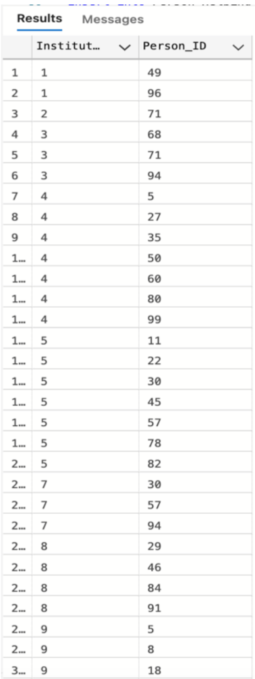
```
-- Helping Institutes Table
CREATE TABLE Helping_Institutes
(
Institute_ID INT PRIMARY KEY IDENTITY(1,1),
Institute_Name VARCHAR(255) NOT NULL,
Phone_Number VARCHAR(50) NOT NULL UNIQUE,
Registration_ID VARCHAR(100) NOT NULL UNIQUE
);
```



Results Messages

	Institut…	Institute…	Phone_Number	Registration_…
1	1	Transform Or…	932-752-5930	RCUTjjZb
2	2	Transforming…	829-123-7379	VMWDYxNV
3	3	Legacy Organ…	843-707-4242	YAZKtnEw
4	4	Inspiration …	340-572-9629	UOEGirJP
5	5	Bright Futur…	146-838-9518	MYOItUnn
6	6	Thrive Organ…	801-861-3053	AIOHwBAF
7	7	Brighter Fut…	854-368-5864	ZXISgGyJ
8	8	United Heart…	597-768-2907	IFQKa7jF
9	9	Inspiration …	497-634-9158	DDLOOD0s
1…	10	Legacy Organ…	384-439-1087	BCSKIxoz
1…	11	Eternal Hope…	311-488-7120	PILWRV1f
1…	12	Transform Or…	442-300-6993	VUSUkpIh
1…	13	Healing Hear…	604-335-7014	ACBZSawu
1…	14	Renewal Orga…	985-302-9992	NIUVpetd
1…	15	Revive Organ…	773-850-1598	LOVPSs4J
1…	16	Bright Futur…	824-223-1680	FSPP8gyv
1…	17	Life Source …	345-975-9743	APFWRNUu
1…	18	Harmony in L…	805-132-3668	TLZF79XL
1…	19	Renewal Orga…	967-769-9123	BKXUehEw
2…	20	Inspire Orga…	270-794-4794	ABBNjHN9
2…	21	Thrive Organ…	202-746-5120	JJZCchSS
2…	22	Vitality Org…	751-799-3854	FQPGYEtQ
2…	23	Renewal Orga…	836-332-9292	DNJOOaZr
2…	24	Brighter Fut…	207-823-3693	WCZTInvk

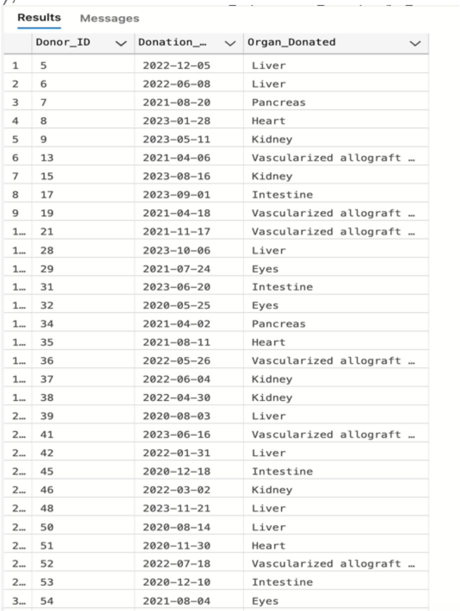
```
-- Person Helping Institutes Table
CREATE TABLE Person_Helping_Institutes
(
Institute_ID INT,
Person_ID INT NOT NULL,
PRIMARY KEY (Institute_ID, Person_ID),
FOREIGN KEY (Institute_ID) REFERENCES Helping_Institutes (Institute_ID),
FOREIGN KEY (Person_ID) REFERENCES Person(Person_ID)
);
```



Results Messages

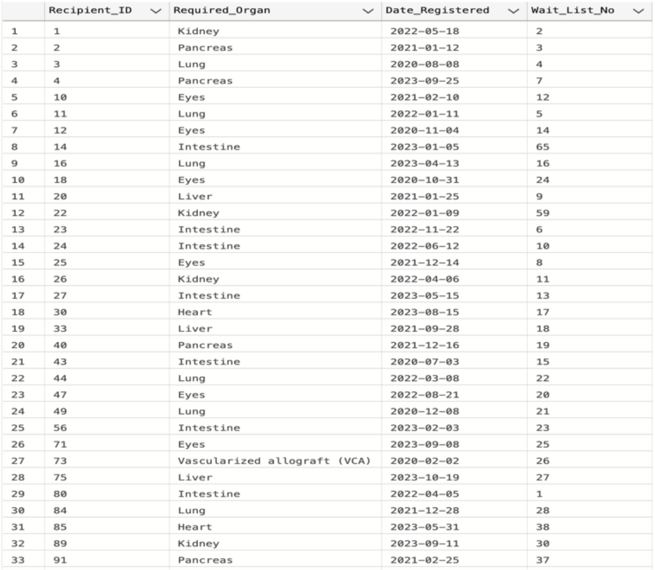
	Institut…	Person_ID
1	1	49
2	1	96
3	2	71
4	3	68
5	3	71
6	3	94
7	4	5
8	4	27
9	4	35
1…	4	50
1…	4	60
1…	4	80
1…	4	99
1…	5	11
1…	5	22
1…	5	30
1…	5	45
1…	5	57
1…	5	78
2…	5	82
2…	7	30
2…	7	57
2…	7	94
2…	8	29
2…	8	46
2…	8	84
2…	8	91
2…	9	5
2…	9	8
3…	9	18

```
-- Donor Table
CREATE TABLE Donor
(
Donor_ID INT PRIMARY KEY,
Donation_Date DATE,
Organ_Donated VARCHAR(255) CHECK ( Organ_Donated IN (
        'Vascularized allograft (VCA)',
        'Heart',
        'Intestine',
        'Liver',
        'Kidney',
        'Lung',
        'Pancreas',
        'Eyes'
        )) NOT NULL ,
CONSTRAINT FK_Person_ID FOREIGN KEY (Donor_ID) REFERENCES Person(Person_ID)
);
```



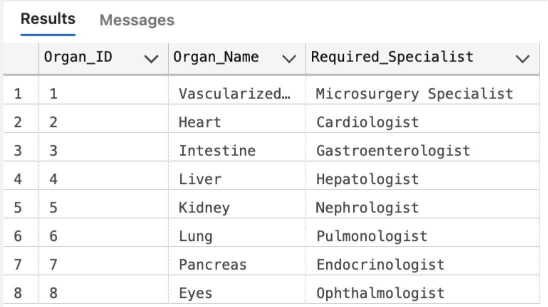
	Donor_ID	Donation_…	Organ_Donated
1	5	2022-12-05	Liver
2	6	2022-06-08	Liver
3	7	2021-08-20	Pancreas
4	8	2023-01-28	Heart
5	9	2023-05-11	Kidney
6	13	2021-04-06	Vascularized allograft …
7	15	2023-08-16	Kidney
8	17	2023-09-01	Intestine
9	19	2021-04-18	Vascularized allograft …
1…	21	2021-11-17	Vascularized allograft …
1…	28	2023-10-06	Liver
1…	29	2021-07-24	Eyes
1…	31	2023-06-20	Intestine
1…	32	2020-05-25	Eyes
1…	34	2021-04-02	Pancreas
1…	35	2021-08-11	Heart
1…	36	2022-05-26	Vascularized allograft …
1…	37	2022-06-04	Kidney
1…	38	2022-04-30	Kidney
2…	39	2020-08-03	Liver
2…	41	2023-06-16	Vascularized allograft …
2…	42	2022-01-31	Liver
2…	45	2020-12-18	Intestine
2…	46	2022-03-02	Kidney
2…	48	2023-11-21	Liver
2…	50	2020-08-14	Liver
2…	51	2020-11-30	Heart
2…	52	2022-07-18	Vascularized allograft …
2…	53	2020-12-10	Intestine
3…	54	2021-08-04	Eyes

```
-- Recipient Table
CREATE TABLE Recipient (
    Recipient_ID INT PRIMARY KEY FOREIGN KEY REFERENCES Person(Person_ID),
    Required_Organ VARCHAR(255) CHECK (
        Required_Organ IN (
            'Vascularized allograft (VCA)',
            'Heart',
            'Intestine',
            'Liver',
            'Kidney',
            'Lung',
            'Pancreas',
            'VCA inside circle'
        )
    ),
    Date_Registered DATE,
    Wait_List_No INT,
    CONSTRAINT CHK_Date_Registered CHECK (Date_Registered <= GETDATE())
    );
```



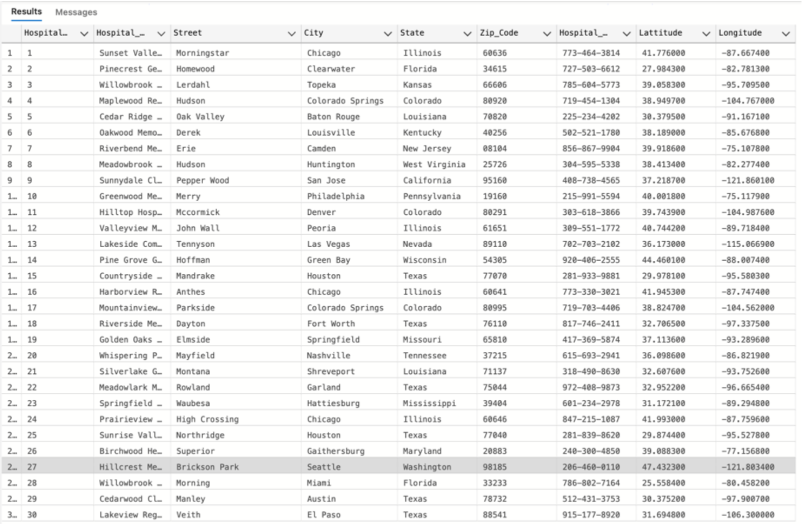
	Recipient_ID	Required_Organ	Date_Registered	Wait_List_No
1	1	Kidney	2022-05-18	2
2	2	Pancreas	2021-01-12	3
3	3	Lung	2020-08-08	4
4	4	Pancreas	2023-09-25	7
5	10	Eyes	2021-02-10	12
6	11	Lung	2022-01-11	5
7	12	Eyes	2020-11-04	14
8	14	Intestine	2023-01-05	65
9	16	Lung	2023-04-13	16
10	18	Eyes	2020-10-31	24
11	20	Liver	2021-01-25	9
12	22	Kidney	2022-01-09	59
13	23	Intestine	2022-11-22	6
14	24	Intestine	2022-06-12	10
15	25	Eyes	2021-12-14	8
16	26	Kidney	2022-04-06	11
17	27	Intestine	2023-05-15	13
18	30	Heart	2023-08-15	17
19	33	Liver	2021-09-28	18
20	40	Pancreas	2021-12-16	19
21	43	Intestine	2020-07-03	15
22	44	Lung	2022-03-08	22
23	47	Eyes	2022-08-21	20
24	49	Lung	2020-12-08	21
25	56	Intestine	2023-02-03	23
26	71	Eyes	2023-09-08	25
27	73	Vascularized allograft (VCA)	2020-02-02	26
28	75	Liver	2023-10-19	27
29	80	Intestine	2022-04-05	1
30	84	Lung	2021-12-28	28
31	85	Heart	2023-05-31	38
32	89	Kidney	2023-09-11	30
33	91	Pancreas	2021-02-25	37

```
-- Organ List Table
CREATE TABLE Organ_List
(
Organ_ID INT PRIMARY KEY,
Organ_Name VARCHAR(255) CHECK (Organ_Name IN (
	'Vascularized allograft (VCA)',
	'Heart',
	'Intestine',
	'Liver',
	'Kidney',
	'Lung',
	'Pancreas',
	'Eyes'
	)) NOT NULL ,
Required_Specialist VARCHAR(255) CHECK (Required_Specialist IN (
	'Microsurgery Specialist',
	'Cardiologist',
	'Gastroenterologist',
	'Hepatologist',
	'Nephrologist',
	'Pulmonologist',
	'Endocrinologist',
	'Ophthalmologist'
	)) NOT NULL
);
```



