Inventory Management

System

SQL scripting

Dbms.mini.project

# CREATE TABLE QUERY:

## EMPLOYEE TABLE:

CREATE TABLE employee (

eid CHAR(5) PRIMARY KEY, ename CHAR(30) NOT NULL, dob DATE NOT NULL,

designation CHAR(20) NOT NULL, home\_no CHAR(5),

locality CHAR(25), city CHAR(20),

pincode INT CHECK (LENGTH(pincode) = 6),

phone\_no CHAR(10) CHECK (LENGTH(phone\_no) = 10) NOT NULL, doj DATE NOT NULL,

dol DATE DEFAULT NULL,

age INT,

salary numeric(7,0) not null

);

## SUPLLIER TABLE:

create table supplier( sid char(5) primary key,

sname char(30) NOT NULL, home\_no CHAR(5),

locality CHAR(25), city CHAR(20),

pincode INT CHECK (LENGTH(pincode) = 6) NOT NULL,

phone\_no CHAR(10) CHECK (LENGTH(phone\_no) = 10) NOT NULL

);

## CUSTOMER TABLE :

create table customer( cid char(5) primary key, cname char(30) not null,

email\_id char(100) check(email\_id like'%\_@ %. %'),

phone\_no CHAR(10) CHECK (LENGTH(phone\_no) = 10) not null

);

## STOCK TABLE:

create table stock(

pid char(6) primary key, pname char(30) not null, supplier\_cost int not null, selling\_cost int not null, quantity\_on\_hand int, min\_quantity int,

reorder int DEFAULT 0 CHECK (reorder >= 0 AND reorder <= 1)

);

## BILL\_ITEMS TABLE :

CREATE TABLE Bill\_Items ( bid CHAR(10) ,

pid CHAR(6) ,

pname CHAR(30) NOT NULL,

pcost INT NOT NULL, quantity INT DEFAULT 1,

FOREIGN KEY (pid) REFERENCES stock (pid), PRIMARY KEY (bid,pid))

);

## BILL TABLE:

create table bill(

bid char(10) primary key, cid char(5),

billing\_date date not NULL, total\_amount int NOT NULL,

FOREIGN KEY (cid) REFERENCES customer(cid)

);

## SUPPLIED TABLE:

create table supplied ( supplier\_id char(5), pid char(6), order\_date date,

receiving\_date date default NULL, squantity int default 1,

samount NUMBER(7,0) NOT NULL,

FOREIGN KEY (supplier\_id) REFERENCES supplier(sid), FOREIGN KEY (pid) REFERENCES stock(pid), PRIMARY KEY (supplier\_id, pid, order\_date)

);

## EMP\_SALARY TABLE:

create table emp\_salary( eid char(5),

salary\_date date, salary numeric(7,0),

FOREIGN KEY (eid) REFERENCES employee(eid), PRIMARY KEY (eid, salary\_date)

);

# TRIGGERS:

## CALCULATE AGE OF EMPLOYEE FROM DATE OF BIRTH

CREATE OR REPLACE TRIGGER employee\_age\_trigger BEFORE INSERT ON employee

FOR EACH ROW BEGIN

:NEW.age := EXTRACT(YEAR FROM SYSDATE) - EXTRACT(YEAR FROM :NEW.dob); END;

/

## GENERATE COST AND NAME OF THE PRODUCT AUTOMATICALLY IN BILL FROM STOCK

CREATE OR REPLACE TRIGGER populate\_Bill\_items before INSERT ON Bill\_Items

FOR EACH ROW BEGIN

SELECT pname, selling\_cost INTO :NEW.pname, :NEW.pcost FROM stock WHERE pid =

:NEW.pid; END;

/

## ADD BILL DATE AS CURRENT DATE IN BILL

CREATE OR REPLACE TRIGGER add\_bill\_date BEFORE INSERT ON bill

FOR EACH ROW BEGIN

:NEW.billing\_date := SYSDATE; END;

/

## CALCULATE TOTAL AMOUNT OF ALL THE PRODUCTS OF BILL ITEMS

CREATE OR REPLACE TRIGGER calculate\_total\_amount BEFORE INSERT ON bill

FOR EACH ROW BEGIN

SELECT SUM(Bill\_Items.pcost \* Bill\_Items.quantity) INTO :NEW.total\_amount FROM Bill\_Items

WHERE Bill\_Items.bid = :NEW.bid; END;

/

## FILL SALARY AUTOMATECALLY ON INSERTION OF EID IN EMP SALARY TABLE

CREATE OR REPLACE TRIGGER FillSalary

BEFORE INSERT ON emp\_salary FOR EACH ROW

BEGIN

SELECT salary INTO :NEW.salary FROM employee

WHERE eid = :NEW.eid; END FillSalary;

