

SOQL, SOSL AND DML



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What is SOQL?



**Salesforce Object Query
Language**

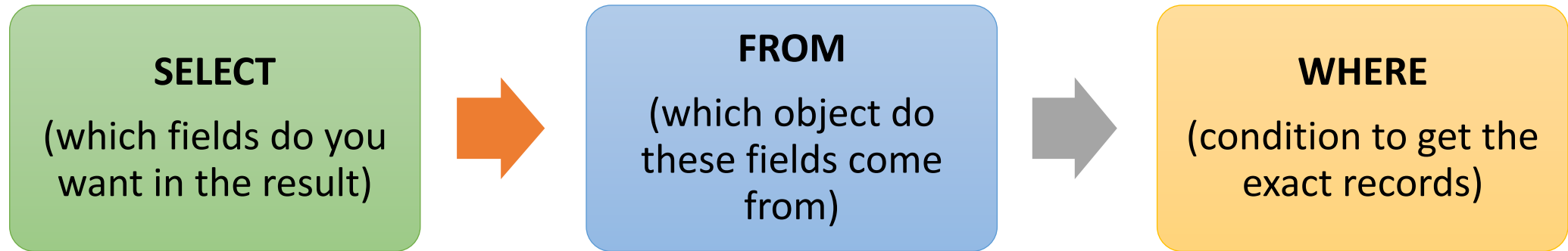


Used to read data stored in your
organization's database



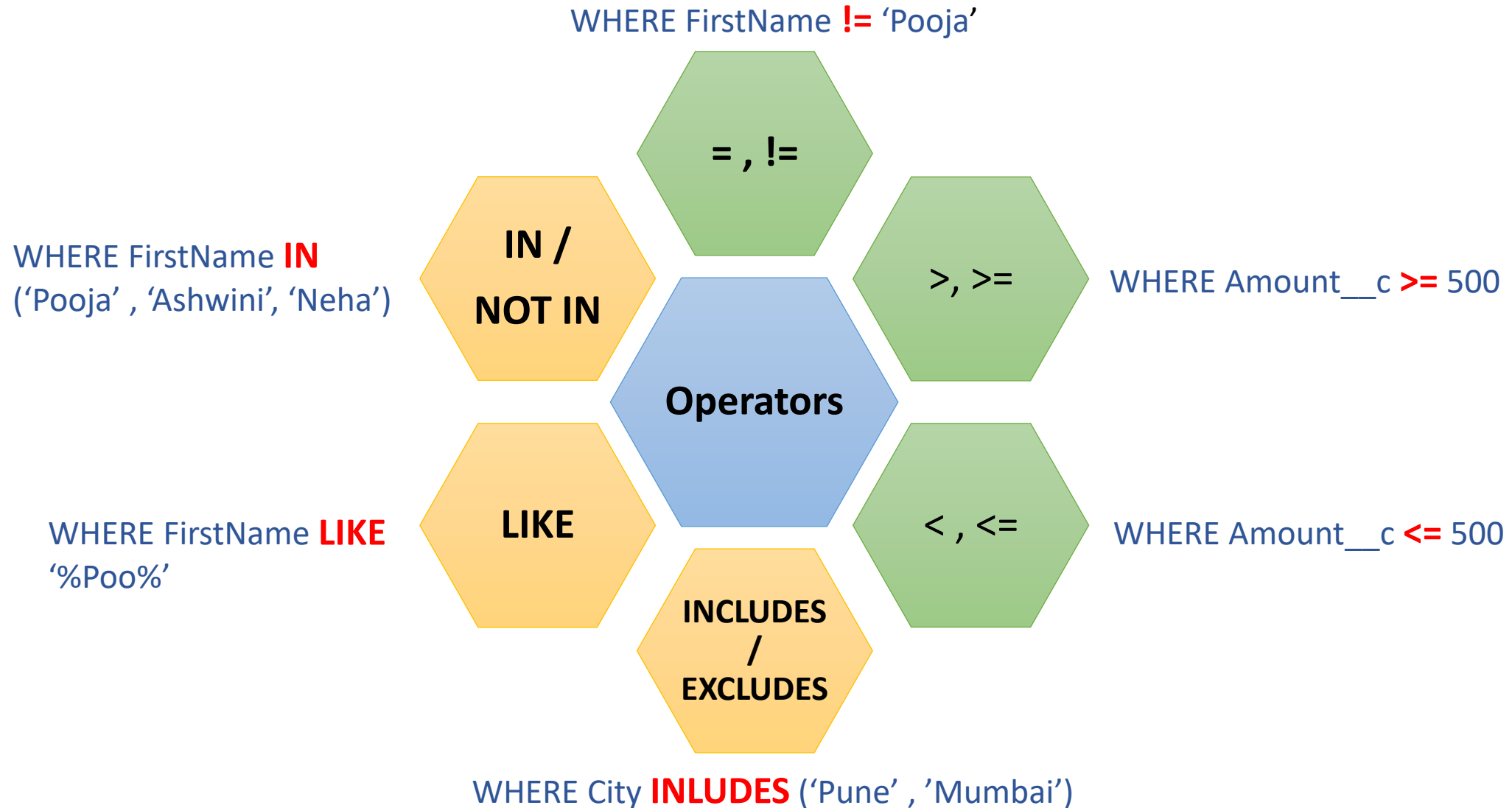
Syntactically similar to SQL but
designed specifically for
Salesforce data