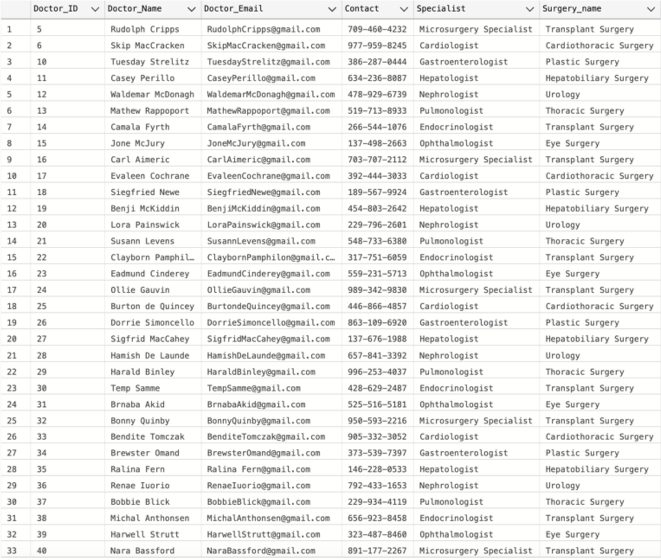
	Organ_ID	Organ_Name	Required_Specialist
1	1	Vascularized…	Microsurgery Specialist
2	2	Heart	Cardiologist
3	3	Intestine	Gastroenterologist
4	4	Liver	Hepatologist
5	5	Kidney	Nephrologist
6	6	Lung	Pulmonologist
7	7	Pancreas	Endocrinologist
8	8	Eyes	Ophthalmologist

```
-- Hospital Table
CREATE TABLE Hospital
(
Hospital_ID INT PRIMARY KEY,
Hospital_Name VARCHAR(255) NOT NULL,
Street VARCHAR(255) NOT NULL,
City VARCHAR(255) NOT NULL,
State VARCHAR(255) NOT NULL,
Zip_Code VARCHAR(10) NOT NULL,
Hospital_Phone VARCHAR(50) NOT NULL,
Lattitude DECIMAL(38,6),
Longitude DECIMAL(38,6)
);
```



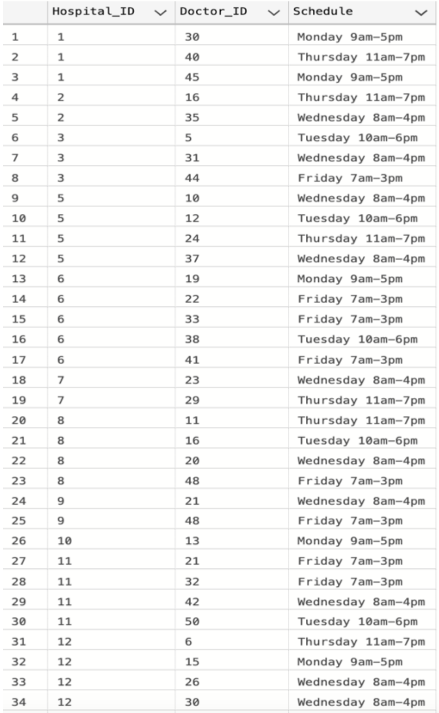
	Hospital…	Hospital_…	Street	City	State	Zip_Code	Hospital_…	Lattitude	Longitude
1	1	Sunset Valle…	Morningstar	Chicago	Illinois	60636	773-464-3814	41.776000	-87.667400
2	2	Pinecrest Ge…	Homewood	Clearwater	Florida	34615	727-503-6612	27.984300	-82.781300
3	3	Willowbrook …	Lerdahl	Topeka	Kansas	66606	785-604-5773	39.058300	-95.709500
4	4	Maplewood Re…	Hudson	Colorado Springs	Colorado	80920	719-454-1304	38.949700	-104.767000
5	5	Cedar Ridge …	Oak Valley	Baton Rouge	Louisiana	70820	225-234-4202	30.379500	-91.167100
6	6	Oakwood Memo…	Derek	Louisville	Kentucky	40256	502-521-1780	38.189000	-85.676800
7	7	Riverbend Me…	Erie	Camden	New Jersey	08104	856-867-9904	39.918600	-75.107800
8	8	Meadowbrook …	Hudson	Huntington	West Virginia	25726	304-595-5338	38.413400	-82.277400
9	9	Sunnydale Cl…	Pepper Wood	San Jose	California	95160	408-738-4565	37.218700	-121.860100
1…	10	Greenwood Me…	Merry	Philadelphia	Pennsylvania	19160	215-991-5594	40.001800	-75.117900
1…	11	Hilltop Hosp…	Mccormick	Denver	Colorado	80291	303-618-3866	39.743900	-104.987600
1…	12	Valleyview M…	John Wall	Peoria	Illinois	61651	309-551-1772	40.744200	-89.718400
1…	13	Lakeside Com…	Tennyson	Las Vegas	Nevada	89110	702-703-2102	36.173000	-115.066900
1…	14	Pine Grove G…	Hoffman	Green Bay	Wisconsin	54305	920-406-2555	44.460100	-88.007400
1…	15	Countryside …	Mandrake	Houston	Texas	77070	281-933-9881	29.978100	-95.580300
1…	16	Harborview R…	Anthes	Chicago	Illinois	60641	773-330-3021	41.945300	-87.747400
1…	17	Mountainview…	Parkside	Colorado Springs	Colorado	80995	719-703-4406	38.824700	-104.562000
1…	18	Riverside Me…	Dayton	Fort Worth	Texas	76110	817-746-2411	32.706500	-97.337500
1…	19	Golden Oaks …	Elmside	Springfield	Missouri	65810	417-369-5874	37.113600	-93.289600
2…	20	Whispering P…	Mayfield	Nashville	Tennessee	37215	615-693-2941	36.098600	-86.821900
2…	21	Silverlake G…	Montana	Shreveport	Louisiana	71137	318-490-8630	32.607600	-93.752600
2…	22	Meadowlark M…	Rowland	Garland	Texas	75044	972-408-9873	32.952200	-96.665400
2…	23	Springfield …	Waubesa	Hattiesburg	Mississippi	39404	601-234-2978	31.172100	-89.294800
2…	24	Prairieview …	High Crossing	Chicago	Illinois	60646	847-215-1087	41.993000	-87.759600
2…	25	Sunrise Vall…	Northridge	Houston	Texas	77040	281-839-8620	29.874400	-95.527800
2…	26	Birchwood He…	Superior	Gaithersburg	Maryland	20883	240-300-4850	39.088300	-77.156800
2…	27	Hillcrest Me…	Brickson Park	Seattle	Washington	98185	206-460-0110	47.432300	-121.803400
2…	28	Willowbrook …	Morning	Miami	Florida	33233	786-802-7164	25.558400	-80.458200
2…	29	Cedarwood Cl…	Manley	Austin	Texas	78732	512-431-3753	30.375200	-97.900700
3…	30	Lakeview Reg…	Veith	El Paso	Texas	88541	915-177-8920	31.694800	-106.300000

```
-- Doctors Table
CREATE TABLE Doctors
(
Doctor_ID INT IDENTITY(1,1),
Doctor_Name VARCHAR(255) NOT NULL,
Doctor_Email VARCHAR(255) NOT NULL,
Contact VARCHAR(50) NOT NULL,
Specialist VARCHAR(255) CHECK (Specialist IN (
        'Microsurgery Specialist',
        'Cardiologist',
        'Gastroenterologist',
        'Hepatologist',
        'Nephrologist',
        'Pulmonologist',
        'Endocrinologist',
        'Ophthalmologist'
         )) NOT NULL,
Surgery_name VARCHAR(255) CHECK (Surgery_name IN (
        'Plastic Surgery',
        'Cardiothoracic Surgery',
        'Transplant Surgery',
        'Hepatobiliary Surgery',
        'Urology',
        'Thoracic Surgery',
        'Transplant Surgery',
        'Eye Surgery'
        )) NOT NULL
CONSTRAINT PK_HospDocID PRIMARY KEY (Doctor_Name, Doctor_ID),
);
```



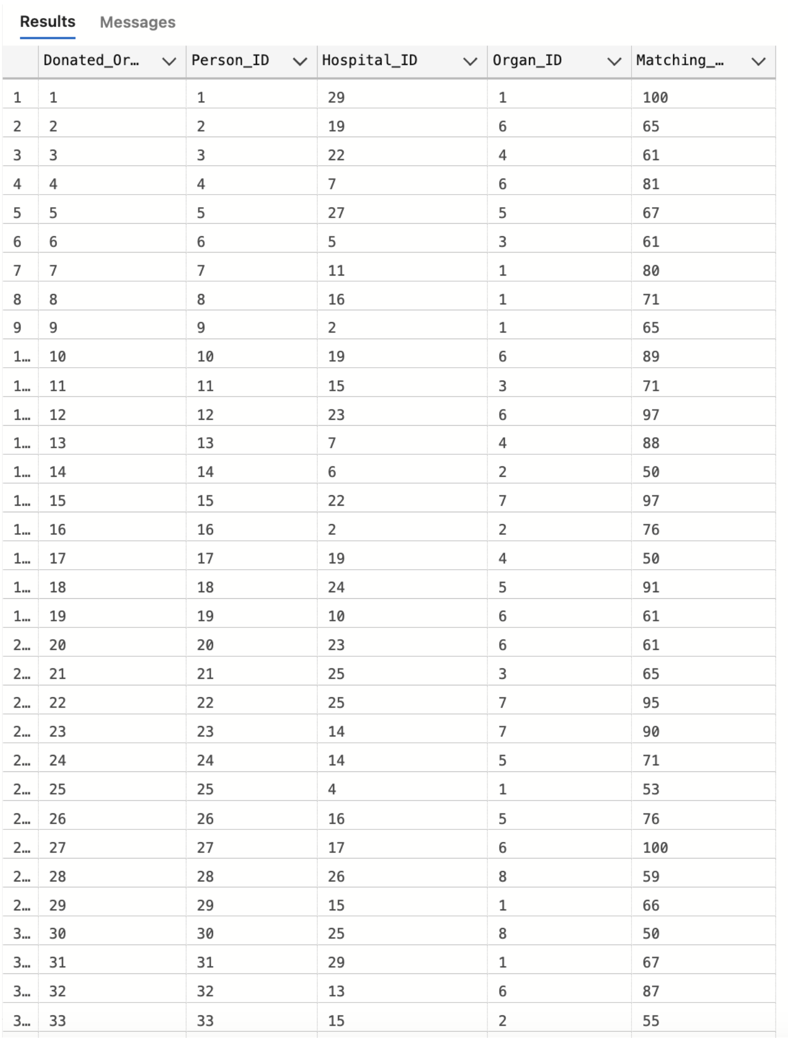
	Doctor_ID	Doctor_Name	Doctor_Email	Contact	Specialist	Surgery_name
1	5	Rudolph Cripps	RudolphCripps@gmail.com	709-460-4232	Microsurgery Specialist	Transplant Surgery
2	6	Skip MacCracken	SkipMacCracken@gmail.com	977-959-8245	Cardiologist	Cardiothoracic Surgery
3	10	Tuesday Strelitz	TuesdayStrelitz@gmail.com	386-287-0444	Gastroenterologist	Plastic Surgery
4	11	Casey Perillo	CaseyPerillo@gmail.com	634-236-8087	Hepatologist	Hepatobiliary Surgery
5	12	Waldemar McDonagh	WaldemarMcDonagh@gmail.com	478-929-6739	Nephrologist	Urology
6	13	Mathew Rappoport	MathewRappoport@gmail.com	519-713-8933	Pulmonologist	Thoracic Surgery
7	14	Camala Fyrth	CamalaFyrth@gmail.com	266-544-1076	Endocrinologist	Transplant Surgery
8	15	Jone McJury	JoneMcJury@gmail.com	137-498-2663	Ophthalmologist	Eye Surgery
9	16	Carl Aimeric	CarlAimeric@gmail.com	703-707-2112	Microsurgery Specialist	Transplant Surgery
10	17	Evaleen Cochrane	EvaleenCochrane@gmail.com	392-444-3033	Cardiologist	Cardiothoracic Surgery
11	18	Siegfried Newe	SiegfriedNewe@gmail.com	189-567-9924	Gastroenterologist	Plastic Surgery
12	19	Benji McKiddin	BenjiMcKiddin@gmail.com	454-803-2642	Hepatologist	Hepatobiliary Surgery
13	20	Lora Painswick	LoraPainswick@gmail.com	229-796-2601	Nephrologist	Urology
14	21	Susann Levens	SusannLevens@gmail.com	548-733-6380	Pulmonologist	Thoracic Surgery
15	22	Clayborn Pamphil…	ClaybornPamphilon@gmail.c…	317-751-6059	Endocrinologist	Transplant Surgery
16	23	Eadmund Cinderey	EadmundCinderey@gmail.com	559-231-5713	Ophthalmologist	Eye Surgery
17	24	Ollie Gauvin	OllieGauvin@gmail.com	989-342-9830	Microsurgery Specialist	Transplant Surgery
18	25	Burton de Quincey	BurtondeQuincey@gmail.com	446-866-4857	Cardiologist	Cardiothoracic Surgery
19	26	Dorrie Simoncello	DorrieSimoncello@gmail.com	863-109-6920	Gastroenterologist	Plastic Surgery
20	27	Sigfrid MacCahey	SigfridMacCahey@gmail.com	137-676-1988	Hepatologist	Hepatobiliary Surgery
21	28	Hamish De Launde	HamishDeLaunde@gmail.com	657-841-3392	Nephrologist	Urology
22	29	Harald Binley	HaraldBinley@gmail.com	996-253-4037	Pulmonologist	Thoracic Surgery
23	30	Temp Samme	TempSamme@gmail.com	428-629-2487	Endocrinologist	Transplant Surgery
24	31	Brnaba Akid	BrnabaAkid@gmail.com	525-516-5181	Ophthalmologist	Eye Surgery
25	32	Bonny Quinby	BonnyQuinby@gmail.com	950-593-2216	Microsurgery Specialist	Transplant Surgery
26	33	Bendite Tomczak	BenditeTomczak@gmail.com	905-332-3052	Cardiologist	Cardiothoracic Surgery
27	34	Brewster Omand	BrewsterOmand@gmail.com	373-539-7397	Gastroenterologist	Plastic Surgery
28	35	Ralina Fern	Ralina Fern@gmail.com	146-228-0533	Hepatologist	Hepatobiliary Surgery
29	36	Renae Iuorio	RenaeIuorio@gmail.com	792-433-1653	Nephrologist	Urology
30	37	Bobbie Blick	BobbieBlick@gmail.com	229-934-4119	Pulmonologist	Thoracic Surgery
31	38	Michal Anthonsen	MichalAnthonsen@gmail.com	656-923-8458	Endocrinologist	Transplant Surgery
32	39	Harwell Strutt	HarwellStrutt@gmail.com	323-487-8460	Ophthalmologist	Eye Surgery
33	40	Nara Bassford	NaraBassford@gmail.com	891-177-2267	Microsurgery Specialist	Transplant Surgery

```
-- Hospital Doctors
CREATE TABLE Hospital_Doctors
(
Hospital_ID INT,
Doctor_ID INT,
Schedule VARCHAR(255),
CONSTRAINT PK_HospDocID PRIMARY KEY (Hospital_ID, Doctor_ID),
CONSTRAINT FK_Hospital_ID FOREIGN KEY (Hospital_ID) REFERENCES Hospital(Hospital_ID),
CONSTRAINT FK_Doctor_ID FOREIGN KEY (Doctor_ID) REFERENCES Doctors(Doctor_ID)
);
```



