Adhish Bahl
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1MCA A
Python Lab 1

Part I

Q1) 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.

Code:

```python
name = "Adhish Bahl"
regNo = 2347203
course = "1MCA B"
domain = "Online Retail Store for Exclusive Sneakers"
domainDescription = "Hii, My name is Adhish Bahl (2347203), from 1MCA-B. This
is my Python Lab program 1. My domain is Online Retail Store for Exclusive
Sneakers. In this domain, the basic idea behind everthing is to provide the
access to exclusive sneakers that are not available in India. This works as
the company buys the exclusive sneakers, that are not available in India, from
different cuntries and then sell those exclusive sneakers to the Indian
people. This solves a very big gap that exist in the India Sneaker market. The
gap of some sneakers that are not available in India to making them available
in India."

para = domainDescription.lower()
wordToFind = input("Enter the word to get the count: ")
countOfWord = para.count(wordToFind)
print("Domain Description: ", domainDescription, "\n")
print("Occurance of \"", wordToFind, "\" in the domain Description = ",
countOfWord, " times.")
```

Output:

```
Domain Description:  Hii, My name is Adhish Bahl (2347203), from 1MCA-B. This is my Python Lab program 1. My domain is Online Retail Store for Exclusive Sneakers. In

Occurance of " sneakers " in the domain Description =  5  times.
```

Q2) 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.)

Code:

```python
domainDescription = "Hii, My name is Adhish Bahl, 2347203, from 1MCA-B. This
is my Python Lab program 1. I got 9.39 GCPA in my undergrade degree. My domain
is Online Retail Store for Exclusive Sneakers. In this domain, the basic idea
behind everthing is to provide the access to exclusive sneakers that are not
available in India. This works as the company buys the exclusive sneakers,
that are not available in India, from different cuntries and then sell those
exclusive sneakers to the Indian people. This solves a very big gap that exist
in the India Sneaker market. The gap of some sneakers that are not available
in India to making them available in India."

words = domainDescription.split(" ")

for i in words:
    for j in i:
        if (ord(j) >= 48 and ord(j) <= 57):
            if "." in i:
                print(i, " is float.")
                break
            else:
                print(i, " is Integer.")
                break
        else:
            print(i, " is String")
            break
```

Output:

```
Hii,  is String
My  is String
name  is String
is  is String
Adhish  is String
Bahl,  is String
2347203,  is Integer.
from  is String
1MCA-B.  is float.
This  is String
is  is String
my  is String
Python  is String
Lab  is String
program  is String
1.  is float.
I  is String
got  is String
9.39  is float.
GCPA  is String
in  is String
my  is String
```

Q3) Write a python program to count the number of alphabets, numeric and other special symbols in the paragraph.

Code:

```python
alphabets = 0
digits = 0
specialCh = 0
choice = 0
domainDescription = "Hii, My name is Adhish Bahl (2347203), from 1MCA-B. This
is my Python Lab program 1. My domain is Online Retail Store for Exclusive
Sneakers. In this domain, the basic idea behind everthing is to provide the
access to exclusive sneakers that are not available in India. This works as
the company buys the exclusive sneakers, that are not available in India, from
different cuntries and then sell those exclusive sneakers to the Indian
people. This solves a very big gap that exist in the India Sneaker market. The
gap of some sneakers that are not available in India to making them available
in India."
customString =""

while(choice != 1 and choice != 2):
    choice = int(input("Choose one:\n1. Enter my own string\n2. Check count
from domain description"))
```

```python
if choice == 1:
    customString = input("Enter your String")
    for i in range(len(customString)):
        if((ord(customString[i]) >= 65 and ord(customString[i]) <= 90) or
(ord(customString[i]) >= 97 and ord(customString[i]) <= 122)):
            alphabets = alphabets + 1
        elif(ord(customString[i]) >= 48 and ord(customString[i]) <= 57):
            digits = digits + 1
        else:
            specialCh = specialCh + 1
elif choice == 2 :
    for i in range(len(domainDescription)):
        if((ord(domainDescription[i]) >= 65 and ord(domainDescription[i]) <=
90) or (ord(domainDescription[i]) >= 97 and ord(domainDescription[i]) <=
122)):
            alphabets = alphabets + 1
        elif(ord(domainDescription[i]) >= 48 and ord(domainDescription[i]) <=
57):
            digits = digits + 1
        else:
            specialCh = specialCh + 1

print("\nTotal count of\nAlphabets: ", alphabets, "\nDigits: ", digits,
"\nSpecial Charectors: ", specialCh)
```

Output:

```
Total count of
Alphabets:  4
Digits:  4
Special Charectors:  6
```

Part II

Q1) 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.

