שם הארגון: חנות

שם האגף: נשים

מגישות:

תהילה בן עזרא 323845321 tasaraf@g.jct.ac.il מיכל יששכר 213686496 Michalisr17@gmail.com

בפרויקט זה נממש מערכת ניהול מידע עבור חנות. המערכת מכילה ישויות שונות וקשרים ביניהם על מנת למפות את כל המידע בצורה מיטבית. מטרת הפרויקט היא לעזור לנהל את החנות בצורה יעילה ומתועדת היטב.

הישויות במערכת והקשרים ביניהם:

לקוחות – אנשים שקונים בחנות

עובדים – אנשים העובדים בחנות

ספקים – ספקי סחורה לחנות

מוצרים – המוצרים הנמכרים בחנות

קטגוריות – שמות הקטגוריות שעל פיהן נמיין את המוצרים שבחנות. לכל מוצר יש קטגוריה אחת לפחות.

הזמנות – הזמנת מוצרים חדשים בין העובדים לספקים

רכישות – רכישת מוצרים על ידי הלקוחות מהעובדים

Entities:

Client = Client_ID, Client_Name, Is_Club_Member

Worker = Worker Id, Worker_Name, Start_of_Work_Date

Supplier = <u>Supplier_Id</u>, Supplier_Name, Region

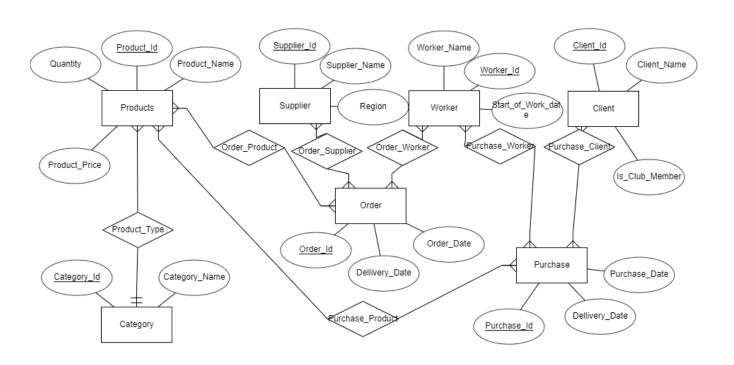
Products = Product_Id, Product_Name, Quantity

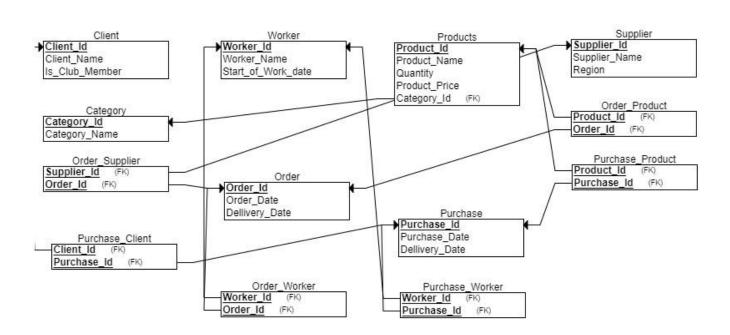
Category = <u>Category_Id</u>, Category_Name