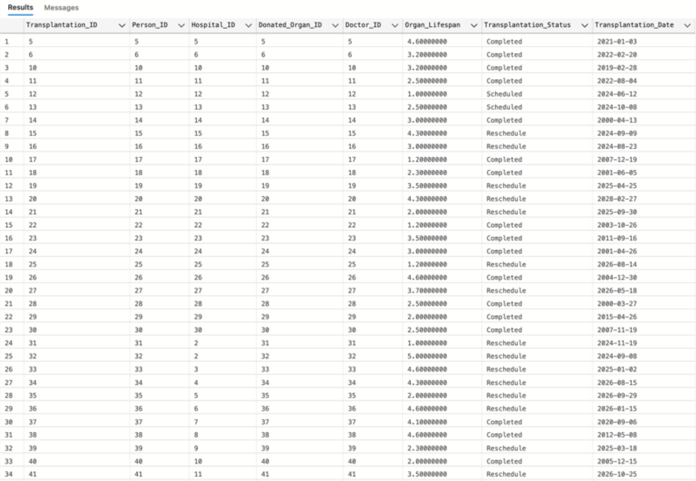
	Hospital_ID	Doctor_ID	Schedule
1	1	30	Monday 9am-5pm
2	1	40	Thursday 11am-7pm
3	1	45	Monday 9am-5pm
4	2	16	Thursday 11am-7pm
5	2	35	Wednesday 8am-4pm
6	3	5	Tuesday 10am-6pm
7	3	31	Wednesday 8am-4pm
8	3	44	Friday 7am-3pm
9	5	10	Wednesday 8am-4pm
10	5	12	Tuesday 10am-6pm
11	5	24	Thursday 11am-7pm
12	5	37	Wednesday 8am-4pm
13	6	19	Monday 9am-5pm
14	6	22	Friday 7am-3pm
15	6	33	Friday 7am-3pm
16	6	38	Tuesday 10am-6pm
17	6	41	Friday 7am-3pm
18	7	23	Wednesday 8am-4pm
19	7	29	Thursday 11am-7pm
20	8	11	Thursday 11am-7pm
21	8	16	Tuesday 10am-6pm
22	8	20	Wednesday 8am-4pm
23	8	48	Friday 7am-3pm
24	9	21	Wednesday 8am-4pm
25	9	48	Friday 7am-3pm
26	10	13	Monday 9am-5pm
27	11	21	Friday 7am-3pm
28	11	32	Friday 7am-3pm
29	11	42	Wednesday 8am-4pm
30	11	50	Tuesday 10am-6pm
31	12	6	Thursday 11am-7pm
32	12	15	Monday 9am-5pm
33	12	26	Wednesday 8am-4pm
34	12	30	Wednesday 8am-4pm

```
-- Donated Organ Table
CREATE TABLE Donated_Organ (
    Donated_Organ_ID INT PRIMARY KEY IDENTITY(1,1),
    Person_ID INT FOREIGN KEY REFERENCES Person(Person_ID),
    Hospital_ID INT FOREIGN KEY REFERENCES Hospital(Hospital_ID),
    Organ_ID INT FOREIGN KEY REFERENCES Organ_List(Organ_ID),
    Matching_Score INT
);
```



	Donated_Or…	Person_ID	Hospital_ID	Organ_ID	Matching_…
1	1	1	29	1	100
2	2	2	19	6	65
3	3	3	22	4	61
4	4	4	7	6	81
5	5	5	27	5	67
6	6	6	5	3	61
7	7	7	11	1	80
8	8	8	16	1	71
9	9	9	2	1	65
1…	10	10	19	6	89
1…	11	11	15	3	71
1…	12	12	23	6	97
1…	13	13	7	4	88
1…	14	14	6	2	50
1…	15	15	22	7	97
1…	16	16	2	2	76
1…	17	17	19	4	50
1…	18	18	24	5	91
1…	19	19	10	6	61
2…	20	20	23	6	61
2…	21	21	25	3	65
2…	22	22	25	7	95
2…	23	23	14	7	90
2…	24	24	14	5	71
2…	25	25	4	1	53
2…	26	26	16	5	76
2…	27	27	17	6	100
2…	28	28	26	8	59
2…	29	29	15	1	66
3…	30	30	25	8	50
3…	31	31	29	1	67
3…	32	32	13	6	87
3…	33	33	15	2	55

```
-- Transplantation Table

CREATE TABLE Transplantation (
   Transplantation_ID INT IDENTITY(1,1) PRIMARY KEY,
   Person_ID INT,
   Hospital_ID INT,
   Donated_Organ_ID INT,
   Doctor_ID INT,
   Organ_Lifespan DECIMAL(36,8),
   Transplantation_Status VARCHAR(255) CHECK (Transplantation_Status IN (
      'Scheduled',
      'In Progress',
      'Completed',
      'Reschedule'
   )) NOT NULL,
   Transplantation_Date DATE,
   CONSTRAINT UK_Transplantation UNIQUE (Person_ID, Hospital_ID, Doctor_ID,
Donated_Organ_ID),
   CONSTRAINT FK_Person_ID_5 FOREIGN KEY (Person_ID) REFERENCES Person(Person_ID),
   CONSTRAINT FK_Hospital_ID_2 FOREIGN KEY (Hospital_ID) REFERENCES Hospital(Hospital_ID),
   CONSTRAINT FK_Donated_Organ_ID_2 FOREIGN KEY (Donated_Organ_ID) REFERENCES
Donated_Organ(Donated_Organ_ID),
   CONSTRAINT FK_Doctor_ID_1 FOREIGN KEY (Doctor_ID) REFERENCES Doctors(Doctor_ID),
   CONSTRAINT CK_Transplantation_Date CHECK (
      (Transplantation_Status = 'Scheduled' AND Transplantation_Date > GETDATE()) OR
      (Transplantation_Status = 'In Progress' AND Transplantation_Date <= GETDATE()) OR
      (Transplantation_Status = 'Completed' AND Transplantation_Date < GETDATE()) OR
      (Transplantation_Status = 'Reschedule' AND Transplantation_Date > GETDATE())
   )
);
```

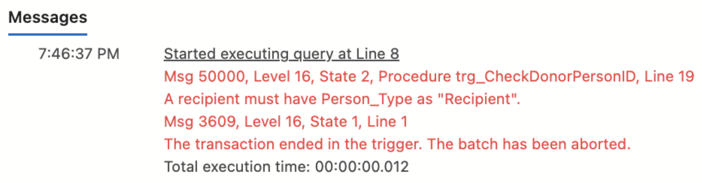


	Transplantation_ID	Person_ID	Hospital_ID	Donated_Organ_ID	Doctor_ID	Organ_Lifespan	Transplantation_Status	Transplantation_Date
1	5	5	5	5	5	4.60000000	Completed	2021-01-03
2	6	6	6	6	6	3.20000000	Completed	2022-02-20
3	10	10	10	10	10	3.20000000	Completed	2019-02-28
4	11	11	11	11	11	2.50000000	Completed	2022-08-04
5	12	12	12	12	12	1.00000000	Scheduled	2024-06-12
6	13	13	13	13	13	2.50000000	Scheduled	2024-10-08
7	14	14	14	14	14	3.00000000	Completed	2000-04-13
8	15	15	15	15	15	4.30000000	Reschedule	2024-09-09
9	16	16	16	16	16	3.00000000	Reschedule	2024-08-23
10	17	17	17	17	17	1.20000000	Completed	2007-12-19
11	18	18	18	18	18	2.30000000	Completed	2001-06-05
12	19	19	19	19	19	3.50000000	Reschedule	2025-04-25
13	20	20	20	20	20	4.30000000	Reschedule	2028-02-27
14	21	21	21	21	21	2.00000000	Reschedule	2025-09-30
15	22	22	22	22	22	1.20000000	Completed	2003-10-26
16	23	23	23	23	23	3.50000000	Completed	2011-09-16
17	24	24	24	24	24	3.00000000	Completed	2001-04-26
18	25	25	25	25	25	1.20000000	Reschedule	2026-08-14
19	26	26	26	26	26	4.60000000	Completed	2004-12-30
20	27	27	27	27	27	3.70000000	Reschedule	2026-05-18
21	28	28	28	28	28	2.50000000	Completed	2000-03-27
22	29	29	29	29	29	2.00000000	Completed	2015-04-26
23	30	30	30	30	30	2.50000000	Completed	2007-11-19
24	31	31	2	31	31	1.00000000	Reschedule	2024-11-19
25	32	32	2	32	32	5.00000000	Reschedule	2024-09-08
26	33	33	3	33	33	4.60000000	Reschedule	2025-01-02
27	34	34	4	34	34	4.30000000	Reschedule	2026-08-15
28	35	35	5	35	35	2.00000000	Reschedule	2026-09-29
29	36	36	6	36	36	4.60000000	Reschedule	2026-01-15
30	37	37	7	37	37	4.10000000	Completed	2020-09-06
31	38	38	8	38	38	4.60000000	Completed	2012-05-08
32	39	39	9	39	39	2.30000000	Reschedule	2025-03-18
33	40	40	10	40	40	2.00000000	Completed	2005-12-15
34	41	41	11	41	41	3.50000000	Reschedule	2026-10-25

