

מיני פרויקט בבסיסי נתונים

מגישות : שירה הופמן וטל קמפנר

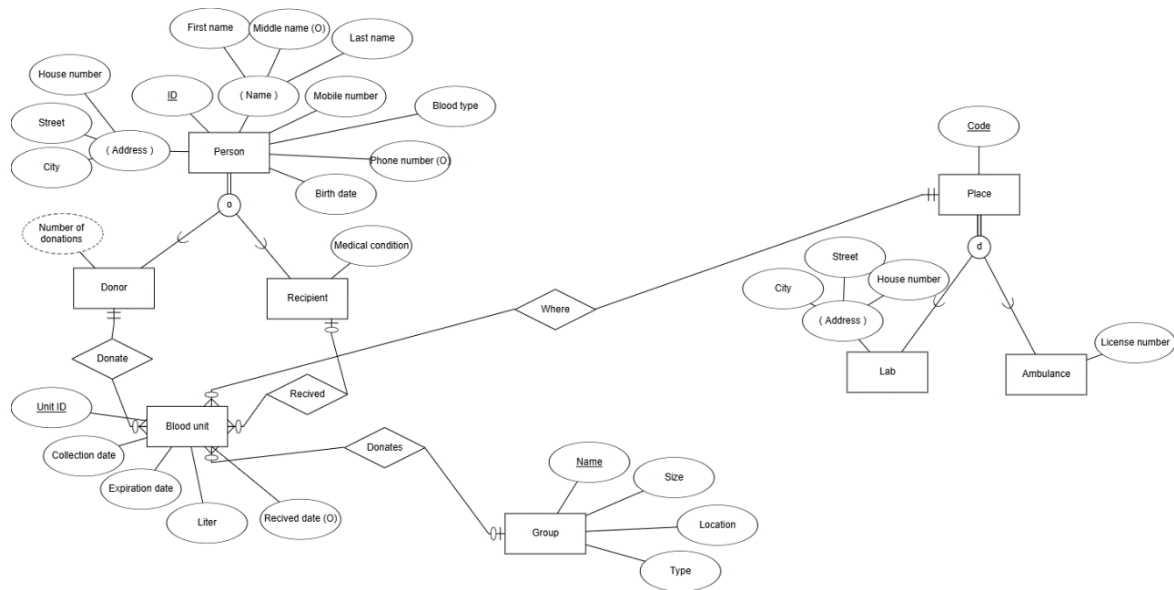
נושא המערכת: בנק **ד**

הישויות הנבחרות :

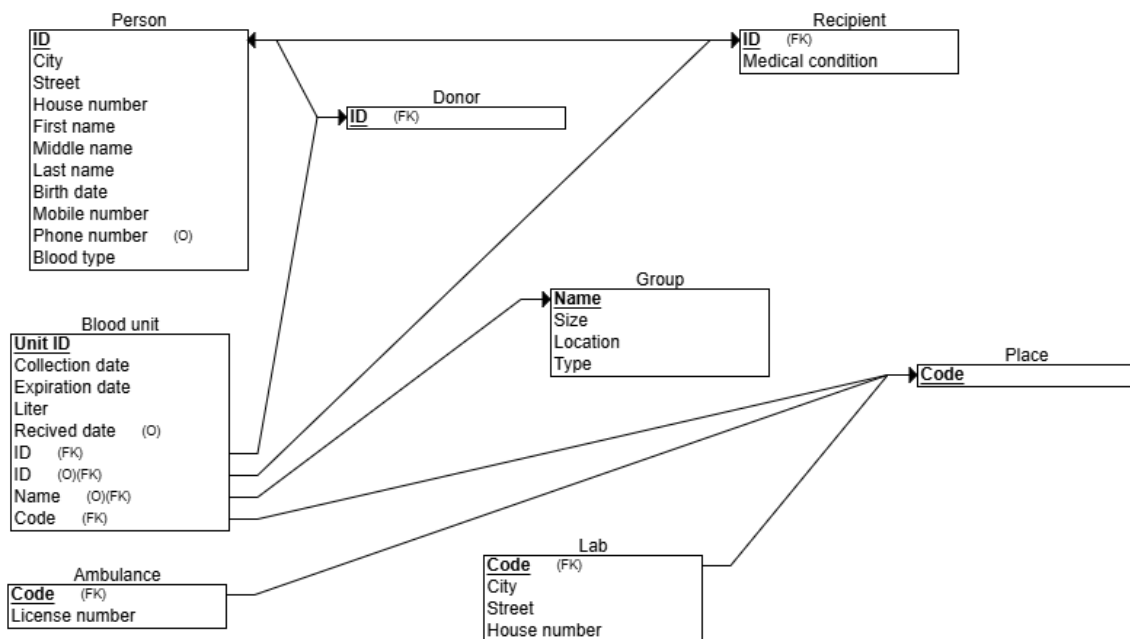
אדם, תורם, נתרם, מקום התרמה, אמבולנס, מעבדה, מנת דם, קבוצת תרימה

