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# ShowSelect.py
""" Uses Selection Sort to illustrate how functions
with list
parameters work."""

from random import randint as randi
def Select(x,i):

    """ Swaps the smallest value in x[i:] with x[i]

    PreC: x is a list of
    integers and i is an in that
    satisfies 0<=i<len(x)
    """
    n =
len(x)
    imin = i
    min_x = x[i]
    for k in range(i+1,n):
        if x[k] < min_x:

            # Found a new minimum value
            imin=k
            min_x = x[k]
    # Swap x[i]
with the minimum value
    temp = x[i]
    x[i] = x[imin]
    x[imin] = temp

def
SelectionSort(a):
    """ Permutes the values in list a so that they
    range
    from smallest to largest.

    PreC: a is a nonempty list of numbers.

    """
    n = len(a)
    for k in range(n):
        Select(a,k)
    #
a[0:(k+1)] is sorted
    print a

def randiList(L,R,n):
    """
Returns a length-n list of random integers
selected from the interval [L,R].

    PreC:
L, R, and n are ints with n>0 and L<R.
    """
    t = []
    for k in
range(n):
        r = randi(L,R)
        t.append(r)
    return t

if __name__ ==
'__main__':
    # A small example
    a = randiList(100,999,8)
    print a

SelectionSort(a)

```

