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| **Reduce function** accepts two arguments, the function to perform the execution and the data to iterate over.  Unlike **filter and map, reduce** iterates two items/elements at a time instead of one.  The result of reduce is to always return a single result.  Syntax: reduce(fun, sequence) |

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| lst = [12, 14, 16, 4, 18] x = 12 y = 14 if x<y:  print(x) # 12 else:  print(y)  x = 12 y = 16 if x<y:  print(x) # 12 else:  print(y)  x = 12 y = 4 if x<y:  print(x) # 4 else:  print(y)  x = 4 y = 18 if x<y:  print(x) # 4 else:  print(y) |

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| Case Study  from functools import reduce  lst = [12, 14, 16, 4, 18]  # find the sum of all numbers r = reduce(lambda x, y: x+y, lst) print(r) # 64  # 12 + 14 = 26 # 26 + 16 = 42 # 42 + 4 = 46 # 46 + 18 = 64  # find the lowest value r = reduce(lambda x, y: x if (x < y) else y, lst) print(r) # 4 |