

Python List

- 1) Accept two int values from the user and return their product. If the product is greater than 1000, then return their sum
- 2) Accept five int values from the user and return their average.
- 3) Given a string of odd length greater than 7, flip a string composed of the three characters in the middle of a given string
- 4) Given a string and an int n, remove the characters from the string in starting from zero to n and returning a new string
- 5) Given a list of ints, return True if the first and last numbers in a list are identical.
- 6) Given a list of two. Create a third list by choosing an item odd index in the first list and even index in the second.

`listOne = [3, 6, 9, 12, 15, 18, 21]`
`listTwo = [4, 8, 12, 16, 20, 24, 28]`
- 7) Given a list of two. Create a third list by choosing an item odd index in the first list and even index in the second.


`List = [54, 44, 27, 79, 91, 41]`
- 8) Remove duplicates from a list and create a tuple and find the minimum number and maximum

`sampleList = [87, 45, 41, 65, 94, 41, 99, 94]`
- 9) Write a Python program to display the astrological sign for a given date of birth.

Expected Result:
Birthday entrance: 15


Entry Month of birth (e.g. March, July, etc.): May Your
astrological sign is: Taurus

 **Capricorn**
Dec 22 to Jan 19

 **Aquarius**
Jan 20 to Feb 18

 **Pisces**
Feb 19 to Mar 20

 **Aries**
Mar 21 to Apr 19

 **Taurus**
Apr 20 to May 20

 **Gemini**
May 21 to Jun 20

 **Cancer**
Jun 21 to Jul 22

 **Leo**
Jul 23 to Aug 22

 **Virgo**
Aug 23 to Sep 22

 **Libra**
Sep 23 to Oct 22

 **Scorpio**
Oct 23 to Nov 21

 **Sagittarius**
Nov 22 to Dec 21

- 10) Write a function that takes a list of numbers stored in ascending order and two values (lower limit and upper limit), and displays the sublist whose items are greater than or equal to the lower limit and less than or equal to the upper limit.

Example: initial list=[12,14,15,16,18,20,24,26,28,32,34,38]

lower limit=13

upper limit = 26

displayed list: [14,15,16,18,20,24,26]

- 11) Develop a program that displays the sum of the odd and even values of the sequence ([21, 5, 34, 8, 16, 7, 3])
- 12) Assuming that the population of country A is of the order of 80,000 with an annual growth rate of 3% and that the population of B is 200,000 with an annual growth rate of 1.5%. Write a program that calculates and writes down the number of years it takes for the population of country A to exceed or equal the population of country B, maintaining growth rates.

13) Given a list

`S = [1,2,[3,4,[5,6,[7,8,[9,[0]]]]]`

Answer correctly:

The size of the S list.

An expression that replaces the 0 in the list with 17.

14) Given an input string, count the occurrences of all characters in a string.

Example: Input: ' pynativepynvepynative '

Sortie: {'p': 3, 'y': 3, 'n': 3, 'a': 2, 't': 2, 'i': 2, 'v': 3, 'e': 3}

15) Write a Python program to add two given lists and find the sum and difference between the lists. Return the result in a tuple.

16) Write a Python program to reverse a given string.

17) Create a function that receives the price of a product and the percentage of discount. View the amount of the discount and the price to be paid after the discount:

18) Print the value of the 'history' key from the dict below

```
sampleDict = {  
    "class": {  
        "student": {  
            "name": "Mike",  
            "marks": {  
                "physics": 70,  
                "history": 80  
            }  
        }  
    }  
}
```

19) Create a function that receives a list as a parameter and returns the second highest value.

20) Write a Python program to return a new set with unique elements from both sets by removing duplicates.

```
set1 = {10, 20, 30, 40, 50}
```

```
set2 = {30, 40, 50, 60, 70}
```