/

## REDUCE QUANTITY OF PRODUCT IN STOCK WHEN PRODUCT IS PURCHASED AND IF QUANTITY ON HAND IS MIN THAN REQUIRED MIN QUANTITY THAN REORDER WILL BE 1 FROM 0

CREATE OR REPLACE TRIGGER reduce\_quantity\_on\_bill\_items AFTER INSERT ON Bill\_Items

FOR EACH ROW DECLARE

v\_quantity\_on\_hand stock.quantity\_on\_hand%TYPE; v\_min\_quantity stock.min\_quantity%TYPE;

BEGIN

SELECT quantity\_on\_hand, min\_quantity INTO v\_quantity\_on\_hand, v\_min\_quantity FROM stock

WHERE pid = :NEW.pid;

UPDATE stock

SET quantity\_on\_hand = v\_quantity\_on\_hand - :NEW.quantity WHERE pid = :NEW.pid;

IF (v\_quantity\_on\_hand - :NEW.quantity) < v\_min\_quantity THEN UPDATE stock

SET reorder = 1 WHERE pid = :NEW.pid;

END IF; END;

/

## INCREASE QUANTITY OF PRODUCT IN STOCK WHEN PRODUCT IS SUPPLIED AND IF QUANTITY ON HAND IS MAX THAN REQUIRED MIN QUANTITY THAN REORDER WILL BE 0 FROM 1

create or replace TRIGGER increase\_quantity\_on\_supplied BEFORE INSERT OR UPDATE OF receiving\_date ON supplied FOR EACH ROW

DECLARE

v\_quantity\_on\_hand stock.quantity\_on\_hand%TYPE; v\_min\_quantity stock.min\_quantity%TYPE;

BEGIN

IF :OLD.receiving\_date IS NULL AND :NEW.receiving\_date IS NOT NULL THEN SELECT quantity\_on\_hand, min\_quantity

INTO v\_quantity\_on\_hand, v\_min\_quantity FROM stock

WHERE pid = :NEW.pid;

UPDATE stock

SET quantity\_on\_hand = v\_quantity\_on\_hand + :NEW.squantity WHERE pid = :NEW.pid;

IF (v\_quantity\_on\_hand + :NEW.squantity) >= v\_min\_quantity THEN UPDATE stock

SET reorder = 0 WHERE pid = :NEW.pid;

END IF; END IF;

END;

## FILL AMOUNT THAT IS GIVEN TO SUPPLIER BASED ON

**PRODUCT’S QUNATITY AND BUYING COST FROM SUPPLIER**

CREATE OR REPLACE TRIGGER fill\_samount\_trigger BEFORE INSERT ON supplied

FOR EACH ROW BEGIN

SELECT stock.supplier\_cost \* :NEW.squantity INTO :NEW.samount

FROM stock

WHERE stock.pid = :NEW.pid; END;

/

# Procedure

## UPDATE EMPLOYEES’S AGE BASED ON THE CURRENT DATE AND THEIR DATE OF BIRTH

CREATE OR REPLACE PROCEDURE update\_employee\_ages AS BEGIN

UPDATE employee

SET age = EXTRACT(YEAR FROM CURRENT\_DATE) - EXTRACT(YEAR FROM dob); END;

/

## CALCULATE TOTAL PROFIT IN PARTICULAR MONTH AND YEAR BASED ON TOTAL SELL AND TOTAL ORDERD COST FROM SUPPLIER

CREATE OR REPLACE PROCEDURE CalculateTotalProfit( p\_month INT,

p\_year INT,

p\_result OUT NUMBER

) AS BEGIN

DECLARE

total\_total\_amount NUMBER := 0; total\_samount NUMBER := 0;

BEGIN

FOR bill\_rec IN (SELECT total\_amount FROM bill WHERE EXTRACT(MONTH FROM billing\_date) = p\_month AND EXTRACT(YEAR FROM billing\_date) = p\_year) LOOP

total\_total\_amount := total\_total\_amount + bill\_rec.total\_amount; END LOOP;

FOR supplied\_rec IN (SELECT samount FROM supplied WHERE EXTRACT(MONTH FROM receiving\_date) = p\_month AND EXTRACT(YEAR FROM receiving\_date) = p\_year) LOOP

total\_samount := total\_samount + supplied\_rec.samount; END LOOP;

p\_result := total\_total\_amount - total\_samount; END;

END CalculateTotalProfit;

# INSERTION QUERY

## EMPLOYEE TABLE

INSERT INTO employee (eid, ename, dob, designation, home\_no, locality, city, pincode, phone\_no, doj, dol, salary)

VALUES ('E1001', 'Rajesh Sharma', TO\_DATE('1985-03-15', 'YYYY-MM-DD'), 'Manager', 'H101', 'Sector 22', 'Delhi', 110022, '9876543210', TO\_DATE('2020-07-10', 'YYYY-MM-DD'), NULL, 50000);

