

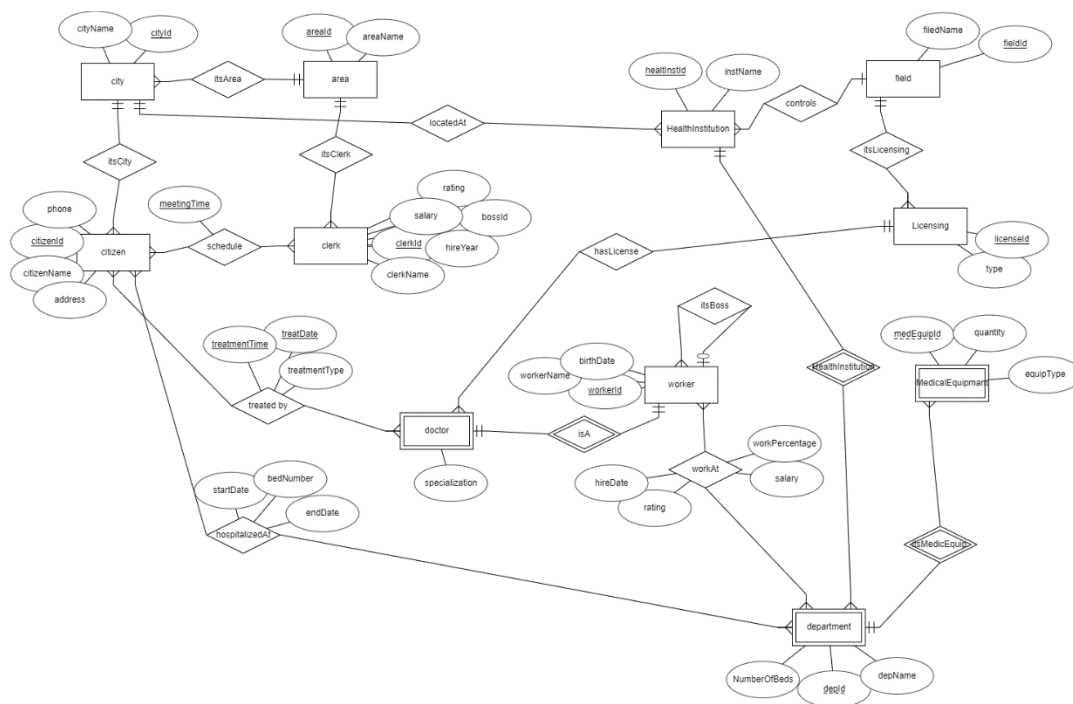
Group B

# מיני פרויקט בבסיסי נתונים

דו"ח שלב 1

עמנואל קואנקה 3940095, שמואל אוריה אשכנזי 312194244

אגף הגריאטריה במשרד הבריאות אחראי על תחום הגריאטריה והמחלות הממושכות במוסדות אשפוז גריאטריים, בבתי החולים הכלליים ובקהילה. אוכלוסיית היעד לפעולות האגף: בני ה- 65 ומעלה וכן חולים במחלות ממושכות עם מגבלות תפקודיות קשות. בין תפקידי האגף: תכנון, קביעות מדיניות, פיתוח שירותים ופיתוח כח אדם, קביעת סטנדרטים ונהלים מקצועיים, רישוי, פיקוח, בקרה ופיתוח אמצעי אכיפה.



(הערה: קו תחתון מסמל מפתח ראשי של הטבלה)

**Area (אזור):** מתארת פרטי אזור.

מכילה : שם אזור (areaName) ומזהה (areald)

**City (אזור):** מתארת פרטי עיר.

מכילה: שם עיר (cityName) ומזהה (cityId)

**Citizen (אזרח):** מתארת פרטי אזרח.

מכילה : שם (citizenName) טלפון(phone), כתובת(address) ומזהה (citizenId)

**Clerk (פקיד):** מתארת פרטי פקיד.

מכילה : שם פקיד (clerkName), דירוג (rating), משכורת (salary), ת.ז מנהל (bossId), שנת

העסקה(hireYear), ומזהה (clerkId)

**Field (תחום-אגף):** מתארת פרטי אגף במשרד הבריאות.

מכילה : שם תחום (fieldName) ומזהה (fieldId)

Licensing (רישוי): מתארת פרטי רישוי.

מכילה : סוג (type) ומזהה (licensingId)

Health Institution (מוסד בריאות): מתארת פרטי מוסד בריאות.

מכילה : שם (instName) ומזהה (healthInstId)

Department (מחלקה): מתארת פרטי מחלקה במוסד בריאות. זוהי ישות חלשה לעומת 'מוסד בריאות'.

מכילה : מספר מיטות (numOfBeds), שם מחלקה (depName) ומזהה (depId)

Medical Equipment (ציוד רפואי): מתארת פרטי ציוד רפואי של מחלקה. זוהי ישות חלשה לעומת 'מחלקה'.

מכילה : סוג (type), כמות (quantity) ומזהה (medEquipId)

Worker (עובד): מתארת פרטי עובד.

מכילה : תאריך לידה (birthDate), שם (workerName) ומזהה (workerId)

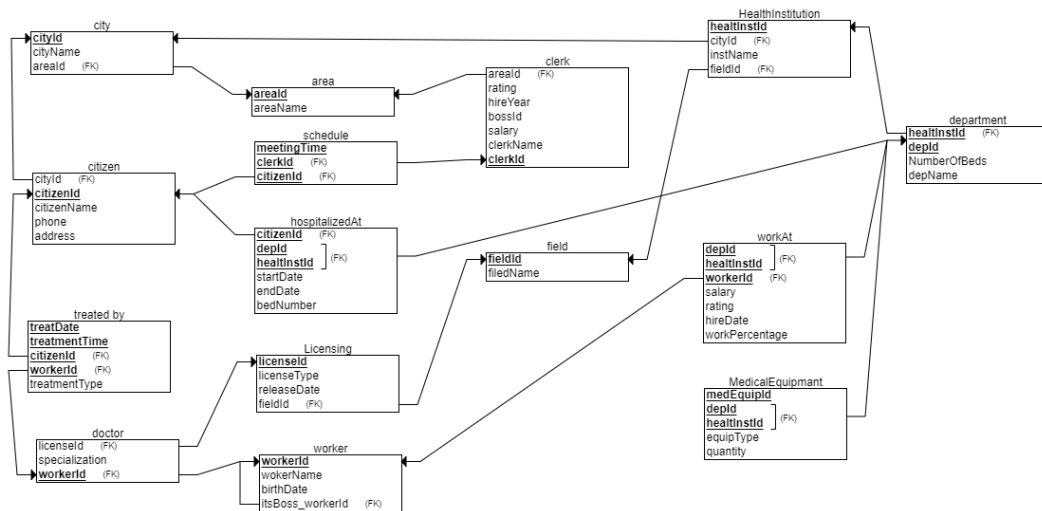
Doctor (רופא): מתארת פרטי רופא. ישות זו יורשת מ'עובד'.