Order = Order_Id, Order_Date, Delivery_Date, Quantity

Purchase = Purchase Id, Purchase_Date, Delivery_Date, Quantity

ERD Diagram

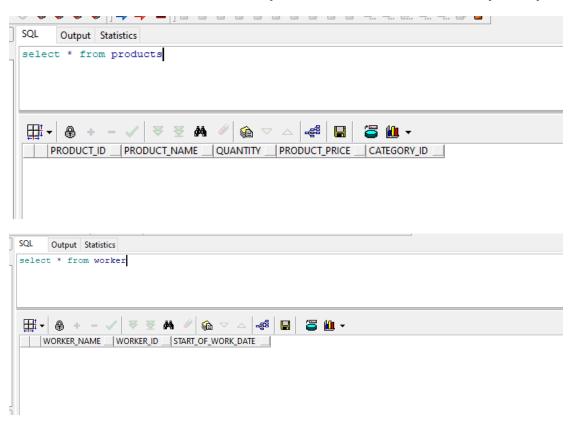




יצירת הטבלאות:

```
▶ | ♂ ◇ ♦ ♂ ♂ ♥ | → → △ | ♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂ ☆ ☆ ☆ ☆ ☆ ☆ ☆
□ 耳 × SQL Output Statistics
         CREATE TABLE Client
            Client_Id NUMERIC(3) NOT NULL,
           Client Name VARCHAR(15) NOT NULL,
Is Club_Member NUMERIC(1) NOT NULL,
PRIMARY KEY (Client_Id)
          CREATE TABLE Worker
            Worker_Name VARCHAR(15) NOT NULL,
            Worker_Id NUMERIC(3) NOT NULL,
           Start_of_Work_date DATE NOT NULL,
PRIMARY KEY (Worker_Id)
□ ‡ × );
          CREATE TABLE Supplier
           Supplier_Id NUMERIC(3) NOT NULL,
Supplier_Name VARCHAR(15) NOT NULL,
            Region VARCHAR(15) NOT NULL,
            PRIMARY KEY (Supplier_Id)
          CREATE TABLE Categorys
            Category_Id NUMERIC(3) NOT NULL,
           Category_Name VARCHAR(15) NOT NULL,
PRIMARY KEY (Category_Id)
□ ग × );
          CREATE TABLE Orders
NOT NULL,
           Order_Id NUMERIC(3) NOT NULL,
Order_Date DATE NOT NULL,
Dellivery_Date DATE NOT NULL,
le Supplier;
           PRIMARY KEY (Order_Id)
          CREATE TABLE Purchase
            Purchase_Id NUMERIC(3) NOT NULL,
Purchase_Date DATE NOT NULL,
            Dellivery_Date DATE NOT NULL,
           PRIMARY KEY (Purchase_Id)
```

בדקנו שאכן הטבלאות נוצרו על ידי הרצה הסקריפט הזה:



:DESC פקודת

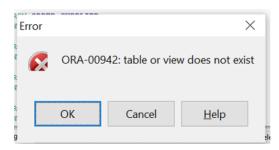
```
Command Window - New
Dialog Editor
Connected to Oracle Database 11g Express Edition Release 11.2.0.2.0
Connected as Tehila@XE
SQL> DESC ORDERS;
Name Type Nullable Default Comments
ORDER_ID NUMBER(3)
ORDER_DATE DATE
DELLIVERY DATE DATE
SQL> DESC CLIENT;
Name Type Nullable Default Comments
______
CLIENT_ID NUMBER(3)
CLIENT_NAME VARCHAR2(15)
IS CLUB MEMBER NUMBER(1)
SQL> DESC PRODUCTS;
Name Type
                     Nullable Default Comments
PRODUCT_ID NUMBER (3)
PRODUCT NAME VARCHAR2 (15)
QUANTITY NUMBER (3)
PRODUCT PRICE NUMBER(3)
CATEGORY_ID NUMBER(3)
SQL>
```

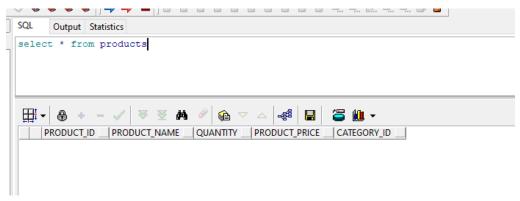
יצירת קובץ DROP_TABLE:

כמובן על פי הסדר כך שהטבלאות התלויות בטבלאות אחרות נמחקות קודם

```
drop table Order_Product;
drop table Purchase_Product;
drop table Purchase_Client;
drop table Order_Supplier;
drop table Order_Worker;
drop table Purchase_Worker;
drop table Client;
drop table Supplier;
drop table Supplier;
drop table Supplier;
prop table Orders;
drop table Purchase;
drop table Purchase;
drop table Orders;
drop table Orders;
drop table Categorys;
```

