

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 Force.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
Variable Declaration	<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>



Map Datatype (cont)

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

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)

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

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.