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CREATE TABLE departement (
depid int primary key,
depname varchar(30) not null
);

INSERT INTOdepartement values(1,'cashier');
INSERT INTO departement values(2,'management');
INSERT INTO departement values(3,'counter');
INSERT INTO departement values(4,'technician');

select *from departement

CREATE TABLE employee(
empid int primary key,
empname varchar(30) not null,
sallary decimal(10,2) not null,
gender    varchar(10) check(gender in('male','female')),
depid int not null,
email varchar(50) unique,
constraint fk_emp_dept foreign key(depid)references departement(depid));

INSERT INTO employee values(1,'sada',13300.00,'female',1,'sada@watercompany.com');
INSERT INTO employee values(2,'bezawit',14300.00,'female',2,'bez@watercompany.com');
INSERT INTO employee values(3,'kalkidan',15300.00,'female',3,'kal@watercompany.com');
INSERT INTO employee values(4,'bezawit',12300.00,'female',4,'beza@watercompany.com');
INSERT INTO employee values(5,'ermiyas',10300.00,'male',2,'ermi@watercompany.com');

select *from employee
select d.depname,count(empid)as staff_count,sum(e.sallary)as total_salary
from departement d join employee e on d.depid=e.depid group by d.depid,d.depname;
ALTER TABLE employee ADD date_of_birth DATE;

INSERT INTO employee (empid, empname, sallary, gender, depid, email, hire_date)
VALUES (6, 'Eden', 10360.00, 'female', 4, 'eden@watercompany.com', TO_DATE('2025-06-16',
'YYYY-MM-DD'));

UPDATE employee SET date_of_birth =TO_DATE('1997-11-17','YYYY-MM-DD')
WHERE empid=1;
UPDATE employee SET date_of_birth =TO_DATE('1996-11-18','YYYY-MM-DD')
WHERE empid=3;
ALTER TABLE employee DROP COLUMN date_of_birth;
SELECT SUM(sallary) AS total_sallary FROM employee;
CREATE OR REPLACE FUNCTION get_total_sallary RETURN NUMBER is total NUMBER;

BEGIN SELECT SUM(sallary)INTO total FROM employee;
RETURN total;
END;

SELECT COUNT(*)AS total_employees FROM employee;

CREATE TABLE customer (
      custid NUMBER PRIMARY KEY,
      custname VARCHAR2(30) NOT NULL,
      kebele NUMBER NOT NULL,
      phoneNo VARCHAR2(15) NOT NULL UNIQUE,
      address VARCHAR2(50),
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    registration_date DATE DEFAULT CURRENT_DATE,
    activity_status NUMBER(1) DEFAULT 1, -- Corrected from BOOLEAN
    CONSTRAINT chk_phone CHECK (LENGTH(phoneNo) >= 10)
);


INSERT INTO customer (custid,custname,kebele,phoneNo,address)
  values(1,'meron',2,'0938984567','gondar piasa');


INSERT INTO customer (custid,custname,kebele,phoneNo,address)
  values(2,'lidya',3,'0938474567','gondar piasa');


INSERT INTO customer (custid,custname,kebele,phoneNo,address)
  values(3,'alemu',2,'0989984567','gondar arada');

INSERT INTO customer (custid,custname,kebele,phoneNo,address)
  values(4,'anteneh',4,'0938584567','gondar maraki');

select *from customer

UPDATE customer SET phoneNo='0981726354'
WHERE custid=2;
//
UPDATE customer SET custname='Meron Kifle'
WHERE custid =1;

SELECT COUNT(*)AS total_customers FROM customer;


INSERT INTO customer (custid,custname,kebele,phoneNo,address)
  values(8,'Hermela',3,'0908474567','gondar maraki');

CREATE TABLE waterMeter(
    wamid INT PRIMARY KEY,
    wat_type VARCHAR(30) NOT NULL CHECK (wat_type IN ('residential', 'commercial',
'governmental', 'industrial')),
    serial_No VARCHAR(20) UNIQUE NOT NULL,
    custid INT NOT NULL,
    active CHAR(1) DEFAULT 'Y' CHECK (active IN ('Y','N')),
    meter_size VARCHAR(15) CHECK (meter_size IN ('small','medium','large')),
    CONSTRAINT fk_wmt_customer FOREIGN KEY(custid) REFERENCES customer(custid)
);

INSERT INTO waterMeter(wamid,wat_type,serial_No,custid,meter_size)
VALUES(1,'residential','WM-RES-1001',1,'small');


INSERT INTO waterMeter(wamid,wat_type,serial_No,custid,meter_size)
VALUES(2,'residential','WM-RES-1002',2,'small');


INSERT INTO waterMeter(wamid,wat_type,serial_No,custid,meter_size)
VALUES(3,'commercial','WM-COM-2001',3,'medium');
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INSERT INTO waterMeter(wamid,wat_type,serial_No,custid,meter_size)
VALUES(4,'industrial','WM-END-3001',4,'large');

