KUMARAGURU college of technology
character is life

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I YEAR BE / BTech
U18CSI2201 – Python Programming
Assignment II

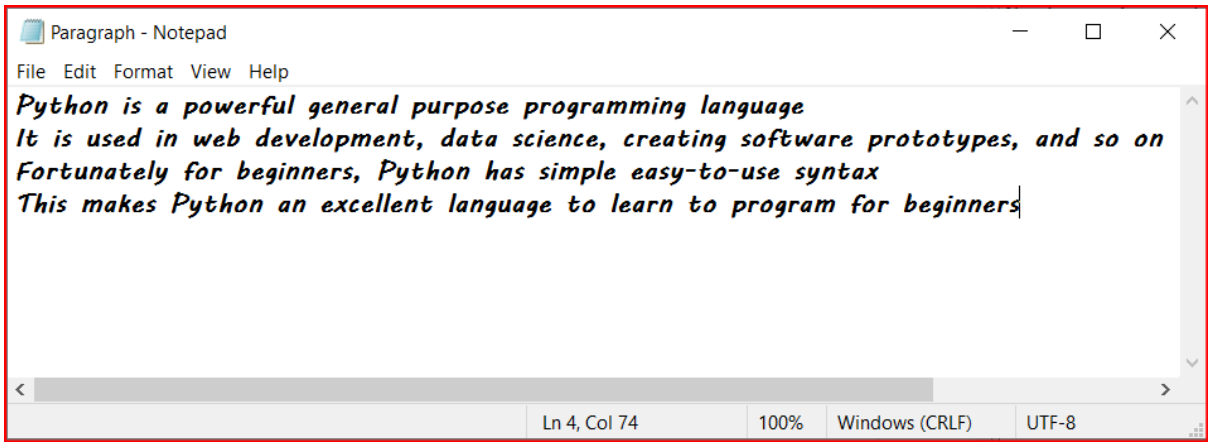
Total Marks:4 x 5 = 20 Marks

1. Compare the python data structures Sting, List, Tuple, Set and Dictionary.

Feature	String	List	Tuple	Set	Dictionary
1. Representation	Defined within ‘ ‘ or “ “ quotes.	Defined within square [] brackets.	Defined within parentheses ( ).	Defined within {} curly braces.	Defined within {} curly braces separated by : for each key.
2.Mutability	Strings are immutable.	Lists are mutable.	Tuples are immutable.	Sets are mutable.	Dictionaries are mutable.
3.Ordered (Indexing)	Strings are ordered.	Lists are ordered.	Tuples are ordered.	Sets are unordered.	Dictionary is unordered. Instead, they have keys.
4.Function to create the structure	str() function is used.	list() function is used	tuple() function is used.	set() function is used.	dict() function is used.
5.Duplicates	-	Lists allow duplicates.	Tuples allow duplicates.	Sets don’t allow duplicates.	Keys cannot be duplicated. But values can be same for different keys.
Example	S=”Hello” S1=’124Abc’	A=[2,4,7,8] a=[‘ten’,’ben’ ,’pen’]	A=(2,4,7,8) a=(‘ten’,’ben’ ,’pen’)	a={1,3,5,6,7}	A={‘J’:10,’B’:2,’C’:3}

2. Write a Python program that takes a text file as input and returns the number of words in the given text file.

Text File:



Code:

```
#Vibin_20BMC046
f=open("C:\\Users\\Vibin\\OneDrive\\Documents\\Python\\Paragraph.txt",'r')
words=0
for line in f:
    a=line.split(" ")
    words+=len(a)
print("Number of words in file=",words)
```

Output:

```
In [16]: runfile('C:/Users/Vibin/.spyder-py3/temp.py', wdir='C:/Users/
Vibin/.spyder-py3')
Number of words in file= 42
```

3. Write Python code for the following:

i. Create a set “player” with names who have registered for next tournament: “Preethi”, “Nila”, “Brindha”.
ii. Create another set “frequent_winners” with names as: “Preethi”, “Parvathi”,”Malathi”
iii. Find the players who are winners but not registered for tournament.
iv. Find out the players who have registered for tournament but requires training.

Solution:

```
In [1]: player={"Preethi","Nila","Brindha"}

In [2]: frequent_winners={"Preethi","Parvathi","Malathi"}



In [4]: print("Winners but not registered for tournament:",frequent_winners-
player)
Winners but not registered for tournament: {'Parvathi', 'Malathi'}

In [5]: print("Players who have registered for tournament but requires
training",player-frequent_winners)
Players who have registered for tournament but requires training {'Nila',
'Brindha'}
```

4. Create a dictionary to store bank customer id and name for 5 customers and do the following operations.

i)Add two new customers “APK40312” - “Aravind”, “APK00086” - “Devi”.
ii)Display the dictionary.
iii)Modify the name of the customer “Aravind” as “Aravindhan”.
iv)Delete a customer with id “APK00086”.
v)Display the updated dictionary.

Code:

```
#Vibin_20BMC046

#creating details of 5 customers
cd={"APK00024":"Jagan","APK00089":"Mani","APK01034":"Varsha","APK03021":"Rakshan",
"APK00037":"Priya"}

#1 adding two more details
cd["APK40312"]="Aravind"
cd["APK00086"]="Devi"
```

```
#2 displaying the details
print("Customer Details:\n",cd)

#3 Modifying "Aravind"
for i in cd.keys():
   if cd[i]=="Aravind":
      cd[i]="Aravindan"

#4 Deleting customer with id “APK00086”
del cd["APK00086"]

#5 Displaying the updated dictionary
print("\nThe Updated Details:\n",cd)
```

Output:

```
In [6]: runfile('C:/Users/Vibin/.spyder-py3/temp.py', wdir='C:/Users/
Vibin/.spyder-py3')
Customer Details:
 {'APK00024': 'Jagan', 'APK00089': 'Mani', 'APK01034': 'Varsha', 'APK03021':
'Rakshan', 'APK00037': 'Priya', 'APK40312': 'Aravind', 'APK00086': 'Devi'}

The Updated Details:
 {'APK00024': 'Jagan', 'APK00089': 'Mani', 'APK01034': 'Varsha', 'APK03021':
'Rakshan', 'APK00037': 'Priya', 'APK40312': 'Aravindan'}
```