מכילה : התמחות (specialization) ומזהה (doctorId)

## תיאור הקשרים

1. כל עיר שייכת לאזור אחד בדיוק (קשר 1:n)
2. כל אזרח שייך לעיר אחת בדיוק (קשר 1:n)
3. כל פקיד שייך לאזור אחד בדיוק (קשר 1:n)
4. לוח זמנים (schedule) מקשר בין פקיד לאזרח (קשר רבים לרבים) מכיל גם זמן פגישה כחלק מהמפתח.
5. לאזרח יש קשר של טיפול עם רופא (קשר רבים לרבים). הקשר מכיל גם סוג טיפול, תאריך ושעה. תאריך ושעה הם חלק מהמפתח של הקשר.
6. לאזרח יש קשר של אשפוז עם מחלקה. שכולל תאריכי התחלה וסיום של אשפוז ומספר מיטה.
7. לעובד יש קשר רקורסיבי עם עצמו ('המנהל שלו') (קשר 1:n)
8. רופא יורש מ'עובד' ויש לו קשר 1:n עם רישוי (לרופא רשיון בודד).
9. לרופא יש קשר עם מחלקה שכולל גם אחוז משרה, תאריך העסקה, דירוג ומשכורת. (קשר 1:n)
10. כל מחלקה שייכת למוסד בריאות אחד בדיוק (קשר 1:n)
11. ציוד רפואי שייך בדיוק מחלקה אחת (קשר 1:n)
12. רישוי מסוים ניתן על ידי תחום-אגף רפואי אחד בדיוק (קשר 1:n)
13. מוסד בריאות ממוקם בעיר אחת בדיוק (קשר 1:n)
14. מוסד בריאות נשלט על ידי תחום-אגף רפואי אחד לכל היותר (קשר 1:n)

## דיאגרמת DSD



## קוד SQL של יצירת הטבלאות (מסודר לפי התלויות)

```

CREATE TABLE area (
    areaId NUMERIC(3) primary key,
    areaName VARCHAR(50) NOT NULL,
);

CREATE TABLE city (
    cityId NUMERIC(3) primary key,
    cityName VARCHAR(50) NOT NULL,
    areaId NUMERIC(3) NOT NULL,
    FOREIGN KEY (areaId) REFERENCES area(areaId)
);

```

```

CREATE TABLE citizen (
    citizenId NUMERIC(9) primary key,
    citizenName VARCHAR(50) NOT NULL,
    phone VARCHAR(15) NOT NULL,
    address VARCHAR(50) NOT NULL,
    cityId NUMERIC(3) NOT NULL,
    FOREIGN KEY (cityId) REFERENCES city(cityId)
);

```

```
);
```

```
CREATE TABLE clerk (  
    clerkId NUMERIC(9) primary key,  
    rating NUMERIC(2) NOT NULL,  
    hireYear NUMERIC(4) NOT NULL,  
    bossId NUMERIC(9) NOT NULL,  
    salary FLOAT NOT NULL,  
    clerkName VARCHAR(50) NOT NULL,  
    areaId NUMERIC(3) NOT NULL,  
    FOREIGN KEY (areaId) REFERENCES area(areaId)  
);
```

```
CREATE TABLE schedule (  
    meetingTime DATE NOT NULL,  
    clerkId NUMERIC(9) NOT NULL,  
    citizenId NUMERIC(9) NOT NULL,  
    PRIMARY KEY (meetingTime, clerkId, citizenId),  
    FOREIGN KEY (clerkId) REFERENCES clerk(clerkId),  
    FOREIGN KEY (citizenId) REFERENCES citizen(citizenId),  
);
```

```
CREATE TABLE field (  
    fieldId NUMERIC(3) primary key,  
    filedName VARCHAR(50) NOT NULL,  
);
```

```
CREATE TABLE Licensing (  
    licenseType VARCHAR(50) NOT NULL,  
    licenseld NUMERIC(3) primary key,  
    releaseDate DATE NOT NULL,  
    fieldId NUMERIC(3) NOT NULL,  
    FOREIGN KEY (fieldId) REFERENCES field(fieldId)  
);
```

```
CREATE TABLE HealthInstitution (  

```

```
healthInstId NUMERIC(3) primary key,  
instName VARCHAR(50) NOT NULL,  
cityId NUMERIC(3) NOT NULL,  
fieldId NUMERIC(3) NOT NULL,  
FOREIGN KEY (cityId) REFERENCES city(cityId),  
FOREIGN KEY (fieldId) REFERENCES field(fieldId)  
);
```

```
CREATE TABLE department (  
  depId NUMERIC NOT NULL,  
  NumberOfBeds NUMERIC(4) NOT NULL,  
  depName VARCHAR(50) NOT NULL,  
  healthInstId NUMERIC(3) NOT NULL,  
  PRIMARY KEY (depId, healthInstId),  
  FOREIGN KEY (healthInstId) REFERENCES HealthInstitution(healthInstId)  
);
```

```
CREATE TABLE MedicalEquipmant (  
  equipType VARCHAR(50) NOT NULL,  
  medEquipId VARCHAR(3) NOT NULL,  
  quantity NUMERIC(5) NOT NULL,  
  depId NUMERIC NOT NULL,  
  healthInstId NUMERIC(3) NOT NULL,  
  PRIMARY KEY (medEquipId, depId, healthInstId),  
  FOREIGN KEY (depId, healthInstId) REFERENCES department(depId, healthInstId)  
);
```

```
CREATE TABLE hospitalizedAt (  
  startDate DATE NOT NULL,  
  endDate DATE NOT NULL,  
  bedNumber NUMERIC(4) NOT NULL,  
  citizenId NUMERIC(9) NOT NULL,  
  depId NUMERIC NOT NULL,  
  healthInstId NUMERIC(3) NOT NULL,  
  PRIMARY KEY (citizenId, depId, healthInstId),  
  FOREIGN KEY (citizenId) REFERENCES citizen(citizenId),
```

```
FOREIGN KEY (deptId, healthInstId) REFERENCES department(deptId, healthInstId)
);
```

```
CREATE TABLE worker (
    workerId NUMERIC(9) primary key,
    workerName VARCHAR(50) NOT NULL,
    birthDate DATE NOT NULL,
    itsBoss_workerId NUMERIC(9) NOT NULL,
    FOREIGN KEY (itsBoss_workerId) REFERENCES worker(workerId)
);
```

```
CREATE TABLE doctor (
    specialization VARCHAR(50) NOT NULL,
    licenseId NUMERIC(3) NOT NULL,
    workerId NUMERIC(9) primary key,
    FOREIGN KEY (licenseId) REFERENCES Licensing(licenseId),
    FOREIGN KEY (workerId) REFERENCES worker(workerId)
);
```

```
CREATE TABLE workAt (
    salary FLOAT NOT NULL,
    rating NUMERIC(2) NOT NULL,
    hireDate DATE NOT NULL,
    workPercentage NUMERIC(2) NOT NULL,
    deptId NUMERIC NOT NULL,
    healthInstId NUMERIC(3) NOT NULL,
    workerId NUMERIC(9) NOT NULL,
    PRIMARY KEY (deptId, healthInstId, workerId),
    FOREIGN KEY (deptId, healthInstId) REFERENCES department(deptId, healthInstId),
    FOREIGN KEY (workerId) REFERENCES worker(workerId)
);
```

```
CREATE TABLE treated_by (
    treatDate DATE NOT NULL,
    treatmentType VARCHAR(50) NOT NULL,
    treatmentTime VARCHAR(50) NOT NULL,
```

```
citizenId NUMERIC(9) NOT NULL,  
workerId NUMERIC(9) NOT NULL,  
PRIMARY KEY (treatDate, treatmentTime, citizenId, workerId),  
FOREIGN KEY (citizenId) REFERENCES citizen(citizenId),  
FOREIGN KEY (workerId) REFERENCES doctor(workerId)  
);
```