המערכת מנהלת מידע של בנק דם. המערכת כוללת ניהול תרומות דם- פרטי התורמים, סוג הדם הנתרם, מועד התרומה ויעד התרומה. המערכת תאפשר הצלבה בין חולה לתורם עם סוג דם מתאים, שליפת מידע כגון- מקומות התרמת דם, תאריכים בהם שיעור התרומה היה גבוה (על מנת לקבוע התרמות נוספות בתאריכים אלו), מידע על סוגי הדם השונים, מועדי ההתרמה קרובים, ועוד...

תרשים ERD:



תרשים DSD:



Create person

```
CREATE TABLE Person
(
  PersonID INT NOT NULL,
  City VARCHAR2(50) NOT NULL,
  Street VARCHAR2(50) NOT NULL,
  House_number INT NOT NULL,
  First_name VARCHAR2(50) NOT NULL,
  Middle_name VARCHAR2(50),
  Last_name VARCHAR2(50) NOT NULL,
  Birth_date DATE NOT NULL,
  Mobile_number VARCHAR2(10) NOT NULL,
  Phone_number VARCHAR2(9),
  Blood_type VARCHAR2(3) NOT NULL,
  PRIMARY KEY (PersonID)
);
```

Create Donor

```
CREATE TABLE Donor
(
  DonorID INT NOT NULL,
  PRIMARY KEY (DonorID),
  FOREIGN KEY (DonorID) REFERENCES Person(PersonID)
);
```

Create Recipient

```
CREATE TABLE Recipient
(
  Medical_condition VARCHAR2(20) NOT NULL,
  RecipientID INT NOT NULL,
  PRIMARY KEY (RecipientID),
  FOREIGN KEY (RecipientID) REFERENCES Person(PersonID)
);
```

Create Donation Group

```
CREATE TABLE DonationGroup
(
  DonationGroupName VARCHAR2(30) NOT NULL,
  DonationGroupSize INT NOT NULL,
  DonationGroupLocation VARCHAR2(40) NOT NULL,
  DonationGroupType VARCHAR2(20) NOT NULL,
  PRIMARY KEY (DonationGroupName)
);
```

Create Place

```
CREATE TABLE Place
(
  PlaceCode INT NOT NULL,
  PRIMARY KEY (PlaceCode)
);
```

Create Ambulance

```
CREATE TABLE Ambulance
(
  License_number VARCHAR2(8) NOT NULL,
  PlaceCode INT NOT NULL,
  PRIMARY KEY (PlaceCode),
  FOREIGN KEY (PlaceCode) REFERENCES Place(PlaceCode)
);
```

Create Lab

```
CREATE TABLE Lab
(
  City VARCHAR2(20) NOT NULL,
  Street VARCHAR2(20) NOT NULL,
  House_number INT NOT NULL,
  PlaceCode INT NOT NULL,
  PRIMARY KEY (PlaceCode),
  FOREIGN KEY (PlaceCode) REFERENCES Place(PlaceCode)
);
```

Create Blood unit

```
CREATE TABLE Blood_unit
(
  Collection_date DATE NOT NULL,
  Expiration_date DATE NOT NULL,
  Liter INT NOT NULL,
  Unit_ID INT NOT NULL,
  Recived_date DATE,
  DonorID INT NOT NULL,
  RecipientID INT,
  DonationGroupName VARCHAR2(20),
  PlaceCode INT NOT NULL,
  PRIMARY KEY (Unit_ID),
  FOREIGN KEY (DonorID) REFERENCES Donor(DonorID),
  FOREIGN KEY (RecipientID) REFERENCES Recipient(RecipientID),
  FOREIGN KEY (DonationGroupName) REFERENCES DonationGroup(DonationGroupName),
  FOREIGN KEY (PlaceCode) REFERENCES Place(PlaceCode)
);
```

