Week 5

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Program 1	Separate the following list to different lists based on following criteria i) starts with 'pizza' ii) Ends with 'puri' iii) Ends with 'dosa' Input: l=['pani puri','dosa','bhel puri','masala dosa','dahi puri','rava dosa','pizza topings','pizza mania']
	Algorithm **Step1: Start** **Step2: Set value of food==['pani puri','dosa','bhel puri',** **'masala dosa','dahi puri','rava dosa','pizza topings','pizza mania']** **Step3: Create empty lists l_pizza = [], l_puri = [],l_dosa = []** **Step4: for each element in list food:** **if first word of element starts with "pizza"** **add element to l_pizza** **else if last word of element is "puri"** **add element to l_puri** **else if last word of element is "dosa"** **add element to l_dosa** **Step5: print l_pizza, l_dosa, l_puri** **Step6: End**
	Program **food=['pani puri','dosa','bhel puri',** **'masala dosa','dahi puri','rava dosa','pizza topings','pizza mania']** **#creating new lists to store pizza, puri, dosa food types** **l_pizza = []** **l_puri = []** **l_dosa = []** **for i in food:** **if i.startswith("pizza"):** **l_pizza.append(i)** **elif i.endswith("puri"):** **l_puri.append(i)** **elif i.endswith("dosa"):**

	l_dosa.append(i) **print("List which starts with pizza is",l_pizza)** **print("List which ends with puri is",l_puri)** **print("List which ends with dosa is",l_dosa)**

	Program with output
	`D:\PES\Semester 1\Computer Science- Python Programming\PythonLab\Week5>program1.py`
	`List which starts with pizza is ['pizza topings', 'pizza mania']`
	`List which ends with puri is ['pani puri', 'bhel puri', 'dahi puri']`
	`List which ends with dosa is ['dosa', 'masala dosa', 'rava dosa']`

Program 2	**a)** Print the given data in the string as formal letter, with one sentence in each line. b) display given list of data as mac address. mac=['00','11','23','45','67','70'] **c)** send festival greetings to friends all friends in the list **d)** Given , Srn's as strings each separated by space, replace PESU in place of PE in first 3 srn's. also find if user given srn is present or not.
	Algorithm **a)** **Step1: Start** **Step2: Initialize s** **Step3: read each line from s and capitalize the first letter of the sentence** **Step4: repeat step3 until all lines are read** **Step5: print the string** **Step6: End** **b)** **Step1: Start** **Step2: initialize mac_list** **Step3: read each element in the list and concatenate with :** **Step4: repeat step4 till all elements are read** **Step5: print mac_list** **Step6: End** **c)** **Step1: Start** **Step2: initialize friend** **Step3: read each element in the list and concatenate with "happy festival" and store in greeting list** **Step4: repeat step4 till all elements are read** **Step5: print greeting** **Step6: End** **d)**

	Step1: Start **Step2: Initialize srn** **Step3: Replace pe with pesu for first three elements** **Step4: Find if a given srn is part of the string and print its location** **Step5: End**
	Program **s='Respected sir,\n I am here by enlisting all the programming languages we teach\n Problem solving using python\n object oriented programming with C++\n java and jee \nR programming \nThanking You \nTeam Programming Languages '** **t = s.split("\n") #converting into list, each element split at \n** **str = ""** **#capitalizes first letter of each line** **for i in range(len(t)):** ** if(i != 0 and i != len(t)-1 and i != len(t)-2):** ** x = t[i].lstrip()** ** str = str + " " + x.capitalize() + '\n'** ** else:** ** str = str + t[i].capitalize() + '\n'** **print(str)** **mac_list = ['00','11','23','45','67','70']** **print(':'.join(mac_list)) #function to join the list** **friend = [' ram',' sita',' raj',' joy',' joe']** **greetings = [] #creating a new list** **for i in friend:** ** greetings.append('Happy festival' + i) #adding new elements to the new list** **print(greetings)** **srn = "PE01 PE02 PE03 PE04 PE05 PE06 PE07 PE08 PE09 PE10"** **print("The SRN before replacing is",srn)** **#replacing PE to PESU for first three elements** **print("The SRN after replaing with PESU is",srn.replace("PE","PESU",3))** **x = input("Input the SRN number to be found ")** **n = srn.find(x) #using funtion find to find the particular snr**

```
if n > 0:
   print("The SRN is found in location",n)
else:
   print("The SRN is not found")
```

Program with output

```
D:\PES\Semester 1\Computer Science- Python Programming\PythonLab\Week5>program2.py
Respected sir,
   I am here by enlisting all the programming languages we teach
   Problem solving using python
   Object oriented programming with c++
   Java and jee
   R programming
Thanking you
Team programming languages

00:11:23:45:67:70
['Happy festival ram', 'Happy festival sita', 'Happy festival raj', 'Happy festival joy', 'Happy festival joe']
The SRN before replacing is PE01 PE02 PE03 PE04 PE05 PE06 PE07 PE08 PE09 PE10
The SRN after replaing with PESU is PESU01 PESU02 PESU03 PE04 PE05 PE06 PE07 PE08 PE09 PE10
Input the SRN number to be found PE04
The SRN is found in location 15
```

Program 3

a) given list of captains and teams(in respective order) assign them to IPL Teams.
b) Given list of tuples, where each tuple takes pattern (name,marks) of a student, display only names.

