**Questions:**

1. Take 20 integer inputs from user and print the following:

number of positive numbers

number of negative numbers

number of odd numbers

number of even numbers

number of 0s.

1. Take 10 integer inputs from the user and store them in a list. Now, copy all the elements in another list but in reverse order.
2. Write a program to find the sum of all elements of a list.
3. Write a program to find the product of all elements of a list.
4. Write a program to find largest and smallest elements of a list.

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1. Write a program to check if elements of a list are same or not if read from front or back (palindrome)
2. Write a Python program to unpack a tuple into several variables.
3. Write a Python program to add an item to a tuple.
4. Write a Python program to convert a tuple to a dictionary.
5. Write a Python program to reverse a tuple.
6. Write a program to add two lists index-wise. Create a new list that contains the 0th index item from both the list, then the 1st index item, and so on till the last element. any leftover items will get added at the end of the new list.
7. Write a program to sort a Tuple
8. Write a Python program to change Brad’s salary to 8500 in the following dictionary.

Given:

sample\_dict = {

'emp1': {'name': 'Jhon', 'salary': 7500},

'emp2': {'name': 'Emma', 'salary': 8000},

'emp3': {'name': 'Brad', 'salary': 500}

}

Create a Python program that defines a class named Student with the following attributes:

name:

roll\_number:

gender:

cgpa:

Include the following methods in the class:

Constructor \_\_init\_\_(self, name, roll\_number, gender, cgpa): Initializes a new Student object with the provided attributes.

Getter methods: Provide getter methods for each attribute (get\_name(), get\_roll\_number(), get\_gender(), get\_cgpa()).

Setter methods: Provide setter methods for each attribute (set\_name(), set\_roll\_number(), set\_gender(), set\_cgpa()).

Create a Python program that defines a class named Student with the following attributes:

name: String representing the student's name

roll\_number: Integer representing the student's unique identification number

gender: String representing the student's gender ("male" or "female")

cgpa: Float representing the student's cumulative grade point average

Include the following methods in the class:

Constructor \_\_init\_\_(self, name, roll\_number, gender, cgpa): Initializes a new Student object with the provided attributes.

Getter methods: Provide getter methods for each attribute (get\_name(), get\_roll\_number(), get\_gender(), get\_cgpa()) to access their values.

Setter methods: Provide setter methods for each attribute (set\_name(), set\_roll\_number(), set\_gender(), set\_cgpa()) to update their values (with appropriate input validation, if necessary).

Include a method that displays the records of only male students.

Write main function according to this class.

**Submission Instructions**

Always read the submission instructions carefully.

* Rename your Jupyter notebook to your roll number and download the notebook as **.ipynb** extension.
* To download the required file, go to **File->Download .ipynb**
* Only submit the **.ipynb** file. DO NOT**zip** or **rar** your submission file
* Submit this file on Google Classroom under the relevant assignment.
* Late submissions will not be accepted