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Lab Assignment:

Take/Prepare any text files for any real life application. For Ex. "Stud.txt", I 'Placement.csv" and "Result.csv" files for result Analysis. Combine into "StudentDetails.csv". Perform all statistical analysis (Average, Max, Min, Count, Sum, Percentage) on it

1. Read Student Info File

```
File
                     file-open(
      Read
 student info.csv', 'r')
 info_dataset=[]
 while True:
     data-file . readline()
     if data:
         info dataset . append (data . replace
     ("\n", else:
         break
 print
                                                  11).split(','))
 (info dataset)
[['Roll No.', 'Name', 'Gender', DOB'], ['101', 'Rahul', '08-04-1991'], ['102'
'Aditya' <sub>'Male', '12-03-1990']</sub>, ,['103', 'Omkar', ' '03-09-1990'], ['104', '
           ', '12-11-1989'], ['16
Abhije
et', 'Male % [ ' 105 ' , 'Pooja ' ' Female' , ' 07-02-1990' ] , [ ' 106 ' , 'Shruti ' , ' Female' , ' 08-06-1991
'],['107','Nikita','Female','21-07-1992'],['108','Ganesh','Male','04-09-1990'],['109
', 'Mayuri 'Female', '14-05-1988], ['110', 'Shrikant', 'Mal
```

```
e', '07-02-1990']]
[3]:
                        RollNo=[]
                        Name=[]
                        Gender=[]
                        DOB=[]
 '07-02-1990' ] ]
                        for row in info dataset [1:]:
                                          RollNo.append(row[0])
                                        Name. append(row[l])
                                        Gender. append (row[2])
                                         DOB. append (row[3])
                        print(R011No)
                        print (Name)
                        print (Gender)
                        print (DOB)
                      ['101','102','103','104','105','106','107%'108','109','110']
                      ['Rahul', 'Aditya', 'Omkar', 'Abhijeet', 'Pooja', 'Shruti', 'Nikita', 'Ganesh', '
                      Mayur i ', 'Shrikant' ]
                      ['Male', 'Male', 'Male', 'Female', 'Female', 'Female', 'Female', 'Male', 'Female', 'Male', 'Ma
                      ']['08-04-1991','12-03-1990','03-09-1990','12-11-1989','07-02-1990','08-06-1991
                      ','21-07-1992','04-09-1990','14-05-1988','07-02-1990']
```

2. Read Student Marks

```
# Read Student Marks file=open(
 'student marks.csv', 'r'
 marks dataset=[]
 while True:
    data-file . readline()
    if data:
        marks dataset . append (data . replace(
    break print
 (marks_dataset)
 [['Roll No., 'Maths', 'Physics', 'Chemistry', 'English', 'Total', 'Percentage'],
1','56','89','74','80','299','74.75']'['102', '60', '75','86,'
79', '300',
<sup>5</sup> ['103','56','75','72', '66.75'],['104% '56','66',
90','96.67'],['105',', '64', '267', 64,5','273','68.25'],['106', '69', '85', '74', '60', '7
9','59','272','68] [' <sup>', '70', '82',</sup> 107 %'<sup>74</sup>','66 %'292',['108','75',
' 8
1','81','83 '320', ['109', '89','76', '77','89', '331', '
82.75'],['110','88', '73','78','329', '82.25']]
```

```
Maths=[]
Physics=[]
Chemistry=[]
English=[]
Total=[]
Percentage=[]
```

```
'69', '70', , '88']
'85', '82', , '73']
'59', '74', , '78']
```

```
for row in marks_dataset[I: ] :
    Maths.append(row[I])
    Physics. append (row [2])
    Chemistry. append (row[3])
    English. append (row[3])
    Total . append (row [4])
    Percentage . append (row[5])

print (Maths)
print (Physics)
print (Chemistry)
print(Eng1ish)
print(Tota1)
print
(Percentage)
```

