**Week 5**

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**Section: G**

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| Program 1 | Separate the following list to different lists based on following criteria   1. starts with 'pizza' 2. Ends with 'puri' 3. 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** |
| Program 2 | 1. Print the given data in the string as formal letter, with one sentence in each line. 2. display given list of data as mac address. mac=['00','11','23','45','67','70'] 3. send festival greetings to friends all friends in the list 4. 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** |
| Program 3 | 1. given list of captains and teams(in respective order) assign them to IPL Teams. 2. 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** |
| Program 4 | 1. Given mohanDas Karamchand gandhi' print i)"m K gandhi" ii) M K GANDHI iii) M K Gandhi iv) Mohandas Karamchand Gandhi 2. **Given s = "bad python bad teacher bad lecture"** 3. **Replace all occurrences of bad to good** 4. **Replace first occurrence of bad to good** 5. **find the leftmost bad** 6. **find the second bad from left** 7. **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** |
| Program 5 | 1. String encoding 2. the first letter of each word is printed at the end. 3. 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** |