DAILY ASSESSMENT REPORT

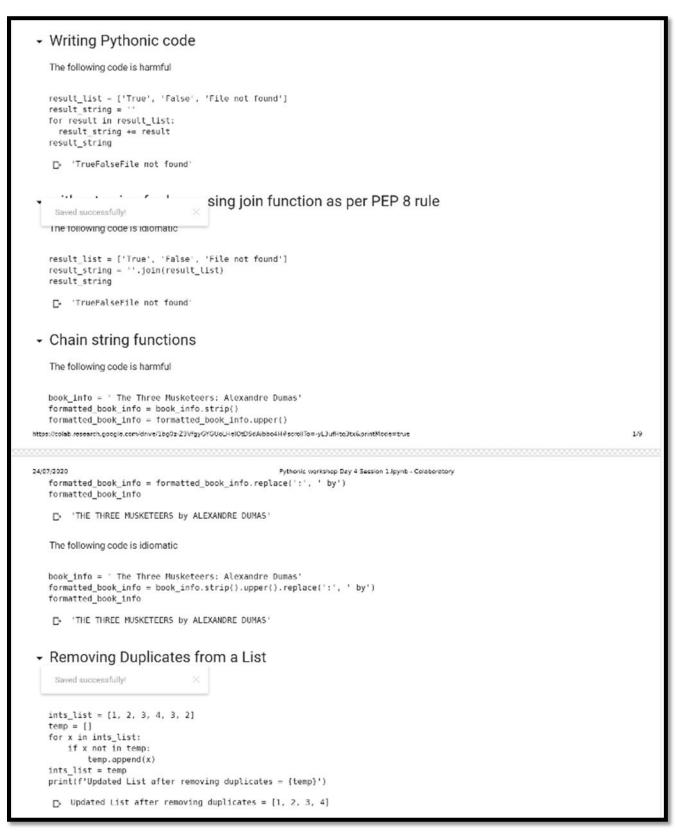| Date:	24-July-2020	Name:	Swastik R Gowda
Course:	Pythonic coding rather than Python coding – Logic Perspective	USN:	4AL17EC091
Topic:	Day-4	Semester & Section:	6th Sem 'B' Sec
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FORENOON SESSION DETAILS
Image of session

Report – Report can be typed or hand written for up to two pages.

❖ A common neologism in the Python community is Pythonic, which can have a wide range of meanings related to program style.

❖ To say that code is Pythonic is to say that it uses Python idioms well, that it is natural or shows fluency in the language. Likewise, to say of an interface or language feature that it is Pythonic is to say that it works well with Python idioms that its use meshes well with the rest of the language.

❖ Python scripts can put the system into different states, set configurations, and test all sorts of real-world use cases. Python can also be used to receive embedded system data that can be stored for analysis.

❖ Programmers can then use Python to develop parameters and other methods of analyzing that data. There are certain things you can do with all sequence types.

❖ These operations include indexing, slicing, adding, multiplying, and checking for membership. In addition, Python has built-in functions for finding the length of a sequence and for finding its largest and smallest elements.

Writing Pythonic code

The following code is harmful

```
result_list = ['True', 'False', 'File not found']
result_string = ''
for result in result_list:
  result_string += result
result_string
```

    ⊳ 'TrueFalseFile not found'

...sing join function as per PEP 8 rule

The following code is idiomatic

```
result_list = ['True', 'False', 'File not found']
result_string = ''.join(result_list)
result_string
```

    ⊳ 'TrueFalseFile not found'

Chain string functions

The following code is harmful

```
book_info = ' The Three Musketeers: Alexandre Dumas'
formatted_book_info = book_info.strip()
formatted_book_info = formatted_book_info.upper()
```

```
formatted_book_info = formatted_book_info.replace(':', ' by')
formatted_book_info
```

    ⊳ 'THE THREE MUSKETEERS by ALEXANDRE DUMAS'

The following code is idiomatic

```
book_info = ' The Three Musketeers: Alexandre Dumas'
formatted_book_info = book_info.strip().upper().replace(':', ' by')
formatted_book_info
```

    ⊳ 'THE THREE MUSKETEERS by ALEXANDRE DUMAS'

Removing Duplicates from a List

```
ints_list = [1, 2, 3, 4, 3, 2]
temp = []
for x in ints_list:
    if x not in temp:
        temp.append(x)
ints_list = temp
print(f'Updated List after removing duplicates = {temp}')
```

    ⊳ Updated List after removing duplicates = [1, 2, 3, 4]

❖ One of the special concepts in Python is the idea of writing idiomatic code that is most aligned with the language features and ideals. In Python, we call this idiomatic code Pythonic.
❖ While this idea is easy to understand, it turns out to be fairly hard to make concrete. This

course will take you on a tour of over 50 of the more popular and useful code examples demonstrating examples of Pythonic code.

▾ Map() function with lamda in Python

It is used t calls the specified function for each item of an iterable (such as string, list, tuple or dictionary) and returns a list of results.

```
def square(x):
    return x*x

numbers=[1, 2, 3, 4, 5]
sqrList=map(square, numbers)
print(list(sqrList))

# use lamda function to have direct values
                              2, 3, 4])
```

Saved successfully! ✕

```
[1, 4, 9, 16, 25]
[1, 4, 9, 16]
```

In the above example, the map() function applies to each element in the numbers[] list.

▾ Slicing operations in string

Program for exchanging first and last characters of a string using function

```
def change(string):
    return string[-1] + string[1:-1] + string[0]
string=input("Enter string:")
print('Modified string:',change(string))
print('original string :',string)
```

```
Enter string:vinay
Modified string: yinav
original string : vinay
```

▾ Removing one character from a string

```
def remove(string, n):
    first = string[:n]
    last = string[n+1:]
    return first + last
string=input("Enter the sring:")
n=int(input('Enter the index of the character to remove:'))
```

Saved successfully! ✕

```
Enter the sring:ramajayam
Enter the index of the character to remove:4
Modified string:
ramaayam
```

▾ Sorting in Python using function

```
def myFunc(e):
    return len(e)
#myfunc=lambda x : len(x)
cars = ['Ford', 'Mitsubishi', 'BMW', 'VW']
cars.sort(key=myFunc)
```

- ❖ In the examples, you'll first see non-Pythonic code and then the more natural Pythonic version. Topics covered include the expansive use of dictionaries, hacking Python's memory usage via slots, using generators, comprehensions, and generator expressions, creating subsets of collections via slices (all the way to the database) and more.
- ❖ Several of these are Python 3 features so you'll have even more reason to adopt Python 3 for your next project

Certificate:

Alva's Institute of Engineering & Technology
(Affiliated to Visvesvaraya Technological University, Belagavi)
Shobhavana Campus, Mijar, Moodbidri-574225

Certificate of Participation

This is to certify that

Swastik R Gowda

of

Alva's Institute of Engineering and Technology

has participated in a four day online workshop on "How to develop Pythonic coding rather than Python coding – Logic Perspective" from 21st July, 2020 to 24th July, 2020 jointly organized by the Department of Computer Science and Engineering and Department of Electronics and Communication Engineering, Alva's Institute of Engineering and Technology, Mijar.

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