בדקנו שהטבלאות נמחקות ולאחר מכן יצרנו אותן שוב מחדש



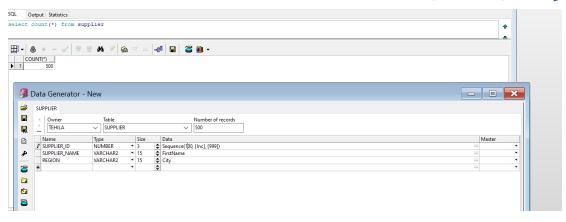


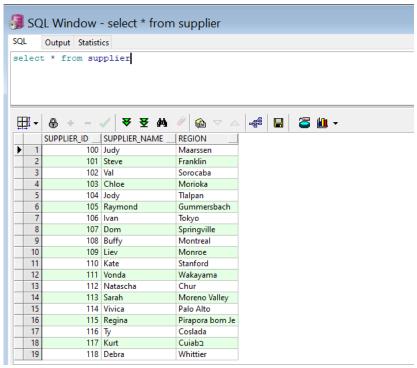
יצירת קובץ SELECT

```
TO SELECTION INC.
SQL Output Statistics
SELECT * FROM CATEGORYS;
SELECT COUNT (*) FROM CATEGORYS;
SELECT * FROM CLIENT;
SELECT COUNT(*) FROM CLIENT;
SELECT * FROM ORDER PRODUCT;
SELECT COUNT (*) FROM ORDER_PRODUCT;
SELECT * FROM ORDERS;
SELECT COUNT(*) FROM ORDERS;
SELECT * FROM ORDER_SUPPLIER;
SELECT COUNT(*) FROM ORDER_SUPPLIER;
SELECT * FROM ORDER_WORKER;
SELECT COUNT (*) FROM ORDER_WORKER;
SELECT * FROM PRODUCTS;
SELECT COUNT (*) FROM PRODUCTS;
SELECT * FROM PURCHASE;
SELECT COUNT(*) FROM PURCHASE;
SELECT * FROM PURCHASE CLIENT;
SELECT COUNT (*) FROM PURCHASE_CLIENT;
SELECT * FROM PURCHASE PRODUCT;
SELECT COUNT(*) FROM PURCHASE PRODUCT;
SELECT * FROM PURCHASE WORKER;
SELECT COUNT(*) FROM PURCHASE_WORKER;
SELECT * FROM SUPPLIER;
SELECT COUNT(*) FROM SUPPLIER;
SELECT * FROM WORKER;
SELECT COUNT(*) FROM WORKER;
```

הכנסת נתונים על ידי שלושת הדרכים המבוקשות:

:DATA GENERATOR על ידי





2. על ידי קוד בפיתון ופקודות INSERT:

```
def generate_insert_statement(existing_ids):
          purchase_id = generate_unique_purchase_id(existing_ids)
     existing_ids.add(purchase_id)
          purchase_date = generate_random_date()
          dellivey_date = generate_random_date()
           return f"INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES({purchase_id}, (TO_DATE('{purchase}
          existing_ids = set()
                  print(generate_insert_statement(existing_ids))
"C:\Users\Tehila Benezra\PycharmProjects\test202b\venn\Scripts\python.exe" C:\assembly\xordll.py
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(668, (T0_DATE('2025/97/29', 'yyyy/mm/dd')), (T0_DATE('2026/96/84', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(608, (T0_DATE('2025/97/29', 'yyyy/mm/dd')), (T0_DATE('2028/96/81', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(287, (T0_DATE('2025/96/88', 'yyyy/mm/dd')), (T0_DATE('2028/96/87', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(668, (T0_DATE('2025/96/88', 'yyyy/mm/dd')), (T0_DATE('2026/96/39', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(708, (T0_DATE('2028/96/81', 'yyyy/mm/dd')), (T0_DATE('2028/96/39', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(708, (T0_DATE('2028/96/30', 'yyyy/mm/dd')), (T0_DATE('2028/96/30', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(308, (T0_DATE('2025/97/25', 'yyyy/mm/dd')), (T0_DATE('2028/96/30', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(751, (T0_DATE('2025/97/25', 'yyyy/mm/dd')), (T0_DATE('2028/96/31', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(751, (T0_DATE('2026/97/11', 'yyyy/mm/dd')), (T0_DATE('2028/96/31', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(751, (T0_DATE('2026/97/11', 'yyyy/mm/dd')), (T0_DATE('2028/96/30', 'yyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(829, (T0_DATE('2026/97/11', 'yyyy/mm/dd')), (T0_DATE('2026/96/96', 'yyyyy/mm/dd'));
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(829, (T0_DATE('2026/97/11', 'yyyy/mm/dd')), (T0_DATE('2026/96/96', 'yyyyy/mm/dd'));
INS
 INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(843, (TO_DATE('2029/09/11',
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(880, (TO_DATE('2028/08/07',
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(888, (TO_DATE('2028/08/07',
INSERT INTO TEHILA.purchase(PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE) VALUES(858, (TO_DATE('2029/11/19',
                                                                                                                                                                          'yyyy/mm/dd')), (TO_DATE('2026/09/21', 'yyyy/mm/dd')), (TO_DATE('2030/09/30',
                                                                                                                                                                                                                                        'yyyy/mm/dd')))
 🚚 SQL Window - New
   insert into purchase (PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE)
   values (604, to_date('27-03-2025', 'dd-mm-yyyy'), to_date('16-10-2027', 'dd-mm-yyyy'));
    insert into purchase (PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE)
   values (319, to_date('08-02-2025', 'dd-mm-yyyy'), to_date('02-05-2030', 'dd-mm-yyyy'));
   insert into purchase (PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE)
   values (348, to_date('28-03-2025', 'dd-mm-yyyy'), to_date('27-01-2025', 'dd-mm-yyyy'));
   insert into purchase (PURCHASE ID, PURCHASE DATE, DELLIVERY DATE)
   values (179, to date('15-08-2025', 'dd-mm-yyyy'), to date('14-08-2027', 'dd-mm-yyyy'));
   insert into purchase (PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE)
   values (388, to_date('23-12-2026', 'dd-mm-yyyy'), to_date('07-05-2029', 'dd-mm-yyyy'));
   insert into purchase (PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE)
values (863, to_date('24-07-2025', 'dd-mm-yyyy'), to_date('14-03-2026', 'dd-mm-yyyy'));
   insert into purchase (PURCHASE_ID, PURCHASE_DATE, DELLIVERY_DATE)
    values (116, to_date('21-05-2029', 'dd-mm-yyyy'), to_date('23-12-2025', 'dd-mm-yyyy'));
 SQL Output Statistics
 select * from purchase
  PURCHASE_ID __ PURCHASE_DATE __ DELLIVERY_DATE __
                                  604 27/03/2025
                                                                         16/10/2027
                                                            • 16/10/2027
• 02/05/2030
                                  319 08/02/2025
```