Ambulance desc

Columns of AMBULANCE

	Name	Type	Nullable	Default	Comments
►	LICENSE_NUMBER	VARCHAR2(8)			
2	PLACECODE	INTEGER			

Blood unit desc

Columns of BLOOD_UNIT

	Name	Type	Nullable	Default	Comments
►	COLLECTION_DATE	DATE			
2	EXPIRATION_DATE	DATE			
3	LITER	INTEGER			
4	UNIT_ID	INTEGER			
5	RECIVED_DATE	DATE	Y		
6	DONORID	INTEGER			
7	RECIPIENTID	INTEGER	Y		
8	DONATIONGROUPNAME	VARCHAR2(20)	Y		
9	PLACECODE	INTEGER			

Donation Group desc

Columns of DONATIONGROUP

	Name	Type	Nullable	Default	Comments
►	DONATIONGROUPNAME	VARCHAR2(30)			
2	DONATIONGROUPSIZE	INTEGER			
3	DONATIONGROUPLOCATION	VARCHAR2(40)			
4	DONATIONGROUPTYPE	VARCHAR2(20)			

Donor desc

Columns of DONOR

	Name	Type	Nullable	Default	Comments
►	DONORID	INTEGER			

Lab desc

Columns of LAB

	Name	Type	Nullable	Default	Comments
►	CITY	VARCHAR2(20)			
2	STREET	VARCHAR2(20)			
3	HOUSE_NUMBER	INTEGER			
4	PLACECODE	INTEGER			

Person desc

Columns of PERSON					
	Name	Type	Nullable	Default	Comments
►	PERSONID	INTEGER			
2	CITY	VARCHAR2(50)			
3	STREET	VARCHAR2(50)			
4	HOUSE_NUMBER	INTEGER			
5	FIRST_NAME	VARCHAR2(50)			
6	MIDDLE_NAME	VARCHAR2(50)	Y		
7	LAST_NAME	VARCHAR2(50)			
8	BIRTH_DATE	DATE			
9	MOBILE_NUMBER	VARCHAR2(10)			
10	PHONE_NUMBER	VARCHAR2(9)	Y		
11	BLOOD_TYPE	VARCHAR2(3)			

Place desc

Columns of PLACE					
	Name	Type	Nullable	Default	Comments
►	PLACECODE	INTEGER			

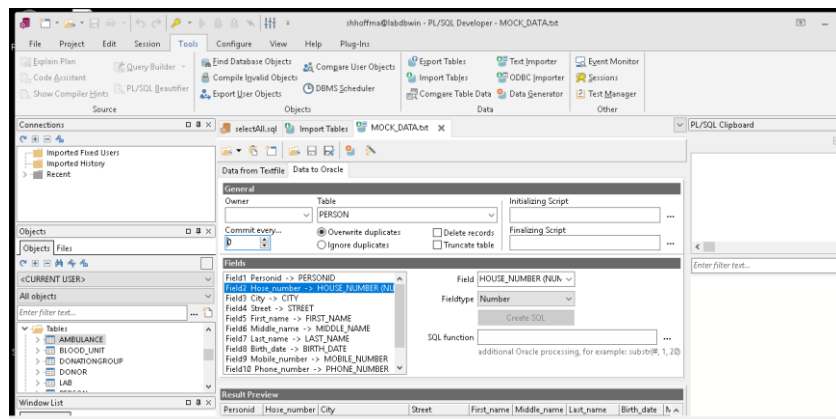
Recipient desc

Columns of RECIPIENT					
	Name	Type	Nullable	Default	Comments
►	MEDICAL_CONDITION	VARCHAR2(20)			
2	RECIPIENTID	INTEGER			

