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| Whenever we are working with data we need to modify data, filter data so we have in-build functions like **map() filter() reduce()**  map() function  The map function is used when you need to modify all elements with an iterables data  Syntax:  map(function, iterables)  Parameters:  **function**: The function to be called for each element of the specified iterable.  **iterables**: One or more iterables  Return Value:  When using map, it returns a map object, which is an iterator |

**Step 01**

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| # Multiply Iterables l1 = [10,20,30,40,50] print(l1\*2) # [10, 20, 30, 40, 50, 10, 20, 30, 40, 50] |

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| # Multiply Iterables using for loop and lambda lst = [10,20,30,40,50] l = [] r = **lambda** n : n\*2 **for** i **in** lst:  l.append(r(i)) print(l) # [20, 40, 60, 80, 100] |

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| # Multiply Iterables using Map Function lst = [10,20,30,40,50] **def** d1(n):  **return** n\*2 result = map(d1, lst) print(result) # <map object at 0x000000D4731EB400> print(list(result)) # [20, 40, 60, 80, 100] |

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| # Multiply Iterables using Map Function with Lambda lst = [10,20,30,40,50] result = list(map(**lambda** x: x\*2, lst)) print(result) # [20, 40, 60, 80, 100] |

**Step 02**

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| # Multiply Sequence l1 = [1,2,3,4] l2 = [1,2,3,4] print(l1\*l2) # TypeError: can't multiply sequence by non-int of type 'list' |

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| # Multiply Sequence using Map Function l1 = [1,2,3,4,5] l2 = [1,2,3,4,5] def d1(a,b):  return a\*b result = map(d1, l1,l2) # map(function, iterables) print(result) # <map object at 0x00000033903CEDC0> print(list(result)) # [1, 4, 9, 16, 25] |

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| # Multiply sequence using lambda and map function l1 = [1,2,3,4] l2 = [1,2,3,4] result = map(**lambda** a, b : a\*b, l1, l2) # lambda args : expression, iterables print(result) # <map object at 0x000000BC037DED60> print(list(result)) # [1, 4, 9, 16] |

**Step 03**

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| Case Study:  employes = [  {"firstName":"Sai", "lastName":"Kiran", "age":27},  {"firstName":"Pradeep", "lastName":"Reddy", "age":29},  {"firstName":"Praneeth", "lastName":"Reddy", "age":35},  {"firstName":"Ranjith", "lastName":"Yadav", "age":30} ] print(employes) print(employes[0]['firstName']+employes[0]['lastName']) print(employes[1]['firstName']+employes[1]['lastName']) print(employes[2]['firstName']+employes[2]['lastName'])  m = map(lambda x:x['firstName']+x['lastName'], employes) print(list(m))  [{'firstName': 'Sai', 'lastName': 'Kiran', 'age': 27}, {'firstName': 'Pradeep', 'lastName': 'Reddy', 'age': 29}, {'firstName': 'Praneeth', 'lastName': 'Reddy', 'age': 35}, {'firstName': 'Ranjith', 'lastName': 'Yadav', 'age': 30}]  SaiKiran  PradeepReddy  PraneethReddy  ['SaiKiran', 'PradeepReddy', 'PraneethReddy', 'RanjithYadav'] |