

# 2347265-lab-exercise-1

August 7, 2023

VISHNU SWAROOP P S - 2347265 - MCA B LAB EXERCISE

```
[11]: # Write a paragraph about introducing you and your selected domain (include
      ↪Full Name, domain name, register number, year .....).
name = "Vishnu Swaroop P S"
domain_name = "Pharmacy Management System"
register_number = "2347265"
year = "2023"

print(f"Hello, my name is {name}. I am passionate about the domain of_
      ↪{domain_name}. "
      f"I am a student with register number {register_number}, currently_
      ↪pursuing my studies in the year {year}. "
      f"My interest in the healthcare sector led me to explore the critical_
      ↪role that effective pharmacy management plays in providing quality_
      ↪pharmaceutical services to patients. "
      f"In the domain of {domain_name}, I aim to delve into the intricacies of_
      ↪drug inventory management, prescription handling, patient records, and_
      ↪optimizing workflows for efficient drug dispensing. "
      f"My goal is to contribute to the development of innovative solutions_
      ↪that streamline pharmacy processes and enhance patient safety. "
      f"With an emphasis on leveraging technology and data-driven approaches, I_
      ↪aspire to make a positive impact on the healthcare industry through the_
      ↪effective management of pharmacies.")
```

Hello, my name is Vishnu Swaroop P S. I am passionate about the domain of Pharmacy Management System. I am a student with register number 2347265, currently pursuing my studies in the year 2023. My interest in the healthcare sector led me to explore the critical role that effective pharmacy management plays in providing quality pharmaceutical services to patients. In the domain of Pharmacy Management System, I aim to delve into the intricacies of drug inventory management, prescription handling, patient records, and optimizing workflows for efficient drug dispensing. My goal is to contribute to the development of innovative solutions that streamline pharmacy processes and enhance patient safety. With an emphasis on leveraging technology and data-driven approaches, I aspire to make a positive impact on the healthcare industry through the effective management of pharmacies.

```
[12]: #Write a python program to count the frequency of any specific word (in your
      ↪domain) in the paragraph.

def count_word_frequency(paragraph, word):
    words = paragraph.lower().split()
    return words.count(word.lower())

paragraph = "Hello, my name is Vishnu Swaroop P S. I am passionate about the
      ↪domain of Pharmacy Management System. " \
            "I am a student with register number 2347265, currently pursuing my
      ↪studies in the year 2023. " \
            "My interest in the healthcare sector led me to explore the
      ↪critical role that effective pharmacy management plays in providing quality
      ↪pharmaceutical services to patients. " \
            "In the domain of Pharmacy Management System, I aim to delve into
      ↪the intricacies of drug inventory management, prescription handling, patient
      ↪records, and optimizing workflows for efficient drug dispensing. " \
            "My goal is to contribute to the development of innovative
      ↪solutions that streamline pharmacy processes and enhance patient safety. " \
            "With an emphasis on leveraging technology and data-driven
      ↪approaches, I aspire to make a positive impact on the healthcare industry
      ↪through the effective management of pharmacies."

word_to_find = input("Enter the word to find its frequency: ")

frequency = count_word_frequency(paragraph, word_to_find)
print(f"The word '{word_to_find}' appears {frequency} times in the paragraph.")
```

The word 'pharmacy' appears 4 times in the paragraph.

```
[13]: #Write a python program to display all the datatypes of selected specific
      ↪elements in the paragraph.

def get_element_datatypes(paragraph):
    elements = paragraph.split()
    element_datatypes = {}

    for element in elements:
        if element.isdigit():
            element_datatypes[element] = "int"
        elif element.replace('.', '', 1).isdigit():
            element_datatypes[element] = "float"
        else:
            element_datatypes[element] = "string"

    return element_datatypes
```

```

paragraph = "I am a student with register number 2347265 , currently pursuing
↳my studies in the year 2023 . My degree percentage is 82.25 ."

element_datatypes = get_element_datatypes(paragraph)
for element, datatype in element_datatypes.items():
    print(f"{element} - {datatype}")

```

```

I - string
am - string
a - string
student - string
with - string
register - string
number - string
2347265 - int
, - string
currently - string
pursuing - string
my - string
studies - string
in - string
the - string
year - string
2023 - int
. - string
My - string
degree - string
percentage - string
is - string
82.25 - float

```

[2]: *#Write a python program to count the number of alphabets, numeric and other  
↳special symbols in the paragraph.*

```

paragraph = "Hello, my name is Vishnu Swaroop P S. I am passionate about the
↳domain of Pharmacy Management System. " \
            "I am a student with register number 2347265, currently pursuing my
↳studies in the year 2023. " \
            "My interest in the healthcare sector led me to explore the
↳critical role that effective pharmacy management plays in providing quality
↳pharmaceutical services to patients. " \
            "In the domain of Pharmacy Management System, I aim to delve into
↳the intricacies of drug inventory management, prescription handling, patient
↳records, and optimizing workflows for efficient drug dispensing. " \
            "My goal is to contribute to the development of innovative
↳solutions that streamline pharmacy processes and enhance patient safety. " \

```

"With an emphasis on leveraging technology and data-driven approaches, I aspire to make a positive impact on the healthcare industry through the effective management of pharmacies."

```
def count_characters(paragraph):
    alphabets = numerics = special_symbols = 0

    for char in paragraph:
        if char.isalpha():
            alphabets += 1
        elif char.isdigit():
            numerics += 1
        else:
            special_symbols += 1

    return alphabets, numerics, special_symbols

alpha_count, numeric_count, special_count = count_characters(paragraph)

print("Number of Alphabets:", alpha_count)
print("Number of Numeric Characters:", numeric_count)
print("Number of Special Symbols:", special_count)
```