Triggers

```
--Trigger 1

CREATE TRIGGER trg_CheckRecipientPersonID
ON Donor
AFTER INSERT, UPDATE
AS
BEGIN
    -- Check if a donor is also a recipient
    IF EXISTS (SELECT 1 FROM inserted i INNER JOIN Recipient r ON i.Donor_ID = r.Recipient_ID)
    BEGIN
        RAISERROR('A donor cannot also be a recipient.', 16, 1)
        ROLLBACK TRANSACTION
        RETURN;  -- Return to prevent further execution
    END
    -- Check if the person type for the donor is not 'Donor'

    IF EXISTS (SELECT 1 FROM Person p
        WHERE p.Person_ID IN (SELECT i.Donor_ID FROM inserted i)
        AND p.Person_Type <> 'Donor'
    )
    BEGIN
        RAISERROR('A donor must have Person_Type as "Donor".', 16, 2)
        ROLLBACK TRANSACTION
        RETURN;  -- Return to prevent further execution
    END
END;
```

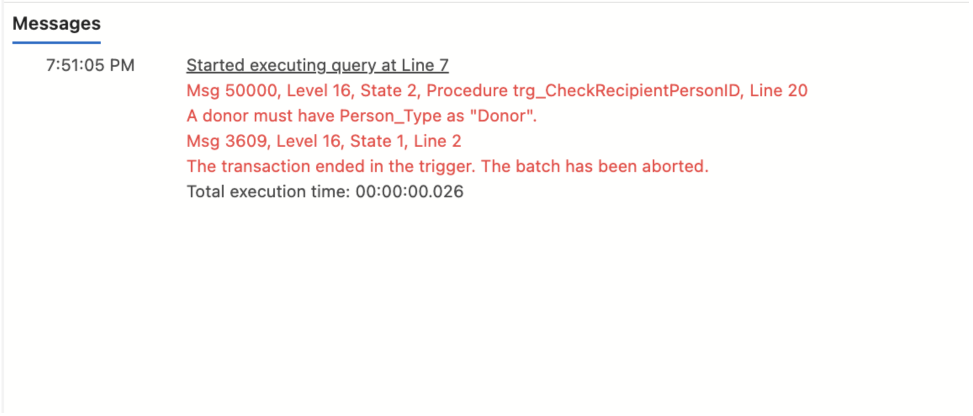
```
insert into Person (first_name, last_name, Contact_Number, email, Street , City, State, Zip_Code,
Blood_Type, Date_of_Birth, Biological_Gender, Person_Type)
values ('Rockie', 'Bartaletti', '413-441-4123', 'rbaraletti1@omniture.com',
'5506 Pepper Wood Junction', 'Springfield', 'Massachusetts', '01152', 'A-',
'1986-06-24', 'M', 'Donor');

select MAX(person_id) from Person;

insert into Recipient (Recipient_ID, Required_Organ, Date_Registered, Wait_List_No)
values (103, 'Intestine', '4/5/2022', 1);
```



```
Messages
    7:46:37 PM      Started executing query at Line 8
                    Msg 50000, Level 16, State 2, Procedure trg_CheckDonorPersonID, Line 19
                    A recipient must have Person_Type as "Recipient".
                    Msg 3609, Level 16, State 1, Line 1
                    The transaction ended in the trigger. The batch has been aborted.
                    Total execution time: 00:00:00.012
```

```
--Trigger 2

CREATE TRIGGER trg_CheckDonorPersonID
ON Recipient
AFTER INSERT, UPDATE
AS
BEGIN
  IF EXISTS (SELECT 1 FROM inserted i INNER JOIN Donor d ON i.Recipient_ID = d. Donor_ID)
  BEGIN
    RAISERROR('A recipient cannot also be a donor.', 16, 1)
    ROLLBACK TRANSACTION
                RETURN;  -- Return to prevent further execution
  END
          -- Check if the person type for the recipient is not 'Recipient'

  IF EXISTS (SELECT 1 FROM Person p
    WHERE p.Person_ID IN (SELECT i.Recipient_ID FROM inserted i)
    AND p.Person_Type <> 'Recipient'
  )
  BEGIN
    RAISERROR('A recipient must have Person_Type as "Recipient".', 16, 2)
    ROLLBACK TRANSACTION
    RETURN;  -- Return to prevent further execution
  END
END;
```

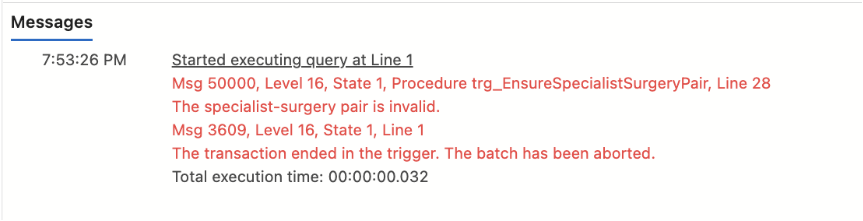
```
insert into Person (first_name, last_name, Contact_Number, email, Street , City, State, Zip_Code,
Blood_Type, Date_of_Birth, Biological_Gender, Person_Type)
values ('Loreal', 'Bartaletti', '413-141-4123', 'lbaraletti1@omniture.com',
'1526  Wood Junction', 'SMAfield', 'Massachusetts', '02152', 'B-',
'1986-06-24', 'M', 'Recipient');

select MAX(person_id) from Person;

insert into Donor (donor_id, Donation_Date, Organ_Donated) values (103,'2024-06-08','Liver')
```



```
Messages
    7:51:05 PM      Started executing query at Line 7
                    Msg 50000, Level 16, State 2, Procedure trg_CheckRecipientPersonID, Line 20
                    A donor must have Person_Type as "Donor".
                    Msg 3609, Level 16, State 1, Line 2
                    The transaction ended in the trigger. The batch has been aborted.
                    Total execution time: 00:00:00.026
```

```
--Trigger 3
```

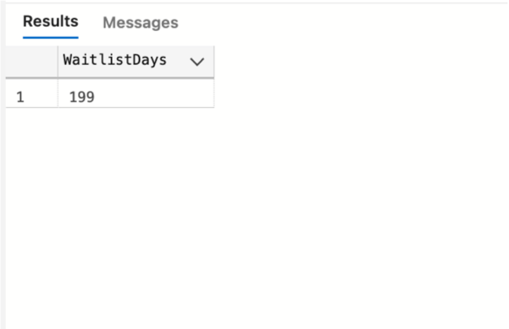
```
CREATE TRIGGER trg_EnsureSpecialistSurgeryPair
ON Doctors
AFTER INSERT
AS
BEGIN
DECLARE @Specialist VARCHAR(255), @SurgeryName VARCHAR(255);

SELECT @Specialist = i.Specialist, @SurgeryName = i.Surgery_name
FROM inserted i;

IF NOT EXISTS (
    SELECT 1
    FROM (
        VALUES
            ('Cardiologist', 'Cardiothoracic Surgery'),
            ('Microsurgery Specialist', 'Transplant Surgery'),
            ('Gastroenterologist', 'Plastic Surgery'),
            ('Hepatologist', 'Hepatobiliary Surgery'),
            ('Nephrologist', 'Urology'),
            ('Pulmonologist', 'Thoracic Surgery'),
            ('Endocrinologist', 'Transplant Surgery'),
            ('Ophthalmologist', 'Eye Surgery')
    ) AS SpecialistSurgeryPair (Specialist, SurgeryName)
    WHERE Specialist = @Specialist AND SurgeryName = @SurgeryName
)
BEGIN
    RAISERROR('The specialist-surgery pair is invalid.', 16, 1);
    ROLLBACK TRANSACTION;
    RETURN;
END
END;


insert into Doctors (Doctor_Name,Doctor_Email,Contact,Specialist,Surgery_name) values
('Amy Jackeson','aj@gmail.com',123-123-1212,'Microsurgery Specialist','Eye Surgery')
```



```
Messages
    7:53:26 PM    Started executing query at Line 1
                  Msg 50000, Level 16, State 1, Procedure trg_EnsureSpecialistSurgeryPair, Line 28
                  The specialist-surgery pair is invalid.
                  Msg 3609, Level 16, State 1, Line 1
                  The transaction ended in the trigger. The batch has been aborted.
                  Total execution time: 00:00:00.032
```

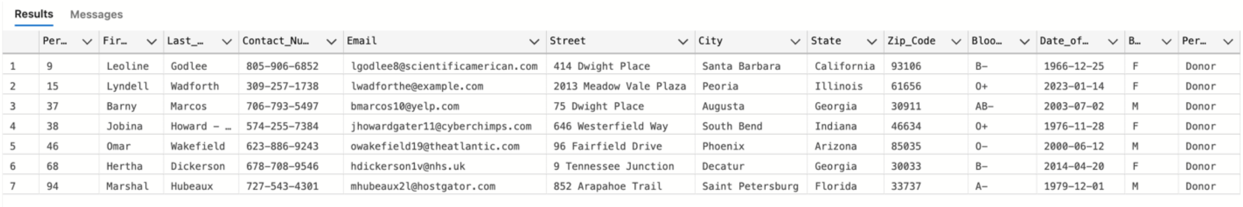
Functions

```
CREATE FUNCTION CalculateWaitlistTime
(
    @RecipientID INT
)
RETURNS INT
AS
BEGIN
    DECLARE @WaitlistTime INT;

    DECLARE @EntryDate DATE;
    SELECT @EntryDate = Date_Registered
    FROM Recipient
    WHERE Recipient_ID = @RecipientID;

    DECLARE @CurrentDate DATE = GETDATE();
    SET @WaitlistTime = DATEDIFF(DAY, @EntryDate, @CurrentDate);

    RETURN @WaitlistTime;
END;


DECLARE @RecipientID INT = 4;
DECLARE @WaitlistDays INT;
SET @WaitlistDays = dbo.CalculateWaitlistTime(@RecipientID);

SELECT @WaitlistDays AS WaitlistDays
```



```
   WaitlistDays
1  199
```