## אכלוס טבלאות

### טבלת Area

אכלסנו באמצעות מחולל הנתונים שב-PLSQL:

הגדרת המחולל:

AREA			
Owner	Table	Number of records	
COHENCA	AREA	20	
Name	Type	Size	Data
AREAID	NUMBER	3	Sequence(1, [1])
AREANAME	VARCHAR2	20	th Carolina, Delaware, California, Illinois, Missouri, Massachusetts, West Virginia, Georgia, Maryland )
*			

הטבלה לאחר האכלוס:

```
select * from AREA t
```

	AREAID	AREANAME
1	1	West Virginia
2	2	Missouri
3	3	Texas
4	4	Delaware
5	5	Tennessee
6	6	Arkansas
7	7	Illinois
8	8	Minnesota
9	9	South Carolina
10	10	Oregon
11	11	Maryland
12	12	Georgia
13	13	Massachusetts
14	14	Mississippi
15	15	Ohio
16	16	Idaho
17	17	Florida
18	18	New Jersey
19	19	Michigan
20	20	Hawaii

## טבלת City

אוכלסה באמצעות מחולל הנתונים של PLSQL

הגדרת המחולל:

CITY				
Owner		Table		Number of records
COHENCA		CITY		20..200
Name	Type	Size	Data	Master
CITYID	NUMBER	3	Sequence(100, [1])	...
CITYNAME	VARCHAR2	50	City	...
AREAD	NUMBER	3	List(select areald from area)	...

לאחר האכלוס:

```
select * from CITY t
```

	CITYID	CITYNAME	AREAD
1	100	Jacksonville	19
2	101	Pasadena	10
3	102	High Wycombe	6
4	103	Bretzfeld-Waldbach	5
5	104	Bernex	2
6	105	Waalwijk	5
7	106	Neuquen	6
8	107	Waite Park	7
9	108	Buffalo Grove	9
10	109	Monroe	15
11	110	Sheffield	3
12	111	Edmonton	13
13	112	Colorado Springs	5
14	113	S. Bernardo do Campo	15
15	114	El Segundo	6
16	115	Kumamoto	9
17	116	Ft. Leavenworth	8
18	117	Kyln	18
19	118	L'union	9
20	119	Pompeia	13
21	120	Pano de Azos	14

טבלת citizen:

יצרנו קובץ csv באמצעות excel:

	A	B	C	D	E	F
1	citizenId	citizenName	phone	address	cityId	
2	708262840	Diamond Olson	(681) 485-9113	61 Beach Avenue	100	
3	189811489	Maritza Marks	(640) 612-8540	107 Pegasus Street	101	
4	467351472	Kennedy Chen	(887) 507-7157	82 Judge Avenue	102	
5	152874477	Anthony Davila	(640) 927-4303	25 Mason Row	103	
6	590564086	Payton Sloan	(363) 800-8519	14 Hope Row	104	
7	945582077	Jeremiah Yu	(322) 423-4859	84 Penrose Route	105	
8	79504732	Gloria Hoffman	(953) 773-4315	113 Barley Row	106	
9	780946586	Abel Hansen	(889) 938-3601	39 Peace Route	107	
10	375972455	Amiya Drake	(915) 878-9537	47 Hazelnut Avenue	108	
11	971633137	Anna Velez	(326) 862-3195	3 Noble Avenue	109	

יבוא הקובץ באמצעות PLSQL:

Data from Textfile Data to Oracle

File Data

Encoding

citizenId,citizenName,phone,address,cityId  
708262840,Diamond Olson,(681) 485-9113,61 Beach Avenue,100  
189811489,Maritza Marks,(640) 612-8540,107 Pegasus Street,101

Configuration

General

Fieldcount: 5

Quote character: "

Comment line:

Import lines: 1 ..

Field Start

Field1 (+0..") citizenId  
Field2 (+0..") citizenName  
Field3 (+0..") phone  
Field4 (+0..") address  
Field5 (+0..") cityId

Field End

Field Start: ☐ Relative position ☐ Absolute position ☐ Character

Field End: ☐ Length ☐ Character

Filter

Apply

Result Preview

citizenId	citizenName	phone	address	cityId
708262840	Diamond Olson	(681) 485-9113	61 Beach Avenue	100
189811489	Maritza Marks	(640) 612-8540	107 Pegasus Street	101

Import Import to Script Close cohenca@XE [22:09:20] 100 records imported in 0.094 seconds Help

התאמת הנתונים לטבלה:

Data from Textfile Data to Oracle

General

Owner: COHENCA Table: CITIZEN

Commit every...: 100

Overwrite duplicates: ☒ Ignore duplicates: ☐ Delete records: ☒ Truncate table: ☐

Initializing Script

Finalizing Script

Fields

Field1 citizenId -> CITIZENID  
Field2 citizenName -> CITIZENNAME  
Field3 phone -> PHONE  
Field4 address -> ADDRESS  
Field5 cityId -> CITYID

Field:

Fieldtype:

Create SQL

SQL function:

additional Oracle processing, for example: substr(#, 1, 20)

Result Preview

citizenId	citizenName	phone	address	cityId
708262840	Diamond Olson	(681) 485-9113	61 Beach Avenue	100
189811489	Maritza Marks	(640) 612-8540	107 Pegasus Street	101

Import Import to Script Close cohenca@XE [22:09:20] 100 records imported in 0.094 seconds Help