348 28/03/2025

388 23/12/2026

116 21/05/2029

474 04/01/2024

676 29/05/2025

814 22/07/2029

8

10 11

179 15/08/2025 • 14/08/2027

863 24/07/2025 * 14/03/2026

474 04/01/2024 01/00/2024 436 02/08/2028 21/10/2024 220 11/09/2025 17/01/2030

464 19/11/2028 **•** 06/02/2025

▼ 27/01/2025

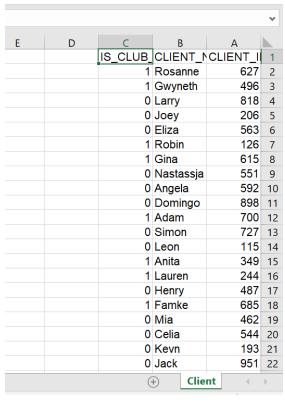
· 07/05/2029

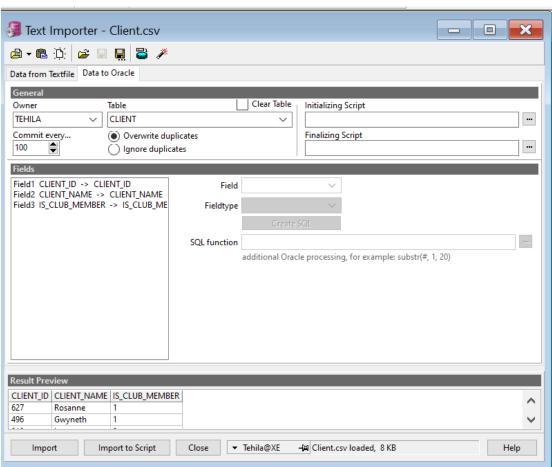
▼ 23/12/2025 ▼ 05/08/2026

▼ 01/06/2024

20/01/2030

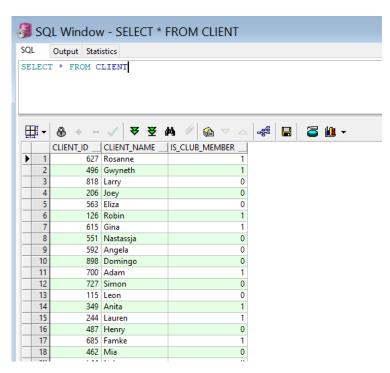
.3 מקובץ:







```
Output Statistics
insert into tehila.client (client_id, client_name, is_club_member)
values (627, 'Rosanne', 1);
insert into tehila.client (client_id, client_name, is_club_member)
values (496, 'Gwyneth', 1);
insert into tehila.client (client_id, client_name, is_club_member)
values (818, 'Larry', 0);
insert into tehila.client (client_id, client_name, is_club_member)
values (206, 'Joey', 0);
insert into tehila.client (client_id, client_name, is_club_member)
values (563, 'Eliza', 0);
insert into tehila.client (client_id, client_name, is_club_member)
values (126, 'Robin', 1);
insert into tehila.client (client_id, client_name, is_club_member)
values (615, 'Gina', 1);
insert into tehila.client (client_id, client_name, is_club_member)
values (551, 'Nastassja', 0);
insert into tehila.client (client_id, client_name, is_club_member)
values (592, 'Angela', 0);
```

