

# Salesforce SOQL & SOSL Cheatsheet

Complete Guide to Query Languages in Salesforce

## SOQL Basics

```
// Basic Syntax
SELECT field1, field2 FROM ObjectName WHERE condition

// Example
List<Account> accounts = [SELECT Id, Name, Industry FROM Account WHERE Industry = 'Technology'];
```

## SOQL Clauses

Clause	Purpose	Example
<b>WHERE</b>	Filter records	WHERE Industry = 'Tech'
<b>ORDER BY</b>	Sort results	ORDER BY Name ASC
<b>LIMIT</b>	Restrict number of records	LIMIT 100
<b>OFFSET</b>	Skip records	OFFSET 50
<b>GROUP BY</b>	Group records	GROUP BY Industry
<b>HAVING</b>	Filter grouped records	HAVING COUNT(Id) > 10

## WHERE Clause Operators

### Comparison Operators

- **=** Equal to
- **!=** Not equal to
- **<** Less than
- **>** Greater than
- **<=** Less than or equal
- **>=** Greater than or equal

### Logical Operators

- **AND** Both conditions true
- **OR** Either condition true
- **NOT** Negates condition
- **LIKE** Pattern matching
- **IN** Value in list
- **NOT IN** Value not in list

## LIKE Wildcard Examples

```
// % matches zero or more characters
```

```
[SELECT Id FROM Account WHERE Name LIKE 'Acme%'] // Starts with Acme
[SELECT Id FROM Account WHERE Name LIKE '%Corp'] // Ends with Corp
[SELECT Id FROM Account WHERE Name LIKE '%Inc%'] // Contains Inc

// _ matches exactly one character
[SELECT Id FROM Account WHERE Name LIKE 'A_me'] // A, any char, me
```

## Date Literals in SQL

Literal	Description	Example
YESTERDAY	Previous day	WHERE CreatedDate = YESTERDAY
TODAY	Current day	WHERE CreatedDate = TODAY
TOMORROW	Next day	WHERE CreatedDate = TOMORROW
LAST_WEEK	Previous week	WHERE CreatedDate = LAST_WEEK
THIS_WEEK	Current week	WHERE CreatedDate = THIS_WEEK
LAST_N_DAYS:n	Last n days	WHERE CreatedDate = LAST_N_DAYS:7
THIS_MONTH	Current month	WHERE CreatedDate = THIS_MONTH
THIS_YEAR	Current year	WHERE CreatedDate = THIS_YEAR

## Relationship Queries

```
// Parent to Child (Subquery)
SELECT Id, Name, (SELECT Id, LastName FROM Contacts) FROM Account

// Child to Parent
SELECT Id, LastName, Account.Name, Account.Industry FROM Contact

// Multi-level Relationships
SELECT Id, Name, Account.Owner.Name FROM Contact
```

**Note:** Subqueries can go only 1 level deep. You can query up to 5 parent-to-child relationships and 20 child-to-parent relationships in a single query.

## Aggregate Functions

### Available Functions

- **COUNT()** - Count records
- **SUM()** - Sum values
- **AVG()** - Average value
- **MIN()** - Minimum value
- **MAX()** - Maximum value
- **COUNT\_DISTINCT()** - Unique count

### Examples

```
AggregateResult[] res = [
  SELECT Industry, COUNT(Id) cnt
  FROM Account
  GROUP BY Industry
];
```

```
Integer count = (Integer)res[0].get('cnt');
```

## SOSL (Salesforce Object Search Language)

```
// Basic SOSL Syntax
FIND {search term} IN ALL FIELDS RETURNING ObjectType(fields)

// Example
List<List<SObject>> searchList = [
FIND {Acme*} IN NAME FIELDS
RETURNING Account(Id, Name), Contact(Id, LastName)
];
```

## SOSL Search Scopes

Scope	Searches
ALL FIELDS	All searchable fields
NAME FIELDS	Name fields only
EMAIL FIELDS	Email fields only
PHONE FIELDS	Phone fields only
SIDEBAR FIELDS	Fields in sidebar

## SOQL vs SOSL

Aspect	SOQL	SOSL
Purpose	Retrieve records from single object	Search text across multiple objects
Return Type	List of sObjects	List of Lists of sObjects
Performance	Faster for specific queries	Faster for text search
Use Case	Known field values	Text search, unknown location

## Query Best Practices

- Always use selective filters (indexed fields when possible)
- Avoid querying inside loops (governor limit issue)
- Use LIMIT to restrict large result sets
- Query only required fields, avoid SELECT \* equivalent
- Use relationship queries instead of multiple queries
- Consider using SOSL for searching multiple objects
- Use bind variables to prevent SOQL injection
- Test queries with large data volumes