טבלת clerk:

יצרנו קובץ csv באמצעות excel:

	A	B	C	D	E	F	G
1	clerkId	clerkName	rating	hireYear	bossId	salary	areaId
2	985608353	Aaron Robbins	76	2019	728586501	6259	65
3	216673752	Regina Hicks	60	2010	611912795	3588	11
4	616839114	Vivian Rhodes	84	2015	82463116	3575	90
5	56423791	Vicente Robles	30	2008	13621976	6554	70
6	715357972	Riley Vang	32	2012	178536762	7322	62
7	769944696	Ashton Maldonad	57	2011	835856510	5472	41
8	106947896	Erin Raymond	33	2014	951674376	6255	14
9	701642916	Emma Terrell	35	2007	192952482	4323	66
10	230298738	Mallory Burnett	74	2006	747768908	8522	21
11	536047901	Alice Rojas	55	2007	359153629	4907	52
12	688678649	Daniela Bradshaw	60	2011	754058532	8450	1
13	45172400	Carlos Corrao	70	2013	116712338	8161	20

ייבוא הקובץ באמצעות PLSQL:

Data from Textfile | Data to Oracle

**File Data** Encoding

```
clerkId,clerkName,rating,hireYear,bossId,salary,areaId
985608353,Aaron Robbins,76,2019,728586501,6259,65
216673752,Regina Hicks,60,2010,611912795,3588,11
```

**Configuration**

General

Fieldcount: 7

Quote character: "

End at line-end: ☒

Name in header: ☒

Skip empty lines: ☒

Comment line:

Import lines: 1 ..

Field1 (+0..") clerkId  
Field2 (+0..") clerkName  
Field3 (+0..") rating  
Field4 (+0..") hireYear  
Field5 (+0..") bossId  
Field6 (+0..") salary  
Field7 (+0..") areaId

Field Start

Relative position: ☐

Absolute position: ☐

Character: ☐

Field End

Length: ☐

Character: ☐

Filter:

Apply

**Result Preview**

clerkId	clerkName	rating	hireYear	bossId	salary	areaId
985608353	Aaron Robbins	76	2019	728586501	6259	65
216673752	Regina Hicks	60	2010	611912795	3588	11

Import Import to Script Close cohenca@XE [22:17:17] 100 records imported in 0.093 seconds Help

התאמת הנתונים לטבלה:

Data from Textfile | Data to Oracle

**General**

Owner: COHENCA Table: CLERK

Commit every...: 100

Overwrite duplicates: ☒ Ignore duplicates: ☐

Delete records: ☒ Truncate table: ☐

Initializing Script:

Finalizing Script:

**Fields**

Field1 clerkId -> CLERKID  
Field2 clerkName -> CLERKNAME  
Field3 rating -> RATING  
Field4 hireYear -> HIREYEAR  
Field5 bossId -> BOSSID  
Field6 salary -> SALARY  
Field7 areaId -> AREAD

Field:

Fieldtype:

Create SQL

SQL function:

additional Oracle processing, for example: substr(#, 1, 20)

**Result Preview**

clerkId	clerkName	rating	hireYear	bossId	salary	areaId
985608353	Aaron Robbins	76	2019	728586501	6259	65
216673752	Regina Hicks	60	2010	611912795	3588	11

Import Import to Script Close cohenca@XE [22:17:17] 100 records imported in 0.093 seconds Help

טבלת schedule:

באמצעות מחולל הנתונים המובנה ב-PLSQL

הגדרת המחולל:

SCHEDULE				
Owner	Table	Number of records		
COHENCA	SCHEDULE	100		
Name	Type	Size	Data	
MEETINGTIME	DATE		Random(2020-01-01 09:10:10, 2021-01-01 09:10:10)	
CLERKID	NUMBER	9	List(select clerkid from CLERK)	
CITIZENID	NUMBER	9	List(select citizenid from citizen)	
*				

הטבלה לאחר האכלוס:

select * from SCHEDULE t				
	MEETINGTIME	CLERKID	CITIZENID	
1	02/01/2020 4:39:47	742868808	618144212	
2	08/01/2020 15:56:26	413518592	55937608	
3	12/01/2020 18:58:45	797503856	121670810	
4	14/01/2020 9:14:49	744958679	709915279	
5	16/01/2020 3:28:04	230298738	49629406	
6	18/01/2020 15:22:53	89160074	434940113	
7	20/01/2020 9:18:00	462438254	79504732	
8	28/01/2020 10:30:51	675975458	784600813	
9	01/02/2020 4:09:50	358888404	365963339	
10	02/02/2020 0:30:31	377845907	189811489	
11	02/02/2020 13:22:48	97748603	156171593	
12	05/02/2020 8:41:16	50870763	129407872	
13	07/02/2020 3:22:53	775027789	64526097	
14	12/02/2020 12:26:47	640330926	426148194	
15	22/02/2020 5:33:38	48780608	426148194	
16	25/02/2020 6:15:41	231962714	79504732	
17	03/03/2020 8:06:25	340526675	591829232	
18	05/03/2020 13:40:48	216673752	603338542	
19	09/03/2020 22:42:14	640574572	779945885	
20	21/03/2020 6:58:36	412908680	897773040	
21	23/03/2020 15:02:18	999775205	710935253	

cohenca@XE [0:45:55] 100 rows

טבלת field:

יצרנו קובץ טקסט באמצעות clojure:

```
(ns clojure-project
  (:require [clojure.java.io :as io]))

(defn main
  []
  (let [dir (io/file "C:\\example")]
    (with-open [file (io/writer (str dir "\\field.txt")):append true]
      (loop [fieldId '(880,191,176,333,297,895,685,842,393,699,983,506)
             fieldName '("General Medicine Division"
                          "Community Medicine Division","Field of Mental Health"
                          "Field of Geriatrics","Dental Health Division"
                          "Field of Rehabilitation","Occupational Therapy"
                          "Physiotherapy","Speech therapist","National Psychology"
                          "Social work","Child development and rehabilitation")]
        (if-not fieldId
          "stop"
          (do(.write file (str (first fieldId) "," (first fieldName) "\n"))
              (recur (next fieldId) (next fieldName)))))))
```

קובץ הטקסט:

```
880,General Medicine Division
191,Community Medicine Division
176,Field of Mental Health
333,Field of Geriatrics
297,Dental Health Division
895,Field of Rehabilitation
685,Occupational Therapy
842,Physiotherapy
393,Speech therapist
699,National Psychology
983,Social work
506,Child development and rehabilitation
```

ייבוא הקובץ:

File Data

880,General Medicine Division  
191,Community Medicine Division  
176,Field of Mental Health

Configuration

General

Fieldcount: 2

Quote character: "

Field1 (+0..,)

Field2 (+0..,)