3. Read Student Placement File

```
In [13] In [15] :
.
```

.

```
Read estudent 6Marks file-open(''103', 'Accentur
student_placement.csv'_'r)
placement_dataset= '4. 25']'['104% 'Cognizant', 'Engineer Trainee'
                                                                                         ['105',
'TCS', 'Software Developer', ['106', 'Siemens', 'Cloud Engineer', '5] while True:
                                                                                       ['107','K
    data-file . readine Engineer', '10 ] [ ' 108 ', ' Infosys', 'Data Analyst ', ' 9 . 5 ' ], [ '
    if data 9', '1B
        rlargement dataset append (data
Machine learning Engineer', '12.5'], ['110', 'Wipro', 'Data Analyst', '4.5
        br@ankpany=[]
print(placJobRole=[]taset)
                                                     "").split(.
          Package=[]
[[
          for row in placement_dataset [1:]:
'Roll
              Company. append (row
No.',
              JobR01e.append(row[2])
'Comp
              Package, append (row
any',
          print(Company)
          print(JobR01e)
'JobR0
          print(Package)
1e','
Packa
         ['Oracle', 'Deloitte', 'Accenture' 'Cognizant', 'TCS', 'Siemens', 'KPMG', '
ge in
LPA'],
         Infosys','IBMI,'Wipro']
[ ' 101
         [ 'Java developer', 'Graduate Software Engineer', 'Engineer Trainee', Engineer Trainee',
         'Software Developer', 'Cloud Engineer' 'Dev ops Engineer' 'Data Analyst', 'Machine lea
         rning Engineer', 'Data Analyst']
'Oracl
e','
         ['8.9','7.6', '4.25', '8',
                                                               '10', '12.5',45']
          studentdata=[]
Java
          studentdata . append (RollNo)
devel
          studentdata . append (Name)
ope
          studentdata . append (Gender)
.9'],['
          studentdata . append (DOB)
102',
          studentdata . append (Maths)
'Deloit
          studentdata . append (Physics)
          studentdata . append (Chemistry)
te',
          studentdata . append (English)
'Grad
          studentdata . append (Total)
uate
          studentdata . append (Percentage)
Softw
          studentdata . append (Company)
          studentdata . append (JobR01e)
are
          studentdata . append (Package)
Engin
```

```
[['101','102','103','104'
                                ,'105','106','107','108','109','110'],
Out[18]:
         ['Rahul',
          'Aditya',
          'Omkar',
          ' Abhijeet',
          'Pooja',
          'Shruti.
          'Nikita',
          'Ganesh',
          'Mayuri'
          'Shrikant' ],
         ['Male',
          'Male',
          'Male',
          'Male',
           Female%
          , Female%
          Female%
          , Female%
          'Male ' ] '
          '08-04-1991',
          '03-09-1990',
          '12-11-1989',
          '07-02-1990',
          08-06-1991,
          21-07-1992,
          .04-09-1990',
          '14-05-1988',
          '07-02-1990']
        ['56','60','56','78', '69','70','75','89','88'],
        ['89','75','75' '74','85','82','81','76','73'],
         ['74'86','72','56', '60','74''81','77','78']
                      '59',
         ['74'86','72','56','60', ''74''81','77','78']
               59',
         ['80'79', '66', '75', '59'66''83', '89', 190
         ['299'300','267','290','273''272''292','320','331'329'
                                                                ],
         ['Oracle', Deloitte',
          ' Accenture '
```

```
'TCS' .
            'Siemens',
            'KPMG',
            'Infosys',
            'IBM',
            'Wipro' 1'
           ['Java developer',
            'Graduate Software Engineer',
            'Engineer Trainee',
            'Engineer Trainee',
            'Software Developer',
            'Cloud Engineer',
            "Dev ops Engineer",
            'Data Analyst',
            'Machine learning Engineer',
            'Data Analyst'],
            '8.9', 7.6', 4.25', '8', '5', '10', 9.5', '12.5', '4.5'
         4. Writing Data to New File
In [19]:
           "StudentDetai1s.csv", "w") fw=open(
In [20]:
           data_to_write=[]
           for i in range(len(studentdata[0])):# 10 rows
               row-list
                                         for
                                                        in
                                  )
               range(len(studentdata)):#12
                                              col
                                                     data-
               studentdata[j] [i] row. append (data) row.
               append('\n') data to write.append(",".
               join (row))
In [21]:
         data to write
Out[21]: ['.01, Rahul, Male, 08-04-1991, 56, 89, 74, 74, 80, 99, 0racle, Java developer, 8.9.
             ' 102,Aditya,Ma1e,12-03-199e,6e,75,86,86,79,300,De10itte,Graduate Software Engineer, 7.
         6,\n',
          '103,0mkar,Male,03-09-1990,56, 75, 72, 72, 64, 267, Accenture, Engineer Trainee,4.25,
```

