**OrderedDict in Python**

An **OrderedDict** is a dictionary subclass that remembers the order that keys were first inserted. The only difference between [dict()](https://www.geeksforgeeks.org/python-set-4-dictionary-keywords-python/) and OrderedDict() is that:

OrderedDict **preserves the order** in which the keys are inserted. A regular dict doesn’t track the insertion order, and iterating it gives the values in an arbitrary order. By contrast, the order the items are inserted is remembered by OrderedDict.

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| # A Python program to demonstrate working of OrderedDict  from collections import OrderedDict    print("This is a Dict:\n")  d = {}  d['a'] = 1  d['b'] = 2  d['c'] = 3  d['d'] = 4    for key, value in d.items():      print(key, value)    print("\nThis is an Ordered Dict:\n")  od = OrderedDict()  od['a'] = 1  od['b'] = 2  od['c'] = 3  od['d'] = 4    for key, value in od.items():      print(key, value) |

Output:

This is a Dict:

('a', 1)

('c', 3)

('b', 2)

('d', 4)

This is an Ordered Dict:

('a', 1)

('b', 2)

('c', 3)

('d', 4)

**Important Points:**

**1. Key value Change:** If the value of a certain key is changed, the position of the key remains unchanged in OrderedDict.

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| # A Python program to demonstrate working of key  # value change in OrderedDict  from collections import OrderedDict    print("Before:\n")  od = OrderedDict()  od['a'] = 1  od['b'] = 2  od['c'] = 3  od['d'] = 4  for key, value in od.items():      print(key, value)    print("\nAfter:\n")  od['c'] = 5  for key, value in od.items():      print(key, value) |

Output:

Before:

('a', 1)

('b', 2)

('c', 3)

('d', 4)

After:

('a', 1)

('b', 2)

('c', 5)

('d', 4)

**2. Deletion and Re-Inserting**: Deleting and re-inserting the same key will push it to the back as OrderedDict, however, maintains the order of insertion.

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| # A Python program to demonstrate working of deletion  # re-insertion in OrderedDict  from collections import OrderedDict    print("Before deleting:\n")  od = OrderedDict()  od['a'] = 1  od['b'] = 2  od['c'] = 3  od['d'] = 4    for key, value in od.items():      print(key, value)    print("\nAfter deleting:\n")  od.pop('c')  for key, value in od.items():      print(key, value)    print("\nAfter re-inserting:\n")  od['c'] = 3  for key, value in od.items():      print(key, value) |

Output:

Before deleting:

('a', 1)

('b', 2)

('c', 3)

('d', 4)

After deleting:

('a', 1)

('b', 2)

('d', 4)

After re-inserting:

('a', 1)

('b', 2)

('d', 4)

('c', 3)