מעבדת תרומת דם

מגישות:
אורית רוקח 213279631
שירהל מיתר 214439101

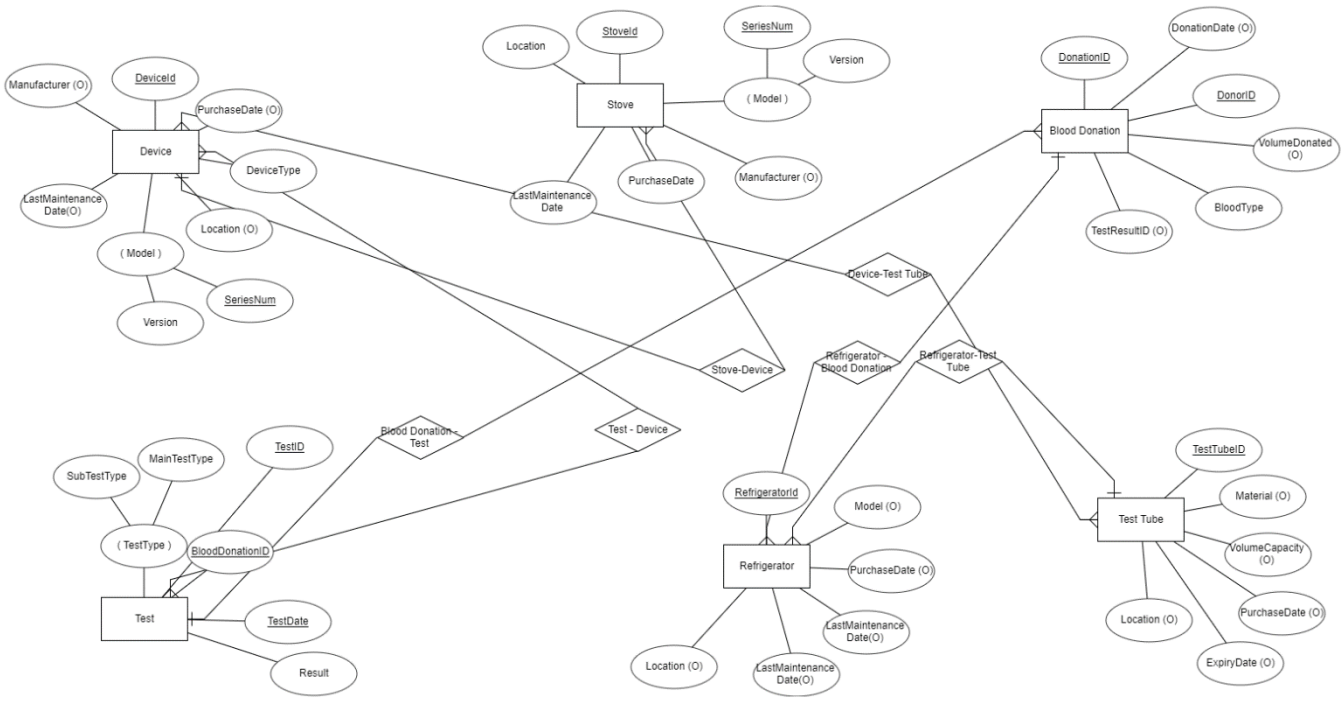
תוכן העניינים

תיאור מילולי:

