

# Practical Assignment

**Name:** Omkar Pokalwar

**Roll Number :** 779

**PRN :** 202201070109

**Take/Prepare any text files for any real-life application. For Ex. "Stud.txt", "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**

## **Code for merging .csv files**

```
import csv

file = open("/content/drive/MyDrive/FY Practical /EDS/Stud_details.csv","r")

data = list(csv.reader(file))

data.sort()

print(data)

file.close()

file1 = open("/content/drive/MyDrive/FY Practical /EDS/stud_score.csv","r")

data1 = list(csv.reader(file1))

print(data1)

#merging two files

data2 = []

for i in range(len(data)):

    data2.append(data[i]+data1[i])

print(data2)

print(data2[0])

#sorting as per records

data2.sort()

print(data2)

#converting list to csv file

file2 = open("/content/drive/MyDrive/FY Practical /EDS/Stud_details-score.csv","w")

cw = csv.writer(file2)

cw.writerows(data2)

file.close()

file1.close()

file2.close()
```

## .CSV FILE

File Home Insert Page Layout Formulas Data Review View Help Tell me

Clipboard Font Alignment Number Conditional Formatting Format as Table Cell Styles Styles

A1 Student ID

	A	B	C	D	E	F	G	H
1	Student ID	Name						
2	1001	Soham						
3	1002	Shubham						
4	1003	Sahil						
5	1004	Onkar						
6	1005	Sanjay						
7	1006	Samarth						
8	1007	Ojas						
9	1008	Aditya						
10	1009	Edison						
11	1010	Heroson						
12								
13								
14								
15								
16								
17								
18								
19								

Stud\_details

Ready Accessibility: Unavailable

stud\_score - E...

File Home Insert Page Layout Formulas Data Review View Help Tell me

Clipboard Font Alignment Number Conditional Formatting Format as Table Cell Styles Styles

A1 Name

	A	B	C	D	E	F	G	H
1	Name	Age	Grade					
2	Soham	19	A					
3	Shubham	21	B					
4	Sahil	20	A					
5	Onkar	23	A					
6	Sanjay	21	B					
7	Samarth	23	D					
8	Ojas	22	B					
9	Aditya	21	A					
10	Edison	20	B					
11	Heroson	19	C					
12								
13								
14								
15								
16								
17								
18								
19								

stud\_score

Ready Accessibility: Unavailable 100%

## Output:-

```
[['1001', 'Soham'], ['1002', 'Shubham'], ['1003', 'Sahil'], ['1004', 'Onkar'], ['1005', 'Sanjay'], ['1006', 'Samarth'], ['1007', 'Ojas'],  
 ['1008', 'Aditya'], ['1009', 'Edison'], ['1010', 'Heroson'], ['Student ID', 'Name']]
```

```
[['Name', 'Age', 'Grade'], ['Soham', '19', 'A'], ['Shubham', '21', 'B'], ['Sahil', '20', 'A'], ['Onkar', '23', 'A'], ['Sanjay', '21', 'B'],  
 ['Samarth', '23', 'D'], ['Ojas', '22', 'B'], ['Aditya', '21', 'A'], ['Edison', '20', 'B'], ['Heroson', '19', 'C']]
```

```
[['1001', 'Soham', 'Name', 'Age', 'Grade'], ['1002', 'Shubham', 'Soham', '19', 'A'], ['1003', 'Sahil', 'Shubham', '21', 'B'], ['1004',  
 'Onkar', 'Sahil', '20', 'A'], ['1005', 'Sanjay', 'Onkar', '23', 'A'], ['1006', 'Samarth', 'Sanjay', '21', 'B'], ['1007', 'Ojas', 'Samarth',  
 '23', 'D'], ['1008', 'Aditya', 'Ojas', '22', 'B'], ['1009', 'Edison', 'Aditya', '21', 'A'], ['1010', 'Heroson', 'Edison', '20', 'B'], ['Student  
ID', 'Name', 'Heroson', '19', 'C']]
```

```
['1001', 'Soham', 'Name', 'Age', 'Grade']
```

```
[['1001', 'Soham', 'Name', 'Age', 'Grade'], ['1002', 'Shubham', 'Soham', '19', 'A'], ['1003', 'Sahil', 'Shubham', '21', 'B'], ['1004',  
 'Onkar', 'Sahil', '20', 'A'], ['1005', 'Sanjay', 'Onkar', '23', 'A'], ['1006', 'Samarth', 'Sanjay', '21', 'B'], ['1007', 'Ojas', 'Samarth',  
 '23', 'D'], ['1008', 'Aditya', 'Ojas', '22', 'B'], ['1009', 'Edison', 'Aditya', '21', 'A'], ['1010', 'Heroson', 'Edison', '20', 'B'], ['Student  
ID', 'Name', 'Heroson', '19', 'C']]
```

## Code for all statistical analysis (Average, Max, Min, Count, Sum, Percentage)

```
import pandas as pd

# Read the CSV file

df = pd.read_csv('/content/drive/MyDrive/FY Practical /EDS/student_details.csv')

# Calculate the average age

avg_age = df['Age'].mean()

# Calculate the maximum age

max_age = df['Age'].max()

# Calculate the minimum age

min_age = df['Age'].min()

# Calculate the total number of students

num_students = df['Student ID'].count()

# Calculate the total grade points

total_grade_points = df['Grade'].replace({'A': 4, 'B': 3, 'C': 2, 'D': 1}).sum()

# Calculate the percentage of students with grade A

num_grade_a = df[df['Grade'] == 'A']['Student ID'].count()

pct_grade_a = num_grade_a / num_students * 100

# Print the results

print('Average age: ', avg_age)

print('Maximum age: ', max_age)

print('Minimum age: ', min_age)

print('Number of students: ', num_students) #count

print('Total grade points: ', total_grade_points) #Sum

print('Percentage of students with grade A: ', pct_grade_a)
```

## Output:-

```
import pandas as pd

# Read the CSV file
df = pd.read_csv('/content/drive/MyDrive/FY Practical /EDS/student_details.csv')

# Calculate the average age
avg_age = df['Age'].mean()

# Calculate the maximum age
max_age = df['Age'].max()

# Calculate the minimum age
min_age = df['Age'].min()

# Calculate the total number of students
num_students = df['Student ID'].count()

# Calculate the total grade points
total_grade_points = df['Grade'].replace({'A': 4, 'B': 3, 'C': 2, 'D': 1}).sum()

# Calculate the percentage of students with grade A
num_grade_a = df[df['Grade'] == 'A']['Student ID'].count()
pct_grade_a = num_grade_a / num_students * 100

# Print the results
print('Average age: ', avg_age)
print('Maximum age: ', max_age)
print('Minimum age: ', min_age)
print('Number of students: ', num_students) #count
print('Total grade points: ', total_grade_points) #Sum
print('Percentage of students with grade A: ', pct_grade_a)
```

```
Average age: 20.9
Maximum age: 23
Minimum age: 19
Number of students: 10
Total grade points: 34
Percentage of students with grade A: 40.0
```