Field Start: Relative position

Field End: Character

Result Preview

1	2
880	General Medicine Division
191	Community Medicine Division
176	Field of Mental Health

Import Import to Script Close cohenca@XE [23:02:13] 12 records imported in 0.079 seconds Help

התאמה לטבלה:

Data from Textfile Data to Oracle

General

Owner: COHENCA

Table: FIELD

Commit every...: 100

Overwrite duplicates: ☒ Overwrite duplicates ☐ Ignore duplicates

Delete records: ☒ Delete records ☐ Truncate table

Fields

Field1 -> FIELDID (NUMBER)

Field2 -> FILENAME (VARCHAR2)

Field: FILENAME (VARCHAR)

Fieldtype: String

Create SQL

SQL function: additional Oracle processing, for example: substr(#, 1, 20)

Result Preview

1	2
880	General Medicine Division
191	Community Medicine Division
176	Field of Mental Health

Import Import to Script Close cohenca@XE [23:02:13] 12 records imported in 0.079 seconds Help

טבלת licensing:

יצירת csv באמצעות excel:

	A	B	C	D	E
1	licenseId	type	releaseDate	fieldId	
2	638	Ophthalmologist	27/01/2000	176	
3	697	Orthodontic	19/03/2000	393	
4	357	Occupational therapist	14/06/2001	685	
5	706	family doctor	17/03/2002	506	
6	839	Gynecologist	21/10/2002	176	
7	463	Ophthalmologist	11/04/2003	895	
8	474	Orthodontic	28/06/2003	842	
9	727	Occupational therapist	18/02/2005	176	
10	732	family doctor	19/08/2007	842	
11	140	Gynecologist	12/01/2008	880	

ייבוא:

Data from Textfile Data to Oracle

File Data

licenseId,type,releaseDate,fieldId  
638,Ophthalmologist,2000-01-27,176  
697,Orthodontic,2000-03-19,393

Configuration

General

Fieldcount: 4

Quote character: "

Field1 (+0..") licenseId  
Field2 (+0..") type  
Field3 (+0..") releaseDate  
Field4 (+0..") fieldId

Field Start

☒ Relative position  
☐ Absolute position  
☐ Character

Field End

☐ Length  
☒ Character

Filter

Apply

Result Preview

licenseId	type	releaseDate	fieldId
638	Ophthalmologist	2000-01-27	176
697	Orthodontic	2000-03-19	393
357	Occupational therapist	2001-06-14	685

Import Import to Script Close cohenca@XE [23:09:56] 99 records imported in 0.078 seconds Help

התאמה לטבלה:

Data from Textfile Data to Oracle

General

Owner: COHENCA Table: LICENSING

Commit every...: 100

☒ Overwrite duplicates ☐ Ignore duplicates ☒ Delete records ☐ Truncate table

Initializing Script

Finalizing Script

Fields

Field1 licenseId -> LICENSEID  
Field2 type -> LICENSETYPE (VARCHAR2)  
Field3 releaseDate -> RELEASEDATE  
Field4 fieldId -> FIELDID

Field: LICENSETYPE (VARCHAR2)

Fieldtype: String

Create SQL

SQL function

additional Oracle processing, for example: substr(, 1, 20)

Result Preview

licenseId	type	releaseDate	fieldId
638	Ophthalmologist	2000-01-27	176
697	Orthodontic	2000-03-19	393
357	Occupational therapist	2001-06-14	685

Import Import to Script Close cohenca@XE [23:09:56] 99 records imported in 0.078 seconds Help

טבלת health institution:

יצירת קובץ csv באמצעות excel:

	A	B	C	D	E
1	healthInstId	instName	cityId	fieldId	
2	435	Big River Hospital	106	685	
3	861	Blessings Clinic	149	191	
4	726	Harmony Grove Clinic	113	333	
5	758	Lowland Clinic	145	506	
6	224	Spring Harbor Medical Clinic	105	842	
7	42	Grand River Hospital	127	895	
8	116	Grand Willow Medical Center	132	393	
9	431	Spring Grove Hospital Center	114	176	
10	380	Grand View Clinic	120	393	
11	426	Tranquility Community Hospital	114	297	
12	546	Spring Forest Clinic	137	333	
13	186	Rose Valley Medical Clinic	106	393	
14	632	Spring Grove General Hospital	118	393	
15	789	Bellevue Community Hospital	110	880	
16	860	Crossroads Hospital	124	176	

ייבוא:

Data from Textfile Data to Oracle

File Data

healthInstId,instName,cityId,fieldId  
435,Big River Hospital,106,685  
861,Blessings Clinic,149,191  
726,Harmony Grove Clinic,113,333

Configuration

General

Fieldcount: 4

Quote character: "

End at line-end: ☒

Name in header: ☒

Skip empty lines: ☒

Comment line:

Import lines: 1 ..

Field1 (+0..") healthInstId  
Field2 (+0..") instName  
Field3 (+0..") cityId  
Field4 (+0..") fieldId

Field Start

Relative position: ☐

Absolute position: ☐

Character: ☐

Field End

Length: ☐

Character: ☐

Filter:

Apply

Result Preview

healthInstId	instName	cityId	fieldId
435	Big River Hospital	106	685
861	Blessings Clinic	149	191
726	Harmony Grove Clinic	113	333

Import Import to Script Close cohenca@XE [23:25:19] 100 records imported in 0.094 seconds Help

התאמה לטבלה:

Data from Textfile Data to Oracle

General

Owner: COHENCA

Table: HEALTHINSTITUTION

Commit every...: 100

Overwrite duplicates: ☒

Ignore duplicates: ☐

Delete records: ☒

Truncate table: ☐

Initializing Script:

Finalizing Script:

Fields

Field1 healthInstId -> HEALTHINSTID  
Field2 instName -> INSTNAME  
Field3 cityId -> CITYID  
Field4 fieldId -> FIELDID

Field:

Fieldtype:

Create SQL

SQL function:

additional Oracle processing, for example substr(#, 1, 20)

Result Preview

healthInstId	instName	cityId	fieldId
435	Big River Hospital	106	685
861	Blessings Clinic	149	191
726	Harmony Grove Clinic	113	333

Import Import to Script Close cohenca@XE [23:25:19] 100 records imported in 0.094 seconds Help



טבלת department:

יצירת csv באמצעות excel:

	A	B	C	D	E	F
1	healtInstId	depld	depName	numberOfBeds		
2	435	224	Admissions	47		
3	861	753	Anesthetics	36		
4	726	621	Breast Screening	30		
5	758	265	Burn Center	39		
6	224	540	Cardiology	38		
7	42	924	CSSD	11		
8	116	598	Chaplaincy	26		
9	431	789	Coronary Care Unit	45		
10	380	993	Critical Care	13		
11	426	97	Diagnostic Imaging	11		
12	546	976	Discharge Lounge	16		
13	186	399	Elderly services	44		
14	632	405	Finance Department	26		

ייבוא:

Data from Textfile Data to Oracle

File Data

healtInstId, depId, depName, numberOfBeds  
435, 224, Admissions, 47  
861, 753, Anesthetics, 36

Configuration

General

Fieldcount: 4

Quote character: "

Field1 (+0..") healtInstId  
Field2 (+0..") depId  
Field3 (+0..") depName  
Field4 (+0..") numberOfBeds

Field Start

☐ Relative position  
☐ Absolute position  
☐ Character

Field End

☐ Length  
☐ Character

☒ End at line-end  
☒ Name in header  
☒ Skip empty lines

Import lines: 1 ..

