Python Assignment

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1. Write a function in python which detects whether the given two strings are anagrams or not

```
2. def anagrams(s1 , s2):
3.     str1 = "\nSting is anagram"
4.     str2 = "\nSting is not a anagram"
5.     if( sorted(s1) == sorted(s2) ):
6.         return str1
7.     else:
8.         return str2
9.
10.    s1 = input("Enter string 1 : ")
11.    s2 = input("\nEnter string 2 : ")
12.    result = anagrams(s1 , s2)
13.    print(result)
```

Output :

```
Enter string 1 : Hello World

Enter string 2 : World Hello

Sting is anagram
```

2. Write a program in Python to reverse a string without using inbuilt function reverse string?

```python
Str = input("Enter The String To Be Revesed :")
print(Str[len(Str)::-1])
```

Output :

```
Enter The String To Be Revesed : Hello World
dlroW olleH
```

3. Write a program to calculate number of upper case letters and number of lower case letters?

```python
def check(Str):
    ucount = 0
    lcount = 0
    for i in range(len(Str)):
        if Str[i].isupper():
            ucount += 1
        elif Str[i].islower():
            lcount += 1

    print("\nUpper Letter Count = ",ucount)
    print("\nLower Letter Count = ",lcount,"\n")

Str = input("Enter the String : ")
check(Str)
```

Output :

```
Enter the String : Hello World

Upper Letter Count =  2

Lower Letter Count =  8
```

4. Write a Python program to sort a list of elements using Gnome sort.

```python
k = 1
SortList = []

def Ggnome():
    global SortList
    global k
    while True:
        if SortList[k] < SortList[k-1]:
            swap()
            dec()
        else:
            inc()

        if k == (len(SortList)):
            break

    print("Sorted List : ",SortList)


def dec():
    global k
    if not k == 1:
        k = k - 1
    return

def inc():
    global k
    global SortList
    leg = (len(SortList))
    if not k == leg:
        k = k + 1
    return
```

```python
def swap():
    global SortList
    global k
    temp = SortList[k]
    SortList[k] = SortList[k - 1]
    SortList[k - 1] = temp



n = int(input("Enter the number of Items you would li
ke to insert : "))

print("Enter ",n," Number of valuee")

for i in range(n):
    ele = int(input())
    SortList.append(ele)

print("Unsorted List : ",SortList)

Ggnome()
```

Output :

```
Enter the number of Items you would like to insert : 5
Enter  5  Number of valuee
54
63
98
51
25
Unsorted List :  [54, 63, 98, 51, 25]
Sorted List :  [25, 51, 54, 63, 98]
```

5. **Write a Python program to find the first duplicate element in a given array of integers. Return -1 If there are no such elements**

```python
Find = []

def Dup():
    global Find
    for i in range((len(Find) - 1)):
        temp = Find[i]
        for i in range(( i + 1),(len(Find))):
            if( temp == Find[i]):
                return temp

    return -1

n = int(input("Enter the number of Items you would li
ke to insert : "))

print("Enter ",n," Number of valuee")

for i in range(n):
    ele = int(input())
    Find.append(ele)

print(Find)

sol = Dup()
print("Duplicate Element in the array is : ",sol)
```

Output :

```
Enter the number of Items you would like to insert : 5
Enter  5  Number of valuee
95
68
32
12
54
[95, 68, 32, 12, 54]
Duplicate Element in the array is :   -1
```

```
Enter the number of Items you would like to insert : 5
Enter  5  Number of valuee
95
62
45
62
32
[95, 62, 45, 62, 32]
Duplicate Element in the array is :   62
```