WEEK 7 - CONTEST REVISION

NOTE:

- **No need to submit anywhere, just keep track of all the PDF you made in a specific folder.**
- **Compare your solution with the solution I'll provide, in case of doubts, kindly reach out to me.**
- **You may get assignment solution in format of PDF or VIDEO solution, depending on the difficulty level.**

Q1. Write a function to check if a given string is a palindrome. Use 2 methods. One is using slicing and other using loops. Both should be written. So basically make 2 functions for each.

Q2. Write a program to generate a list of even numbers between 1 and 20 using list comprehension.

Q3. Write a function that takes a string as input and returns only vowels in that string.

```
# Example 1
r = onlyVowels("abcdef")
print(r)

# Output
ae

# Example 2
r = onlyVowels("A24bKA78EAC%^i")
print(r)

# Output
AAEAi

# Example 2
r = onlyVowels("123456789")
print(r)

# Output
```

Q4. Write a function to find the contiguous subarray with the largest sum in a given list of integers.

```
# Example
mylist = [[1,2,1,6,2],[5,6,5],[-1,1,1,1,1]]
r = largestSum(mylist)
print(r)

# Output
16

# Explanation
[5,6,5] has highest sum so answer is 16
```

Q5. Python program to find second largest number in a list. If 2nd largest element does not exists. Return -1.

Q6. Write a program for Sum of number digits in List.

```
# Example
mylist = [12, 67, 98, 34]

# Output
[3, 13, 17, 7]
```

Q7. Write different ways to remove i'th character from string in Python. Ask **i** from user.

Q8. Write a program to find Maximum frequency character in String. Return/Print the character which comes the most times in that string.

Q9. Given a string of size n, write functions to perform following operations on string:

- **Left (Or anticlockwise)** rotate the given string by d elements (where d <= n).
- **Right (Or clockwise)** rotate the given string by d elements (where d <= n).
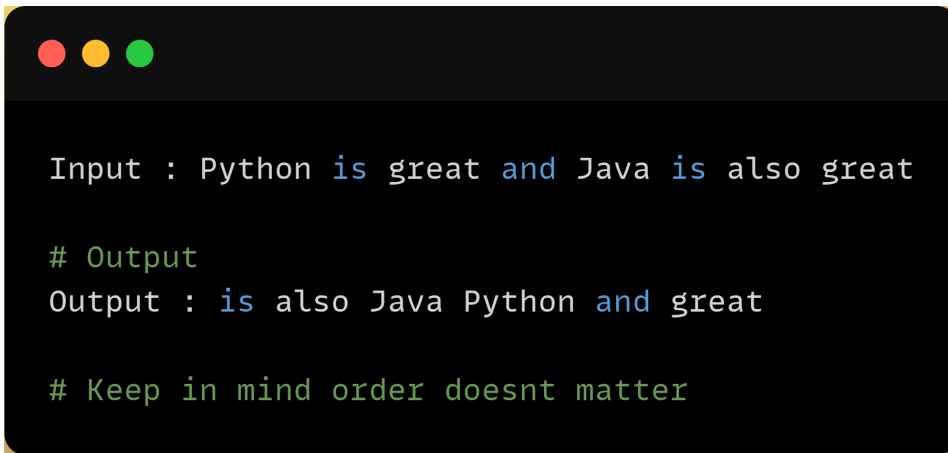
```
Input : s = "pythonprogramming"
        d = 4

Left Rotation  : onprogrammingpyth
Right Rotation : mingpythonprogram
```

Q10. Python program to find the sum of all items in a dictionary.

Q11. Ways to sort list of dictionaries by values in Python – Using lambda function.

Q12. Remove all duplicates words from a given sentence.

```
Input : Python is great and Java is also great

# Output
Output : is also Java Python and great

# Keep in mind order doesnt matter
```
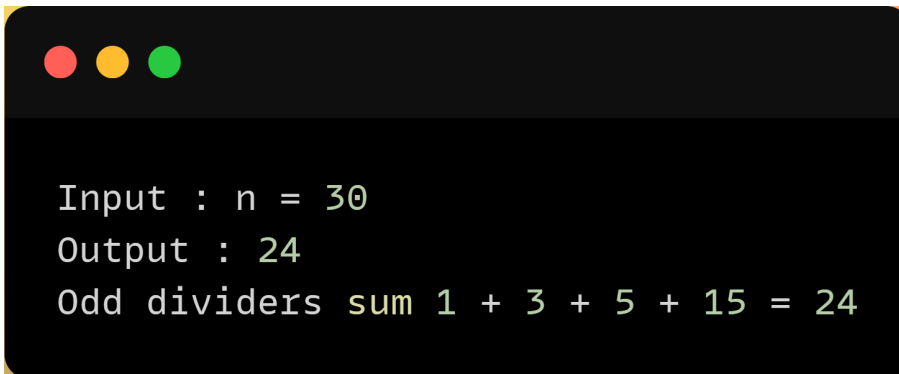
Q13. Write a program to get/print the number of characters, words, spaces and lines in a file.

Q14. Python Program to merge two files into a third file.

Q15. Python Program for Find sum of odd factors of a number.

```
Input : n = 30
Output : 24
Odd dividers sum 1 + 3 + 5 + 15 = 24
```

Q16. Write a python program for a given long integer, we need to find if the difference between sum of odd digits and sum of even digits is 0 or not. The indexes start from zero (0 index is for the leftmost digit).

```
Input: 1212112
Output: Yes
Explanation:
the odd position element is 2+2+1=5
the even position element is 1+1+1+2=5
the difference is 5-5=0 equal to zero .
So print yes.

Input:12345
Output: No
Explanation:
the odd position element is 1+3+5=9
the even position element is 2+4=6
the difference is 9-6=3 not equal to zero.
So print no.
```