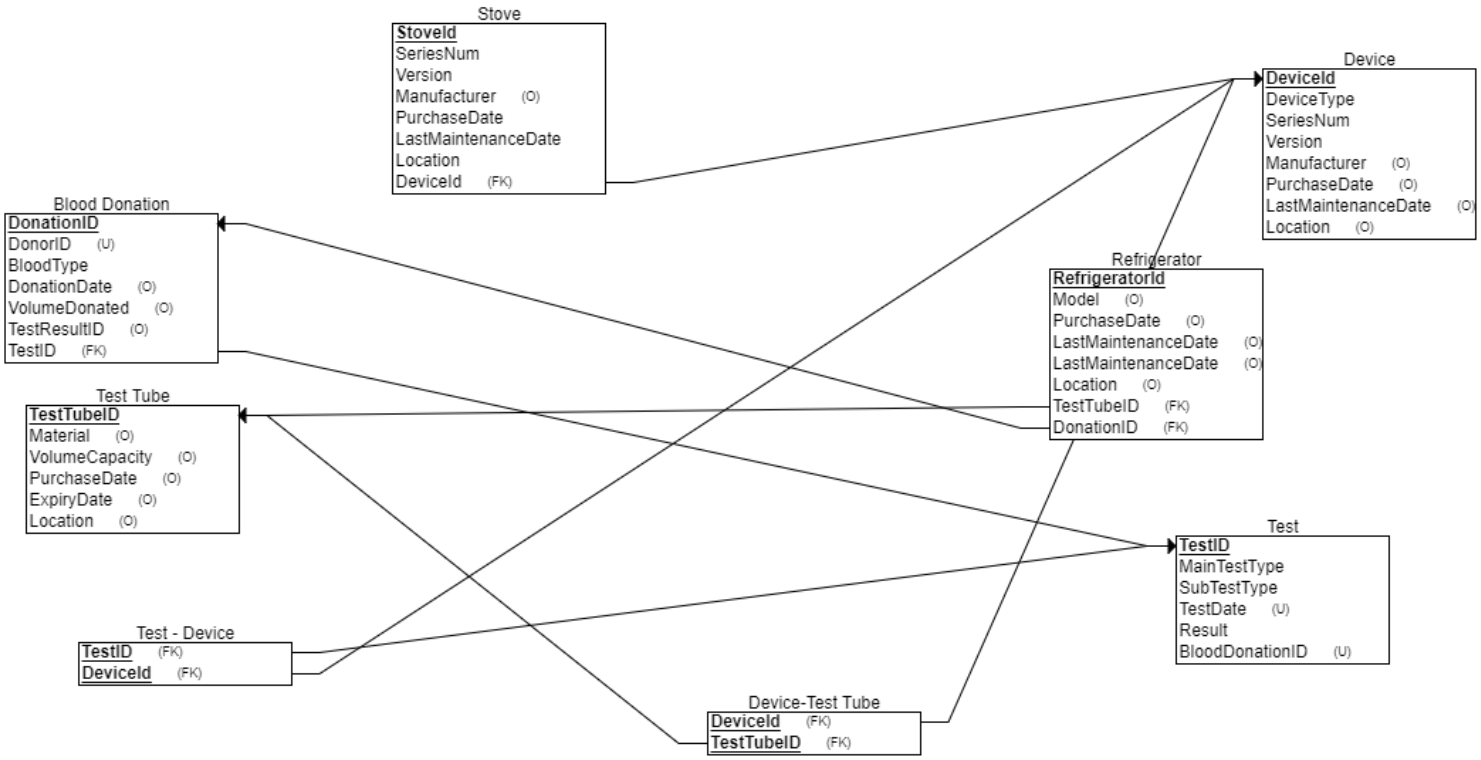
שם המערכת: מעבדת תרומות דם.

תיאור המערכת: המערכת היא מערכת לניהול מידע על מכשירים, בדיקות רפואיות, תרומות דם וציוד רפואי. הנתונים המרכזיים במערכת כוללים מידע על מכשירים רפואיים (כמו מספר סידורי, סוג, יצרן ותאריכי רכישה ותחזוקה אחרונה), בדיקות רפואיות (כולל סוג בדיקה, תאריך ותוצאות), תרומות דם (כולל סוג דם, תאריך התרומה וכמות דם) וציוד רפואי נלווה (כולל תאריכי רכישה ותחזוקה, דגם ומיקום). המערכת מטרתה לאפשר ניהול יעיל ומדויק של כלל המידע הרלוונטי, כולל הקשרים בין הנתונים, לצורך תמיכה בתהליכי רפואיים, ניהול מלאי וציוד, וניטור וניהול תרומות דם.

ERDשל המערכת:



DSD של המערכת



CreateTable

```
CREATE TABLE Device1
(
 DeviceId varchar2(50) NOT NULL,
 DeviceType INT NOT NULL,
 SeriesNum INT NOT NULL,
 VersionD INT NOT NULL,
 Manufacturer varchar2(50),
 PurchaseDate DATE,
 LastMaintenanceDate DATE,
 LocationD varchar2(50),
 PRIMARY KEY (DeviceId)
);

CREATE TABLE Test_Tube1—
(
 TestTubeID varchar2(50) NOT NULL,
 Material INT,
 VolumeCapacity INT,
 PurchaseDate DATE,
 ExpiryDate DATE,
 LocationTestTube varchar2(50),
 PRIMARY KEY (TestTubeID)
);

CREATE TABLE Test_1—
(
 TestID varchar2(50) NOT NULL,
```

```
 MainTestType INT NOT NULL,
 SubTestType INT NOT NULL,
 TestDate DATE NOT NULL,
 ResultT varchar2(50) NOT NULL,
 BloodDonationID varchar2(50) NOT NULL,
 PRIMARY KEY (TestID),
 UNIQUE (TestDate),
 UNIQUE (BloodDonationID)
);

CREATE TABLE Test_Device1—
(
 TestID varchar2(50) NOT NULL,
 DeviceId varchar2(50) NOT NULL,
 PRIMARY KEY (TestID, DeviceId),
 FOREIGN KEY (TestID) REFERENCES Test_1(TestID),
 FOREIGN KEY (DeviceId) REFERENCES Device1(DeviceId)) ;

CREATE TABLE DeviceTest_Tube1—
(
 DeviceId varchar2(50) NOT NULL,
 TestTubeID varchar2(50) NOT NULL,
 PRIMARY KEY (DeviceId, TestTubeID),
 FOREIGN KEY (DeviceId) REFERENCES Device1(DeviceId),
 FOREIGN KEY (TestTubeID) REFERENCES Test_Tube1(TestTubeID)
);

CREATE TABLE Blood_Donation1
```

```
(
 DonationID varchar2(50) NOT NULL,
 DonorID varchar2(50) NOT NULL,
 BloodType varchar2(50) NOT NULL,
 DonationDate DATE,
 VolumeDonated INT,
 TestResultID varchar2(50),
 TestID varchar2(50) NOT NULL,
 PRIMARY KEY (DonationID),
 FOREIGN KEY (TestID) REFERENCES Test_1(TestID),
 UNIQUE (DonorID)
);

CREATE TABLE Stove1—
(
 StoveId varchar2(50) NOT NULL,
 SeriesNum INT NOT NULL,
 VersionStove INT NOT NULL,
 Manufacturer INT,
 PurchaseDate DATE NOT NULL,
 LastMaintenanceDate DATE NOT NULL,
 LocationStove varchar2(50) NOT NULL,
 DeviceId varchar2(50) NOT NULL,
 PRIMARY KEY (StoveId),
 FOREIGN KEY (DeviceId) REFERENCES Device1(DeviceId)
);

CREATE TABLE Refrigerator1—
```

```
(
 RefrigeratorId varchar2(50) NOT NULL,
 ModelR INT,
 PurchaseDate DATE,
 LastMaintenanceDate DATE,
 LocationR varchar2(50),
 TestTubeID varchar2(50) NOT NULL,
 DonationID varchar2(50) NOT NULL,
 PRIMARY KEY (RefrigeratorId),
 FOREIGN KEY (TestTubeID) REFERENCES Test_Tube1(TestTubeID),
 FOREIGN KEY (DonationID) REFERENCES Blood_Donation1(DonationID)
);
```

DropTable

```
;DROP TABLE Refrigerator1

;DROP TABLE Stove1

;DROP TABLE Blood_Donation1

;DROP TABLE DeviceTest_Tube1

;DROP TABLE Test_Device1

;DROP TABLE Test_1

;DROP TABLE Test_Tube1

;DROP TABLE Device1
```

Insert

זה כמות אדירה ולכן נרשום רק כמה שורות...

```
INSERT INTO Device1 (DeviceId, DeviceType, SeriesNum, VersionD,
Manufacturer, PurchaseDate, LastMaintenanceDate, LocationD) VALUES
('YvSGkO6l6fRwXlaf5But', 31, 760, 9, 'PvsL2vp1kgjRPSYTZaTE', TO_DATE('2003-
09-16', 'YYYY-MM-DD'), TO_DATE('2010-04-13', 'YYYY-MM-DD'),
'evqI5CvnJlWT5sjpFOr8');

INSERT INTO Device1 (DeviceId, DeviceType, SeriesNum, VersionD,
Manufacturer, PurchaseDate, LastMaintenanceDate, LocationD) VALUES
('eR4LgsUjk1PKOmGQkmDp', 46, 436, 2, 'WiFxVJLbwrIcYzZdpL5G',
TO_DATE('2010-04-04', 'YYYY-MM-DD'), TO_DATE('2010-09-25', 'YYYY-MM-DD'),
'mFjXIEDHUPMHzDIvApsT');

INSERT INTO Device1 (DeviceId, DeviceType, SeriesNum, VersionD,
Manufacturer, PurchaseDate, LastMaintenanceDate, LocationD) VALUES
('3h5ggjXUeEB2Gr8WzzWa', 73, 748, 9, 'sApvxdDVio2a9G4AMJ3C',
TO_DATE('2020-03-12', 'YYYY-MM-DD'), TO_DATE('2000-04-20', 'YYYY-MM-DD'),
'r964gYNL8H8739jrYgrf');
```

SelectAll

```
SELECT* from Device1;

SELECT* from Test_Tube1;

SELECT* from Test_1;

SELECT* from Test_Device1;

SELECT* from DeviceTest_Tube1;

SELECT* from Blood_Donation1;

SELECT* from Stove1;

SELECT* from Refrigerator1;
```