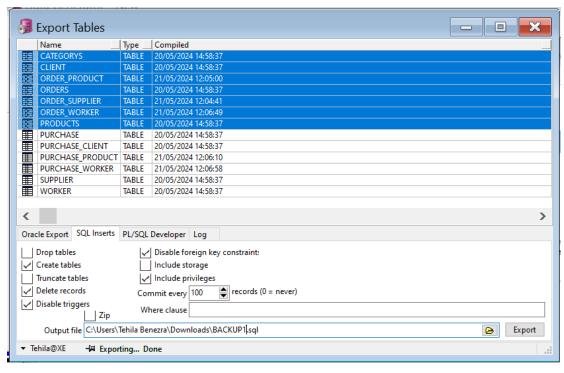


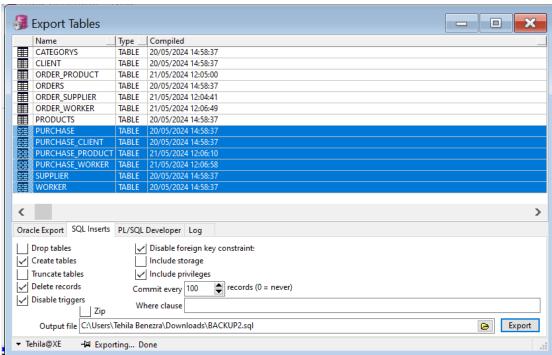
יצירת קובץ INSERT שכולל כ- 10 שורות לכל אחת מהטבלאות כנדרש

```
insert into client (CLIENT_ID, CLIENT_NAME, IS_CLUB_MEMBER)
values (727, 'Simon', 0);
insert into client (CLIENT_ID, CLIENT_NAME, IS_CLUB_MEMBER)
values (115, 'Leon', 0);
insert into client (CLIENT_ID, CLIENT_NAME, IS_CLUB_MEMBER)
values (349, 'Anita', 1);
insert into client (CLIENT_ID, CLIENT_NAME, IS_CLUB_MEMBER)
values (244, 'Lauren', 1);
insert into CATEGORYS (CATEGORY_ID, CATEGORY_NAME)
values (100, 'irure ipsum do.');
insert into CATEGORYS (CATEGORY_ID, CATEGORY_NAME)
values (101, 'rerum sit. ');
insert into CATEGORYS (CATEGORY_ID, CATEGORY_NAME)
values (102, 'officiis. ');
```

```
SQL Output Statistics
insert into ORDER_PRODUCT (PRODUCT_ID, ORDER_ID)
values (111, 611);
insert into ORDER_PRODUCT (PRODUCT_ID, ORDER_ID)
values (117, 617);
insert into ORDER_PRODUCT (PRODUCT_ID, ORDER_ID)
values (120, 120);
insert into ORDER PRODUCT (PRODUCT ID, ORDER ID)
values (124, 124);
insert into ORDER PRODUCT (PRODUCT ID, ORDER ID)
values (126, 626);
insert into ORDERS (ORDER_ID, ORDER_DATE, DELLIVERY_DATE)
 values (493, to_date('25-03-2025', 'dd-mm-yyyy'), to_date('03-06-2024', 'dd-mm-yyyy'));
insert into ORDERS (ORDER_ID, ORDER_DATE, DELLIVERY_DATE)
 values (377, to_date('04-02-2026', 'dd-mm-yyyy'), to_date('23-05-2025', 'dd-mm-yyyy'));
insert into ORDERS (ORDER_ID, ORDER_DATE, DELLIVERY_DATE)
 values (323, to_date('12-06-2026', 'dd-mm-yyyy'), to_date('10-04-2029', 'dd-mm-yyyy'));
insert into ORDERS (ORDER_ID, ORDER_DATE, DELLIVERY_DATE)
values (703, to_date('12-08-2025', 'dd-mm-yyyy'), to_date('24-12-2025', 'dd-mm-yyyy'));
■ 8 501:53 ▼ Tehila@XE → SQL script saved successfully
```