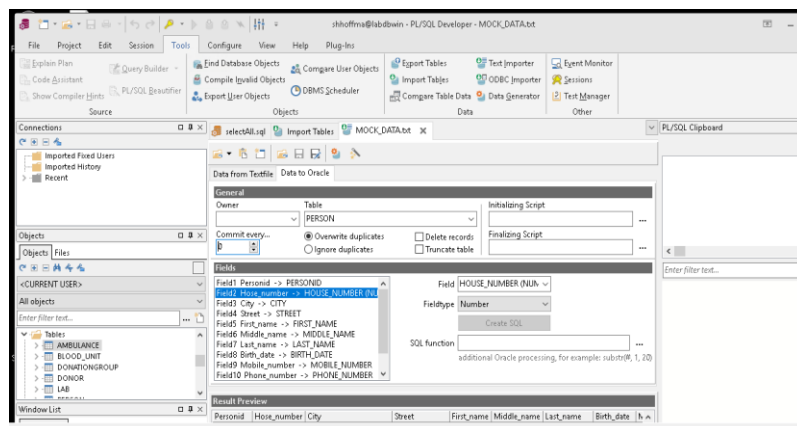
1. יבוא קבצי טקסט-

להלן קטע מתוך קובץ הטקסט עם נתוני היישות Person

```
966390835,6,Saba Yoi,Monterey,Carlynnne,Josi,Ridings,03/29/1939,2087867536,,0+
690317118,498,Chama,8th,Jeanna,,Sabban,12/14/2010,1135940638,,B-
551779895,280,Kukawa,Marquette,Quincy,,Callen,02/18/1920,7229398906,,A+
913589022,5,Beaverton,Ilene,Gerald,,Antoshin,05/05/1919,5033341324,,AB+
484402865,9,Alamar,Onsgard,Royal,Granthem,McDonell,09/02/1933,6216157234,,A+
213047831,096,El Plan,Iowa,Bealle,,Pedersen,05/03/1952,2356829998,,AB-
840733763,2262,Gracias,Forest,Nicolea,Arthur,Masser,04/26/2018,5739837318,,A+
219977600,12,Reshetnikov,Esch,Alvira,Joly,Jendrassik,07/07/1956,2554593083,,O-
826200379,32551,Vashkivtsi,Sommers,Jimmy,Shelton,Le Fleming,10/05/1977,4405901732,,A-
151656221,85,Cambanugoy,Sutteridge,Sigfried,,Hain,06/10/1945,4963814910,,B-
426700247,97,Casa Nova,Crowley,Maddi,,Windrass,02/15/1903,5724139342,,AB-
143566905,72,Ilek,Sage,Sileas,Nikola,Bridgland,10/11/1965,3403205620,,B-
187859985,46236,Krajan Karanganyar,Quincy,Frederic,Leora,Mattis,10/04/1914,3806436585,,B-
327911424,9987,Mir,Pearson,Sally,Konstantine,Fairall,01/24/1978,6138097470,,O+
728764827,4429,Kekaran,Delladonna,Linzy,Pinchas,Marklew,07/16/2001,4103320802,,A-
265785605,20225,Juazeiro do Norte,Killdeer,Valentine,Ly,Dovermann,09/15/1998,3475148802,,A+
714026684,447,Gapyeong,Corry,Lotta,,Charrisson,11/19/1957,8063741665,,B+
555738498,389,Niort,Red Cloud,Bonny,,Sach,02/22/1976,6639071546,,B+
505181727,3932,Sintansin,Algoma,Gordy,,Figgins,01/30/2011,1045864129,,O-
423366489,03,Sypniewo,Nova,Melisent,,Tortoiseshell,08/10/1999,7313510506,,AB+
118972200,01812,Silva Jardim,Brown,Monroe,Worth,Groundwater,12/14/1987,6503943525,,AB-
720479249,09929,Naikoten Dua,Columbus,Dru,,Rennix,01/29/2014,6526639188,,AB-
549366764,101,Kudirkos Naumiestis,Helena,Jodi,Anselma,Goggins,10/12/1982,4578598532,,A+
591415349,8,Strančice,Rockefeller,Garry,Austine,Kencott,06/20/1971,6908995541,,AB-
475216112,19,Yaodu,Anzinger,Madelyn,Arney,Howis,07/31/1978,7836056326,,A+
954716453,92,Balading,Sugar,Neila,Gratia,Milfin,09/27/1901,5783728156,,B-
122959836,2122,Pokhara,Schmedeman,Olivie,Kriste,Mounce,04/05/1977,5883630168,,B-
502139257,1,Merton,Hanover,Adolphus,Bili,Meredith,10/12/1925,9013198325,,AB+
911893601,89224,Shidu,Sloan,Jilli,Rustie,Faulder,12/17/1931,113333853,,B+
456576271,7003,Lavras da Mangabeira,Holmberg,Gualterio,Hai,Arlt,07/16/1941,5346410114,,O-
611583858,6406,Kastornoye,Montana,Laverne,Laurice,Gould,01/04/2014,3918626076,,AB+
```