Filter

Apply

Result Preview

healtInstId	depId	depName	numberOfBeds
435	224	Admissions	47
861	753	Anesthetics	36
726	621	Breast Screening	30

Import Import to Script Close cohenca@XE [23:44:21] 264 records imported in 0.234 seconds Help

התאמה לטבלה:

Data from Textfile Data to Oracle

General

Owner: COHENCA Table: DEPARTMENT

Commit every...: 100

☒ Overwrite duplicates ☒ Delete records  
☐ Ignore duplicates ☐ Truncate table

Initializing Script

Finalizing Script

Fields

Field1 healtInstId -> HEALTINSTID  
Field2 depId -> DEPID  
Field3 depName -> DEPNAM  
Field4 numberOfBeds -> NUMBEROFBEDS

Field:   
Fieldtype:   
Create SQL

SQL function:   
additional Oracle processing, for example: substr(, 1, 20)

Result Preview

healtInstId	depId	depName	numberOfBeds
435	224	Admissions	47
861	753	Anesthetics	36
726	621	Breast Screening	30

Import Import to Script Close cohenca@XE [23:44:21] 264 records imported in 0.234 seconds Help

טבלת medical equipment:

יצירת csv באמצעות excel:

	A	B	C	D	E	F
1	medEquipId	healthInstId	depld	equiptype	quantity	
2	968	435	224	Blood gas analyzers	1104	
3	500	861	753	Wheelchairs	2517	
4	275	726	621	oxygen tanks	1891	
5	595	758	265	Medical Lasers	1154	
6	773	224	540	Breast pumps	2019	
7	220	42	924	blankets	6624	
8	989	116	598	Electrolyte analyzers	8683	
9	707	431	789	blankets	1938	
10	503	380	993	Nebulizers	4659	
11	195	426	97	Diagnostic scopes	3501	
12	22	546	976	Traction equipment	9420	
13	394	186	399	Traction equipment	3932	
14	315	632	405	Hematology analyzers	8200	

ייבוא:

Data from Textfile Data to Oracle

**File Data** Encoding

```
medEquipId,healthInstId,depld,equiptype,quantity
968,435,224,Blood gas analyzers,1104
500,861,753,Wheelchairs,2517
```

**Configuration**

General

Fieldcount: 5

☒ End at line-end

☒ Name in header

☒ Skip empty lines

Quote character: "

Comment line:

Import lines: 1 ..

Field1 (+0..") medEquipId  
Field2 (+0..") healthInstId  
Field3 (+0..") depld  
Field4 (+0..") equiptype  
Field5 (+0..") quantity

Field Start

☐ Relative position

☐ Absolute position

☐ Character

Field End

☐ Length

☐ Character

Filter:

Apply

**Result Preview**

medEquipId	healthInstId	depld	equiptype	quantity
968	435	224	Blood gas analyzers	1104
500	861	753	Wheelchairs	2517
275	726	621	oxygen tanks	1891

Import Import to Script Close cohenca@XE [0:12:28] 264 records imported in 0.094 seconds Help

התאמה לטבלה:

Data from Textfile Data to Oracle

**General**

Owner: Table

COHENCA MEDICALEQUIPMANT

Commit every... 100

☒ Overwrite duplicates ☒ Delete records

☐ Ignore duplicates ☐ Truncate table

Initializing Script

Finalizing Script

**Fields**

Field1 medEquipId -> MEDEQUIPID  
Field2 healthInstId -> HEALTHINSTID  
Field3 depld -> DEPID  
Field4 equiptype -> EQUIPTYPE  
Field5 quantity -> QUANTITY

Field:

Fieldtype:

Create SQL

SQL function:

additional Oracle processing, for example: substr(#, 1, 20)

**Result Preview**

medEquipId	healthInstId	depld	equiptype	quantity
968	435	224	Blood gas analyzers	1104
500	861	753	Wheelchairs	2517
275	726	621	oxygen tanks	1891

Import Import to Script Close cohenca@XE [0:12:28] 264 records imported in 0.094 seconds Help

טבלת hospitalized at:

יצירת csv דרך excel:

	A	B	C	D	E	F	G
1	citizenId	healthInstId	depId	startdate	endDate	bedNumber	
2	708262840	435	224	31/01/2018	16/03/2018	2294	
3	189811489	861	753	20/02/2018	19/04/2018	2934	
4	467351472	726	621	08/03/2018	25/05/2018	8390	
5	152874477	758	265	15/03/2018	29/05/2018	1270	
6	590564086	224	540	20/03/2018	02/08/2018	7727	
7	945582077	42	924	02/05/2018	09/10/2018	2782	
8	79504732	116	598	31/05/2018	19/11/2018	9621	
9	780946586	431	789	06/06/2018	29/12/2018	6593	
10	375972455	380	993	18/10/2018	09/01/2019	7588	
11	971633137	426	97	04/01/2019	04/02/2019	427	

יבוא הקובץ ל-PLSQL:

Data from Textfile Data to Oracle

File Data

Encoding

citizenId,healthInstId,depId,startdate,endDate,bedNumber  
708262840,435,224,2018-01-31,2018-03-16,2294  
189811489,861,753,2018-02-20,2018-04-19,2934  
467351472,726,621,2018-03-08,2018-05-25,8390

Configuration

General

Fieldcount: 6

Quote character: "

Field1 (+0..") citizenId  
Field2 (+0..") healthInstId  
Field3 (+0..") depId  
Field4 (+0..") startdate  
Field5 (+0..") endDate  
Field6 (+0..") bedNumber

Field Start

Relative position  
Absolute position  
Character

Field End

Length  
Character

Filter

Apply

Result Preview

citizenId	healthInstId	depId	startdate	endDate	bedNumber
708262840	435	224	2018-01-31	2018-03-16	2294
189811489	861	753	2018-02-20	2018-04-19	2934
467351472	726	621	2018-03-08	2018-05-25	8390

Import Import to Script Close cohenca@XE [0:37:25] 100 records imported in 0.172 seconds Help

התאמת הנתונים לטבלה:

Data from Textfile Data to Oracle

General

Owner: COHENCA Table: HOSPITALIZEDAT

Commit every...: 100

Overwrite duplicates  
Ignore duplicates

Delete records  
Truncate table

Initializing Script

Finalizing Script

Fields

Field1 citizenId -> CITIZENID  
Field2 healthInstId -> HEALTHINSTID  
Field3 depId -> DEPID  
Field4 startdate -> STARTDATE  
Field5 endDate -> ENDDATE  
Field6 bedNumber -> BEDNUMBER

Field: Fieldtype: Create SQL

SQL function: additional Oracle processing, for example: substr(, 1, 20)

Result Preview

citizenId	healthInstId	depId	startdate	endDate	bedNumber
708262840	435	224	2018-01-31	2018-03-16	2294
189811489	861	753	2018-02-20	2018-04-19	2934
467351472	726	621	2018-03-08	2018-05-25	8390

Import Import to Script Close cohenca@XE [0:37:25] 100 records imported in 0.172 seconds Help

טבלת worker:

יצירת קובץ טקסט באמצעות clojure:

```
(ns clojure-project
  (:require [clojure.java.io :as io]))

(defn main
  []
  (let [dir (io/file "C:\\example") counter (atom 0)]
    (with-open [ids (io/reader (str dir "\\ " "ids.txt"))
                bossids (io/reader (str dir "\\ " "ids2.txt"))
                names (io/reader (str dir "\\ " "names.txt"))
                dates (io/reader (str dir "\\ " "dates.txt"))
                file (io/writer (str dir "\\ " "worker.txt") :append true)]
      (loop [workerId (line-seq ids)
             workerName (line-seq names)
             birthDate (line-seq dates)
             bossId (line-seq bossids)]
        (swap! counter inc)
        (if-not workerId
          "stop"
          (do (.write file (str (first workerId) "," (first workerName) ","
                                (first birthDate) "," (first bossId) "\n"))
              (if (or (< (deref counter) 10) (odd? (deref counter)))
                (recur (next workerId) (next workerName) (next birthDate) (next bossId))
                (recur (next workerId) (next workerName) (next birthDate) bossId))
              ))
          )))))
```

```
531238815,Diamond Olson,2000-01-20,531238815
648956315,Maritza Marks,1957-08-25,648956315
071932811,Kennedy Chen,1992-09-09,071932811
311466467,Anthony Davila,1976-05-16,311466467
214019947,Payton Sloan,1989-01-02,214019947
655611592,Jeremiah Yu,1971-08-22,655611592
267895569,Gloria Hoffman,1979-08-22,267895569
475822438,Abel Hansen,1960-06-03,475822438
608832283,Amiya Drake,1964-09-02,608832283
871947790,Anna Velez,1971-01-31,871947790
156552498,Iyana Meza,1977-10-16,871947790
154508569,Johnathon Barnes,1964-06-07,531238815
918926951,Shaniya Dominguez,1987-06-04,531238815
867688554,Bentley Hunter,1956-12-28,648956315
684228936,Madyson Bradley,1969-01-30,648956315
518625103,Aiyana Hahn,1961-06-10,071932811
950758028,Zachariah Moran,1983-11-30,071932811
```

קובץ הטקסט שנוצר:

Data from Textfile Data to Oracle

File Data

Encoding

Configuration

General

Fieldcount: 4

Quote character: "

Comment line: #

Import lines: 1

Field Start

Field End

Filter

Apply

Result Preview

1	2	3	4
531238815	Diamond Olson	2000-01-20	531238815
648956315	Maritza Marks	1957-08-25	648956315
071932811	Kennedy Chen	1992-09-09	071932811

Import Import to Script Close

cohenca@XE [0:52:41] 100 records imported in 0.078 seconds

Help

"בוא:

Data from Textfile Data to Oracle

General

Owner: COHENCA

Table: WORKER

Commit every...: 100

Overwrite duplicates: ☒ Overwrite duplicates ☐ Ignore duplicates

Delete records: ☒ Delete records ☐ Truncate table

Initializing Script

Finalizing Script

Fields

Field1 -> WORKERID (NUMBER)

Field2 -> WORKERNAME (VARCHAR2)

Field3 -> BIRTHDATE (DATE)

Field4 -> ITSBOS\_WORKERID (NUMBER)

Field: ITSBOS\_WORKERID (N

Fieldtype: Number

Create SQL

SQL function

additional Oracle processing, for example

Result Preview

1	2	3	4
531238815	Diamond Olson	2000-01-20	531238815
648956315	Maritza Marks	1957-08-25	648956315
071932811	Kennedy Chen	1992-09-09	071932811

Import Import to Script Close

cohenca@XE [0:52:41] 100 records imported in 0.078 seconds

התאמה לטבלה:

טבלת doctor:

יצירת csv באמצעות excel:

	A	B	C	D	E
1	workerId	specialization	licenseId		
2	531238815	Critical care medicine	638		
3	648956315	Hospice and palliative care	697		
4	71932811	Pain medicine	357		
5	311466467	Pediatric anesthesiology	706		
6	214019947	Sleep medicine	839		
7	655611592	Dermatopathology	463		
8	267895569	Pediatric dermatology	474		
9	475822438	Procedural dermatology	727		
10	608832283	Abdominal radiology	732		
11	871947790	Breast imaging	140		
12	156552498	Cardiothoracic radiology	895		

ייבוא:

Data from Textfile | Data to Oracle

**File Data** Encoding

workerId,specialization,licenseId  
531238815,Critical care medicine,638  
648956315,Hospice and palliative care,697

**Configuration**

General

Fieldcount: 3

Quote character: "

End at line-end: ☒

Name in header: ☒

Skip empty lines: ☒

Import lines: 1 ..

Field Start

Field1 (+0 .. ",") workerId  
Field2 (+0 .. ",") specialization  
Field3 (+0 .. ",") licenseId

Field End

Field Start: ☐ Relative position ☐ Absolute position ☐ Character

Field End: ☐ Length ☐ Character

Filter:  Apply

**Result Preview**

workerId	specialization	licenseId
531238815	Critical care medicine	638
648956315	Hospice and palliative care	697

Import Import to Script Close cohenca@XE [1:18:08] 85 records imported in 0.109 seconds Help

התאמת הנתונים לטבלה:

Data from Textfile | Data to Oracle

**General**

Owner: COHENCA Table: DOCTOR

Commit every...: 100

Overwrite duplicates: ☒ Ignore duplicates: ☐

Delete records: ☒ Truncate table: ☐

Initializing Script:

Finalizing Script:

**Fields**

Field1 workerId -> WORKERID  
Field2 specialization -> SPECIALIZATION  
Field3 licenseId -> LICENSEID

Field:

Fieldtype:

SQL function:

additional Oracle processing, for example: substr(%, 1, 20)

**Result Preview**

workerId	specialization	licenseId
531238815	Critical care medicine	638
648956315	Hospice and palliative care	697

Import Import to Script Close cohenca@XE [1:18:08] 85 records imported in 0.109 seconds Help

טבלת workAt:

יצירת csv באמצעות excel:

A	B	C	D	E	F	G	H
healthInstId	depld	workerid	salary	rating	hireDate	workPercentage	
435	224	531238815	5110.151	46	28/09/2006	89	
861	753	648956315	9203.725	20	04/07/2007	10	
726	621	71932811	7608.353	92	29/05/2008	7	
758	265	311466467	10196.82	68	25/10/2008	8	
224	540	214019947	9650.464	61	04/09/2010	74	
42	924	655611592	9522.606	16	19/08/2011	57	
116	598	267895569	9673.756	6	23/09/2011	45	
431	789	475822438	5300.325	88	02/01/2012	44	
380	993	608832283	11422.21	33	03/03/2012	54	
426	97	871947790	6179.105	71	04/08/2012	49	
546	976	156552498	7267.421	59	16/04/2013	51	
186	399	154508569	12308.55	1	07/02/2014	50	
632	405	918926951	11810.06	52	16/09/2014	4	

ייבוא:

Data from Textfile | Data to Oracle

File Data

Encoding

Configuration

General

Fieldcount: 7

Quote character: "

Comment line

Field Start

Field End

Field1 (+0..") healthInstId  
Field2 (+0..") depld  
Field3 (+0..") workerid  
Field4 (+0..") salary  
Field5 (+0..") rating  
Field6 (+0..") hireDate  
Field7 (+0..") workPercentage

Result Preview

healthInstId	depld	workerid	salary	rating	hireDate	workPercentage
435	224	531238815	5110.151	46	2006-09-28	89
861	753	648956315	9203.725	20	2007-07-04	10
726	621	71932811	7608.353	92	2008-05-29	7

Import | Import to Script | Close | cohenca@XE [1:15:20] 100 records imported in 0.078 seconds | Help

התאמת הנתונים לטבלה:

Data from Textfile | Data to Oracle

General

Owner: COHENCA

Table: WORKAT

Commit every...: 100

Overwrite duplicates

Delete records

Truncate table

Initializing Script

Finalizing Script

Fields

Field1 healthInstId -> HEALTHINSTID  
Field2 depld -> DEPID  
Field3 workerid -> WORKERID  
Field4 salary -> SALARY  
Field5 rating -> RATING  
Field6 hireDate -> HIREDATE  
Field7 workPercentage -> WORKPERCENTAGE

Field

Fieldtype

Create SQL

SQL function

additional Oracle processing, for example: substr(, 1, 20)

Result Preview

healthInstId	depld	workerid	salary	rating	hireDate	workPercentage
435	224	531238815	5110.151	46	2006-09-28	89
861	753	648956315	9203.725	20	2007-07-04	10
726	621	71932811	7608.353	92	2008-05-29	7

Import | Import to Script | Close | cohenca@XE [1:15:20] 100 records imported in 0.078 seconds | Help

טבלת treatedBy:

יצירת csv באמצעות excel:

	A	B	C	D	E	F	G	H
	treatDate	treatTime	citizenId	workerId	treatType			
	02/01/2019	12:05	708262840	531238815	surgery			
	03/01/2019	12:10	189811489	648956315	checkup			
	04/01/2019	12:15	467351472	71932811	Diaphragm pacing			
	05/01/2019	12:20	152874477	311466467	Clinical uses of mesenchymal stem cells			
	06/01/2019	12:25	590564086	214019947	Hydrogogue			
	07/01/2019	12:30	945582077	655611592	Protein replacement therapy			
	08/01/2019	12:35	79504732	267895569	Apheresis			
	09/01/2019	12:40	780946586	475822438	NDR Method			
0	10/01/2019	12:45	375972455	608832283	Management of scoliosis			
1	11/01/2019	12:50	971633137	871947790	Dopamine therapy			
2	12/01/2019	12:55	202710130	156552498	Self-administration			
3	13/01/2019	13:00	936814527	154508569	Mydicar			
4	14/01/2019	13:05	618144212	918926951	Treatment of human lice			

ייבוא:

Data from Textfile Data to Oracle

File Data

Encoding

treatDate,treatTime,citizenId,workerId,treatType

2019-01-02,12:05,708262840,531238815,surgery

2019-01-03,12:10,189811489,648956315,checkup

Configuration

General

Fieldcount: 5

Quote character: "

Comment line:

Import lines: 1 ..

Field Start

☒ Relative position

☐ Absolute position

☐ Character

Field End

☐ Length

☒ Character

Field1 (+0..") treatDate

Field2 (+0..") treatTime

Field3 (+0..") citizenId

Field4 (+0..") workerId

Field5 (+0..") treatType

Filter

Apply

Result Preview

treatDate	treatTime	citizenId	workerId	treatType
2019-01-02	12:05	708262840	531238815	surgery
2019-01-03	12:10	189811489	648956315	checkup

Import Import to Script Close cohenca@XE [1:35:19] 180 records imported in 0.141 seconds Help

התאמת הנתונים לטבלה:

Data from Textfile Data to Oracle

General

Owner: COHENCA

Table: TREATED\_BY

Initializing Script:

Finalizing Script:

Commit every...: 100

☒ Overwrite duplicates ☐ Ignore duplicates

☒ Delete records ☐ Truncate table

Fields

Field1 treatDate -> TREATDATE

Field2 treatTime -> TREATMENTTIME (VARCHAR2)

Field3 citizenId -> CITIZENID

Field4 workerId -> WORKERID

Field5 treatType -> TREATMENTTYPE (VARCHAR2)

Field: TREATMENTTYPE (VARC

Fieldtype: String

Create SQL

SQL function:

additional Oracle processing, for example: substr(, 1, 20)

Result Preview

treatDate	treatTime	citizenId	workerId	treatType
2019-01-02	12:05	708262840	531238815	surgery
2019-01-03	12:10	189811489	648956315	checkup

Import Import to Script Close cohenca@XE [1:35:19] 180 records imported in 0.141 seconds Help

נרמול

הסכמה מנורמלת בצורת 3NF משום שהיא עומדת בכללים הבאים:

1NF- אין שדה מורכב – כל שדה בטבלא מכיל את יחידת המידע הבסיסית לגבי המידע באותו שדה.

2NF- השדות תלויים בכל המפתח – כל שדה גם כאשר יש מפתח שמורכב מיותר משדה אחד כל השדות באותה טבלא תלויים בכל המפתח ולא רק בחלקו.

3NF- אין שדות שתלויים בשדה שאיננו מפתח.