INSERT INTO employee (eid, ename, dob, designation, home\_no, locality, city, pincode, phone\_no, doj, dol, salary)

VALUES ('E1002', 'Pooja Verma', TO\_DATE('1990-06-25', 'YYYY-MM-DD'), 'Software Engineer', 'A205', 'Baner', 'Pune', 411045, '8765432109', TO\_DATE('2021-04-20', 'YYYY-MM-DD'), NULL, 60000);

INSERT INTO employee (eid, ename, dob, designation, home\_no, locality, city, pincode, phone\_no, doj, dol, salary)

VALUES ('E1003', 'Sandeep Singh', TO\_DATE('1988-12-10', 'YYYY-MM-DD'), 'Sales Executive', 'B304', 'MG Road', 'Mumbai', 400023, '7654321098', TO\_DATE('2019-09-15', 'YYYY-MM-DD'), NULL, 45000);

INSERT INTO employee (eid, ename, dob, designation, home\_no, locality, city, pincode, phone\_no, doj, dol, salary)

VALUES ('E1004', 'Anita Das', TO\_DATE('1995-05-05', 'YYYY-MM-DD'), 'HR Manager', 'C202', 'Rajajinagar', 'Bangalore', 560010, '6543210987', TO\_DATE('2020-02-01', 'YYYY-MM-DD'), NULL, 55000);

INSERT INTO employee (eid, ename, dob, designation, home\_no, locality, city, pincode, phone\_no, doj, dol, salary)

VALUES ('E1005', 'Rajeev Khanna', TO\_DATE('1980-09-30', 'YYYY-MM-DD'), 'Project Manager', 'D101', 'Salt Lake', 'Kolkata', 700064, '5432109876', TO\_DATE('2018-06-12', 'YYYY-MM-DD'), NULL, 75000);

## SUPPLIER TABLE

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no) VALUES ('S1001', 'Ramesh Traders', 'H101', 'Sector 22', 'Delhi', 110022, '9876543210');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no) VALUES ('S1002', 'Mohan Enterprises', 'A205', 'Baner', 'Pune', 411045, '8765432109');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no)

VALUES ('S1003', 'Sarita Distributors', 'B304', 'MG Road', 'Mumbai', 400023, '7654321098');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no)

VALUES ('S1004', 'Anand Traders', 'C202', 'Rajajinagar', 'Bangalore', 560010, '6543210987');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no)

VALUES ('S1005', 'Rajeev Enterprises', 'D101', 'Salt Lake', 'Kolkata', 700064, '5432109876');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no)

VALUES ('S1006', 'Neha Traders', 'E501', 'Indiranagar', 'Bangalore', 560038, '4321098765');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no)

VALUES ('S1007', 'Vijay Distributors', 'F202', 'Tilak Nagar', 'Delhi', 110018, '3210987654');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no) VALUES ('S1008', 'Suman Enterprises', 'G301', 'Adyar', 'Chennai', 600020, '2109876543');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no) VALUES ('S1009', 'Manoj Traders', 'H101', 'Sector 22', 'Delhi', 110022, '1098765432');

INSERT INTO supplier (sid, sname, home\_no, locality, city, pincode, phone\_no) VALUES ('S1010', 'Preeti Distributors', 'I201', 'Andheri', 'Mumbai', 400058, '0987654321');

## CUSTOMER TABLE

INSERT INTO customer (cid, cname, email\_id, phone\_no)

VALUES ('C1001', 'Rajesh Kumar', 'rajesh@gmail.com', '9876543210');

INSERT INTO customer (cid, cname, email\_id, phone\_no)

VALUES ('C1002', 'Pooja Verma', 'pooja@gmail.com', '8765432109');

INSERT INTO customer (cid, cname, email\_id, phone\_no)

VALUES ('C1003', 'Sandeep Singh', 'sandeep@yahoo.com', '7654321098');

INSERT INTO customer (cid, cname, email\_id, phone\_no) VALUES ('C1004', 'Anita Das', 'anita@gmail.com', '6543210987');

INSERT INTO customer (cid, cname, email\_id, phone\_no)

VALUES ('C1005', 'Rajeev Khanna', 'rajeev@yahoo.com', '5432109876');

## STOCK TABLE

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1001', 'Maggi Noodles', 10, 15, 100, 20);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1002', 'Dove Soap', 20, 25, 200, 30);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1003', 'Colgate Toothpaste', 15, 20, 150, 25);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1004', 'Tata Tea', 30, 40, 250, 40);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1005', 'Rice', 25, 35, 300, 50);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1006', 'Tata Salt', 5, 10, 400, 30);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1007', 'Milk', 20, 25, 150, 25);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1008', 'Sunflower Oil', 50, 60, 100, 15);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1009', 'Wheat Flour', 40, 50, 200, 30);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1010', 'Dettol Handwash', 25, 30, 120, 20);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1011', 'Lays Chips', 10, 15, 180, 25);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1012', 'Tata Docomo SIM', 5, 10, 50, 10);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1013', 'Pencil', 2, 5, 300, 50);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1014', 'Sharpener', 1, 3, 400, 60);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1015', 'Eraser', 1, 3, 350, 55);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1016', 'Ballpoint Pen', 5, 10, 200, 30);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1017', 'Notebook', 20, 30, 150, 25);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1018', 'Scissors', 10, 15, 100, 20);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1019', 'Water Bottle', 15, 20, 50, 10);