INSERT INTO waterMeter(wamid,wat_type,serial_No,custid,meter_size)
VALUES(5,'industrial','WM-END-3002',2,'large');

select *from waterMeter


DELETE FROM waterMeter where wamid=5;

CREATE TABLE bill(
	billNo INT PRIMARY KEY,
	rate DECIMAL(10,2) NOT NULL CHECK (rate > 0),
	consumption DECIMAL(10,2) NOT NULL CHECK (consumption >= 0),
	amount DECIMAL(10,2) GENERATED ALWAYS AS (rate * consumption) VIRTUAL,
	billDate DATE DEFAULT CURRENT_DATE NOT NULL,
	due_date DATE DEFAULT (CURRENT_DATE + INTERVAL '30' DAY) NOT NULL,
	wamid INT NOT NULL,
	empid INT NOT NULL,
	status VARCHAR(15) DEFAULT 'unpaid' CHECK (status IN ('paid', 'unpaid', 'overdue')),
	CONSTRAINT fk_bill_wmeter FOREIGN KEY(wamid) REFERENCES waterMeter(wamid),
	CONSTRAINT fk_bill_employee FOREIGN KEY(empid) REFERENCES employee(empid),
	CONSTRAINT chk_due_date CHECK (due_date > billDate)
);


INSERT INTO bill(billNo,rate,consumption,wamid,empid,status)
VALUES(1,5.50,10.00,1,1,'unpaid');

INSERT INTO bill(billNo,rate,consumption,wamid,empid,status)
VALUES(2,5.50,14.00,1,1,'unpaid');

INSERT INTO bill(billNo,rate,consumption,wamid,empid,status)
VALUES(3,10.00,20.55,2,3,'paid');

INSERT INTO bill(billNo,rate,consumption,wamid,empid,status)
VALUES(4,9.50,10.90,3,4,'overdue');

select *from bill
select *from bill where status='unpaid';
select *from bill where status='overdue';

CREATE OR REPLACE FUNCTION get_total_bill(bill_id in INT )
RETURN NUMBER IS total NUMBER;
BEGIN SELECT amount +tax INTO total from bill WHERE billNo=bill_id;
RETURN total;
END;

SELECT get_total_bill (2) As total_amount FROM dual;


UPDATE bill SET status='paid'
WHERE billNo=4;
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SELECT d.depname,COUNT(e.empid) As total_employees
FROM    departement d JOIN employee e ON d.depid=e.depid
GROUP BY d.depname;


UPDATE bill SET consumption=15.00,rate=6.00
WHERE billNo=2;

ALTER TABLE bill ADD tax DECIMAL(10,2) DEFAULT 0.00;

UPDATE bill SET tax = 15.00 WHERE billNo = 2;

SELECT billNo,amount,tax,(amount + tax)AS total_amount FROM bill;
DELETE FROM bill WHERE billNo=1;

SELECT SUM(amount + tax) AS total_bill_amount FROM bill;

ALTER TABLE employee ADD hire_date DATE DEFAULT CURRENT_DATE;

SELECT *FROM employee
ALTER TABLE customer ADD DOB DATE;
UPDATE CUSTOMER
SET DOB = TO_DATE( '1995-03-14','YYYY-MM-DD')
WHERE CUSTID = 1;

UPDATE CUSTOMER
SET DOB = TO_DATE( '1996-03-17','YYYY-MM-DD')
WHERE CUSTID = 2;

UPDATE CUSTOMER
SET DOB = TO_DATE( '1988-02-14','YYYY-MM-DD')
WHERE CUSTID = 3;

UPDATE CUSTOMER
SET DOB = TO_DATE( '1985-03-14','YYYY-MM-DD')
WHERE CUSTID = 4;

SELECT custid,custname,DOB FROM customer;
SELECT *FROM customer;

ALTER TABLE customer DROP COLUMN DOB;
RENAME customer TO clients;
ALTER TABLE employee RENAME COLUMN sallary TO salary;
ALTER TABLE customer RENAME COLUMN DOB to date_of_birth;

RENAME clients TO customer;
UPDATE customer SET date_of_birth=TO_DATE('1996-7-23','YYYY-MM-DD')
WHERE custid=7;

insert into customer (custid,custname,kebele,phoneNo,address)
  values(5,'almaz',2,'0900984567','gondar maraki');
SELECT *FROM customer WHERE custid=5;

ALTER TABLE employee RENAME COLUMN salary TO sallary;
insert into customer (custid,custname,kebele,phoneNo,address)
  values(6,'almaz',2,'0900984560','gondar maraki');
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SELECT *FROM customer WHERE custid=6;
ROLLBACK;

insert into customer (custid,custname,kebele,phoneNo,address)
values(7,'Hawlet',3,'0900964567','gondar azezo');
SELECT *FROM customer WHERE custid=7;
COMMIT;
insert into departement values(5,'customer service ');
SELECT *FROM departement;
ROLLBACK;
COMMIT;

DROP TABLE employee;

TRUNCATE TABLE customer;
```