**SQL Cheat Sheet - Database Concepts**

**1. Data Definition Language (DDL)**

**CREATE TABLE vo\_candidate   
 candidate\_id NUMBER PRIMARY KEY,  
 fname VARCHAR2(20),  
 lname VARCHAR2(20),  
 dob DATE,  
 salary NUMBER CHECK (salary > 10000 AND salary < 50000),  
 party\_id NUMBER,  
 CONSTRAINT uk\_candidate\_name UNIQUE (fname, lname),  
 CONSTRAINT fk\_candidate\_party\_id  
 FOREIGN KEY (party\_id) REFERENCES vo\_party(party\_id)  
);**

**CREATE TABLE vo\_party (  
 party\_id NUMBER PRIMARY KEY,  
 party\_desc VARCHAR2(20) UNIQUE  
);**

**Table Level**

ALTER TABLE vo\_candidate ADD CONSTRAINT PK\_vo\_candidate\_id\_pk PRIMARY KEY (candidate\_id);  
ALTER TABLE vo\_candidate DROP CONSTRAINT FK\_vo\_candidate\_party;

ALTER TABLE vo\_student\_class ENABLE CONSTRAINT FK\_vo\_student\_class\_ssn;

ALTER TABLE vo\_candidate CONSTRAINT PK\_vo\_candidate\_id\_pk PRIMARY KEY (candidate\_id);

ALTER TABLE vo\_candidate CONSTRAINT FK\_candidate\_party\_id FOREIGN KEY (party\_id) REFERENCES vo\_party(party\_id);

ALTER TABLE vo\_candidate CONSTRAINT CK\_disease\_deadly CHECK (deadly IN ('Yes', 'No'))

ALTER TABLE vo\_candidate DISABLE CONSTRAINT CK\_vo\_candidate\_salary;

DROP TABLE table\_name;  
CREATE INDEX idx\_class\_description ON Class (Class\_description);

DROP INDEX idx\_class\_description;  
TRUNCATE TABLE table\_name; // Keep Table Schema but drops all data fast

**Column Level**

ALTER TABLE vo\_party MODIFY partydesc VARCHAR2(20) UNIQUE NOT NULL;

ALTER TABLE vo\_party MODIFY candidate\_id NUMBER PRIMARY KEY

ALTER TABLE vo\_candidate ADD partyID NUMBER(10);  
ALTER TABLE vo\_candidate DROP COLUMN DOB;

ALTER TABLE vo\_candidate MODIFY salary NUMBER CHECK (salary > 10000 AND salary < 50000)

**2. Data Manipulation Language (DML)**INSERT INTO vo\_party (party\_id, party\_desc) VALUES (1, 'Republican');  
INSERT INTO patient VALUES ('123456789', 'Doe', 'John');Assuming order: SSN, LNAME, FNAME  
DELETE FROM patient\_disease WHERE patientID = '123456789';   
DELETE FROM vo\_student\_class;// delete all rows

**8. Entity-Relationship (ER) Diagrams (Brief)**

**Entities**: Represented as rectangles (e.g., Doctor, Patient, Drug).  
**Attributes**: Properties of entities (e.g., Name, Specialty, Price).  
**Relationships**: Associations between entities, represented as diamonds or lines (e.g., makes, includes, sells).  
**Cardinality**: Defines the number of instances of one entity related to another (1:1, 1:N, N:M).  
**Participation**: Specifies if entity participation in a relationship is mandatory (Total/Full) or optional (Partial).  
**Primary Key (PK)**: Uniquely identifies entities.  
**Foreign Key (FK)**: Used to link related entities in different tables.  
**Composite Key (CK)**: Primary key composed of multiple attributes.

**Primary Key**: Unique identifier, Not Null, Indexed.  
**Foreign Key**: Links to another table, maintains referential integrity.  
**Unique Key**: Unique values, allows NULL (unless NOT NULL also specified).  
**Not Null**: Column must have a value.  
**Check Constraint**: Value must satisfy a condition.

**TO\_DATE('102590', 'mmddyy'):** Converts a string to a DATE datatype based on the specified format.  
**TO\_CHAR(dob, 'mmddyyyy'):** Converts a DATE datatype to a string in the specified format.  
**Date Formats:** 'mmddyyyy', 'ddmmyy', 'yyyy/mm/dd', 'ddyyyyMM hh12:mi:ss', ‘Month D, Yr’, ‘bM/bD/YY’

Default Date Format: Database has a default date format setting. You can insert dates as strings in this format without TO\_DATE (e.g., '25-JAN-18').

A diagram of a pharmacy

AI-generated content may be incorrect.A diagram of a work flow

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