Desc

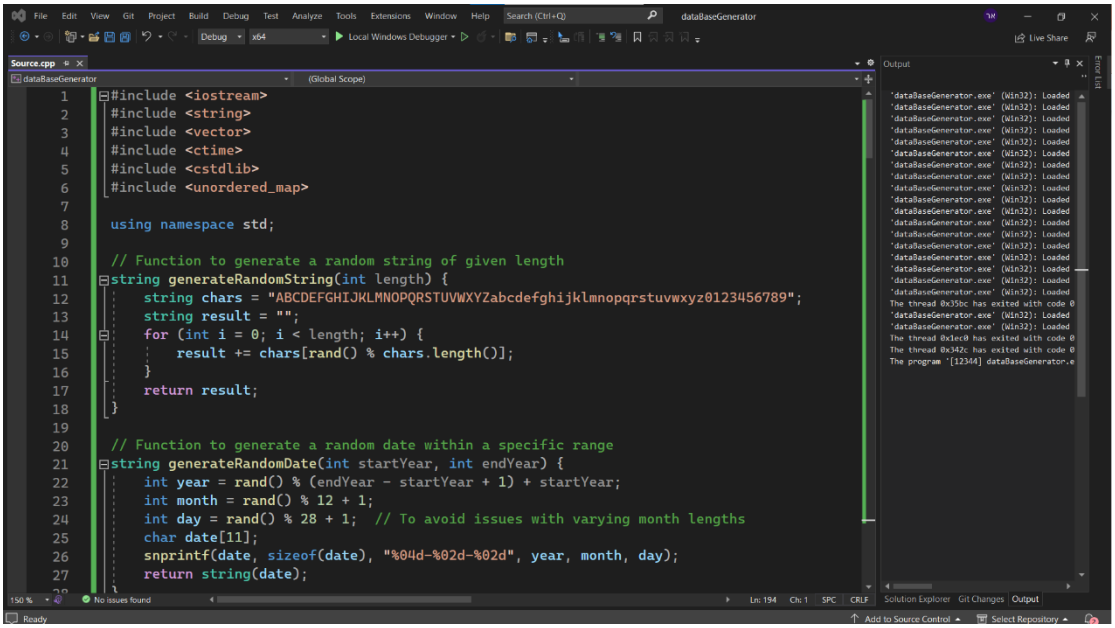
```
VOLUMEDONATED  INTEGER      Y
TESTRESULTID   VARCHAR2(50) Y
TESTID         VARCHAR2(50)

SQL> desc Stove1
Name                  Type         Nullable Default Comments
--------------------- ------------ -------- ------- --------
STOVEID               VARCHAR2(50)
SERIESNUM             INTEGER
VERSIONSTOVE          INTEGER
MANUFACTURER          INTEGER      Y
PURCHASEDATE          DATE
LASTMAINTENANCEDATE   DATE
LOCATIONSTOVE         VARCHAR2(50)
DEVICEID              VARCHAR2(50)

SQL> desc Refrigerator1
Name                  Type         Nullable Default Comments
--------------------- ------------ -------- ------- --------
REFRIGERATORID        VARCHAR2(50)
MODELR                INTEGER      Y
PURCHASEDATE          DATE         Y
LASTMAINTENANCEDATE   DATE         Y
LOCATIONR             VARCHAR2(50) Y
TESTTUBEID            VARCHAR2(50)
DONATIONID            VARCHAR2(50)

SQL>
```

```
SQL> desc Test_Device1
Name     Type         Nullable Default Comments
-------- ------------ -------- ------- --------
TESTID   VARCHAR2(50)
DEVICEID VARCHAR2(50)

SQL> desc DeviceTest_Tube1
Name       Type         Nullable Default Comments
---------- ------------ -------- ------- --------
DEVICEID   VARCHAR2(50)
TESTTUBEID VARCHAR2(50)

SQL> desc Blood_Donation1
Name           Type         Nullable Default Comments
-------------- ------------ -------- ------- --------
DONATIONID     VARCHAR2(50)
DONORID        VARCHAR2(50)
BLOODTYPE      VARCHAR2(50)
DONATIONDATE   DATE         Y
VOLUMEDONATED  INTEGER      Y
TESTRESULTID   VARCHAR2(50) Y
TESTID         VARCHAR2(50)

SQL> desc Stove1
Name                  Type         Nullable Default Comments
--------------------- ------------ -------- ------- --------
STOVEID               VARCHAR2(50)
SERIESNUM             INTEGER
VERSIONSTOVE          INTEGER
MANUFACTURER          INTEGER      Y
```

```
SQL> desc device1
Name                 Type         Nullable Default Comments
-------------------- ------------ -------- ------- --------
DEVICEID             VARCHAR2(50)
DEVICETYPE           INTEGER
SERIESNUM            INTEGER
VERSIOND             INTEGER
MANUFACTURER         VARCHAR2(50) Y
PURCHASEDATE         DATE         Y
LASTMAINTENANCEDATE DATE         Y
LOCATIOND            VARCHAR2(50) Y

SQL> desc Test_Tube1
Name              Type         Nullable Default Comments
----------------- ------------ -------- ------- --------
TESTTUBEID        VARCHAR2(50)
MATERIAL          INTEGER      Y
VOLUMECAPACITY    INTEGER      Y
PURCHASEDATE      DATE         Y
EXPIRYDATE        DATE         Y
LOCATIONTESTTUBE VARCHAR2(50) Y

SQL> desc Test_1
Name              Type         Nullable Default Comments
----------------- ------------ -------- ------- --------
TESTID           VARCHAR2(50)
MAINTESTTYPE     INTEGER
SUBTESTTYPE      INTEGER
TESTDATE         DATE
```