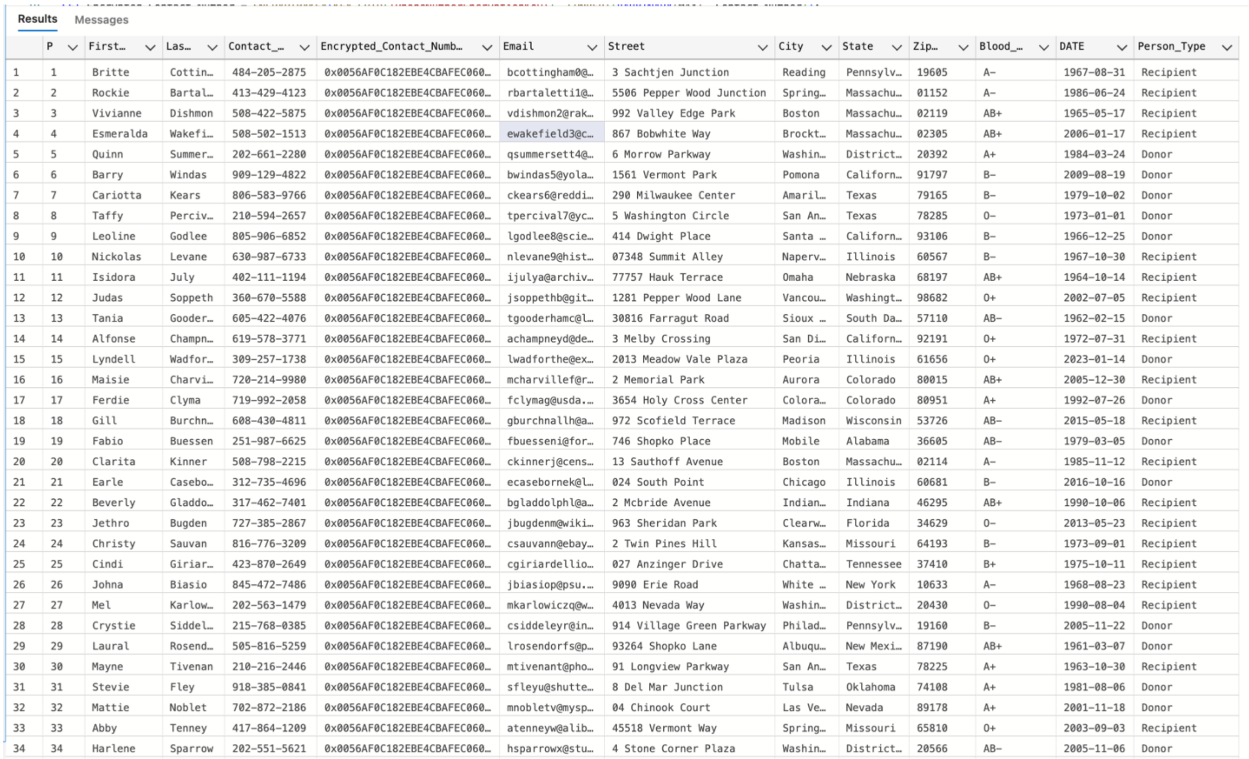
```
CREATE TABLE PotentialDonorsForOrgan (
    Person_ID INT,
    First_Name VARCHAR(100),
    Last_Name VARCHAR(100),
    Contact_Number VARCHAR(50),
    Email VARCHAR(100),
    Street VARCHAR(100),
    City VARCHAR(100),
    State VARCHAR(100),
    Zip_Code VARCHAR(10),
    Blood_Type VARCHAR(3),
    Date_of_Birth DATE,
    Biological_Gender VARCHAR(1),
    Person_Type VARCHAR(10)
);

CREATE PROCEDURE InsertPotentialDonorsForOrgan @RequiredOrgan VARCHAR(25)
AS
BEGIN
    INSERT INTO PotentialDonorsForOrgan (Person_ID, First_Name,
             Last_Name, Contact_Number, Email, Street, City, State, Zip_Code, Blood_Type,
             Date_of_Birth, Biological_Gender, Person_Type)
    SELECT
        p.Person_ID,
        p.First_Name,
        p.Last_Name,
        p.Contact_Number,
        p.Email,
        p.Street,
        p.City,
        p.State,
        p.Zip_Code,
        p.Blood_Type,
        p.Date_of_Birth,
        p.Biological_Gender,
        p.Person_Type
    FROM
        Person p
    JOIN
        Donor d ON p.Person_ID = d.Donor_ID
    WHERE
        d.Organ_Donated = @RequiredOrgan;
END;

EXEC InsertPotentialDonorsForOrgan 'Kidney';

SELECT * FROM PotentialDonorsForOrgan;
```



	Per…	Fir…	Last_…	Contact_Nu…	Email	Street	City	State	Zip_Code	Bloo…	Date_of…	B…	Per…
1	9	Leoline	Godlee	805-906-6852	lgodlee8@scientificamerican.com	414 Dwight Place	Santa Barbara	California	93106	B-	1966-12-25	F	Donor
2	15	Lyndell	Wadforth	309-257-1738	lwadforthe@example.com	2013 Meadow Vale Plaza	Peoria	Illinois	61656	O+	2023-01-14	F	Donor
3	37	Barny	Marcos	706-793-5497	bmarcos10@yelp.com	75 Dwight Place	Augusta	Georgia	30911	AB-	2003-07-02	M	Donor
4	38	Jobina	Howard - …	574-255-7384	jhowardgater11@cyberchimps.com	646 Westerfield Way	South Bend	Indiana	46634	O+	1976-11-28	F	Donor
5	46	Omar	Wakefield	623-886-9243	owakefield19@theatlantic.com	96 Fairfield Drive	Phoenix	Arizona	85035	O-	2000-06-12	M	Donor
6	68	Hertha	Dickerson	678-708-9546	hdickerson1v@nhs.uk	9 Tennessee Junction	Decatur	Georgia	30033	B-	2014-04-20	F	Donor
7	94	Marshal	Hubeaux	727-543-4301	mhubeaux2l@hostgator.com	852 Arapahoe Trail	Saint Petersburg	Florida	33737	A-	1979-12-01	M	Donor

Column data encryption

```
ALTER TABLE Person
ADD Encrypted_Contact_Number VARBINARY(MAX);

CREATE MASTER KEY ENCRYPTION BY PASSWORD = 'YourMasterKeyPassword';

CREATE SYMMETRIC KEY PhoneNumberEncryptionKey
    WITH ALGORITHM = AES_256
    ENCRYPTION BY PASSWORD = 'DMDD_Group11';

CREATE CERTIFICATE MyCertificate
    WITH SUBJECT = 'Certificate for Column Encryption';

OPEN SYMMETRIC KEY PhoneNumberEncryptionKey
    DECRYPTION BY PASSWORD = 'DMDD_Group11';

UPDATE Person
SET Encrypted_Contact_Number = ENCRYPTBYKEY(KEY_GUID('PhoneNumberEncryptionKey'),
CONVERT(VARBINARY(MAX), Contact_Number));

SELECT Person_ID,
First_Name,
Last_Name,
Contact_Number,
Encrypted_Contact_Number  ,
Email ,
Street,
City,
State,
Zip_Code ,
Blood_Type,
Date_of_Birth DATE,
Person_Type
FROM PERSON;
```



	P	First…	Las…	Contact_…	Encrypted_Contact_Numb…	Email	Street	City	State	Zip…	Blood_…	DATE	Person_Type
1	1	Britte	Cottin…	484-205-2875	0x0056AF0C182EBE4CBAFEC060…	bcottingham0@…	3 Sachtjen Junction	Reading	Pennsylv…	19605	A-	1967-08-31	Recipient
2	2	Rockie	Bartal…	413-429-4123	0x0056AF0C182EBE4CBAFEC060…	rbartaletti1@…	5506 Pepper Wood Junction	Spring…	Massachu…	01152	A-	1986-06-24	Recipient
3	3	Vivianne	Dishmon	508-422-5875	0x0056AF0C182EBE4CBAFEC060…	vdishmon2@rak…	992 Valley Edge Park	Boston	Massachu…	02119	AB+	1965-05-17	Recipient
4	4	Esmeralda	Wakefi…	508-502-1513	0x0056AF0C182EBE4CBAFEC060…	ewakefield3@c…	867 Bobwhite Way	Brockt…	Massachu…	02305	AB+	2006-01-17	Recipient
5	5	Quinn	Summer…	202-661-2280	0x0056AF0C182EBE4CBAFEC060…	qsummersett4@…	6 Morrow Parkway	Washin…	District…	20392	A+	1984-03-24	Donor
6	6	Barry	Windas	909-129-4822	0x0056AF0C182EBE4CBAFEC060…	bwindas5@yola…	1561 Vermont Park	Pomona	Californ…	91797	B-	2009-08-19	Donor
7	7	Cariotta	Kears	806-583-9766	0x0056AF0C182EBE4CBAFEC060…	ckears6@reddi…	290 Milwaukee Center	Amaril…	Texas	79165	B-	1979-10-02	Donor
8	8	Taffy	Perciv…	210-594-2657	0x0056AF0C182EBE4CBAFEC060…	tpercival7@yc…	5 Washington Circle	San An…	Texas	78285	O-	1973-01-01	Donor
9	9	Leoline	Godlee	805-906-6852	0x0056AF0C182EBE4CBAFEC060…	lgodlee8@scie…	414 Dwight Place	Santa …	Californ…	93106	B-	1966-12-25	Donor
10	10	Nickolas	Levane	630-987-6733	0x0056AF0C182EBE4CBAFEC060…	nlevane9@hist…	07348 Summit Alley	Naperv…	Illinois	60567	B-	1967-10-30	Recipient
11	11	Isidora	July	402-111-1194	0x0056AF0C182EBE4CBAFEC060…	ijulya@archiv…	77757 Hauk Terrace	Omaha	Nebraska	68197	AB+	1964-10-14	Recipient
12	12	Judas	Soppeth	360-670-5588	0x0056AF0C182EBE4CBAFEC060…	jsoppethb@git…	1281 Pepper Wood Lane	Vancou…	Washingt…	98682	O+	2002-07-05	Recipient
13	13	Tania	Gooder…	605-422-4076	0x0056AF0C182EBE4CBAFEC060…	tgooderhamc@l…	30816 Farragut Road	Sioux …	South Da…	57110	AB-	1962-02-15	Donor
14	14	Alfonse	Champn…	619-578-3771	0x0056AF0C182EBE4CBAFEC060…	achampneyd@de…	3 Melby Crossing	San Di…	Californ…	92191	O+	1972-07-31	Recipient
15	15	Lyndell	Wadfor…	309-257-1738	0x0056AF0C182EBE4CBAFEC060…	lwadforthe@ex…	2013 Meadow Vale Plaza	Peoria	Illinois	61656	O+	2023-01-14	Donor
16	16	Maisie	Charvi…	720-214-9980	0x0056AF0C182EBE4CBAFEC060…	mcharvillef@r…	2 Memorial Park	Aurora	Colorado	80015	AB+	2005-12-30	Recipient
17	17	Ferdie	Clyma	719-992-2058	0x0056AF0C182EBE4CBAFEC060…	fclymag@usda.…	3654 Holy Cross Center	Colora…	Colorado	80951	A+	1992-07-26	Donor
18	18	Gill	Burchn…	608-430-4811	0x0056AF0C182EBE4CBAFEC060…	gburchnallh@a…	972 Scofield Terrace	Madison	Wisconsin	53726	AB-	2015-05-18	Recipient
19	19	Fabio	Buessen	251-987-6625	0x0056AF0C182EBE4CBAFEC060…	fbuesseni@for…	746 Shopko Place	Mobile	Alabama	36605	AB-	1979-03-05	Donor
20	20	Clarita	Kinner	508-798-2215	0x0056AF0C182EBE4CBAFEC060…	ckinnerj@cens…	13 Sauthoff Avenue	Boston	Massachu…	02114	A-	1985-11-12	Recipient
21	21	Earle	Casebo…	312-735-4696	0x0056AF0C182EBE4CBAFEC060…	ecasebornek@l…	024 South Point	Chicago	Illinois	60681	B-	2016-10-16	Donor
22	22	Beverly	Gladdo…	317-462-7401	0x0056AF0C182EBE4CBAFEC060…	bgladdolphl@a…	2 Mcbride Avenue	Indian…	Indiana	46295	AB+	1990-10-06	Recipient
23	23	Jethro	Bugden	727-385-2867	0x0056AF0C182EBE4CBAFEC060…	jbugdenm@wiki…	963 Sheridan Park	Clearw…	Florida	34629	O-	2013-05-23	Recipient
24	24	Christy	Sauvan	816-776-3209	0x0056AF0C182EBE4CBAFEC060…	csauvann@ebay…	2 Twin Pines Hill	Kansas…	Missouri	64193	B-	1973-09-01	Recipient
25	25	Cindi	Giriar…	423-870-2649	0x0056AF0C182EBE4CBAFEC060…	cgiriardellio…	027 Anzinger Drive	Chatta…	Tennessee	37410	B+	1975-10-11	Recipient
26	26	Johna	Biasio	845-472-7486	0x0056AF0C182EBE4CBAFEC060…	jbiasiop@psu.…	9090 Erie Road	White …	New York	10633	A-	1968-08-23	Recipient
27	27	Mel	Karlow…	202-563-1479	0x0056AF0C182EBE4CBAFEC060…	mkarlowiczq@w…	4013 Nevada Way	Washin…	District…	20430	O-	1990-08-04	Recipient
28	28	Crystie	Siddel…	215-768-0385	0x0056AF0C182EBE4CBAFEC060…	csiddeleyr@in…	914 Village Green Parkway	Philad…	Pennsylv…	19160	B-	2005-11-22	Donor
29	29	Laural	Rosend…	505-816-5259	0x0056AF0C182EBE4CBAFEC060…	lrosendorfs@p…	93264 Shopko Lane	Albuqu…	New Mexi…	87190	AB+	1961-03-07	Donor
30	30	Mayne	Tivenan	210-216-2446	0x0056AF0C182EBE4CBAFEC060…	mtivenant@pho…	91 Longview Parkway	San An…	Texas	78225	A+	1963-10-30	Recipient
31	31	Stevie	Fley	918-385-0841	0x0056AF0C182EBE4CBAFEC060…	sfleyu@shutte…	8 Del Mar Junction	Tulsa	Oklahoma	74108	A+	1981-08-06	Donor
32	32	Mattie	Noblet	702-872-2186	0x0056AF0C182EBE4CBAFEC060…	mnobletv@mysp…	04 Chinook Court	Las Ve…	Nevada	89178	A+	2001-11-18	Donor
33	33	Abby	Tenney	417-864-1209	0x0056AF0C182EBE4CBAFEC060…	atenneyw@alib…	45518 Vermont Way	Spring…	Missouri	65810	O+	2003-09-03	Recipient
34	34	Harlene	Sparrow	202-551-5621	0x0056AF0C182EBE4CBAFEC060…	hsparrowx@stu…	4 Stone Corner Plaza	Washin…	District…	20566	AB-	2005-11-06	Donor

