**Assignment- Essentials of Python Programming**

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List 1:

1.

var = [1, 1, 1, 1, 1, 1, 1, 2]  
var\_set = list(set(var))  
dict = {var\_set[0]: 0, var\_set[1]: 0}  
for elem in var:  
 dict[elem] += 1  
if dict[var\_set[0]] > 1:  
 print(var\_set[1])  
else:  
 print(var\_set[0])

2.

list\_2 = [1, 3, 5, 2, 6, 7, 2, 5, 98, 14, 15]  
sum = 0  
for elem in list\_2:  
 sum += elem  
mean = sum / len(list\_2)  
print(mean)  
diff = abs(mean - list\_2[0])  
res = list\_2[0]  
for elem in list\_2:  
 if diff > abs(mean - elem):  
 diff = abs(mean - elem)  
 # print()  
 res = elem  
print(res)

5.

lst = [2, 3, 23, 4, 5, 1]  
modified\_lst = [2, 3, 23, 4, 5]  
for element in lst:  
 if element not in modified\_lst:  
 print(element)

6.

list\_6 = [3, 6, 12, 44, 48, 99]  
list\_6.sort(reverse=False)  
result = abs(list\_6[0] - list\_6[1])  
print(result)

7.

list\_7 = [72, 5, 104, 8, 39, 34, 12, 34]  
sum = 0  
for elem in list\_7:  
 sum += elem  
mean = sum / len(list\_7)  
# print(mean)  
count = 0  
for elem in list\_7:  
 if elem < mean:  
 count += 1  
print(count)

List 2:

1.

time\_str = "5:70:65"  
list\_time = time\_str.split(":")  
print(list\_time)  
list\_time.reverse()  
sec = int(list\_time[0]) % 60  
mins = (int(list\_time[1]) + (int(list\_time[0]) // 60)) % 60  
hrs = ((int(list\_time[1]) + (int(list\_time[0]) // 60)) // 60) + (int(list\_time[2]))  
result = str(hrs) + ":" + str(mins) + ":" + str(sec)  
print(result)

4.

str = "pinched"  
str\_set = list(set(str))  
dict = {}  
for elem in str\_set:  
 dict[elem] = 0  
for elem in str:  
 dict[elem] += 1  
check = False  
for key, value in dict.items():  
 if dict[key] != 1:  
 print("String is not an isogram")  
 check = True  
 break  
if check == False:  
 print("String is an isogram!")

5.

str = "hello"  
list = []  
for i in range(len(str)):  
 list.append(str[:i] + str[i].upper() + str[i + 1:])  
print(list)

6.

number = 93041  
num\_dup = number  
check=10  
div=1  
len=0  
while num\_dup!=0:  
 if num\_dup % 10<check:  
 check=num\_dup%10  
 num\_dup//=10  
 len+=1  
num\_temp=number  
for num in range(len):  
 div = div \* 10  
 if check==num\_temp%10:  
 break  
 num\_temp//=10  
result=int((number//div)\*(div/10)+(number%div)%(div/10))  
print(result)

7.

number=228701  
lst=[]  
while number!=0:  
 lst.append(number%10)  
 number//=10  
 # len+=1  
lst.sort(reverse=True)  
lst.pop()  
res=0  
for elem in lst:  
 res=elem+res\*10  
print(res)

8.

sentence="hello world the sun has risen in the world"  
list\_word = sentence.split(" ")  
word\_set = list(set(list\_word))  
dict = {}  
for elem in word\_set:  
 dict[elem] = 0  
for elem in list\_word:  
 dict[elem] += 1  
print(dict)