PROIECT BAZE DE DATE

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A diagram of a product

Description automatically generated

**Tabela ProduseNet:**

CREATE TABLE ProduseNet (

id\_produs NUMBER(10) PRIMARY KEY,

denumire\_produs VARCHAR2(50),

descriere VARCHAR2(1000),

pret\_unitar NUMBER(20),

categorie VARCHAR2(30)

);

**Tabela ClientiNet:**

CREATE TABLE ClientiNet (

id\_client NUMBER(10) PRIMARY KEY,

prenume VARCHAR2(50),

nume VARCHAR2(50),

telefon VARCHAR2(20),

adresa VARCHAR2(255)

);

**Tabela StocNet:**

CREATE TABLE StocNet (

id\_stoc NUMBER(10) PRIMARY KEY,

cantitate\_stoc NUMBER(10),

id\_produs NUMBER(10),

FOREIGN KEY (id\_produs) REFERENCES ProduseNet(id\_produs)

);

**Tabela ComenziNet:**

CREATE TABLE ComenziNet (

id\_comanda NUMBER(10) PRIMARY KEY,

data\_comanda DATE,

modalitate VARCHAR2(50),

id\_client NUMBER(10),

FOREIGN KEY (id\_client) REFERENCES ClientiNet(id\_client)

);

**Tabela Produse\_Comenzi:**

CREATE TABLE Produse\_Comenzi (

id\_comanda NUMBER(10),

id\_produs NUMBER(10),

cantitate NUMBER(10),

pret NUMBER(10),

FOREIGN KEY (id\_comanda) REFERENCES ComenziNet(id\_comanda),

FOREIGN KEY (id\_produs) REFERENCES ProduseNet(id\_produs)

);

Adaugarea de inregistrari in fiecare tabela

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (1, 'Laptop', 'Laptop performant', 1500, 'Electronice');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (2, 'Smartphone', 'Telefon inteligent', 800, 'Electronice');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (3, 'Mouse', 'Mouse gaming', 20, 'Accesorii');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (4, 'Tastatura', 'Tastatura mecanica', 100, 'Accesorii');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (5, 'Caiet', 'Caiet de notite', 5, 'Birotica');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (6, 'Pix', 'Pix cu mina', 2, 'Birotica');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (7, 'Cana', 'Cana colorata', 15, 'Diverse');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (8, 'Ceas', 'Ceas decorativ', 50, 'Diverse');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (9, 'Carti', 'Carti de fictiune', 30, 'Carti');

INSERT INTO ProduseNet (id\_produs, denumire\_produs, descriere, pret\_unitar, categorie) VALUES (10, 'Hartie A4', 'Hartie pentru imprimanta', 12, 'Birotica');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (25, 'Ion', 'Rozalescu', '123456789', 'Strada Exemplu, Nr. 123');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (1, 'John', 'Doe', '123456789', 'Strada Exemplu, Nr. 123');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (2, 'Jane', 'Smith', '987654321', 'Bulevardul Principal, Nr. 456');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (3, 'Alex', 'Johnson', '555112233', 'Aleea Linistita, Nr. 789');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (4, 'Maria', 'Popescu', '777888999', 'Calea Victoriei, Nr. 101');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (5, 'Robert', 'Ionescu', '111223344', 'Bd. Unirii, Nr. 202');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (6, 'Elena', 'Dragomir', '333444555', 'Str. Dorobantilor, Nr. 303');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (7, 'Andrei', 'Mihai', '666777888', 'Aleea Florilor, Nr. 404');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (8, 'Ana', 'Stan', '999000111', 'Bulevardul Independentei, Nr. 505');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (9, 'George', 'Radu', '222333444', 'Aleea Soarelui, Nr. 606');

INSERT INTO ClientiNet (id\_client, prenume, nume, telefon, adresa) VALUES (10, 'Adina', 'Munteanu', '444555666', 'Str. Plopilor, Nr. 707');

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (1, 50, 1);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (2, 100, 2);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (3, 200, 3);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (4, 30, 4);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (5, 500, 5);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (6, 150, 6);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (7, 80, 7);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (8, 10, 8);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (9, 40, 9);