NON CLUSTERED INDEX

For faster query performance

1. Index on Last name and first name of person

```
CREATE NONCLUSTERED INDEX IX_Person_LastName_FirstName
ON Person (Last_Name, First_Name);

-- Example query using the indexed columns
SELECT *
FROM Person
WHERE Last_Name = 'Smith' AND First_Name = 'Harry';
```

2. Index to find Recipient waiting for specified organ within certain time

```
CREATE NONCLUSTERED INDEX IX_Recipient_RequiredOrgan_DateRegistered
ON Recipient (Required_Organ, Date_Registered);

-- Example query using the non-clustered index
SELECT *
FROM Recipient
WHERE Required_Organ = 'Kidney'
  AND Date_Registered > '2023-01-01';
```

3. Index to retrieve doctors of particular specialization

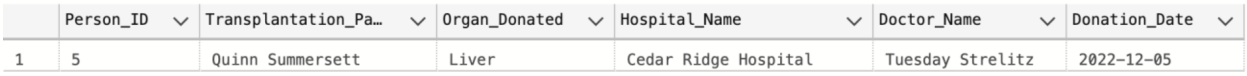
```
CREATE NONCLUSTERED INDEX IX_Doctors_Specialist
ON Doctors (Specialist);

-- Example query using the non-clustered index
SELECT *
FROM Doctors
WHERE Specialist = 'Cardiologist';
```

Structured Procedure

Procedure 1

```
-- structured procedure
CREATE PROCEDURE GetRecipientPatientDetails
    @PersonID INT,
    @Patient_Name VARCHAR(255) OUTPUT,
    @DonationDate DATE OUTPUT,
    @OrganDonated VARCHAR(255) OUTPUT,
    @Hospital_Name VARCHAR(255) OUTPUT,
    @Doctor_Name VARCHAR(255) OUTPUT
AS
BEGIN
    DECLARE @IsRecipient BIT = 0;

    -- Check if the person is a recipient
    SELECT @IsRecipient = COUNT(*)
    FROM Recipient
    WHERE Recipient_ID = @PersonID;

    -- If the person is not a recipient, display message
    IF @IsRecipient = 0
    BEGIN
        PRINT 'The person is not a recipient.';
        RETURN;
    END

select
CONCAT(p.first_name,' ', p.Last_Name) as Transplantation_Patient,
do.Organ_Donated,
a.Hospital_Name,
a.Doctor_Name,
do.Donation_Date
from Transplantation t

left join Person p
on p.Person_ID = t.Person_ID
left join Donor do
on do.Donor_ID = t.Person_ID
left join (select h.Hospital_ID, h.Hospital_Name, d.Doctor_Name from Hospital_Doctors hd
            left join Hospital h on hd.Hospital_ID = h.Hospital_ID
            left join Doctors d on d.Doctor_ID = hd.Doctor_ID) a on a.Hospital_ID = t.Hospital_ID
where @PersonID = t.Person_ID;
Print @Patient_Name;
Print @DonationDate;
Print @OrganDonated;
Print @Hospital_Name;
Print @Doctor_Name ;
end;

declare @Patient_Name VARCHAR(255) ,
        @DonationDate DATE,
        @OrganDonated VARCHAR(255) ,
        @Hospital_Name VARCHAR(255),
        @Doctor_Name VARCHAR(255)
```

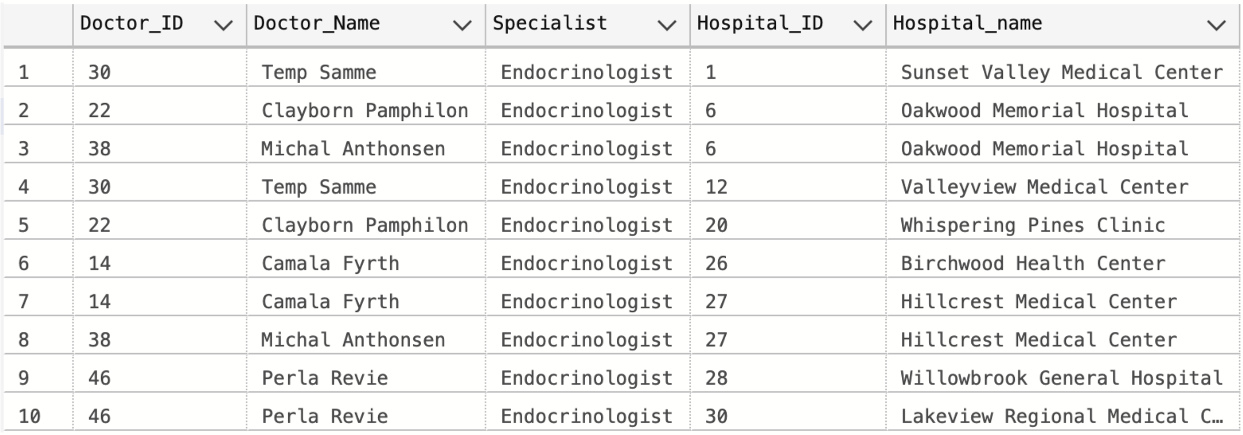
```
EXEC GetRecipientPatientDetails 1, @Patient_Name OUTPUT, @DonationDate OUTPUT,
@OrganDonated OUTPUT, @Hospital_Name OUTPUT, @Doctor_Name OUTPUT;
```



	Person_ID	Transplantation_Pa…	Organ_Donated	Hospital_Name	Doctor_Name	Donation_Date
1	5	Quinn Summersett	Liver	Cedar Ridge Hospital	Tuesday Strelitz	2022-12-05

Procedure 2

```
CREATE PROCEDURE GetDoctorsBySpecialization
    @Specialization varchar(40),
    @HospitalID INT output,
    @Hospitalname varchar (40) output,
    @Doctor_Name varchar(40) output

AS
BEGIN

    -- Retrieve doctors working at the specified hospital
    SELECT D.Doctor_ID, D.Doctor_Name, D.Specialist, HD.Hospital_ID, H.Hospital_name
    FROM Hospital_Doctors HD
    LEFT JOIN Doctors D ON D.Doctor_ID = HD.Doctor_ID
    LEFT JOIN Hospital H ON H.Hospital_ID = HD.Hospital_ID
    WHERE D.Specialist = @Specialization;
    Print   @Specialization
    Print   @HospitalID
    Print   @Hospitalname
    Print   @Doctor_Name
END;

declare @HospitalID INT ,
    @Hospitalname varchar (40) ,
    @Doctor_Name varchar(40)

EXEC GetDoctorsBySpecialization 'Endocrinologist',@HospitalID, @Hospitalname, @Doctor_Name;
```



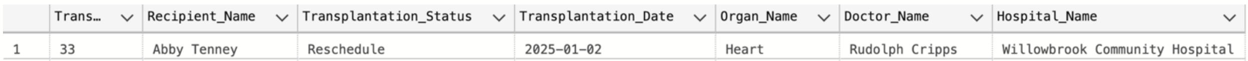
	Doctor_ID	Doctor_Name	Specialist	Hospital_ID	Hospital_name
1	30	Temp Samme	Endocrinologist	1	Sunset Valley Medical Center
2	22	Clayborn Pamphilon	Endocrinologist	6	Oakwood Memorial Hospital
3	38	Michal Anthonsen	Endocrinologist	6	Oakwood Memorial Hospital
4	30	Temp Samme	Endocrinologist	12	Valleyview Medical Center
5	22	Clayborn Pamphilon	Endocrinologist	20	Whispering Pines Clinic
6	14	Camala Fyrth	Endocrinologist	26	Birchwood Health Center
7	14	Camala Fyrth	Endocrinologist	27	Hillcrest Medical Center
8	38	Michal Anthonsen	Endocrinologist	27	Hillcrest Medical Center
9	46	Perla Revie	Endocrinologist	28	Willowbrook General Hospital
10	46	Perla Revie	Endocrinologist	30	Lakeview Regional Medical C…

Procedure 3

```
CREATE PROCEDURE TransplantationDetailsbyRecipientID
    @PersonID int,
    @Transplantation_ID int output,
    @Recipient_Name varchar(40) output,
    @Transplantation_Status varchar(40) output,
    @Transplantation_Date date output,
    @Organ_name varchar(40) output,
    @Doctor_name varchar(40) output,
    @Hospital varchar (40) output
```

```
AS
BEGIN
   DECLARE @Recipient_ID BIT = 0;

   -- Check if the person is a recipient
   SELECT @Recipient_ID = COUNT(*)
   FROM Transplantation T
   WHERE T.Person_ID = @PersonID;

   -- If the person is not a recipient, display message
   IF @Recipient_ID = 0
   BEGIN
      PRINT 'The person has not had a transplant';
      RETURN;
   END
   SELECT
      T.Transplantation_ID,
      Recipient_Name = RP.First_Name + ' ' + RP.Last_Name,
      T.Transplantation_Status,
      T.Transplantation_Date,
      OL.Organ_Name,
      HD.Doctor_Name,
      HD.Hospital_Name
   FROM Transplantation T
   INNER JOIN Donated_Organ DO ON T.Donated_Organ_ID = DO.Donated_Organ_ID
   INNER JOIN Organ_List OL ON DO.Organ_ID = OL.Organ_ID
   LEFT JOIN Recipient R ON R.Recipient_ID = T.Person_ID
   LEFT JOIN Donor D ON D.Donor_ID = T.Person_ID
   LEFT JOIN Person RP ON RP.Person_ID = R.Recipient_ID
   LEFT JOIN Person DP ON DP.Person_ID = D.Donor_ID
   LEFT JOIN (
      SELECT HD.Hospital_ID, H.Hospital_Name, D.Doctor_Name, D.Specialist
      FROM Hospital_Doctors HD
      LEFT JOIN Hospital H ON HD.Hospital_ID = H.Hospital_ID
      LEFT JOIN Doctors D ON D.Doctor_ID = HD.Doctor_ID
   ) HD ON HD.Hospital_ID = T.Hospital_ID
   where r.Recipient_ID =@PersonID;

   print @Transplantation_ID
   print @PersonID
   print @Recipient_Name
   print @Transplantation_Status
   print @Transplantation_Date
   print @Organ_name
   print @Doctor_name
   print @Hospital
 END;


 declare @Transplantation_ID int,
       @Recipient_Name varchar(40),
       @Transplantation_Status varchar(40),
       @Transplantation_Date Date ,
       @Organ_name varchar(40),
       @Doctor_Name varchar(40),
       @Hospital varchar (40)
```

```
EXEC TransplantationDetailsbyRecipientID 33 ,@Transplantation_ID, @Recipient_Name,
@Transplantation_Status,
@Transplantation_Date, @Organ_name, @Doctor_Name, @Hospital
```

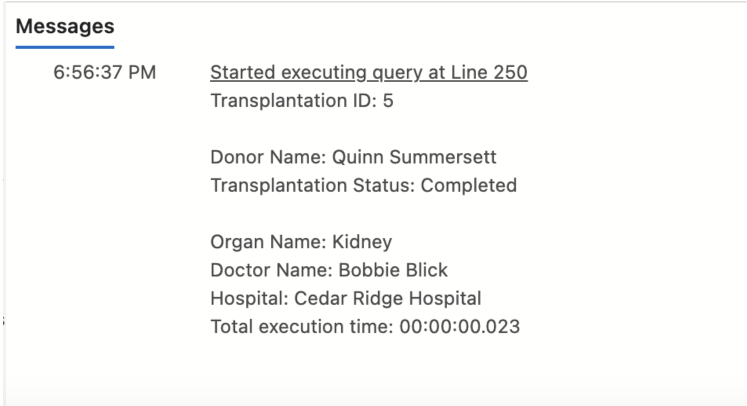


	Trans…	Recipient_Name	Transplantation_Status	Transplantation_Date	Organ_Name	Doctor_Name	Hospital_Name
1	33	Abby Tenney	Reschedule	2025-01-02	Heart	Rudolph Cripps	Willowbrook Community Hospital

