■ Oracle SQL Revision Cheat Sheet

1. Creating Tables

Use CREATE TABLE to define structure:
```
CREATE TABLE customers ( customer_id NUMBER PRIMARY KEY, first_name VARCHAR2(25) NOT
NULL, last_name VARCHAR2(25) NOT NULL, email VARCHAR2(50) UNIQUE, phone VARCHAR2(20)
UNIQUE );
```

2. Foreign Keys

```
CREATE TABLE orders ( order_id NUMBER PRIMARY KEY, customer_id NUMBER NOT NULL,
order_date DATE DEFAULT SYSDATE, CONSTRAINT fk_cust FOREIGN KEY (customer_id)
REFERENCES customers(customer_id) );
```

3. Common Constraints

PRIMARY KEY – Unique record identifier UNIQUE – No duplicate values NOT NULL – Must have a value CHECK – Enforces a condition DEFAULT – Sets default value FOREIGN KEY – Creates relationship

4. Basic Queries

```
SELECT * FROM employees; SELECT first_name || ' ' || last_name AS full_name FROM
employees; SELECT department_id, AVG(salary) FROM employees GROUP BY department_id
HAVING AVG(salary) > 2500;
```

5. Joins

INNER JOIN – Matches records LEFT JOIN – All from left + matches SELF JOIN – Table joined with itself
```
SELECT e1.first_name, e2.first_name AS manager FROM employees e1 JOIN employees e2
ON e1.manager_id = e2.employee_id;
```

6. Triggers

```
CREATE OR REPLACE TRIGGER trg_vehicle_rental_check BEFORE INSERT ON rental FOR EACH
ROW DECLARE v_count NUMBER; BEGIN SELECT COUNT(*) INTO v_count FROM rental WHERE
vehicle_vehicle_id = :NEW.vehicle_vehicle_id AND return_date IS NULL; IF v_count > 0
THEN RAISE_APPLICATION_ERROR(-20001, 'Vehicle is already rented!'); END IF; END; /
```

7. Common Errors

ORA-00904 – Invalid identifier → Check spelling ORA-02291 – FK violation → Parent record missing ORA-04098 – Invalid trigger → Use SHOW ERRORS bad bind variable – Column missing in :NEW

8. DDL & DML

CREATE – Make table ALTER – Modify structure DROP – Delete table TRUNCATE – Delete all rows INSERT – Add data UPDATE – Modify data DELETE – Remove data

Quick Tips

• Always create parent tables first • FOREIGN KEY types must match parent • Use SHOW ERRORS for triggers • :NEW and :OLD only used inside triggers