INSERT INTO StocNet (id\_stoc, cantitate\_stoc, id\_produs) VALUES (10, 300, 10);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (1, TO\_DATE('01-01-2024', 'DD-MM-YYYY'), 'card', 2, 1);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (2, TO\_DATE('02-01-2024', 'DD-MM-YYYY'), 'card', 4, 2);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (3, TO\_DATE('03-01-2024', 'DD-MM-YYYY'), 'cash', 6, 7, 3);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (4, TO\_DATE('04-01-2024', 'DD-MM-YYYY'), 'card', 8, 1);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (5, TO\_DATE('05-01-2024', 'DD-MM-YYYY'), 'cash', 10, 2);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (6, TO\_DATE('06-01-2024', 'DD-MM-YYYY'), 'card', 2, 3);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (7, TO\_DATE('07-01-2024', 'DD-MM-YYYY'), 'cash', 4, 1);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (8, TO\_DATE('08-01-2024', 'DD-MM-YYYY'), 'card', 6, 2);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (9, TO\_DATE('09-01-2024', 'DD-MM-YYYY'), 'cash', 8, 3);

INSERT INTO ComenziNet (id\_comanda, data\_comanda, modalitate, id\_client, cantitate\_produse) VALUES (10, TO\_DATE('10-01-2024', 'DD-MM-YYYY'), 'card', 10, 1);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (1, 1, 5, 20);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (2, 3, 10, 15);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (3, 5, 3, 25);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (4, 2, 8, 18);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (5, 7, 12, 30);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (6, 4, 6, 22);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (7, 10, 4, 12);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (8, 8, 7, 28);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (9, 6, 9, 16);

INSERT INTO Produse\_Comenzi (id\_comanda, id\_produs, cantitate, pret) VALUES (10, 9, 2, 35);

Exemple de interogari variate

•>=

SELECT denumire\_produs, pret\_unitar

FROM ProduseNet

WHERE pret\_unitar >= 100;

•LIKE

SELECT id\_client, prenume, nume

FROM ClientiNet

WHERE prenume LIKE 'A%';

•BETWEEN

SELECT id\_produs, cantitate\_stoc

FROM StocNet

WHERE id\_produs BETWEEN 3 AND 7;

•TO\_DATE

SELECT id\_comanda, data\_comanda

FROM ComenziNet

WHERE data\_comanda > TO\_DATE('05-01-2024', 'dd-mm-yyyy');

•MIN

SELECT MIN(cantitate\_stoc) AS cantitate\_minima

FROM StocNet;

•JOINCTIUNI

SELECT p.denumire\_produs, pc.cantitate, pc.pret, pc.cantitate \* pc.pret AS valoare

FROM produsenet p, produse\_comenzi pc

WHERE p.id\_produs = pc.id\_produs;

SELECT p.id\_produs, p.denumire\_produs, pc.cantitate, pc.pret

FROM produsenet p, produse\_comenzi pc

WHERE p.id\_produs = pc.id\_produs(+);

SELECT p.denumire\_produs, pc.pret

FROM produsenet p, produse\_comenzi pc

WHERE p.id\_produs = pc.id\_produs

AND pc.pret = (SELECT MAX(pc.pret) FROM produse\_comenzi pc);

•TO\_CHAR

SELECT id\_comanda,

TO\_CHAR(data\_comanda, 'YYYY-MM-DD')

FROM ComenziNet;

•SUBSTR

SELECT denumire\_produs,

SUBSTR(denumire\_produs, 1, 3) AS extragere

FROM ProduseNet

ORDER BY extragere DESC;

•UNION

SELECT id\_produs, denumire\_produs FROM ProduseNet

UNION

SELECT id\_client, prenume || ' ' || nume FROM ClientiNet;

•MINUS

SELECT id\_produs, denumire\_produs FROM ProduseNet

MINUS

SELECT id\_produs, 'Produs indisponibil' FROM StocNet;