Code:

```python
randomSet = {"Adhish", 51637, "Nike", 10245.36, True, 486323, 6153.51, False,
"Air Force"}
print("Initial Set: ", randomSet)
```

```
poppedElement = randomSet.pop()
print("\nAfter using .pop(): ", randomSet, "\nElement removed is: ",
poppedElement)
poppedElement = randomSet.discard(51637)
print("\nAfter using .discard(51637): ", randomSet)
poppedElement = randomSet.discard("Nike")
print("\nAfter using .discard(\"Nike\"): ", randomSet)
randomSet.clear()
print("\nAfter using .clear(): ", randomSet)
del randomSet
print("\nAfter using del: Set is deleted and hence it does not exist")
```

Output:

```
Initial Set:  {False, True, 10245.36, 'Nike', 'Adhish', 6153.51, 'Air Force', 486323, 51637}

After using .pop():  {True, 10245.36, 'Nike', 'Adhish', 6153.51, 'Air Force', 486323, 51637}
Element removed is:  False

After using .discard(51637):  {True, 10245.36, 'Nike', 'Adhish', 6153.51, 'Air Force', 486323}

After using .discard("Nike"):  {True, 10245.36, 'Adhish', 6153.51, 'Air Force', 486323}

After using .clear():  set()

After using del: Set is deleted and hence it does not exist
```

Q2) Update the Set with minimum 5 string attributes of your domain and arrange the Set in descending order.

Code:

```
randomSet = set()
for i in range(6):
    tempVar = input("Give an element for the set: ")
    randomSet.add(tempVar)

print("Initial Set: ", randomSet)
print("\nAfter Ascending Sorting the set: ", sorted(randomSet))
print("\nAfter Descending Sorting the set: ", sorted(randomSet, reverse=True))
```

Output:

```
Initial Set:  {'BAhl', 'Adhish', 'Ok', '8573', 'True', '123'}

After Ascending Sorting the set:  ['123', '8573', 'Adhish', 'BAhl', 'Ok', 'True']

After Descending Sorting the set:  ['True', 'Ok', 'BAhl', 'Adhish', '8573', '123']
```

Q3) Create a Tuple and Execute the packing and unpacking operations of tuples using the attributes of your domain.

Code:

```python
def packingUnpackingTuple():
    domainTuple = ("Nike", "Order Placed", "Air Jorden", "Addidas", "BLue",
"Exclusive", "Shipped")
    print("Original Tuple:", domainTuple)
    firstTerm, secondTerm, thirdTerm, fourthTerm, fifthTerm, sixthTerm,
seventhTerm = domainTuple
    print("\nUnpacked Variables:")
    print("First Term:", firstTerm)
    print("Second Term:", secondTerm)
    print("Third Term:", thirdTerm)
    print("Fourth Term:", fourthTerm)
    print("Fifth Term:", fifthTerm)
    print("Sixth Term:", sixthTerm)
    print("Seventh Term:", seventhTerm)

packingUnpackingTuple()
```

Output:

```
Original Tuple: ('Nike', 'Order Placed', 'Air Jorden', 'Addidas', 'BLue', 'Exclusive', 'Shipped')

Unpacked Variables:
First Term: Nike
Second Term: Order Placed
Third Term: Air Jorden
Fourth Term: Addidas
Fifth Term: BLue
Sixth Term: Exclusive
Seventh Term: Shipped
```

Q4) 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)

Code:

```python
def countLetter(domain, letter):
    countOfLetter = domain.lower().count(letter.lower())
    return(countOfLetter)
```

```
domain = input("Enter your Domain Name: ")
letter = input("Enter the letter you want to count")
totalCount = countLetter(domain, letter)
print("Domain Name: ", domain, "\nLetter to count in Domain: ", letter,
"\nCount of letter in the domain name: ", totalCount)
```

Output:

```
Domain Name:  this is my domain name
Letter to count in Domain:  a
Count of letter in the domain name:  2
```

Q5) Enter your domain name, execute all the slicing possibilities and also negative indexing.

Code:

```
def slicingAndIndexing(domainName):
    print("Original Domain Name:", domainName)
    print("\nPositive Slicing:")
    print("Slicing from index 2 to 8:", domainName[2:8])
    print("Slicing from index 0 to 3:", domainName[:3])
    print("Slicing from index 7 to the end:", domainName[7:])
    print("Slicing from index 5 to 15 with step 3:", domainName[5:15:3])
    print("\nNegative Slicing:")
    print("Slicing from the end -10 to the end -3:", domainName[-10:-3])
    print("Slicing from the end -10 to the end -3 with step 2:", domainName[-
10:-3:2])
    print("\nPositive Indexing:")
    print("first character:", domainName[0])
    print("10th character:", domainName[9])
    print("\nNegative Indexing:")
    print("Last character:", domainName[-1])
    print("5th charector from last character:", domainName[-5])

domainName = input("Enter your Domain Name: ")
slicingAndIndexing(domainName)
```

Output:

```
Original Domain Name: Inline Store for Exclusive Sneakers

Positive Slicing:
Slicing from index 2 to 8: line S
Slicing from index 0 to 3: Inl
Slicing from index 7 to the end: Store for Exclusive Sneakers
Slicing from index 5 to 15 with step 3: eteo

Negative Slicing:
Slicing from the end -10 to the end -3: e Sneak
Slicing from the end -10 to the end -3 with step 2: eSek

Positive Indexing:
first character: I
10th character: o

Negative Indexing:
Last character: s
5th charector from last character: a
```