Algorithm

Step1: Start
Step2: Initialize cap_list and team_list
Step3: create empty IPL list, x
Step4: add values to x from cap_list and team_list
Step5: Print x

Step1: Start
Step2: initialize score with list of tuples (name, marks)
Step3: read each element in the list and extract only name into a new list, y
Step4: repeat step3 till all elements are read
Step5: print y
Step6: End

Program

```
cap_list = ['Kholi','Dhoni','Rohit S',]
team_list = ['RCB', 'CSK', 'MI']
x = list(zip(cap_list,team_list)) #zip function to merge two lists
print("Team captain with their IPL teams ",x)


#zip(*list_name) to separate the student name and score as two elements in a list
score = [("Akash", 85), ("Arind", 80), ("Asha",95), ('Bhavana',90), ('Bhavik',87)]
y = list(zip(*score))
```

	print("List displaying only student names is ",y[0])

	Program with output
	`D:\PES\Semester 1\Computer Science- Python Programming\PythonLab\Week5>program3.py`
	`Team captain with their IPL teams [('Kholi', 'RCB'), ('Dhoni', 'CSK'), ('Rohit S', 'MI')]`
	`List displaying only student names is ('Akash', 'Arind', 'Asha', 'Bhavana', 'Bhavik')`

Program 4	a) Given mohanDas Karamchand gandhi' print i)"m K gandhi" ii) M K GANDHI iii) M K Gandhi iv) Mohandas Karamchand Gandhi **b) Given s = "bad python bad teacher bad lecture"** **i) Replace all occurrences of bad to good** **ii) Replace first occurrence of bad to good** **iii) find the leftmost bad** **iv) find the second bad from left** v) **Replace the second bad to worst and display from that point of string and also display the whole string**
	Algorithm **a)** **Step1: Start** **Step2: initialize name ="mohanDas Karamchand Gandhi";** **Step3: read each word from the string** **Step4: read first letter of the first two words and concatenate the last word** **Step5: convert the string of step4 to capital letters** **Step6: use title function on step6 output** **Step7: use title function on 'name'** **Step8: end** **b)** **Step1: Start** **Step2: initialize s** **Step3: use replace function to convert all bad to good** **Step4: find occurrence of first 'bad' and replace with 'good' with replace function** **Step5: use find function to locate the leftmost bad** **Step6: use find function to locate second leftmost bad** **Step7: find occurrence of second 'bad', replace to 'worst' and print the string** **Step8: End**
	Program **name = "mohanDas Karamchand gandhi"** **print(name)** **name_list = name.split()** **#1)m K gandhi**

```
x = ""
for i in name_list[:2]:
    x = x+(i[0])+" "

print(x+name_list[2])


#2)M K GANDHI
c = ""
for i in name_list[:2]:
    c = c+(i[0].upper())+" "
c = c+name_list[2].upper()
print(c)

#3)M K Gandhi
b = c.title()
print(b)

#4)Mohandas Karamchand Gandhi
print(name.title())



s = "bad python bad teacher bad lecture"

#i)Replace all occurrences of bad to good
s1 = s.replace("bad","good")
print(s1)

#ii)Replace first occurrence of bad to good
s2 = s.replace("bad","good",1)
print(s2)

#iii)find the leftmost bad
s3 = s.find("bad",0)
print(s3)

#iv)find the second bad from left
s4 = s.find("bad",1)
print(s4)

#v)Replace the second bad to worst and display from that point of string and also display
the whole string
list1 = s.split()
```

```
count = 0
ele = None
newstr = " "
for i in range(len(list1)):
   if list1[i]=="bad":
      count+=1
      ele = i
   if count == 2:
      break

list1[ele] = "worst"
print(newstr.join(list1))
newstr1 = " "
print(newstr1.join(list1[ele:]))
```

Program with output

```
D:\PES\Semester 1\Computer Science- Python Programming\PythonLab\Week5>program4.py
mohanDas Karamchand gandhi
m K gandhi
M K GANDHI
M K Gandhi
Mohandas Karamchand Gandhi
good python good teacher good lecture
good python bad teacher bad lecture
0
11
bad python worst teacher bad lecture
worst teacher bad lecture
```

Program 5

a) String encoding
   i) the first letter of each word is printed at the end.
   ii) In the second case, after each character, a p is printed.

b)reverse a string

input:

nice place to study is library

Algorithm

a)

Step1: Start
Step2: initialize s="practice problems for students"
Step3: read each word in the string
Step4: Add the first letter of the word to the end of the word
Step5: repeat step4 for all the words in the string
Step6: print the string

	Step7: read each word in the string **Step8: Add the letter 'p' after every letter of the word** **Step9: repeat step4 for all the words in the string** **Step10: print the string** **Step11: End** **b)** **Step1: Start** **Step2: initialize the string, value= 'nice place to study is library'** **Step3: create empty string, list1** **Step4: read each word in the string from last word** **Step5: Add the word to list1** **Step6: repeat step3 and step4 for all the words in the string** **Step7: print the string list1** **Step8: End**
	Program **"""** **String encoding** **i)the first letter of each word is printed at the end.** **"""** **s = "practice problems for students"** **list1 = s.split() #converting value into a list** **s1 = ""** **for i in list1:** ** s1 = s1 + i + i[0]+" "** **print(s1)** **#ii)After each character, a 'p' is added** **list2=[]** **for i in list1:** ** x = ""** ** for j in i:** ** x = x + j + "p"** ** list2.append(x)** **print(" ".join(list2))** **#b)reverse a string, input:nice place to study is library** **value = "nice place to study is library"** **list1 = value.split()** **print("The given string is:",value)**

	x=[] **l = len(list1)** **for i in range(l-1,-1,-1):** **x.append(list1[i])** **print("The reversed string is:"," ".join(x))**
	Program with output D:\PES\Semester 1\Computer Science- Python Programming\PythonLab\Week5>program5.py practicep problemsp forf studentss pprpapcptpipcpep pprpopbplpepmpsp fpoprp sptpupdpepnptpsp The given string is: nice place to study is library The reversed string is: library is study to place nice