Procedure 4

```
CREATE PROCEDURE TransplantationDetailsbyDate
    @Transplantation_Date date,
    @Transplantation_ID int output,
    @Recipient_Name varchar(40) output,
    @Donor_Name varchar(40) output,
    @Transplantation_Status varchar(40) output,
    @Organ_name varchar(40) output,
    @Doctor_name varchar(40) output,
    @Hospital varchar(40) output
AS
BEGIN
    DECLARE @TransplantationDate BIT = 0;

    -- Check if the transplantation exists
    SELECT @TransplantationDate = COUNT(*)
    FROM Transplantation T
    WHERE T.Transplantation_Date = @Transplantation_Date;

    -- If the transplantation does not exist, display a message
    IF @TransplantationDate = 0
    BEGIN
        PRINT 'There has been no transplantation on this day';
        RETURN;
    END

    SELECT
        @Transplantation_ID = T.Transplantation_ID,
        @Recipient_Name = RP.First_Name + ' ' + RP.Last_Name,
        @Donor_Name = DP.First_Name + ' ' + DP.Last_Name,
        @Transplantation_Status = T.Transplantation_Status,
        @Organ_name = OL.Organ_Name,
        @Doctor_name = HD.Doctor_Name,
        @Hospital = HD.Hospital_Name
    FROM Transplantation T
    INNER JOIN Donated_Organ DO ON T.Donated_Organ_ID = DO.Donated_Organ_ID
    INNER JOIN Organ_List OL ON DO.Organ_ID = OL.Organ_ID
    LEFT JOIN Recipient R ON R.Recipient_ID = T.Person_ID
    LEFT JOIN Donor D ON D.Donor_ID = T.Person_ID
    LEFT JOIN Person RP ON RP.Person_ID = R.Recipient_ID
    LEFT JOIN Person DP ON DP.Person_ID = D.Donor_ID
    LEFT JOIN (
        SELECT HD.Hospital_ID, H.Hospital_Name, D.Doctor_Name, D.Specialist
        FROM Hospital_Doctors HD
        LEFT JOIN Hospital H ON HD.Hospital_ID = H.Hospital_ID
        LEFT JOIN Doctors D ON D.Doctor_ID = HD.Doctor_ID
    ) HD ON HD.Hospital_ID = T.Hospital_ID
    WHERE T.Transplantation_Date = @Transplantation_Date;
END;
```

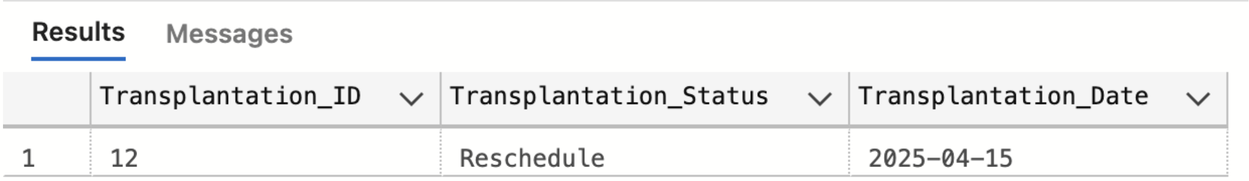
```
DECLARE @Transplantation_ID int,
	@Recipient_Name varchar(40),
	@Donor_Name varchar(40),
	@Transplantation_Status varchar(40),
	@Transplantation_Date Date,
	@Organ_name varchar(40),
	@Doctor_Name varchar(40),
	@Hospital varchar(40)

EXEC TransplantationDetailsbyDate '2021-01-03', @Transplantation_ID OUTPUT, @Recipient_Name 
OUTPUT, @Donor_Name OUTPUT, @Transplantation_Status OUTPUT,
   @Organ_name OUTPUT, @Doctor_Name OUTPUT, @Hospital OUTPUT

PRINT 'Transplantation ID: ' + CAST(@Transplantation_ID AS varchar(10))
PRINT 'Recipient Name: ' + @Recipient_Name
PRINT 'Donor Name: ' + @Donor_Name
PRINT 'Transplantation Status: ' + @Transplantation_Status
PRINT 'Transplantation Date: ' + CAST(@Transplantation_Date AS varchar(10))
PRINT 'Organ Name: ' + @Organ_name
PRINT 'Doctor Name: ' + @Doctor_Name
PRINT 'Hospital: ' + @Hospital
```



```
Messages
    6:56:37 PM        Started executing query at Line 250
                      Transplantation ID: 5

                      Donor Name: Quinn Summersett
                      Transplantation Status: Completed

                      Organ Name: Kidney
                      Doctor Name: Bobbie Blick
                      Hospital: Cedar Ridge Hospital
                      Total execution time: 00:00:00.023
```

Procedure 5

```
CREATE PROCEDURE RescheduleTransplantation
   @Transplantation_ID INT,
   @RescheduleDate DATE
AS
BEGIN
   -- Update Transplantation_Status to 'Cancelled' and Transplantation_Date to input date
   UPDATE Transplantation
   SET Transplantation_Status = 'Reschedule',
      Transplantation_Date = @RescheduleDate
   WHERE Transplantation_ID = @Transplantation_ID;
END;


EXEC RescheduleTransplantation @Transplantation_ID = 12, @RescheduleDate = '2025-04-15';

SELECT Transplantation_ID, Transplantation_Status, Transplantation_Date
FROM Transplantation
WHERE Transplantation_ID = 12
```

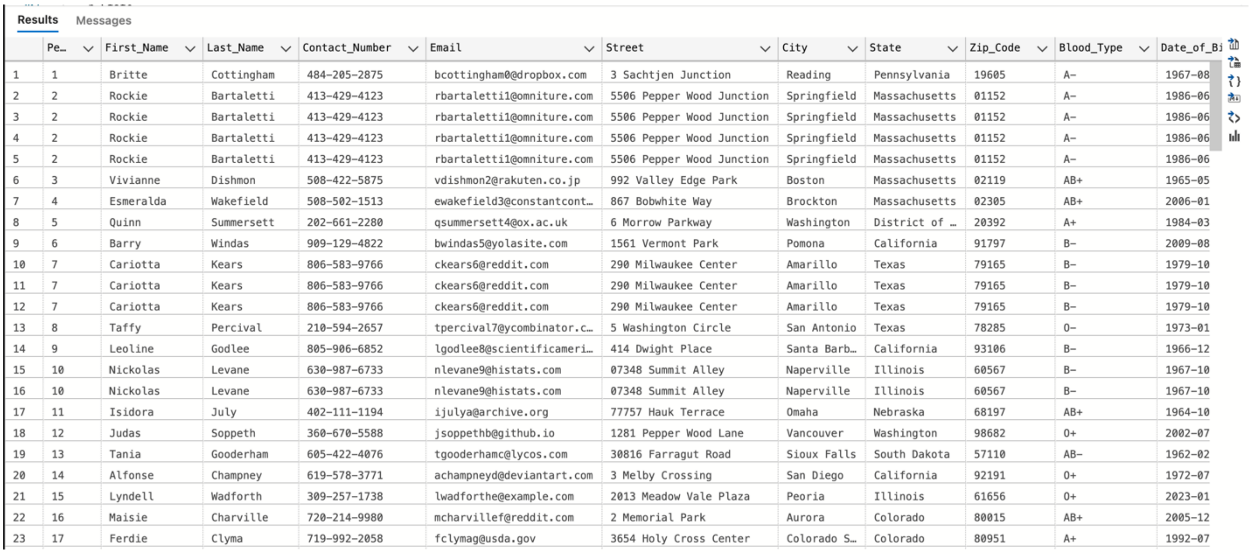


	Transplantation_ID	Transplantation_Status	Transplantation_Date
1	12	Reschedule	2025-04-15

VIEWS

View 1

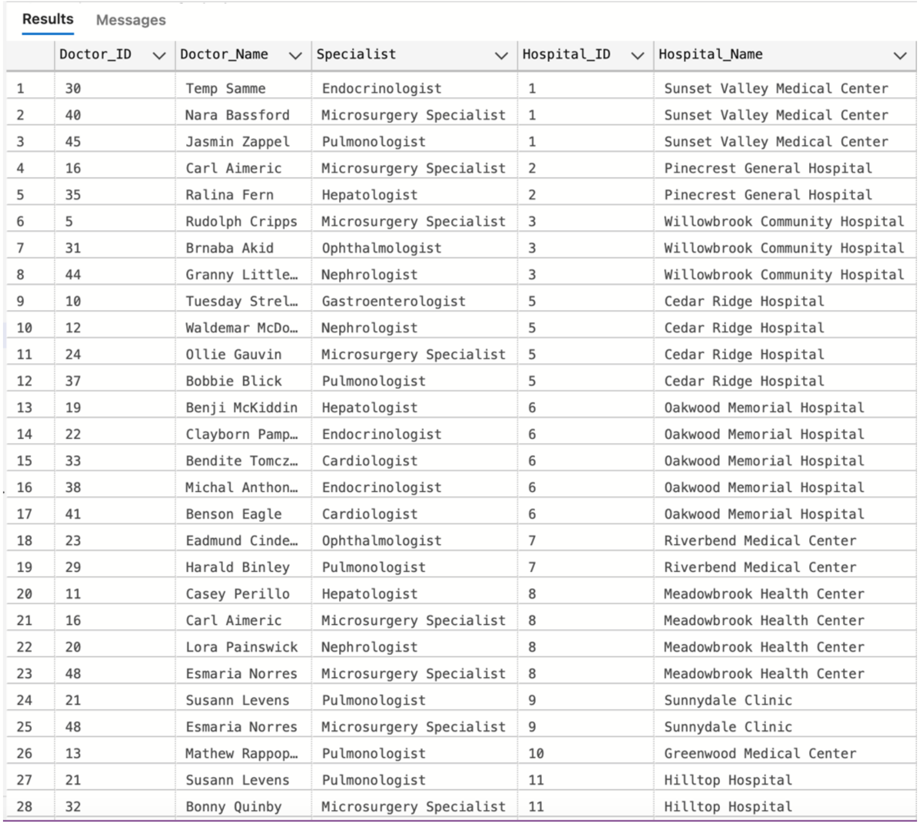
```
CREATE VIEW PatientDetailsView AS
SELECT
    p.Person_ID,
    p.First_Name,
    p.Last_Name,
    p.Contact_Number,
    p.Email,
    p.Street,
    p.City,
    p.State,
    p.Zip_Code,
    p.Blood_Type,
    p.Date_of_Birth,
    p.Person_Type,
    mi.Insurance_Company,
    r.Required_Organ AS Needed_Organ,
    t.Transplantation_Status,
    t.Transplantation_Date
FROM Person p
LEFT JOIN Medical_Insurance mi ON p.Person_ID = mi.Person_ID
LEFT JOIN Recipient r ON p.Person_ID = r.Recipient_ID
LEFT JOIN Transplantation t ON p.Person_ID = t.Person_ID;

SELECT * FROM PatientDetailsView;
```