2. בעזרת שימוש באתר mockaroo



3. הגדרת Data generator

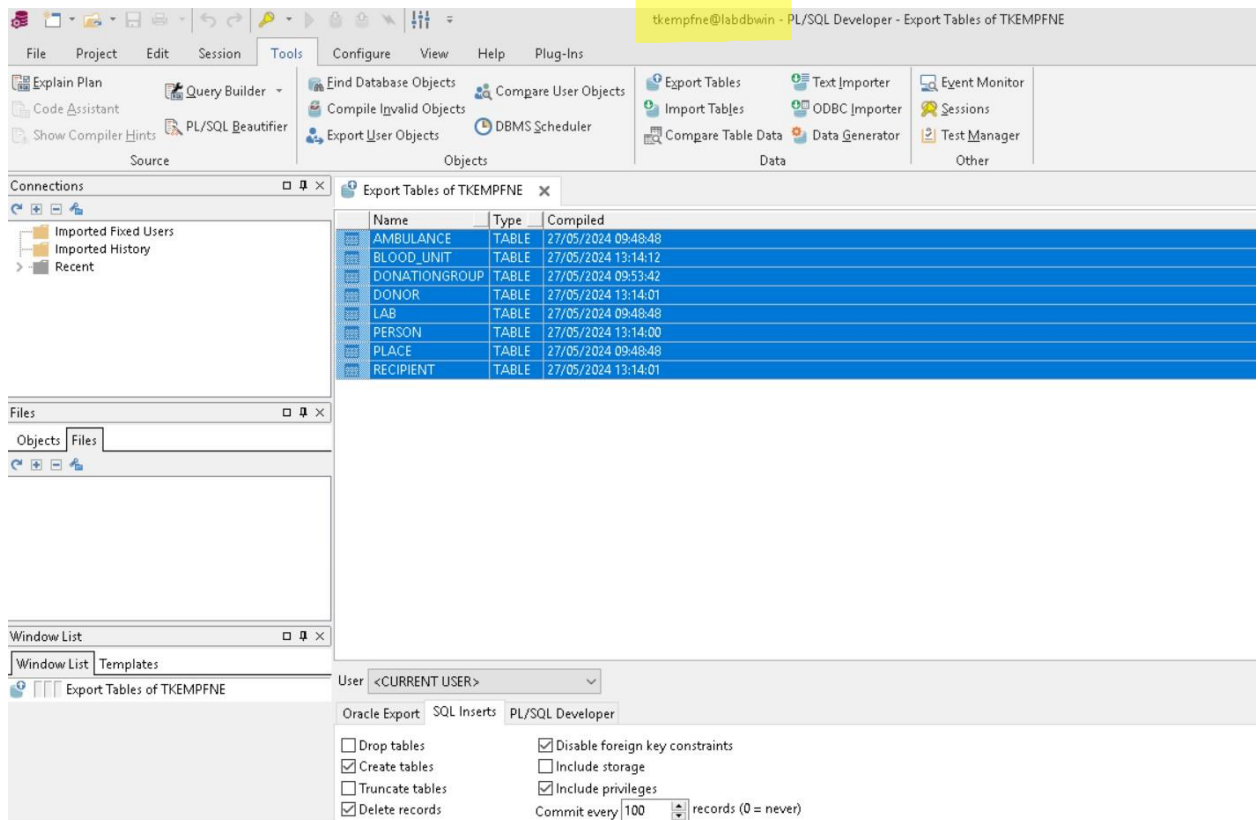
Data Generator

BLOOD_UNIT

Owner: TKEMPFNE Table: BLOOD_UNIT Number of records: 10..20

Name	Type	Size	Data	Master
COLLECTION_DATE	DATE		Random(1/1/2022, 1/12/2023)	...
EXPIRATION_DATE	DATE		Random(1/1/2025, 1/12/2026)	...
LITER	NUMBER		List(1,2,3,4,5)	...
UNIT_ID	NUMBER		Sequence(1)	...
RECIVED_DATE	DATE		Random(1/12/2023, 1/12/2024)	...
DONORID	NUMBER		List(select DonorID from Donor)	...
RECIPIENTID	NUMBER		List(select RecipientID from Recipient)	...
DONATIONGROUPNAME	VARCHAR2	20	List(select DonationGroupName from DonationGroup)	...
PLACECODE	NUMBER		List(select PlaceCode from Place)	...
*				...

גיבוי-



שחזור-

(ניתן לראות שהחשבון ששחזר את הנתונים שונה מזה שעשה את הגיבוי)

