

Python Beginner Homework 9

In the following multiple choice questions, please circle the correct output of Python code.

1.

```
nums=[1,3,5,7,9]
nums.append(10)
nums.insert(0,9)
del nums[2]
print(len(nums))
```

(a) 5 (b) 6 (c) 7 (d) 8 (e) 9
2.

```
nums=[1,3,5,7,9]
nums.append(10)
nums.insert(0,9)
del nums[2]
print(nums)
```

(a) [1,3,5,7,9] (b) [1,3,5,7,9,10,9] (c) [9,1,5,7,9,10] (d) [9,1,3,5,7,9]
(e) [1,3,5,7,9,9,10]
3.

```
nums=[3,2,5,4,9,5,4,6,7,8]
nums1 = []
for i in range(0, len(nums)):
    if nums[i]%3 != 0:
        nums1.append(nums[i])
print(nums1)
```

(a) [2,5,4,5,4,7,8] (b) [] (c) [3,9,6] (d) index out of range (e) [6,9,3]
4.

```
nums=[3,2,5,4,9,5,4,6,7,8]
nums1 = []
for i in range(0, len(nums)):
    if nums[i]%3 == 0:
        nums1.insert(0,nums[i])
print(nums1)
```

(b) [2,5,4,5,4,7,8] (b) [] (c) [3,9,6] (d) index out of range (e) [6,9,3]
5.

```
nums=[3,2,5,4,9,5,4,6,7,8]
for i in range(0, len(nums)):
    if nums[i]%3==0:
        del nums[i]
print(nums)
```

(a) [2,5,4,5,4,7,8] (b) [] (c) [3,9,6] (d) index out of range (e) [0]

Coding question 1: Split a list into 2 lists. One list has all even numbers, and another list has all odd number. For example, for `nums=[4,3,5,6,3,4,7,9]`, answer should be `nums1=[4,6,4]`, `nums2=[3,5,3,7,9]`.

Coding question 2: Merge two lists `nums1=[1,2,3,4,5]`, `nums2=[6,7,8,9,10]` into one list `nums=[10,1,9,2,8,3,7,4,6,5]`.

Coding question 3 (hard): Put first 10 Fibonacci numbers into a list. Answer should be `[1,1,2,3,5,8,13,21,34,55]`.

Coding question 4 (hard): Put all prime numbers between 2 and 100 (inclusive) into a list. Answer should be [2,3,5....93,97].