Data Generators

*על ידי תוכנית בc++

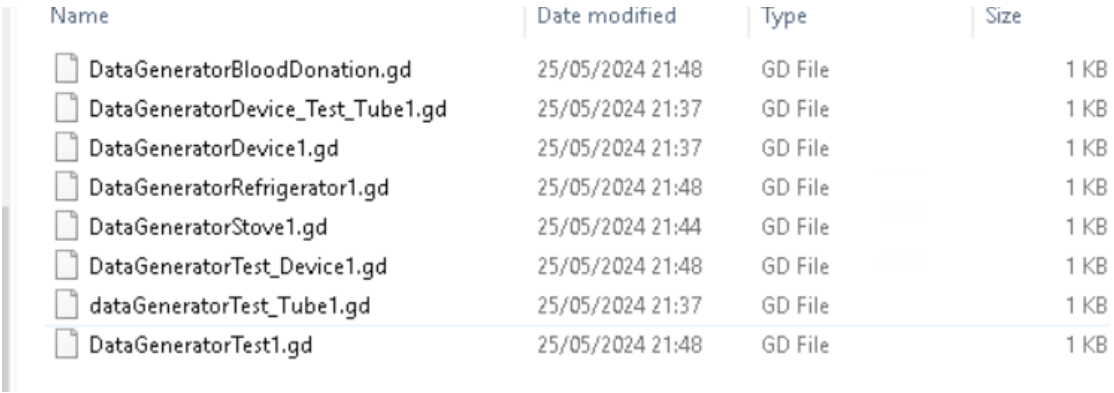


```cpp
#include <iostream>
#include <string>
#include <vector>
#include <ctime>
#include <cstdlib>
#include <unordered_map>

using namespace std;

// Function to generate a random string of given length
string generateRandomString(int length) {
    string chars = "ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789";
    string result = "";
    for (int i = 0; i < length; i++) {
        result += chars[rand() % chars.length()];
    }
    return result;
}

// Function to generate a random date within a specific range
string generateRandomDate(int startYear, int endYear) {
    int year = rand() % (endYear - startYear + 1) + startYear;
    int month = rand() % 12 + 1;
    int day = rand() % 28 + 1;  // To avoid issues with varying month lengths
    char date[11];
    snprintf(date, sizeof(date), "%04d-%02d-%02d", year, month, day);
    return string(date);
```