SOQL Query Format



```
SELECT Id, FirstName, LastName, Email, Amount__c  
FROM Account  
WHERE FirstName = 'Pooja'
```

Conditional Operators



Logical Operators

Build your own logic by joining multiple conditional operators using logical operators

AND
(both the
conditions
should be true)

```
SELECT Id, Name, Amount__c  
FROM Account  
WHERE FirstName = 'Pooja'  
      AND LastName = 'Chordia'
```

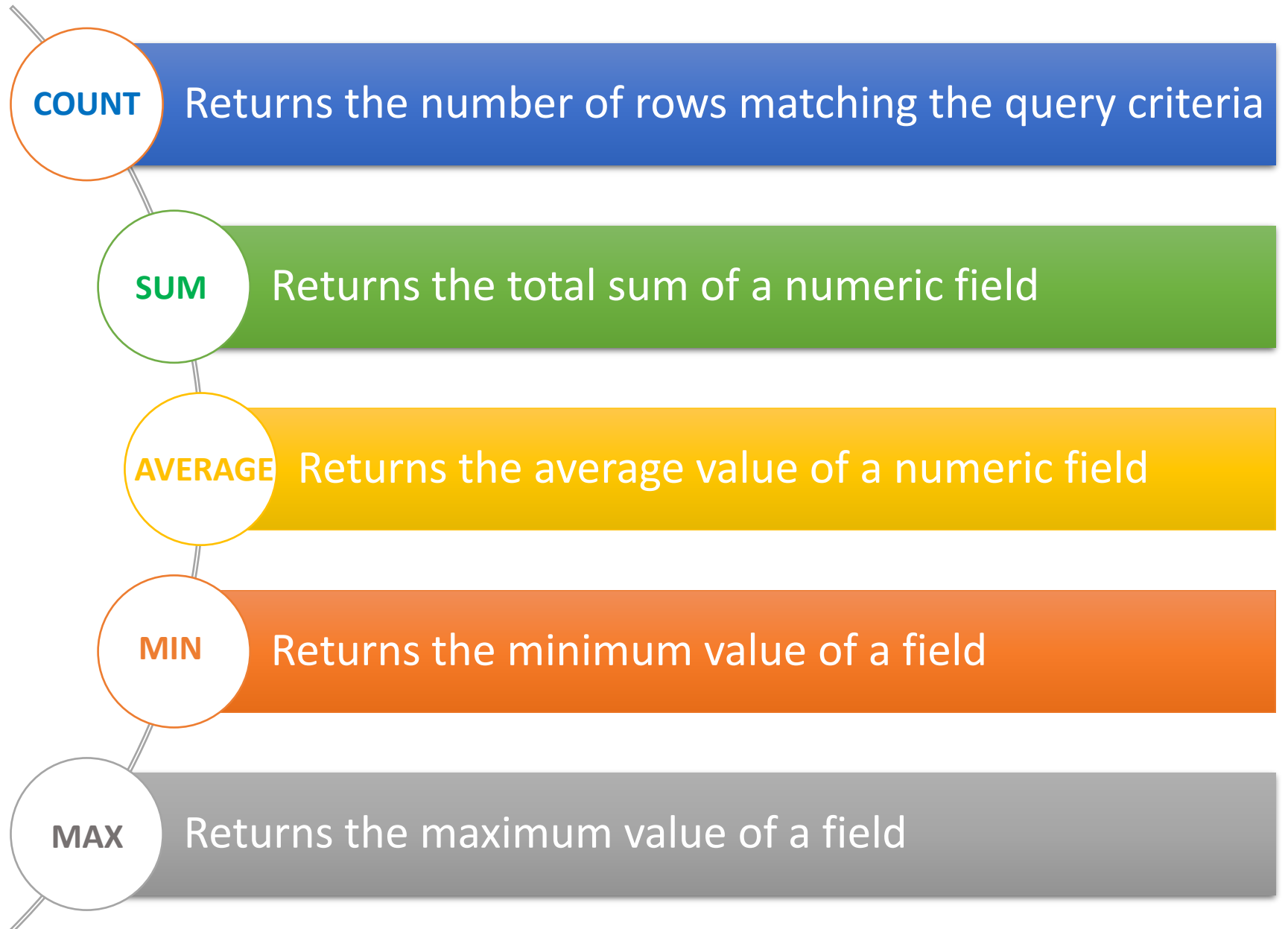
OR
(any one of the
condition
should be true)

```
SELECT Id, Name, Amount__c, Email  
FROM Account  
WHERE FirstName = 'Pooja'  
      OR LastName = 'Chordia'
```

