**Function questions in python**

1.Write a python function to find the maximum sum of a subarray in a given list of integers

def max\_subarray\_sum(nums):

if not nums:

return 0 # or float('-inf'), depending on requirements

max\_current = max\_global = nums[0]

for num in nums[1:]:

max\_current = max(num, max\_current + num)

max\_global = max(max\_global, max\_current)

return max\_global

2. Create a function that takes a list of words as inputs and returns a new list with words sorted by their length

def sort\_words\_by\_length(words):

return sorted(words, key=len)

3. Write a python function to find all prime numbets within a given range

def find\_primes\_in\_range(start, end):

def is\_prime(n):

if n < 2:

return False

for i in range(2, int(n\*\*0.5) + 1):

if n % i == 0:

return False

return True

primes = [num for num in range(start, end + 1) if is\_prime(num)]

return primes

4. Create a function that takes a string as input and returns the most frequently occurring character in the string

from collections import Counter

def most\_frequent\_char(s):

if not s:

return None # or raise ValueError("Input string is empty")

counter = Counter(s)

most\_common = counter.most\_common(1)[0] # Returns a tuple: (char, count)

return most\_common[0]

5. Write a python function to check if two strings are anagrams of each other.

def are\_anagrams(str1, str2):

str1 = str1.replace(" ", "").lower()

str2 = str2.replace(" ", "").lower()

return sorted(str1) == sorted(str2)

6. Create a function that takes a list of dictionaries (each representing a person) as input and returns a new list of dictionaries , sorted by the value of a given key(e.g, age)

people = [

{"name": "Alice", "age": 30},

{"name": "Bob", "age": 25},

{"name": "Charlie", "age": 35}

]

sorted\_people = sort\_dicts\_by\_key(people, "age")

print(sorted\_people)