

| Apex | Data types (cont) | List Datatype (cont) | Set Datatypes (cont) |
|--|--|--|---|
| <p>What is Apex</p> <p>Apex is a strongly typed, object-oriented Programming language that allows developers to execute the flow and transaction control statements on the force.com platform server in conjunction with calls to the Froce.com API.</p> | <p>Datetime Datetime currentDate = Datetime.now();</p> <p>ID Id recordId = '001R0000012345-6789';</p> <p>Blob Blob type is more complex and typically used for binary data like images.</p> | <p>deepClone(preserveId, preserveReadOnlyTimestamps, preserveAutoNumber) Creates a deep clone of the list. You can specify whether to preserve record IDs, readonly timestamps, and autonumber fields.</p> | <p>toString() Returns the string representation of the set.</p> |
| Understanding the Apex Syntax | List Datatype | Set Datatypes | Map Datatype |
| <p>Variable Decalation</p> <p>Loop Statement</p> <p>Flow Control Statement</p> <p>List Datatype</p> <p>Map Datatype</p> <p>Set Datatype</p> <p>DML Statement</p> <p>SOQL Query</p> <p>Apex Trigger</p> | <p>Method List Datatype</p> <p>add(listElement) or add(index, listElement) Adds the specified element to the end of the list.</p> <p>contains(listElement) Returns true if the list contains the specified element.</p> <p>equals(list2) Compares the current list to another list, returning true if they are equal.</p> <p>isEmpty() Returns true if the list is empty.</p> <p>remove(index) Removes the element at the specified position in the list.</p> <p>size() Returns the number of elements in the list.</p> <p>sort() Sorts the elements of the list in ascending order.</p> | <p>add(setElement) Adds an element to the set if it is not already present.</p> <p>clear() Removes all of the elements from the set.</p> <p>clone() Makes a duplicate copy of the set.</p> <p>contains(setElement) Returns true if the set contains the specified element.</p> <p>equals(set2) Compares this set with the specified set and returns true if both sets are equal; otherwise, returns false.</p> <p>isEmpty() Returns true if the set has zero elements.</p> <p>remove(setElement) Removes the specified element from the set if it is present.</p> <p>size() Returns the number of elements in the set (its cardinality).</p> | <p>clear() Removes all of the key-value mappings from the map.</p> <p>clone() Makes a duplicate copy of the map.</p> <p>containsKey(key) Returns true if the map contains a mapping for the specified key.</p> <p>deepClone() Makes a duplicate copy of a map, including sObject records if this is a map with sObject record values.</p> <p>equals(map2) Compares this map with the specified map and returns true if both maps are equal; otherwise, returns false.</p> <p>get(key) Returns the value to which the specified key is mapped, or null if the map contains no value for this key.</p> <p>isEmpty() Returns true if the map has zero key-value pairs.</p> <p>keySet() Returns a set that contains all of the keys in the map.</p> |
| Data types | | | |
| <p>Boolean Boolean isTrue = true;</p> <p>String String greeting = 'Hello, Salesforce!';</p> <p>Integer Integer quantity = 10;</p> <p>Long Long bigNumber = 1234567890;</p> <p>Decimal Decimal price = 99.99;</p> <p>Double Double largeValue = 1234567890.123456789;</p> <p>Date Date today = Date.today();</p> <p>Time Time currentTime = Time.now();</p> | | | |



Map Datatype (cont)

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| put(key, value) | Associates the specified value with the specified key in the map. |
| remove(key) | Removes the mapping for the specified key from the map, if present, and returns the corresponding value. |
| size() | Returns the number of key-value pairs in the map. |
| toString() | Returns the string representation of the map. |

Loop Statement

For Each Loop:

```
List<String> names = new List<String>{'Alice', 'Bob', 'Charlie'};
for (String name : names) {
    System.debug(name);
}
```

 Traditional For Loop:

```
for (Integer i = 0; i < 5; i++) {
    System.debug(i);
}
```

Triggers - Context Variable

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| Trigger.new | Contains a list of newly created or updated records. |
| Trigger.old | Contains a list of old records before they were updated. |

Triggers - Context Variable (cont)

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| Trigger.newMap | Contains a mapping between IDs and objects for all new records. |
| Trigger.oldMap | Contains a mapping between IDs and objects for all old records. |
| Trigger.isInsert | Returns true if the trigger is running due to an Insert operation. |
| Trigger.isUpdate | Returns true if the trigger is running due to an Update operation. |
| Trigger.isDelete | Returns true if the trigger is running due to a Delete operation. |
| Trigger.isBefore | Returns true if the trigger is running before data is written to the database. |
| Trigger.isAfter | Returns true if the trigger is running after data is written to the database. |
| Trigger.isUndelete | Returns true if the trigger is running due to an Undelete operation. |

SOQL

```
SELECT SELECT Field1,
Fields Field2 FROM
FROM ObjectName
Object WHERE Condition
```

SOQL (cont)

| | |
|----------------------|---|
| ORDER BY Clause | SELECT Name, CreatedDate FROM Account ORDER BY CreatedDate DESC |
| LIMIT Clause | SELECT Name FROM Account LIMIT 10 |
| GROUP BY Clause | SELECT Industry, COUNT(Id) FROM Account GROUP BY Industry |
| Aggregate Functions | SELECT AVG(Amount) FROM Opportunity |
| Relationship Queries | SELECT Name, (SELECT LastName FROM Contacts) FROM Account |
| Date Functions | SELECT Name FROM Account WHERE CreatedDate = THIS_MONTH |

Aggregate Functions

| | |
|---------|--|
| COUNT() | Counts the number of records in the query result. |
| SUM() | Calculates the sum of a numerical field. |
| AVG() | Calculates the average value of a numerical field. |
| MIN() | Finds the minimum value of a numerical field. |
| MAX() | Finds the maximum value of a numerical field. |

Date and time functions

| | |
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| TODAY | Returns the current date (excluding hours, minutes, seconds). |
| YESTERDAY | Returns the date of yesterday. |
| THIS_MONTH | Returns all records created in the current month. |
| LAST_N_DAYS:n | Returns all records created in the last n days. |
| NEXT_N_DAYS:n | Returns all records that will be created in the next n days. |
| CALENDAR_MONTH(fieldName) | Returns the month of a specific date field. |
| DAY_ONLY(fieldName) | Returns the day of a specific date field. |
| THIS_YEAR | Returns all records created in the current year. |