*על ידי קבצי exel

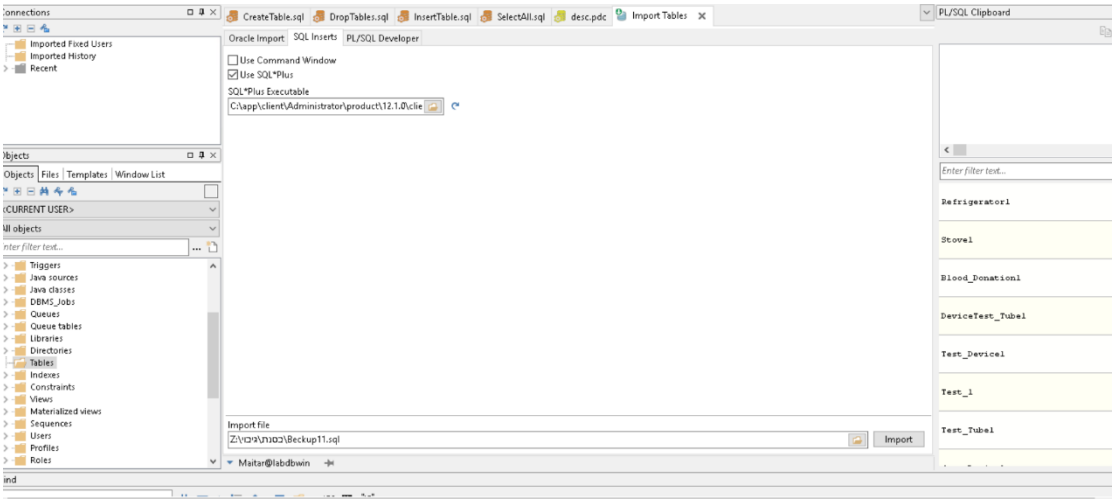
	A	B	C	D	E	F	G	H
1	StoveId	SeriesNum	VersionStov	Manufacture	PurchaseDa	LastMainter	LocationSto	DeviceId
2	OJ8Wfwytgs	174	6	u61GURC3Q	18/05/2012	13/08/2011	BoPRzd0Wq	3JwIU9dGEK
3	PhjEe2RBjeZ	558	4	DrP9PLdrDE	11/03/2000	26/02/2017	VutQ1URAbg	GJuUmCFHC
4	ucv1cbpZpG	450	6	ixWGvNwzjV	09/08/2021	30/05/2008	JLVnsJ16iwT	VeaAlT3zZXY
5	OtW1RvJk2c	232	1	csnDyAO7cT	20/05/2014	18/03/2022	OGHZcYN8ey	c2S8bsiiL3b
6	qmbrzvsh75	619	6	bNMtNT0Hb	18/01/2009	30/11/2011	dVLRZGP62l	aG8voTCFXY
7	Eh2froCbIfP3	467	8	AdEhesNB2f	15/12/2008	17/12/2018	egFJsZF4KM	oXmV4VXME
8	geg5hj1XtJC	785	2	ohntDbJHMa	04/01/2015	03/11/2002	yvs03aKBXv	pOmuSefulv
9	cAmrtwNx9l	348	10	QtMFaAOaQ	20/10/2016	02/06/2004	43a7gSo2YC	6TZmHHpk2
10	xP7xvGst9Jz	964	8	xPEVVZB4M6	14/02/2017	30/06/2021	m8akuXm3u	TDrY6r5Ed1S
11	PqhxyYb34y	70	7	7rcgEJWFDX	18/10/2021	22/07/2005	dNOxhXQWJ	VvQmjJJqAG
12	loWYjCPkxzc	599	4	xPEVVZB4M6	07/07/2017	06/07/2001	kPJ6wn5HhE	iEvYsrJUPtxe
13	EB9ezF823d	79	2	mXOT9piWC	11/12/2009	08/11/2022	FxlaHGs01l4	6TZmHHpk2
14	fep9TtSfwdjS	660	4	x2PuvzbtSyC	24/02/2002	06/04/2005	59dIwta97K	VvQmjJJqAG
15	6ro8MKCOn	309	3	RoTCaXQL8E	08/07/2019	07/07/2022	dcCBE3VjI7n	zVz4eeNfme
16	UKHpG0XGv	604	7	CZtZyaszJn6	23/09/2011	04/07/2017	n4qlODAzP6	Dt7CfR13I5C
17	UdOKkkAQeI	99	2	u61GURC3Q	02/08/2021	31/10/2015	IreuSnbbyNb	Q9AlgKi2VQ
18	gecyR2hzoh	371	7	h6Qa6DmKc	06/06/2001	03/06/2017	UJdUtdHCl6	gcZRRWdAL8
19	6l7Ov4qMr7	437	7	zZ7AzXqFIt3I	18/08/2023	19/02/2003	rtJWWFXq3\	UpHsnKtDiV
20	FbKBuDvdM	310	8	RVi0pauvdW	18/06/2016	09/06/2005	zraIB27hQnp	MHRvIrODdE
21	pLBOWESXQ	310	2	CZtZyaszJn6	23/07/2020	29/03/2015	Zot8YWkgxc	YFvzR6EXWS
22	ten6PvTviRV	304	6	NxpuEbcI3gC	02/12/2012	18/08/2007	BcwsWb2Lw	eneDROYPYE
23	YCPYnvqT1FZ	894	9	rbCuTVjFSU5	07/01/2005	21/07/2013	JclUsbia4og	X7PaplqOlTk
24	lB0HfxfNSfgM	59	3	Y8f1XoK7d8	04/03/2014	13/12/2023	xG4dvyiqR5\	cD7b4H2mT
25	HPojJsjF6tVl	433	6	NxpuEbcI3gC	10/07/2005	22/02/2018	sRXlLJKockR	BYsYqbqkNlJ