	Pe…	First_Name	Last_Name	Contact_Number	Email	Street	City	State	Zip_Code	Blood_Type	Date_of_Bi
1	1	Britte	Cottingham	484-205-2875	bcottingham0@dropbox.com	3 Sachtjen Junction	Reading	Pennsylvania	19605	A-	1967-08
2	2	Rockie	Bartaletti	413-429-4123	rbartaletti1@omniture.com	5506 Pepper Wood Junction	Springfield	Massachusetts	01152	A-	1986-06
3	2	Rockie	Bartaletti	413-429-4123	rbartaletti1@omniture.com	5506 Pepper Wood Junction	Springfield	Massachusetts	01152	A-	1986-06
4	2	Rockie	Bartaletti	413-429-4123	rbartaletti1@omniture.com	5506 Pepper Wood Junction	Springfield	Massachusetts	01152	A-	1986-06
5	2	Rockie	Bartaletti	413-429-4123	rbartaletti1@omniture.com	5506 Pepper Wood Junction	Springfield	Massachusetts	01152	A-	1986-06
6	3	Vivianne	Dishmon	508-422-5875	vdishmon2@rakuten.co.jp	992 Valley Edge Park	Boston	Massachusetts	02119	AB+	1965-05
7	4	Esmeralda	Wakefield	508-502-1513	ewakefield3@constantcont…	867 Bobwhite Way	Brockton	Massachusetts	02305	AB+	2006-01
8	5	Quinn	Summersett	202-661-2280	qsummersett4@ox.ac.uk	6 Morrow Parkway	Washington	District of …	20392	A+	1984-03
9	6	Barry	Windas	909-129-4822	bwindas5@yolasite.com	1561 Vermont Park	Pomona	California	91797	B-	2009-08
10	7	Cariotta	Kears	806-583-9766	ckears6@reddit.com	290 Milwaukee Center	Amarillo	Texas	79165	B-	1979-10
11	7	Cariotta	Kears	806-583-9766	ckears6@reddit.com	290 Milwaukee Center	Amarillo	Texas	79165	B-	1979-10
12	7	Cariotta	Kears	806-583-9766	ckears6@reddit.com	290 Milwaukee Center	Amarillo	Texas	79165	B-	1979-10
13	8	Taffy	Percival	210-594-2657	tpercival7@ycombinator.c…	5 Washington Circle	San Antonio	Texas	78285	O-	1973-01
14	9	Leoline	Godlee	805-906-6852	lgodlee8@scientificameri…	414 Dwight Place	Santa Barb…	California	93106	B-	1966-12
15	10	Nickolas	Levane	630-987-6733	nlevane9@histats.com	07348 Summit Alley	Naperville	Illinois	60567	B-	1967-10
16	10	Nickolas	Levane	630-987-6733	nlevane9@histats.com	07348 Summit Alley	Naperville	Illinois	60567	B-	1967-10
17	11	Isidora	July	402-111-1194	ijulya@archive.org	77757 Hauk Terrace	Omaha	Nebraska	68197	AB+	1964-10
18	12	Judas	Soppeth	360-670-5588	jsoppethb@github.io	1281 Pepper Wood Lane	Vancouver	Washington	98682	O+	2002-07
19	13	Tania	Gooderham	605-422-4076	tgooderhamc@lycos.com	30816 Farragut Road	Sioux Falls	South Dakota	57110	AB-	1962-02
20	14	Alfonse	Champney	619-578-3771	achampneyd@deviantart.com	3 Melby Crossing	San Diego	California	92191	O+	1972-07
21	15	Lyndell	Wadforth	309-257-1738	lwadforthe@example.com	2013 Meadow Vale Plaza	Peoria	Illinois	61656	O+	2023-01
22	16	Maisie	Charville	720-214-9980	mcharvillef@reddit.com	2 Memorial Park	Aurora	Colorado	80015	AB+	2005-12
23	17	Ferdie	Clyma	719-992-2058	fclymag@usda.gov	3654 Holy Cross Center	Colorado S…	Colorado	80951	A+	1992-07

View 2

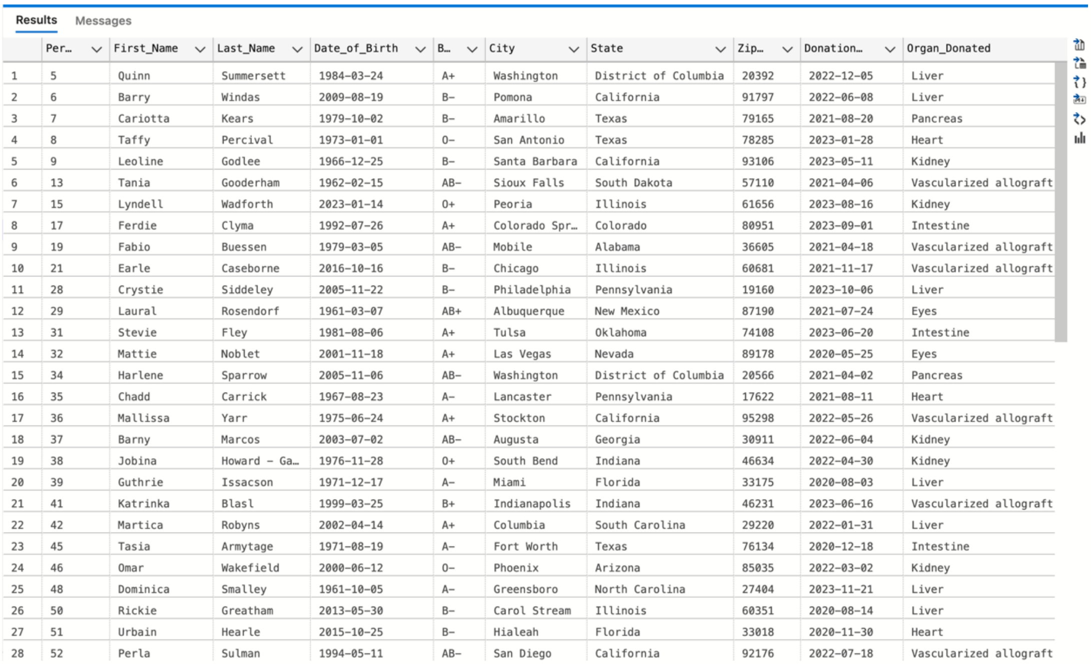
```
CREATE VIEW HospitalDoctorsView AS
SELECT
    d.Doctor_ID,
    d.Doctor_Name,
    d.Specialist,
    h.Hospital_ID,
    h.Hospital_Name
FROM Doctors d
INNER JOIN Hospital_Doctors hd ON d.Doctor_ID = hd.Doctor_ID
INNER JOIN Hospital h ON hd.Hospital_ID = h.Hospital_ID;

SELECT * FROM HospitalDoctorsView
```



	Doctor_ID	Doctor_Name	Specialist	Hospital_ID	Hospital_Name
1	30	Temp Samme	Endocrinologist	1	Sunset Valley Medical Center
2	40	Nara Bassford	Microsurgery Specialist	1	Sunset Valley Medical Center
3	45	Jasmin Zappel	Pulmonologist	1	Sunset Valley Medical Center
4	16	Carl Aimeric	Microsurgery Specialist	2	Pinecrest General Hospital
5	35	Ralina Fern	Hepatologist	2	Pinecrest General Hospital
6	5	Rudolph Cripps	Microsurgery Specialist	3	Willowbrook Community Hospital
7	31	Brnaba Akid	Ophthalmologist	3	Willowbrook Community Hospital
8	44	Granny Little…	Nephrologist	3	Willowbrook Community Hospital
9	10	Tuesday Strel…	Gastroenterologist	5	Cedar Ridge Hospital
10	12	Waldemar McDo…	Nephrologist	5	Cedar Ridge Hospital
11	24	Ollie Gauvin	Microsurgery Specialist	5	Cedar Ridge Hospital
12	37	Bobbie Blick	Pulmonologist	5	Cedar Ridge Hospital
13	19	Benji McKiddin	Hepatologist	6	Oakwood Memorial Hospital
14	22	Clayborn Pamp…	Endocrinologist	6	Oakwood Memorial Hospital
15	33	Bendite Tomcz…	Cardiologist	6	Oakwood Memorial Hospital
16	38	Michal Anthon…	Endocrinologist	6	Oakwood Memorial Hospital
17	41	Benson Eagle	Cardiologist	6	Oakwood Memorial Hospital
18	23	Eadmund Cinde…	Ophthalmologist	7	Riverbend Medical Center
19	29	Harald Binley	Pulmonologist	7	Riverbend Medical Center
20	11	Casey Perillo	Hepatologist	8	Meadowbrook Health Center
21	16	Carl Aimeric	Microsurgery Specialist	8	Meadowbrook Health Center
22	20	Lora Painswick	Nephrologist	8	Meadowbrook Health Center
23	48	Esmaria Norres	Microsurgery Specialist	8	Meadowbrook Health Center
24	21	Susann Levens	Pulmonologist	9	Sunnydale Clinic
25	48	Esmaria Norres	Microsurgery Specialist	9	Sunnydale Clinic
26	13	Mathew Rappop…	Pulmonologist	10	Greenwood Medical Center
27	21	Susann Levens	Pulmonologist	11	Hilltop Hospital
28	32	Bonny Quinby	Microsurgery Specialist	11	Hilltop Hospital

View 3

```
CREATE VIEW OrganDonorsView AS
SELECT
    p.Person_ID,
    p.First_Name,
    p.Last_Name,
    p.Date_of_Birth,
    p.Blood_Type,
    p.City,
    p.State,
    p.Zip_Code,
    d.Donation_Date,
    d.Organ_Donated
FROM Person p
INNER JOIN Donor d ON p.Person_ID = d.Donor_ID;

select * from OrganDonorsView
```



	Per…	First_Name	Last_Name	Date_of_Birth	B…	City	State	Zip…	Donation…	Organ_Donated
1	5	Quinn	Summersett	1984-03-24	A+	Washington	District of Columbia	20392	2022-12-05	Liver
2	6	Barry	Windas	2009-08-19	B-	Pomona	California	91797	2022-06-08	Liver
3	7	Cariotta	Kears	1979-10-02	B-	Amarillo	Texas	79165	2021-08-20	Pancreas
4	8	Taffy	Percival	1973-01-01	O-	San Antonio	Texas	78285	2023-01-28	Heart
5	9	Leoline	Godlee	1966-12-25	B-	Santa Barbara	California	93106	2023-05-11	Kidney
6	13	Tania	Gooderham	1962-02-15	AB-	Sioux Falls	South Dakota	57110	2021-04-06	Vascularized allograft
7	15	Lyndell	Wadforth	2023-01-14	O+	Peoria	Illinois	61656	2023-08-16	Kidney
8	17	Ferdie	Clyma	1992-07-26	A+	Colorado Spr…	Colorado	80951	2023-09-01	Intestine
9	19	Fabio	Buessen	1979-03-05	AB-	Mobile	Alabama	36605	2021-04-18	Vascularized allograft
10	21	Earle	Caseborne	2016-10-16	B-	Chicago	Illinois	60681	2021-11-17	Vascularized allograft
11	28	Crystie	Siddeley	2005-11-22	B-	Philadelphia	Pennsylvania	19160	2023-10-06	Liver
12	29	Laural	Rosendorf	1961-03-07	AB+	Albuquerque	New Mexico	87190	2021-07-24	Eyes
13	31	Stevie	Fley	1981-08-06	A+	Tulsa	Oklahoma	74108	2023-06-20	Intestine
14	32	Mattie	Noblet	2001-11-18	A+	Las Vegas	Nevada	89178	2020-05-25	Eyes
15	34	Harlene	Sparrow	2005-11-06	AB-	Washington	District of Columbia	20566	2021-04-02	Pancreas
16	35	Chadd	Carrick	1967-08-23	A-	Lancaster	Pennsylvania	17622	2021-08-11	Heart
17	36	Mallissa	Yarr	1975-06-24	A+	Stockton	California	95298	2022-05-26	Vascularized allograft
18	37	Barny	Marcos	2003-07-02	AB-	Augusta	Georgia	30911	2022-06-04	Kidney
19	38	Jobina	Howard - Ga…	1976-11-28	O+	South Bend	Indiana	46634	2022-04-30	Kidney
20	39	Guthrie	Issacson	1971-12-17	A-	Miami	Florida	33175	2020-08-03	Liver
21	41	Katrinka	Blasl	1999-03-25	B+	Indianapolis	Indiana	46231	2023-06-16	Vascularized allograft
22	42	Martica	Robyns	2002-04-14	A+	Columbia	South Carolina	29220	2022-01-31	Liver
23	45	Tasia	Armytage	1971-08-19	A-	Fort Worth	Texas	76134	2020-12-18	Intestine
24	46	Omar	Wakefield	2000-06-12	O-	Phoenix	Arizona	85035	2022-03-02	Kidney
25	48	Dominica	Smalley	1961-10-05	A-	Greensboro	North Carolina	27404	2023-11-21	Liver
26	50	Rickie	Greatham	2013-05-30	B-	Carol Stream	Illinois	60351	2020-08-14	Liver
27	51	Urbain	Hearle	2015-10-25	B-	Hialeah	Florida	33018	2020-11-30	Heart
28	52	Perla	Sulman	1994-05-11	AB-	San Diego	California	92176	2022-07-18	Vascularized allograft