•SUBCERERE SIMPLA

SELECT nume, prenume, telefon

FROM ClientiNet

WHERE id\_client IN (SELECT id\_client FROM ComenziNet WHERE modalitate = 'card');

•SUBCERERE CORELATA

SELECT nume, (SELECT COUNT(\*)

FROM ComenziNet

WHERE id\_client = c.id\_client) AS total\_comenzi

FROM ClientiNet c;

•LEFT JOIN

select c.id\_comanda, c.data\_comanda, c.modalitate, cl.nume

from comenziNet c, clientiNet cl

where c.id\_client = cl.id\_client(+)

and modalitate = 'cash';

•IS NOT NULL

SELECT p.id\_produs, p.denumire\_produs, p.descriere

FROM ProduseNet p, stocNet s

where p.id\_produs = s.id\_produs

and s.cantitate\_stoc IS NOT NULL;

•INDEX

SELECT \*

FROM ProduseNet

WHERE pret\_unitar BETWEEN 20 AND 60;

CREATE INDEX idx\_pret\_unitar ON ProduseNet(pret\_unitar);

•SYNONYM

create synonym cl for clientinet;

create synonym p for produsenet;

create synonym s for stocnet;

select \* from user\_synonyms;

•HAVING

SELECT c.id\_comanda, c.data\_comanda, SUM(pc.pret \* pc.cantitate) AS valoare\_comanda

FROM comenzinet c

JOIN produse\_comenzi pc ON c.id\_comanda = pc.id\_comanda

WHERE EXTRACT(DAY FROM c.data\_comanda) < 7

GROUP BY c.id\_comanda, c.data\_comanda

HAVING SUM(pc.pret \* pc.cantitate) > 50

ORDER BY c.data\_comanda;

•CASE

SELECT c.id\_comanda,

c.data\_comanda,

SUM(pc.pret \* pc.cantitate) AS valoare\_totala,

CASE

WHEN SUM(pc.pret \* pc.cantitate) < 50 THEN 15

WHEN SUM(pc.pret \* pc.cantitate) BETWEEN 50 AND 100 THEN 20

WHEN SUM(pc.pret \* pc.cantitate) > 100 THEN 30

ELSE 0

END AS cheltuieli\_transport

FROM comenzinet c

JOIN produse\_comenzi pc ON c.id\_comanda = pc.id\_comanda

GROUP BY c.id\_comanda, c.data\_comanda;

•GROUP BY

SELECT c.id\_client,

pc.id\_produs,

SUM(pc.cantitate) AS cantitate\_totala

FROM comenzinet c

JOIN produse\_comenzi pc ON c.id\_comanda = pc.id\_comanda

GROUP BY c.id\_client, pc.id\_produs;

•SYSDATE

SELECT id\_comanda, data\_comanda,

CASE WHEN data\_comanda > SYSDATE THEN 'Comanda curenta' ELSE 'Comanda trecuta'

END AS status\_comanda

FROM ComenziNet;

•DECODE

SELECT id\_produs, pret\_unitar, pret\_unitar \* DECODE(id\_produs, 1, 1.1, 2, 1.2) AS pret\_majorat

FROM ProduseNet;

•UPDATE

UPDATE ProduseNet

SET pret\_unitar = pret\_unitar \* 1.15

WHERE categorie = 'Diverse';

ROLLBACK; --pt a anula marirea

•CERERI IERARHICE

SELECT

LEVEL AS nivel, c.id\_comanda, c.data\_comanda, cl.nume, cl.prenume, cl.telefon, cl.adresa, pc.cantitate, pc.pret

FROM ComenziNet c, ClientiNet cl, Produse\_Comenzi pc, ProduseNet p

WHERE c.id\_client = cl.id\_client

AND c.id\_comanda = pc.id\_comanda

AND pc.id\_produs = p.id\_produs

AND c.id\_comanda = 1

CONNECT BY PRIOR c.id\_comanda = pc.id\_comanda

AND LEVEL <= 10 -- limitare la 10 nivele

AND PRIOR dbms\_random.value IS NOT NULL -- pt a nu mai da eroare loop

START WITH c.id\_comanda = 1;