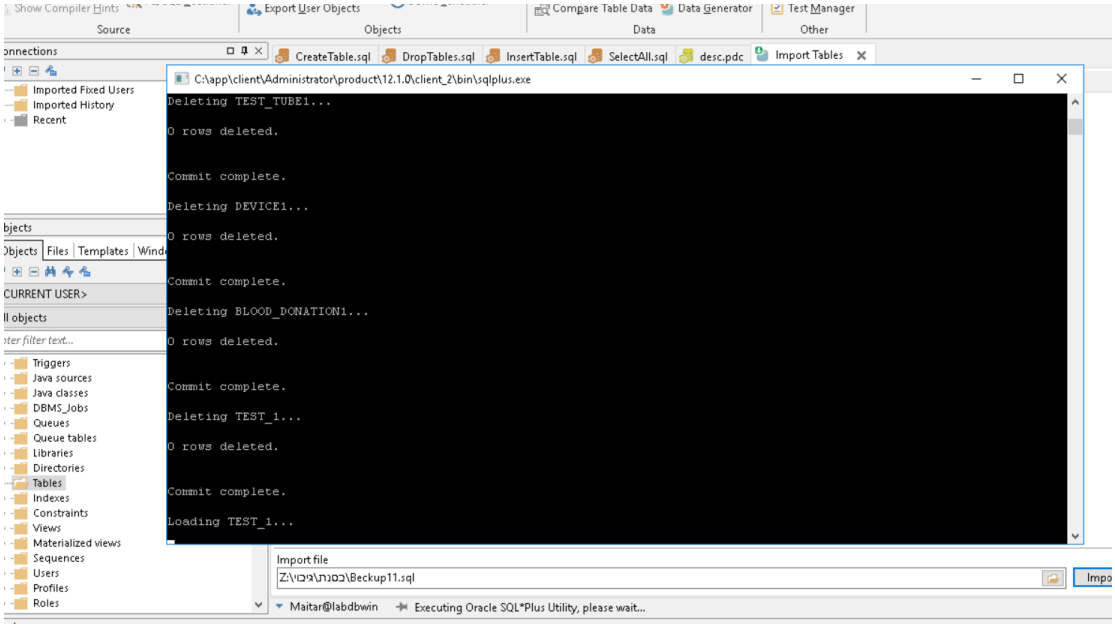
***על ידי Data Generaor**

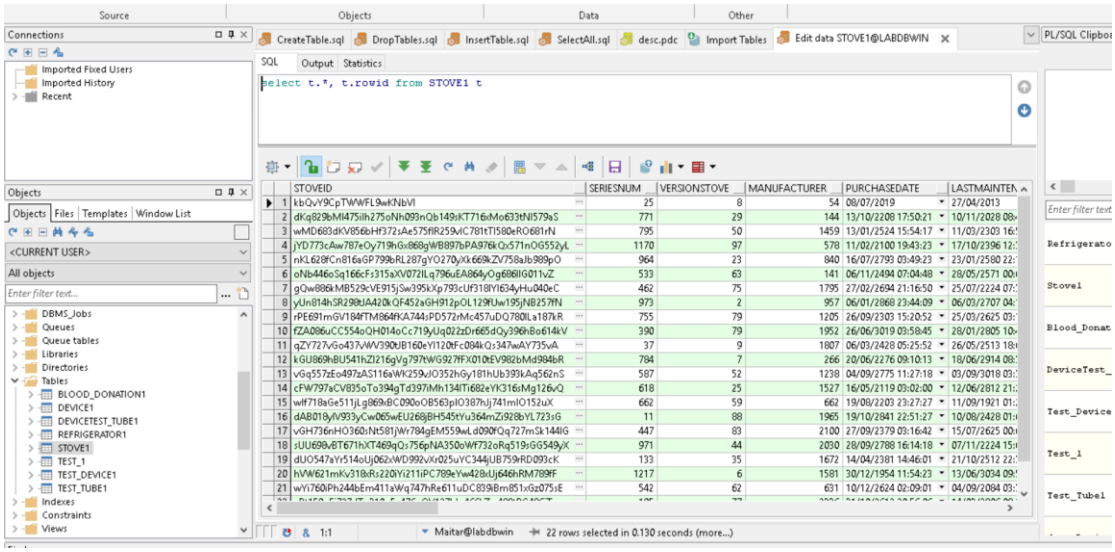


Name	Date modified	Type	Size
DataGeneratorBloodDonation.gd	25/05/2024 21:48	GD File	1 KB
DataGeneratorDevice_Test_Tube1.gd	25/05/2024 21:37	GD File	1 KB
DataGeneratorDevice1.gd	25/05/2024 21:37	GD File	1 KB
DataGeneratorRefrigerator1.gd	25/05/2024 21:48	GD File	1 KB
DataGeneratorStove1.gd	25/05/2024 21:44	GD File	1 KB
DataGeneratorTest_Device1.gd	25/05/2024 21:48	GD File	1 KB
dataGeneratorTest_Tube1.gd	25/05/2024 21:37	GD File	1 KB
DataGeneratorTest1.gd	25/05/2024 21:48	GD File	1 KB

גיבוי


CreateTable.sql
DropTables.sql
InsertTable.sql
SelectAll.sql
desc.pdc
Import Tables
Oracle Import
SQL Inserts
PL/SQL Developer
Use Command Window
Use SQL*Plus
SQL*Plus Executable
C:\app\client\Administrator\product\12.1.0\clie
PL/SQL Clipboard
Import file
Z:\כסנרת\גיבוי\Beckup11.sql
Import
Maitar@labdbwin


Source
Objects
Data
Other
CreateTable.sql
DropTables.sql
InsertTable.sql
SelectAll.sql
desc.pdc
Import Tables
C:\app\client\Administrator\product\12.1.0\client_2\bin\sqlplus.exe
Deleting TEST_TUBE1...
0 rows deleted.
Commit complete.
Deleting DEVICE1...
0 rows deleted.
Commit complete.
Deleting BLOOD_DONATION1...
0 rows deleted.
Commit complete.
Deleting TEST_1...
0 rows deleted.
Commit complete.
Loading TEST_1...
Import file
Z:\כסנרת\גיבוי\Beckup11.sql
Maitar@labdbwin
Executing Oracle SQL*Plus Utility, please wait...


