1.قم بجعل عناصر القائمة التالية في قائمة واحدة بطريقتين

Flat a nested list in 2 Ways.

```python
nested_list = [["Hello", "from", "Codezilla"],
    ["Python", "Course", "is", "awesome"],
    ["I", "enjoy", "learning", "Python", "with", "Codezilla"]]
```

إذا لم توفق للوصول للحل يمكنك السعي مرة أخرى بمساعدة
الخطوات التالية

```python
# 1. Flat a nested list in 2 ways

# solution 1 using extend()


#########

# solution 2 using append()
```

```python
# solution 1 using extend()
nested_list = [["Hello", "from", "Codezilla"],
    ["Python", "Course", "is", "awesome"],
    ["I", "enjoy", "learning", "Python", "with", "Codezilla"]]

flat_lst = []
for lst in nested_list:
    flat_lst.extend(lst)

print(flat_lst)


#########

# solution 2 using append()

nested_list = [["Hello", "from", "Codezilla"],
    ["Python", "Course", "is", "awesome"],
    ["I", "enjoy", "learning", "Python", "with", "Codezilla"]
    ]

flat_lst = []
for lst in nested_list:
    for word in lst:
        flat_lst.append(word)

print(flat_lst)
```

2.قم بإيجاد أصغر مضاعف للرقم 9 في القائمة التالية

Find the smallest multiple of 9 in the following list

```
numbers = [511, 260, 261, 912, 362, 473, 893, 277, 351, 494,
486, 885, 341, 484, 598, 950, 859, 716, 488, 584]
```

إذا لم توفق للوصول للحل يمكنك السعي مرة أخرى بمساعدة
الخطوات التالية

```python
# 2. the smallest multiple of 9 in a list

# sort the list

# loop through the list

# check if the number is divisible by 9
```

```python
numbers = [511, 260, 261, 912, 362, 473, 893, 277, 351, 494,
486, 885, 341, 484, 598, 950, 859, 716, 488, 584]

# sort the list
numbers.sort()

# loop through the list
for number in numbers:
    # check if the number is divisible by 9
    if number % 9 == 0:
        print(f"The smallest multiple of 9 is {number}")
        break
```

3.قم بإيجاد أكبر رقم في القائمة التالية دون استخدام max &
sort

Find the largest number in the following list without using max and sort.

```
numbers = [-588, -479, -713, -701, -885, -578, -835, -466,
 -935, -665, -360, -837, -389, -367, -454, -668, -907, -822,
 -541, -680, -405, -330, -625, -916, -331, -876, -689, -753,
 -810, -648, -787, -952, -718, -401, -502, -699, -533, -450,
 -580, -725]
```

إذا لم توفق للوصول للحل يمكنك السعي مرة أخرى بمساعدة
الخطوات التالية

```python
# 3. Max number in a list without using max() and sort()

# initialize the largest number

# loop through the list

# check if the number is larger than the largest number

# update the largest number
```

```python
numbers = [-588, -479, -713, -701, -885, -578, -835, -466, -
935, -665, -360, -837, -389, -367, -454, -668, -907, -822, -
541, -
          680, -405, -330, -625, -916, -331, -876, -689, -753,
-810, -648, -787, -952, -718, -401, -502, -699, -533, -450, -
580, -725]

# initialize the largest number
largest = numbers[0]

# loop through the list
for number in numbers:
    # check if the number is larger than the largest number
    if number > largest:
        # update the largest number
        largest = number

print(f"The largest number is {largest}")
```

1.قم بإيجاد أكبر رقم زوجي في القائمة التالية دون استخدام max
& sort

Find the largest even number in the following list without using max and sort.

```
numbers = [-500, -694, -762, -445, -348, -361, -758,
 -594, -954, -861, -610, -549, -336, -400, -600, -836,
 -671, -573, -555, -390, -450, -811, -849, -870, -815, -694,
 -951, -588, -484, -609, -674, -411, -408, -498, -649,
 -541, -441, -839, -567, -898]
```

إذا لم توفق للوصول للحل يمكنك السعي مرة أخرى بمساعدة
الخطوات التالية

```python
# 4. Max even number in a list without using max() and sort()

# initialize the largest even number

# check if the number is even

# update the largest even number

# loop through the list

# check if the number is even and larger than the largest even
number

# update the largest even number
```

```python
numbers = [-500, -694, -762, -445, -348, -361, -758, -594, -
954, -861, -610, -549, -336, -400, -600, -836, -671, -573, -
555, -
          390, -450, -811, -849, -870, -815, -694, -951, -588,
-484, -609, -674, -411, -408, -498, -649, -541, -441, -839, -
567, -898]

# initialize the largest even number
for number in numbers:
    # check if the number is even
    if number % 2 == 0:
        # update the largest even number
        largest_even = number
        break

# loop through the list
for number in numbers:
    # check if the number is even and larger than the largest
even number
    if number % 2 == 0 and number > largest_even:
        # update the largest even number
        largest_even = number


print(f"The largest even number is {largest_even}")
```

{codezilla}