Number of Alphabets: 726

Number of Numeric Characters: 11

Number of Special Symbols: 147

[1]: *# 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.*

```
pharmacy_set = {25, 3.14, "Pharmacy", True, "Inventory", "Patient Records"}
print("Original Set: ", pharmacy_set)
popped_element = pharmacy_set.pop()
print("Popped Element : ", popped_element)
print("Set after pop : ", pharmacy_set)
pharmacy_set.discard(3.14)
print("Set after discard : ", pharmacy_set)
pharmacy_set.clear()
print("Set after Clear", pharmacy_set)
del pharmacy_set
```

"""

*Insights:*

1. *pop(): The pop() function is used to remove and return an arbitrary element from the set. As sets are unordered, there's no defined order for elements, and the popped element may not necessarily be the last one that was added.*

2. `clear()`: The `clear()` function is used to remove all elements from the set, resulting in an empty set.

3. `discard()`: The `discard()` function removes the specified element from the set if it exists. If the element is not present in the set, no error is raised, and the set remains unchanged.

4. `del`: The `del` statement can be used to delete the entire set, making it no longer accessible. After using `del` on the set, any further attempts to access it will raise an error, as the set no longer exists.

"""

Original Set: {'Pharmacy', True, 'Patient Records', 3.14, 'Inventory', 25}  
Popped Element : Pharmacy  
Set after pop : {True, 'Patient Records', 3.14, 'Inventory', 25}  
Set after discard : {True, 'Patient Records', 'Inventory', 25}  
Set after Clear set()

[1]: "\nInsights:\n1. `pop()`: The `pop()` function is used to remove and return an arbitrary element from the set. As sets are unordered, there's no defined order for elements, and the popped element may not necessarily be the last one that was added.\n\n2. `clear()`: The `clear()` function is used to remove all elements from the set, resulting in an empty set.\n\n3. `discard()`: The `discard()` function removes the specified element from the set if it exists. If the element is not present in the set, no error is raised, and the set remains unchanged.\n\n4. `del`: The `del` statement can be used to delete the entire set, making it no longer accessible. After using `del` on the set, any further attempts to access it will raise an error, as the set no longer exists.\n"

[3]: #Update the Set with minimum 5 string attributes of your domain and arrange the Set in descending order.

```
pharmacy_set = {"Pharmacy", "Inventory", "Patient Records"}

pharmacy_set.update({"Prescription Processing", "Drug Dispensing", "Medication Management", "Inventory Control", "Pharmaceutical Services"})

print("Original Set", pharmacy_set)
sorted_set_descending = sorted(pharmacy_set, reverse=True)

print("Updated Set (Descending Order):", sorted_set_descending)
```

Original Set {'Patient Records', 'Prescription Processing', 'Pharmacy', 'Inventory Control', 'Inventory', 'Drug Dispensing', 'Medication Management', 'Pharmaceutical Services'}  
Updated Set (Descending Order): ['Prescription Processing', 'Pharmacy', 'Pharmaceutical Services', 'Patient Records', 'Medication Management',

```
'Inventory Control', 'Inventory', 'Drug Dispensing']
```

```
[14]: # Tuple with attributes from the domain "Pharmacy Management System"
pharmacy_tuple = ("Pharmacy", "Inventory", "Patient Records", "Billing",
    ↪ "Prescriptions")

attribute1, attribute2, attribute3, attribute4, attribute5 = pharmacy_tuple
packed_tuple = (attribute1, attribute2, attribute3, attribute4, attribute5)

print("Original Tuple:", pharmacy_tuple)
print("Packed Tuple:", packed_tuple)
print(attribute1)
```

```
Original Tuple: ('Pharmacy', 'Inventory', 'Patient Records', 'Billing',
'Prescriptions')
```

```
Packed Tuple: ('Pharmacy', 'Inventory', 'Patient Records', 'Billing',
'Prescriptions')
```

```
Pharmacy
```

```
[15]: #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)
```

```
domain_name = ("p","h","a","r","m","a","c","y")

count = domain_name.count('a')
print("Count of a is",count)
```

```
Count of a is 2
```

```
[16]: # Enter your domain name, execute all the slicing possibilities and also
    ↪ negative indexing.
```

```
domain_name = "pharmacy management system"

sliced_1 = domain_name[0:7]
sliced_2 = domain_name[9:]
sliced_3 = domain_name[::2]
sliced_4 = domain_name[::-1]
sliced_5 = domain_name[5:16:3]

negative_index_1 = domain_name[-6:]
negative_index_2 = domain_name[-12:-6]

print("Original Domain Name:", domain_name)
```

```
print("Sliced 1:", sliced_1)
print("Sliced 2:", sliced_2)
print("Sliced 3:", sliced_3)
print("Sliced 4 (Reversed):", sliced_4)
print("Sliced 5:", sliced_5)
print("Negative Index 1:", negative_index_1)
print("Negative Index 2:", negative_index_2)
```

Original Domain Name: pharmacy management system

Sliced 1: pharmac

Sliced 2: management system

Sliced 3: pamc aaeetsse

Sliced 4 (Reversed): metsys tnemeganam ycamrahp

Sliced 5: a ne

Negative Index 1: system

Negative Index 2: ement