Source
Objects
Data
Other
Connections
Imported Fixed Users
Imported History
Recent
CreateTable.sql
DropTables.sql
InsertTable.sql
SelectAll.sql
desc.pdc
Import Tables
Edit data STOVE1@LABDBWIN
PL/SQL Clipbo
SQL
Output
Statistics
select t.*, t.rowid from STOVE1 t
Objects
Objects
Files
Templates
Window List
<CURRENT USER>
All objects
Enter filter text...
DBMS_Jobs
Queues
Queue tables
Libraries
Directories
Tables
BLOOD_DONATION1
DEVICE1
DEVICETEST_TUBE1
REFRIGERATOR1
STOVE1
TEST_1
TEST_DEVICE1
TEST_TUBE1
Indexes
Constraints
Views
STOVEID
SERIESNUM
VERSIONSTOVE
MANUFACTURER
PURCHASEDATE
LASTMAINTEN
1 kbQvY9CpTWWFL9wKNbVl 25 8 54 08/07/2019 27/04/2013
2 dKq829bMl475ilh275oNh099nQb149skT716xMo633tNl579aS 771 29 144 13/10/2208 17:50:21 10/11/2028 08
3 wMD683dkV856bHf372sAe575flR259vIC781tTl580eRO681rN 795 50 1459 13/01/2524 15:54:17 11/03/2303 16:
4 jYD773cAww787eOy719hGx868gWB897bPA976kQs571nOG552yL 1170 97 578 11/02/2100 19:43:23 17/10/2396 12:
5 nKL628fCn816aGP799bRL287gYO270yXk669kZV758aJb989pO 964 23 840 16/07/2793 03:49:23 23/01/2580 22:
6 oNb446oSq166cFr315aXV072ILq796uEA864yOg686lG011vZ 533 63 141 06/11/2494 07:04:48 28/05/2571 00
7 gQw886kMB529cVE915jSw395kXp793cUf318Yl634yHu040eC 462 75 1795 27/02/2694 21:16:50 25/07/2224 07:
8 yUn814hSR290tJA420kQF452aGH912pOL129fUw195jNB257fN 973 2 957 06/01/2868 23:44:09 06/03/2707 04:
9 rPE691mGV184fTM864fKA744sPD572rMc457uDQ780lLa187kR 755 79 1205 26/09/2303 15:20:52 25/03/2625 03:
10 fZA086uCC554oQH014oCc719yUq022zDr665dQy396hBo614kV 390 79 1952 26/06/3019 03:58:45 28/01/2805 10
11 qZY727vGo437vWV390tJB160eYl120tFc084kQs347wAY735vA 37 9 1807 06/03/2428 05:25:52 26/05/2513 18
12 kGU869hBU541hZI216gVg797tWG927fFX010tEV982bMd984bR 784 7 266 20/06/2276 09:10:13 18/06/2914 08:
13 vGq557zEo497zAS116aWK259vJO352hGy181hUb393kAq562nS 587 52 1238 04/09/2775 11:27:18 03/09/3018 03:
14 cFW797aCV835oTo394gTd397iMh134iTi682eYK316sMg126vQ 618 25 1527 16/05/2119 03:02:00 12/06/2812 21:
15 wIf718aGe511jLg869vBC090oOB563pIO387hlj741mIO152uX 662 59 662 19/08/2203 23:27:27 11/09/1921 01:
16 dAB018yIV933yCw065wEU268jBH545tYu364mZi928bYL723sG 11 88 1965 19/10/2841 22:51:27 10/08/2428 01:
17 vGH736nHO360iNt581jWr784gEM559wLd090fQq727mSk144IG 447 83 2100 27/09/2379 03:16:42 15/07/2625 00
18 sUU698vBT671hXT469qQs756pNA350oWf732oRq519sGG549yX 971 44 2030 28/09/2788 16:14:18 07/11/2224 15
19 dUO547aYr514oUj062xWD992vXr025uYC344jUB759rRD093cK 133 35 1672 14/04/2381 14:46:01 21/10/2512 22:
20 hVW621mKv318sRs220iYi211iPC789eYw428xUj646hRM789fF 1217 6 1581 30/12/1954 11:54:23 13/06/3034 09:
21 wYi760iPh244bEm411aWq747hRe611uDC839iBm851xGz075sE 542 62 631 10/12/2624 02:09:01 04/09/2084 03:
1:1
Maitar@labdbwin
22 rows selected in 0.130 seconds (more...)
Refrigerato
Stove1
Blood_Donat
DeviceTest_
Test_Device
Test_1
Test_Tube1