{//}

1.باستخدام for loop قم بالبحث عن الكلمة التي سيدخلها المستخدم في القائمة التالية وقم بطباعة الناتج

Using For loop search for the word that the user will enter in the following list and print the result.

```
words = [
        'each', 'those', 'feel', 'seem', 'high', 'place',
'little', 'world', 'very', 'still',
        'nation', 'hand', 'life', 'tell', 'write', 'become',
'here', 'show', 'house', 'both',
        'between', 'need', 'mean', 'call', 'develop', 'under',
'last', 'right', 'move', 'thing',
        'general', 'school', 'never', 'same', 'another',
'begin', 'while', 'number', 'part',
        'turn', 'real', 'leave', 'might', 'want', 'point',
'form', 'child', 'small', 'since',
        'against', 'late', 'home', 'interest', 'large',
'person', 'open', 'public', 'follow',
        'during', 'present', 'without', 'again', 'hold',
'codezilla', 'govern', 'around',
        'head', 'consider', 'word', 'program', 'problem',
'however', 'lead', 'system',
        'order', 'plan', 'keep', 'face', 'group', 'play',
'stand', 'increase',
        'early', 'course', 'change', 'help', 'line',
'possible', 'fact', 'down']
```

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

```
# 1. search for the word that user input in a list using for loop

# list of words

# user input

# search for the word

# check if the word is in the list
```

{//}

```
# 1. search for the word that user input in a list using for
loop

# list of words
words = [
        'each', 'those', 'feel', 'seem', 'high', 'place',
'little', 'world', 'very', 'still',
        'nation', 'hand', 'life', 'tell', 'write', 'become',
'here', 'show', 'house', 'both',
        'between', 'need', 'mean', 'call', 'develop', 'under',
'last', 'right', 'move', 'thing',
        'general', 'school', 'never', 'same', 'another',
'begin', 'while', 'number', 'part',
        'turn', 'real', 'leave', 'might', 'want', 'point',
'form', 'child', 'small', 'since',
        'against', 'late', 'home', 'interest', 'large',
'person', 'open', 'public', 'follow',
        'during', 'present', 'without', 'again', 'hold',
'codezilla', 'govern', 'around',
        'head', 'consider', 'word', 'program', 'problem',
'however', 'lead', 'system',
        'order', 'plan', 'keep', 'face', 'group', 'play',
'stand', 'increase',
        'early', 'course', 'change', 'help', 'line',
'possible', 'fact', 'down']
```

{//}

```
# user input
inp = input("Enter a word: ")

# a variable to check the word is in the list or not
check_word = True

# search for the word
for word in words:
    # check if the word is in the list
    if word == inp.lower():
        print(f"The word ({inp}) is in the list")
        check_word = False
        break

# print the word is not in the list
if check_word:
    print(f"The word ({inp}) is not in the list")
```

2. قم بإخبار المستخدم إذا ما كان الرقم الذي سيدخله هو رقم أولي أم لا

Tell the user if the entered number is a prime number or not.

```
# Prime number is an integer number that is only divisible by 1 and itself
```

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

```
# 2. is prime number

# prime number is an integer number that is only divisible by 1 and itself


# loop through 2 to number - 1

# check if number is divisible by any number between 2 and itself

# increment the number of divisors



# print the result
```

{//}

```python
# 2. is prime number


# prime number is an integer number that is only divisible by 1
and itself

# user input
number = int(input("Enter an integer number: "))

# definfe a variable to check for the number of divisors
num_divisors = 0

# loop through 2 to number - 1
for i in range(1, number+1):
    # check if number is divisible by any number between 2 and
itself
    if number % i == 0:
        # increment the number of divisors
        num_divisors += 1


# print the result
if num_divisors == 2:
    print(f"{number} is a prime number")
else:
    print(f"{number} is not a prime number")
```

3.قم بتحويل عناصر القائمة التالية إلى أرقام موجبة (بعد أن تنتهي من إجابة هذا السؤال قم بإلقاء نظرة على إجابته)

Change list items into their absolute values, and do not forget to look at this question answer.

```
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

```
# 3. Absolute value for list of numbers, take a look at the solutions

# solution 1

# list of numbers

# empty list to store positive numbers

# loop through the list

# check if number is negative

# add the number to the list

#######

# solution 2

# list of numbers

# empty list to store positive numbers

# loop through the list

# add the absolute value of number to the list using abs() function
```

{//}

```
# 3. Absolute value for list of numbers, take a look at the
solutions

# solution 1

# list of numbers
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]

# empty list to store positive numbers
positive_numbers = []

# loop through the list
for number in numbers:
    # check if number is negative
    if number < 0:
        number *= -1
    # add the number to the list
    positive_numbers.append(number)

print(positive_numbers)



#######
```

{//}

```
# solution 2

# list of numbers
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]

# empty list to store positive numbers
positive_numbers = []

# loop through the list
for number in numbers:
    # add the absolute value of number to the list using abs()
function
    positive_numbers.append(abs(number))

print(positive_numbers)
```

{//}

4.قم بعد كم مرة تكرر الحرف a وكم مرة تكرر الحرف e في القائمة التالية

Find the number of occurrences of the letter a and the letter e in the following list

```
lst_words = [['have', 'that', 'they', 'with', 'this', 'from',
'which', 'would', 'will', 'there', 'make', 'when', 'more',
'other', 'what', 'time', 'about', 'than', 'into', 'could'],
[ 'state', 'only', 'year', 'some', 'take', 'come', 'these',
'know', 'like', 'then', 'first', 'work', 'such', 'give',
'over', 'think', 'most', 'even', 'find', 'also', 'after',
'many', 'must', 'look', 'before', 'great', 'back', 'through',
'long'],
[ 'where', 'much', 'should', 'well', 'people', 'gouda', 'just',
'because', 'good', 'each', 'those', 'feel', 'seem', 'high',
'place', 'little', 'world', 'very', 'still', 'nation', 'hand',
'life', 'tell', 'write', 'become', 'here', 'show', 'house',
'both', 'between', 'need', 'mean', 'call', 'develop', 'under',
'last', 'right', 'move', 'thing'],
['general', 'school', 'never', 'same', 'another', 'begin',
'while', 'number', 'part', 'turn', 'real', 'leave', 'might',
'want', 'point', 'form', 'child', 'small', 'since', 'against',
'late', 'home', 'interest', 'large', 'person', 'open',
'public', 'follow', 'during', 'present', 'without', 'again',
'hold', 'codezilla', 'govern', 'around', 'head', 'consider',
'word', 'program', 'problem', 'however', 'lead', 'system'],
['order', 'plan', 'keep', 'face', 'group', 'play', 'stand',
'increase', 'early', 'course', 'change', 'help', 'line',
'possible', 'fact', 'down']]
```

{//}

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

```
# 4. Counting the number of letter "a" and letter "e" in a list of words

# list of words

# define a counter

# loop through the list of words

# loop through the words in the list

# loop through the letters in the word

# check if letter is a or e

# print the result
```

```
# list of words
lst_words = [
       ['have', 'that', 'they', 'with', 'this', 'from',
'which', 'would', 'will', 'there',
       'make', 'when', 'more', 'other', 'what', 'time',
'about', 'than', 'into', 'could'],

      [ 'state', 'only', 'year', 'some', 'take', 'come',
'these', 'know', 'like', 'then',
       'first', 'work', 'such', 'give', 'over', 'think',
'most', 'even', 'find', 'also',
       'after', 'many', 'must', 'look', 'before', 'great',
'back', 'through', 'long'],

      [ 'where', 'much', 'should', 'well', 'people', 'gouda',
'just', 'because', 'good',
       'each', 'those', 'feel', 'seem', 'high', 'place',
'little', 'world', 'very', 'still',
       'nation', 'hand', 'life', 'tell', 'write', 'become',
'here', 'show', 'house', 'both',
       'between', 'need', 'mean', 'call', 'develop', 'under',
'last', 'right', 'move', 'thing'],

       ['general', 'school', 'never', 'same', 'another',
'begin', 'while', 'number', 'part',
       'turn', 'real', 'leave', 'might', 'want', 'point',
'form', 'child', 'small', 'since',
       'against', 'late', 'home', 'interest', 'large',
'person', 'open', 'public', 'follow',
       'during', 'present', 'without', 'again', 'hold',
'codezilla', 'govern', 'around',
```

{//}

```
        'head', 'consider', 'word', 'program', 'problem',
'however', 'lead', 'system'],

        ['order', 'plan', 'keep', 'face', 'group', 'play',
'stand', 'increase',
        'early', 'course', 'change', 'help', 'line',
'possible', 'fact', 'down']]


# define a counter
counter_a = 0
counter_e = 0

# loop through the list of words
for lst in lst_words:
    # loop through the words in the list
    for word in lst:
        # loop through the letters in the word
        for letter in word:
            # check if letter is a or e
            if letter == 'a':
                counter_a += 1
            elif letter == 'e':
                counter_e += 1


# print the result
print(f"The number of letter 'a' in Words is {counter_a}")
print(f"The number of letter 'e' in Words is {counter_e}")
```