1. قم بعمل list جديدة تحتوي على مربع كل رقم من الأرقام التالية

create a new list with the square of the numbers in the given list.

```
numbers = [1, 2, 3, 4, 5]
```

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```
# Define the list of numbers

# Initialize an empty list to store the squares of the numbers

# Use a for loop to iterate over the numbers in the list

# Print the resulting list of squared numbers
```

```python
# Define the list of numbers
numbers = [1, 2, 3, 4, 5]

# Initialize an empty list to store the squares of the numbers
squared_numbers = []

# Use a for loop to iterate over the numbers in the list
for num in numbers:
    # Calculate the square of each number
    square = num ** 2
    # Append the square to the list of squared numbers
    squared_numbers.append(square)

# Print the resulting list of squared numbers
print(squared_numbers)
```

2. قم بعمل list جديدة تحتوي على درجات الطلاب كنسبة مئوية بالصيغة التالية 88%

create a new list with the scores as percent and each score in the format of '88%'

```
scores = [75, 87, 93, 98, 82, 67, 91, 88]
```

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```
# Code to create a new list with the scores as percent and each score in the
format of '88%'

# Define the list of scores

# Initialize an empty list to store the scores as percent

# Use a for loop to iterate over the scores in the list

# Print the resulting list of scores as percent
```

```python
# Define the list of scores
scores = [75, 87, 93, 98, 82, 67, 91, 88]

# Initialize an empty list to store the scores as percent
percent_scores = []

# Use a for loop to iterate over the scores in the list
for score in scores:
    # Calculate the score as percent and convert it to a string
    percent_score = str(score) + '%'
    # Append the score as percent to the list of percent_scores
    percent_scores.append(percent_score)

# Print the resulting list of scores as percent
print(percent_scores)
```

3.قم بجعل كل عناصر ال list التالية lowercase

Make a list with all the items in the following list in lowercase.

```
fruits = ["APPLE", "ORANGE", "BANANA", "PEAR", "MANGO"]
```

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```
# Initialize an empty list to store the lowercase fruits

# Use a for loop to iterate over each fruit in the list

# Print the lower_fruits list
```

```
fruits = ["APPLE", "ORANGE", "BANANA", "PEAR", "MANGO"]

# Initialize an empty list to store the lowercase fruits
lower_fruits = []

# Use a for loop to iterate over each fruit in the list
for fruit in fruits:
    # Convert the fruit to lowercase and add it to the lower_fruits list
    lower_fruits.append(fruit.lower())

# Print the lower_fruits list
print(lower_fruits)
```

4.قم بجعل كل عناصر ال list التالية title case

Make a list with all the items in the following list in title case.

```
names = ["mohamed gouda", "islam mahfouz", "ayman hamed", "hassan ali",
"mostafa mohamed"]
```

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

```
# Initialize an empty list to store the title-cased names

# Use a for loop to iterate over each name in the list

# Print the title_names list
```

```
names = ["mohamed gouda", "islam mahfouz", "ayman hamed", "hassan ali", "mostafa
mohamed"]

# Initialize an empty list to store the title-cased names
title_names = []

# Use a for loop to iterate over each name in the list
for name in names:
    # Convert the name to title case and add it to the title_names list
    title_names.append(name.title())

# Print the title_names list
print(title_names)
```

5.قم بعمل list تحتوي على كل حرف في النص الذي سيدخله المستخدم واجعله uppercase

Make a list from the letters of the user string in uppercase.

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```
# Initialize an empty list to store the uppercase letters

# Use a for loop to iterate over each letter in the string

# Print the letters list
```

```
### >>>> We could use the upper() method on the string
txt = input("Enter a string: ")

# Initialize an empty list to store the uppercase letters
letters = []

# Use a for loop to iterate over each letter in the string
for char in txt:
    # Convert the letter to uppercase and add it to the letters list
    letters.append(char.upper())

# Print the letters list
print(letters)
```

6.قم بعمل قائمة جديدة تحتوي على الأسعار بالصيغة التالية

$10.99

Make a new list with prices in the following form

$10.99.

```
prices = [10.99, 20.99, 30.99, 40.99, 50.99]
```

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

```
# write the prices in the list as currency in dollars

# (e.g. 10.99 should be $10.99)

# Initialize an empty list to store the prices as currency

# Use a for loop to iterate over each price in the list

# Print the currencies list
```

```python
prices = [10.99, 20.99, 30.99, 40.99, 50.99]

# Initialize an empty list to store the prices as currency
currencies = []

# Use a for loop to iterate over each price in the list
for price in prices:
    # Cadd a "$" symbol in front of the price
    currency = f"${price}"
    # Add the currency to the currencies list
    currencies.append(currency)

# Print the currencies list
print(currencies)
```

7.قم بحساب متوسط الأسعار التالية دون استخدام sum & len Functions

Calculate the average of the following price list without using sum nor len functions.

```
# A list of prices
prices = [75, 153, 635, 144, 356, 712, 675, 234]
```

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

```
# Calculate the average without using the sum() function and the len() function

# A list of prices

# Initialize variables to store the total and the number of prices

# Loop through the list of prices

# Calculate the average price

# Print the average price
```

```python
# A list of prices
prices = [75, 153, 635, 144, 356, 712, 675, 234]

# Initialize variables to store the total and the number of prices
total = 0
count = 0

# Loop through the list of prices
for price in prices:
    # Add the current price to the total
    total += price
    # Increment the count of prices
    count += 1

# Calculate the average price
average = total / count

# Print the average price
print(f"The average price is {average:.2f}")
```

8.قم بتحويل ال list التالية إلى نص باستخدام For لتحصل على الناتج التالي

Make the following list into one string using For, to get the following output. (Your own implementation of join string method)

```
nums = [1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29]
```

```
#output
"1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29"
```

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

```
# Code to convert a list of numbers into a comma-separated string

# Define the list of numbers

# Initialize the string with the first number

# Use a for loop to iterate over the items in the list, starting from the second item

# Print the resulting string
```

{//}

```python
# Define the list of numbers
nums = [1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29]

# Initialize the string with the first number
string = str(nums[0])

# Use a for loop to iterate over the items in the list, starting from the second item
for num in nums[1:]:
    # Add the current item to the string, separated by a comma
    string += ", " + str(num)

# Print the resulting string
print(string)
```