NOT
(condition
should not be
true)

```
SELECT Name, Amount__c, BillingCity  
FROM Account  
WHERE BillingCity  
      NOT IN ('Pune', 'Mumbai')
```

Aggregate Functions



Other Clauses

GROUP BY

Use the GROUP BY clause to group the result set based on the field specified

```
SELECT Name,  
MAX(Amount),  
MIN(Amount),  
SUM(Amount)  
FROM Opportunity  
GROUP BY Name
```

ORDER BY

Use ORDER BY in a SELECT statement to control the order of the query results.

```
SELECT Name  
FROM Account  
ORDER BY Name DESC  
NULLS LAST
```

HAVING

HAVING is an optional clause used to filter the results that an aggregated function returns

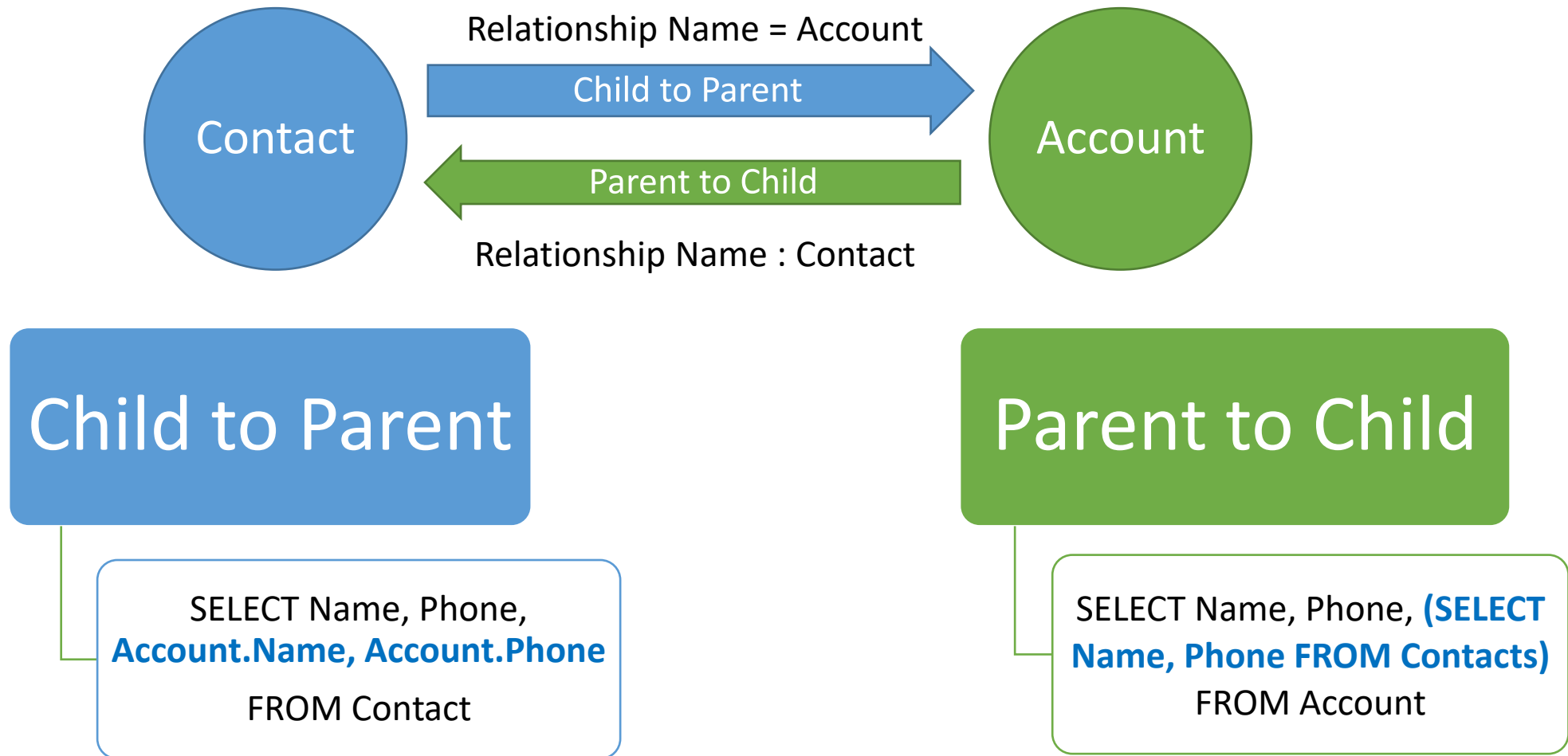
```
SELECT LeadSource,  
COUNT(Name)  
FROM Lead  
GROUP BY LeadSource  
HAVING COUNT(Name) >  
100
```

LIMIT

Use LIMIT to specify the maximum number of rows to return

```
SELECT Name  
FROM Account  
WHERE Industry = 'Media'  
LIMIT 125
```

Relationship Queries



Exercise

01

Get contact in
ascending order of
account creation
date

02

Get name from
contact where
name is either
Sarah Smith or
Jessi Jones

03

Retrieve all the
contact records
where name
contains 's'

04

Get Sum,
Minimum,
Maximum,
Average amount
from opportunity

Solution

```
SELECT    Id, Name, Account.CreatedDate
FROM      Contact
ORDER BY  Account.CreatedDate ASC
```

```
SELECT Name, Id
FROM Contact
WHERE Name IN ('Sarah Smith','Jessi Jones')
```

```
SELECT Name, Id
FROM Contact
WHERE Name LIKE '%S%'
```

```
SELECT SUM(Amount) total,
       AVG(Amount) avg,
       MIN(Amount) minm,
       MAX(Amount) maxm
FROM Opportunity
```

What is SOSL?