'Cognizant',

106, Shruti, emale, 08-06-1991, 69, 85, 59, 59, 59, 272, Siemens, Cloud Engineer, 5, , '107, Nikita, Female, 21-07-1992, 70, 82, 74, 74, 66, 292, KPMG, Dev ops Engineer, 10, , '108, Ganesh, Male, 04-09-1990, 75, 81, 81, 81, 83, 320, Infosys '109, Mayuri, Female, 14-05-1988, 89, 76, 77, 77, 89, 331, IBM, M Analyst, 9.5, , achinelearning Engineer, 12.

' 104, Abhijeet, Ma1e, 12-11-1989, 78, 90, 56, 56, 66, 290, Cognizant, Engineer Trainee, 4, ,

' 105, Pooja, Female, 07-02-1990, 64, 74, 60, 60, 75, 273, TCS, Software Developer, 8, ,

```
73, 78, 78, 10, 329, Wipro, Data Analyst, 4.5, \n']
```

'110,

Shrikant, Male, 07-02-1990, 88,

```
fw. writelines (data_to_write)
```

```
fw. close ()
```

```
# 1 . Sum of Marks # 2. Average

Marks print("Math Marks=" ,

Maths) print("Phyics Marks=" ,

Physics) print ("Chemistry Marks=" ,

Chemistry) print ("English

Marks=" , English) math=[int(i) for i

in Maths] physics=[int(i) for i in

Physics] chemistry=[int(i) for i in

Chemistry] english=[int(i) for i in

English] sum_of_marks=[]

for i in range(len(math)):

sum_of_marks . append (math [i] +physics [i] +chemistry [i] +english [i] )

avg. append (round (.um_of_marks[i] , 2))
```

5. Statistical Operation

In [26]:

```
print ("Sum of Marks=" , sum_of_marks) print ("Average Marks=" , avg)
```

```
Math Marks= ['56','60','56', '78', '69','70', Phyics Marks= ['89','75','75','90', '74', '85', '82','81,'76','73']

Chemistry Marks= ['74','86', '72','56','60', '74','81', '77', English Marks= ['74','86', '72','56','60', '74', '81']

Sum of Marks= [293, 307, 275, 280, 258, 272, 300, 318, 319, 317]

Average Marks= [293, 307, 275, 280, 258, 272, 300, 318, 319, 317]
```

```
# 3. Max Marks print ("Maximum
Marks=" ,max(avg))
```

```
, '81','<sup>77</sup>',
```

```
In [28]: # 4. Min Marks # Max Marks print ("Maximum Marks=" ,min(avg))
```

Maximum Marks= 258

```
In [29]:
```

```
# 5. Count total no of student print ("Total No of Student=",len(studentdata[0]))
```

Total No of Student= 10

```
In [30]:
```

```
#6. Percentage

#assume math marks=90, physic=90, chem=90

for i in range(len(sum_of_marks)):

per. append ( round ( 100*sum_of_marks [ i ] / 270)

, 2) ) print ( "Percentage=" , per)
```

Percentage= [108.52, 113.7, 101.85, 103.7, 95.56, 100.74, 111.11, 117.78, 118.15, 117.4 1]

]: