1. Write a paragraph about introducing you and your selected domain (include Full Name, domain name, register number, year .....). Write a python program to count the frequency of any specific word (in your domain) in the paragraph.

In [ ]:
```
### Program 1

name = "Vishal Kalita"
domain = "Personal expense tracker"
registrationNumber = 2347264


paragraph = f'Hello, I am {name}, currently pursuing my Master of Computer Applications with a pr

print(paragraph)
words = paragraph.split()
# print(words)

count = 0
frequency = input("Enter the word whose frequency you want: ")

for word in words:
    if word.lower().strip(',.') == frequency.lower().strip(',.'):
        count +=1
print(f'The count of "{frequency}" = {count}')
```

```
Hello, I am Vishal Kalita, currently pursuing my Master of Computer Applications with a project f
ocused on Personal expense tracker. My Registration Number is 2347264. Studying in 1st year 2023.
The count of "hi" = 0
```

2. Write a python program to display all the datatypes of selected specific elements in the paragraph. (For example:– name - string, reg.no - int, marks - float, etc.)

In [ ]:
```
### Program 2

def data_Type(word):
    try:
        int(word)
        return "int"
    except ValueError:
        return "string"


name = "Vishal Kalita"
domain = "Personal expense tracker"
registrationNumber = 2347264


paragraph = f'Hello, I am {name}, currently pursuing my Master of Computer Applications with a pr
words = paragraph.split()

for word in words:
    word = word.strip(',.')
    print(f'{word} - {data_Type(word)}')
```

```
Hello - string
I - string
am - string
Vishal - string
Kalita - string
currently - string
pursuing - string
my - string
Master - string
of - string
Computer - string
Applications - string
with - string
a - string
project - string
focused - string
on - string
Personal - string
expense - string
tracker - string
My - string
Registration - string
Number - string
is - string
2347264 - int
Studying - string
in - string
1st - string
year - string
2023 - int
```

3. Write a python program to count the number of alphabets, numeric and other special symbols in the paragraph.

In [ ]:
```python
###     Program 3

name = "Vishal Kalita"
domain = "Personal expense tracker"
registrationNumber = 2347264


paragraph = f'Hello, I am {name}, currently pursuing my Master of Computer Applications with a pr

# words = paragraph.split()

alphabet, num, special_ch = 0,0,0

for x in paragraph:
    if x.isalpha():
        alphabet+=1
    elif x.isdigit():
        num+=1
    elif not x.isspace():
        special_ch+=1


print(f'Alphabets = {alphabet}')
print(f'Numeric = {num}')
print(f'Special = {special_ch}')
```

```
Alphabets = 148
Numeric = 12
Special = 5
```

4. Create a Set with elements that consists of various data types (int, float, string, Boolean, etc. from your domain) and perform the functions pop(), clear(), discard() and del. Write the insights as docstring.

In [ ]:
```
###     Program 4

#Declaring the set for domain-- Finance Management (Expense tracker)

#expense_set = { name, email, contact, expense_category, Transaction_amount, tracking_expense}
expense_set = {"Vishal","vishal@gmail.com",123456677, "Clothing", 5500.00,True}

#Pop(): removes any random item from set
expense_set = {"Vishal","vishal@gmail.com",123456677, "Clothing", 5500.00,True}
expense_set.pop()
print(expense_set)
```

```
{True, 'Clothing', 'Vishal', 123456677, 5500.0}
```

In [ ]:
```
#clear(): will remove all the elements from the set
expense_set = {"Vishal","vishal@gmail.com",123456677, "Clothing", 5500.00,True}
expense_set.clear()
print(expense_set)
```

```
set()
```

In [ ]:
```
#discard(): removes the specified item from the set. also it does not throw any error if the iten

expense_set = {"Vishal","vishal@gmail.com",123456677, "Clothing", 5500.00,True}
expense_set.discard("Clothing")
print(f'Discarding set : {expense_set}')
```

```
Discarding set : {'vishal@gmail.com', True, 'Vishal', 123456677, 5500.0}
```

In [ ]:
```
#del(): Deletes the expense_set,  if we try to print expense_set it will throw an error
expense_set = {"Vishal","vishal@gmail.com",123456677, "Clothing", 5500.00,True}
print(expense_set)


del(expense_set)
print(expense_set)   ##This will show an error as we have deleted the expense_set
```

```
{'vishal@gmail.com', True, 'Clothing', 'Vishal', 123456677, 5500.0}
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[14], line 7
      3 print(expense_set)
      6 del(expense_set)
----> 7 print(expense_set)   ##This will show an error as we have deleted the expense_set

NameError: name 'expense_set' is not defined
```

5. Update the Set with minimum 5 string attributes of your domain and arrange the Set in descending order.

In [ ]:
```
####    Program 5

empty_set = set()
```

```
expense_set = { "Vishal", "Kalita","vishal@gmail.com","Groceries","Male"}

empty_set.update(expense_set)

print(empty_set)

#Arranging in Descending Order

desc_list = sorted(empty_set, reverse = True)
print(set(desc_list))
```

```
{'vishal@gmail.com', 'Vishal', 'Male', 'Kalita', 'Groceries'}
{'vishal@gmail.com', 'Groceries', 'Vishal', 'Male', 'Kalita'}
```

6. Create a Tuple and Execute the packing and unpacking operations of tuples using the attributes of your domain.

In [ ]:
```
###     Program 6

expense_set = ["Vishal","vishal@gmail.com",123456677, "Clothing", 5500.00,True]

name, email, number , expense_category, Transaction_amount, expense_added = expense_set

print(f'name = {name}')
print(f'email = {email}')
print(f'number = {number}')
print(f'expense_category = {expense_category}')
print(f'Transaction = {Transaction_amount}')
print(f'expense_added = {expense_added}')
```

```
name = Vishal
email = vishal@gmail.com
number = 123456677
expense_category = Clothing
Transaction = 5500.0
expense_added = True
```

7. Enter your domain name as characters and count any number of characters and print the count (for example – (‘p’,’r’,’o’,’g’,’r’,’a’,’m’) count of ‘r’ = 2)

In [ ]:
```
###     Program 7


domain = "Finance Management (expense tracker)"

count = 0
frequency = input("Enter the character : ")

for x in domain:
    if x.lower() == frequency.lower():
        count+=1

print(f'frequency of "{frequency}" = {count}')
```

```
frequency of "t" = 2
```

8. Enter your domain name, execute all the slicing possibilities and also negative indexing.

In [ ]:

```
###     Program 8

domain = input("Enter your domain here : ")
# print(domain)

print("\t\t\tPositive Slicing")
print(f'Characters from index 1 to 5 : {domain[1:5]}')
print(f'Characters from index 0 to 5 : {domain[:5]}')
print(f'Characters from index 1 to end index : {domain[1:]}')
print(f'Characters from index 0 to end index : {domain[:]}')

#### NEGATIVE SLICING

print("\t\tNegative Slicing")
print(f'Characters from index -7 to -1 : {domain[-7:-1]}')
print(f'Characters from index 0 to all except the last: {domain[:-1]}')


##NEGAIVE STEP

print("\t\tNegative Step")
print(f'Reversing the string : {domain[::-1]}')
```

```
Enter your domain here : Expense Tracker
                        Positive Slicing
Characters from index 1 to 5 : xpen
Characters from index 0 to 5 : Expen
Characters from index 1 to end index : xpense Tracker
Characters from index 0 to end index : Expense Tracker
                Negative Slicing
Characters from index -7 to -1 : Tracke
Characters from index 0 to all except the last: Expense Tracke
                Negative Step
Reversing the string : rekcarT esnepxE
```