**Class -** CSE 8392 Special Topics (Advanced Application Programming)  
**Quest** – Basic Python Quest **Name** - Rishab Vaishya **SMU ID** - 47505527

**Code :**

*# Basic Python Quest  
# When returning lists of values, order is not important unless specified*\_\_STUDENT\_ID\_\_ = **"47505527"**\_\_CODING\_NAME\_\_ = **"Mindfreak"  
  
  
def** isSorted(list):  
 i = 1  
 **while** i < len(list):  
 *# when RHS value < LHS value* **if** list[i] < list[i - 1]:  
 **return False** i += 1  
 **return True  
  
  
def** isSortedAndUnique(list):  
 *#reusing the already defined functions* **if** isSorted(list) **and** hasUniqueValues(list):  
 **return True  
  
 return False  
  
  
def** hasUniqueValues(list):  
 i = 1  
 **while** i < len(list):  
 **for** j **in** range(i):  
 *# returns false when duplicate found* **if** list[j] == list[i]:  
 **return False** i += 1  
 **return True  
  
  
def** genSortedArrayUniqueValues(list):  
 *# creating new result list, which will have sorted & unique values* newList = []  
 **if not** list:  
 **return** list  
 *# appending 1st element from input list* newList.append(list[0])  
 i = 1  
 **for** i **in** range(len(list)):  
 *# taking 1 element from input list & compare it with each values of result list* compareItem = list[i]  
 isDuplicate = **False  
 for** j **in** range(len(newList)):  
 *# if element is duplicate, move on to the next element from input list* **if** compareItem == newList[j] :  
 isDuplicate = **True  
 break** *# if element in new result list > comparing element from input list then swap,  
 # so that at the end the largest value is appended at the end,  
 # resulting in ascending sort* **elif** compareItem < newList[j] :  
 temp = newList[j]  
 newList[j] = compareItem  
 compareItem = temp  
  
 **if not** isDuplicate :  
 newList.append(compareItem)  
 **return** newList  
  
  
**def** listToMapTwoByTwo(list):  
 map = {}  
  
 **if not** list:  
 **return** map  
  
 i = 0  
 **while** i < (len(list)-1):  
 map[list[i]] = list[i+1]  
 *# iterating loop by 2* i+=2  
 **return** map  
  
  
**def** wordsInStringToDictWordCount(s):  
 dict = {}  
 words = s.split()  
 **for** word **in** words :  
 *# if word already exists* **if** word **in** dict :  
 dict[word] = dict[word]+1  
 **else** :  
 dict[word] = 1  
  
 **return** dict  
  
  
**def** reverseWordsInString(string):  
 s = **""** words = string.split()  
 **for** word **in** reversed(words):  
 s+= str(word)  
 s+= **' '** *# strip removes the last space from the string* **return** s.strip()  
  
  
**def** genListOfOverlaps(list1, list2,):  
 finalList = []  
 **for** myItem **in** list1 :  
 *# if element from list 1 is present in list 2* **if** myItem **in** list2 :  
 finalList.append(myItem)  
 **return** finalList  
  
  
**def** removeDupsNoSet(list):  
 finalList = []  
 **for** item **in** list :  
 *# if element from input list not in final resulting list* **if** item **not in** finalList :  
 finalList.append(item)  
 **return** finalList  
  
  
**def** removeDupsUseSet(mylist):  
 *# list converted to set converted to list & returned* **return** list(set(mylist))  
  
  
**if** \_\_name\_\_ == **'\_\_main\_\_'**:  
 print (**'Hello Mindfreak!'**)

**Output :**