גיבוי (הגיבוי בוצע ב2 חלקים כיוון שלא היה מקום)



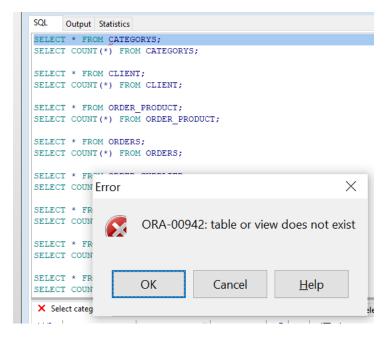


```
■ BACKUP1.sql ×
C: > Users > Tehila Benezra > Downloads > = BACKUP1.sql
   prompt PL/SQL Developer import file
       יום παישי 20 מאי 23 יום 2024 by Tehila Benezra
      set feedback off
       set define off
   5 prompt Creating CATEGORYS...
       create table CATEGORYS
       category_id NUMBER(3) not null, category_name VARCHAR2(15) not null
  12 alter table CATEGORYS
        add primary key (CATEGORY_ID);
  15 prompt Creating CLIENT...
       create table CLIENT
        client_id NUMBER(3) not null,
client_name VARCHAR2(15) not null,
        is_club_member NUMBER(1) not null
       alter table CLIENT
       add primary key (CLIENT_ID);
       prompt Creating ORDERS...
       create table ORDERS
         order_id
       order date DATE not null,
```

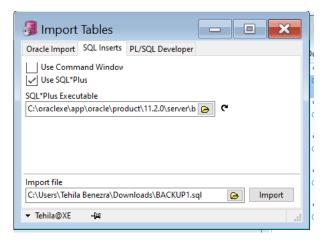
```
C: > Users > Tehila Benezra > Downloads > ≡ BACKUP2.sql
   prompt PL/SQL Developer import file
   2 prompt Created on מאי 23 יום 2024 by Tehila Benezra
   3 set feedback off
       set define off
       prompt Creating PURCHASE...
       create table PURCHASE
       purchase_id NUMBER(3) not null,
purchase_date DATE not null,
         dellivery_date DATE not null
      alter table PURCHASE
       add primary key (PURCHASE_ID);
       prompt Creating PURCHASE_CLIENT...
       create table PURCHASE_CLIENT
        client_id NUMBER(3) not null,
         purchase_id NUMBER(3) not null
       alter table PURCHASE_CLIENT
        add primary key (CLIENT_ID, PURCHASE_ID);
        alter table PURCHASE_CLIENT
        add foreign key (CLIENT_ID)
        references CLIENT (CLIENT_ID);
  28 alter table PURCHASE_CLIENT
  29 add foreign key (PURCHASE_ID)
30 references PURCHASE (PURCHASE ID);
```

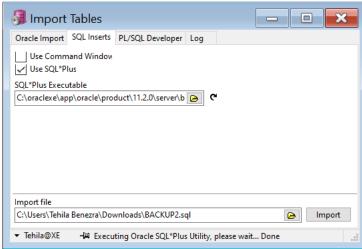
מחיקת הפרויקט

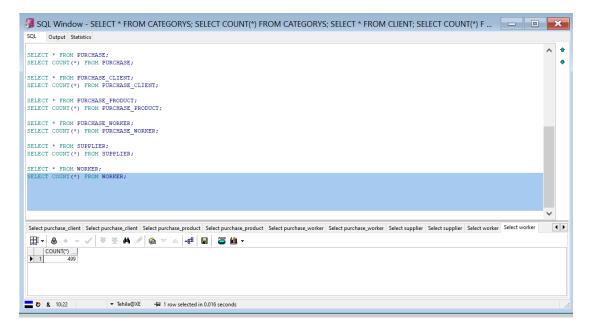
```
drop table Order_Product;
drop table Purchase_Product;
drop table Purchase_Client;
drop table Order_Supplier;
drop table Order_Supplier;
drop table Order_Worker;
drop table Purchase_Worker;
drop table Elient;
drop table Supplier;
drop table Supplier;
drop table Orders;
drop table Purchase;
drop table Purchase;
drop table Purchase;
drop table Products;
drop table Categorys;
```



שחזור הפרויקט (כמובן עלינו לייבא את שני קבצי הגיבוי)







הפרויקט שוחזר בהצלחה.