INSERT INTO stock (pid, pname, supplier\_cost, selling\_cost, quantity\_on\_hand, min\_quantity) VALUES ('P1020', 'Crayons', 8, 12, 250, 40);

## BILL\_ITEMS TABLE

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000001', 'P1001', 2);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000001', 'P1005', 3);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000001', 'P1009', 1);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000001', 'P1012', 5);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000001', 'P1016', 10);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000001', 'P1019', 2);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000002', 'P1002', 2);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000002', 'P1006', 1);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000002', 'P1013', 4);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000002', 'P1018', 3);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000003', 'P1003', 3);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000003', 'P1004', 2);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000005', 'P1007', 5);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000003', 'P1008', 1);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000004', 'P1010', 2);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000005', 'P1011', 4);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000005', 'P1014', 2);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000005', 'P1015', 3);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000005', 'P1020', 2);

INSERT INTO Bill\_Items (bid, pid, quantity) VALUES ('B00000005', 'P1002', 5);

## BILL TABLE

INSERT INTO bill (bid, cid) VALUES ('B00000001', 'C1001');

INSERT INTO bill (bid, cid) VALUES ('B00000002', 'C1002');

INSERT INTO bill (bid, cid) VALUES ('B00000003', 'C1003');

INSERT INTO bill (bid, cid) VALUES ('B00000004', 'C1004');

INSERT INTO bill (bid, cid) VALUES ('B00000005', 'C1005');

## SUPPLIED TABLE

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1001', 'P1001', TO\_DATE('2023-10-01', 'YYYY-MM-DD'), TO\_DATE('2023-10-05', 'YYYY-MM-DD'), 50, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1002', 'P1002', TO\_DATE('2023-10-02', 'YYYY-MM-DD'), TO\_DATE('2023-10-06', 'YYYY-MM-DD'), 30, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1003', 'P1003', TO\_DATE('2023-10-03', 'YYYY-MM-DD'), TO\_DATE('2023-10-07', 'YYYY-MM-DD'), 40, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1001', 'P1004', TO\_DATE('2023-10-04', 'YYYY-MM-DD'), TO\_DATE('2023-10-08', 'YYYY-MM-DD'), 60, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1002', 'P1005', TO\_DATE('2023-10-05', 'YYYY-MM-DD'), TO\_DATE('2023-10-09', 'YYYY-MM-DD'), 70, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1003', 'P1006', TO\_DATE('2023-10-06', 'YYYY-MM-DD'), TO\_DATE('2023-10-10', 'YYYY-MM-DD'), 80, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1001', 'P1007', TO\_DATE('2023-10-07', 'YYYY-MM-DD'), TO\_DATE('2023-10-11', 'YYYY-MM-DD'), 90, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1002', 'P1008', TO\_DATE('2023-10-08', 'YYYY-MM-DD'), TO\_DATE('2023-10-12', 'YYYY-MM-DD'), 100, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1003', 'P1009', TO\_DATE('2023-10-09', 'YYYY-MM-DD'), TO\_DATE('2023-10-13', 'YYYY-MM-DD'), 110, NULL);

INSERT INTO supplied (supplier\_id, pid, order\_date, receiving\_date, squantity, samount)

VALUES ('S1001', 'P1010', TO\_DATE('2023-10-10', 'YYYY-MM-DD'), TO\_DATE('2023-10-14', 'YYYY-MM-DD'), 120, NULL);

## EMPLOYEE SALARY TABLE

INSERT INTO emp\_salary (eid, salary\_date)

VALUES ('E1001', TO\_DATE('2023-11-01', 'YYYY-MM-DD'));

INSERT INTO emp\_salary (eid, salary\_date)

VALUES ('E1002', TO\_DATE('2023-11-01', 'YYYY-MM-DD'));

INSERT INTO emp\_salary (eid, salary\_date)

VALUES ('E1003', TO\_DATE('2023-11-01', 'YYYY-MM-DD'));

INSERT INTO emp\_salary (eid, salary\_date)

VALUES ('E1004', TO\_DATE('2023-11-01', 'YYYY-MM-DD'));

INSERT INTO emp\_salary (eid, salary\_date)

VALUES ('E1005', TO\_DATE('2023-11-01', 'YYYY-MM-DD'));