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# ShowLists.py
""" Contains functions that can be used to get practice
with lists and functions that involve lists. """

def Add1(x,y):
    """ Returns a list of numbers whose elements
    are obtained by adding corresponding elements from
    the lists x and y.

    PreC: x and y are lists of numbers with len(x)==len(y)
    """
    z = []
    for k in range(len(x)):
        s = x[k]+y[k]
        z.append(s)
    return z

def Add2(x,y):
    """ PreC: x and y are lists of numbers with len(x)==len(y)"""
    for k in range(len(x)):
        x[k] = x[k]+y[k]

def Add3(x,y):
    """PreC: x and y are lists of numbers with len(x)==len(y)"""
    for k in range(len(x)):
        x[k] = x[k]+y[k]
    return x

if __name__ == '__main__':

    # Example 1
    print "\nExample 1:"
    a = [1,2,3]
    b = [10,20,30]
    c = Add1(a,b)
    print a
    print b
    print c

    # Example 2
    print "\nExample 2:"
    a = [1,2,3]
    b = [10,20,30]
    b = Add1(a,b)
    print a
    print b

    # Example 3
    print "\nExample 3:"
    a = [1,2,3]
    b = [10,20,30]
    Add2(a,b)
    print a
    print b

    # Example 4
    print "\nExample 4:"

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a = [1,2,3]
b = [10,20,30]
c = Add2(a,b)
print a
print b
print c
```

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# Example 5
print '\nExample 5:'
a = [1,2,3]
b = [10,20,30]
b = Add2(a,b)
print a
print b
```

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# Example 6
print '\nExample 6:'
a = [1,2,3]
b = [10,20,30]
c = Add3(a,b)
print a
print b
print c
```

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# Example 7
print '\nExample 7:'
a = [1,2,3]
b = [10,20,30]
a = Add3(a,b)
print a
print b
```