Salesforce Object Search Language

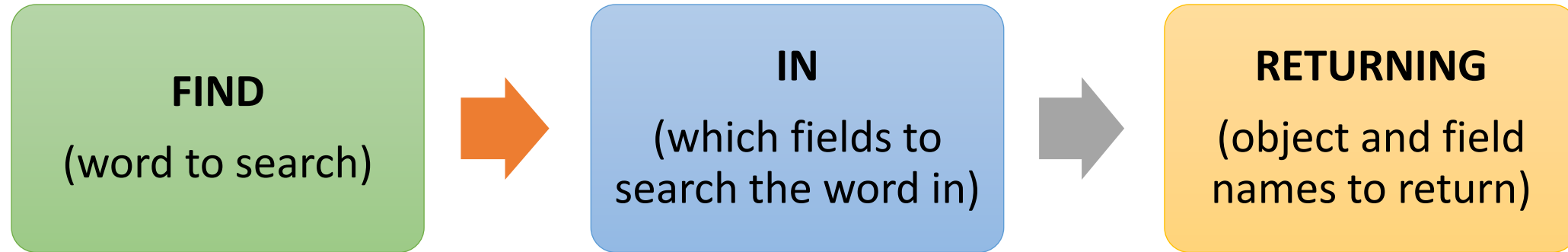


Language that performs text searches in records



Can query on multiple types of objects Together

SOSL Query Format



```
FIND {Deloitte}

IN ALL FIELDS

RETURNING Contact(FirstName,
LastName, Email), Account(Name,
Email)
```

Search in Specific Fields

All Fields (By Default)

SOSL will search in all fields. This is default if we don't specify anything in SOSL IN clause

Name Fields

SOSL will search only in Name fields

Email Fields

SOSL will search only in Email datatype fields

Phone Fields

SOSL will search only in Phone datatype fields

Sidebar Fields

SOSL will search only in indexed (External Id) fields

Wildcards in SOSL

SOSL supports two wildcards:

A green rectangular box with a white question mark centered inside.

Question marks match only one character in the middle or end of your search term.

Example : *'jo?n'* finds items with the term *john* or *joan* but not *jon* or *johan*

A blue rectangular box with a white asterisk centered inside.

Asterisks match zero or more characters at the middle or end (not the beginning) of your search term.

Example : *'john*'* finds items that start with john, such as, john, johnson or johnny

Exercise

01

Find name "Joe Smith" anywhere in the system

02

Find name with "Jo?" in the name field of a lead and return the name and phone number.

03

Find name "Joe Smith" or "Joe Smythe" in the name field of a lead or contact and return the name and phone number

04

Find names starting with "Jo" in Name field of Account object and order the records by Name field

Solution

FIND {Joe Smith}

FIND {Jo?}

IN Name **Fields**

RETURNING lead(name, phone)

FIND {"Joe Smith" **OR** "Joe Smythe"}

IN Name **Fields**

RETURNING lead(name, phone), contact(name, phone)

FIND {Jo*}

RETURNING Account(Name, Id **ORDER BY** Name)

What is DML?



Data Manipulation Language



Used to create, modify or delete records in Salesforce



One of the most important part of Apex

DML Operations



INSERT

Insert a new record or a list of records

```
insert [sObject |  
List<sObject>]
```



UPDATE

Update existing records with the new data specified. Existing records are matched using the ID

```
update [ sObject |  
List<sObject>]
```



UPSERT

Performs both insert/update on the specified records. If record ID matches, then it updates the record. Otherwise, it inserts a new record

```
upsert [sObject |  
List<sObject>]
```



DELETE

Delete records with the matching ID from the database

```
delete [sObject |  
List<sObject>]
```



UNDELETE

Retrieves a record or list of records previously deleted from recycle bin

```
undelete [sObject |  
List<sObject>]
```

Governor Limits

<i>Description</i>	<i>Limit</i>
<i>Total number of SOQL queries issued</i>	100
<i>Total number of SOQL queries issued for Batch Apex and future methods</i>	200
<i>Total number of records retrieved by SOQL queries</i>	50,000
<i>Total number of SOSL queries issued</i>	20
<i>Total number of records retrieved by a single SOSL query</i>	200
<i>Total number of DML statements issued</i>	150

Thank You !

For any queries, please reach out to :

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