

AMERICAN INTERNATIONAL UNIVERSITY BANGLADESH

Faculty of Science And Technology



Project Report Cover

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Project Title: Develop Grade sheet using Python

Due Date: 14/08/2021 Semester: Summer 2020-21

Subject Code: CSC4162 Subject Name: Programming in Python

Section: A Course Instructor: Akinul Islam Jony

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Individual Submission



Group Submission

No.	Student Name	Student Number	Student Signature	Date
Group Members:				
1	Syeda Asrafa Islam	18-38067-2	Asrafa	14/08/2021
2	Abdullah Al Fahmee	18-38205-2	ABDULLAH	14/08/2021
3	Zahid Hasan Loshan	18-38160-2	Zahid	14/08/2021
4	Ehsanul Ahmmed	18-37857-2	Ehsanul	14/08/2021

Develop Grade sheet using Python

Attendance File

Attendance.ipynbssss

import pandas as pd //First of all, we import the pandas library.

Week 1 Lab

df = pd.read_csv ('./Attendance/Week_1_Lab.csv') // Read CSV Files CSV files (comma separated files) are used to store big data sets. Here we read the Week_1_Lab.csv file using read_csv() function from the folder which is namely Attendance_folder.

```
In [1]: import pandas as pd
```

```
In [2]: df = pd.read_csv ('./Attendance/Week_1_Lab.csv')
df
```

```
Out[2]:
```

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	23/05/2021, 08:00:34
1	Akinul Islam Jony	Left	23/05/2021, 10:11:26
2	Akinul Islam Jony	Joined	23/05/2021, 10:11:46
3	MD. AL-EMRAN PARAG	Joined	23/05/2021, 08:00:50
4	MD. AL-EMRAN PARAG	Left	23/05/2021, 10:50:58
...
87	SAZZAD HASAN	Joined	23/05/2021, 08:07:46
88	SAZZAD HASAN	Left	23/05/2021, 09:20:55
89	SAZZAD HASAN	Joined	23/05/2021, 09:20:56
90	MOHAMMAD ALI	Joined	23/05/2021, 08:08:19
91	HIZBULLAH ATIK SIDDIQUE	Joined	23/05/2021, 09:13:44

92 rows × 3 columns

df // Print the file.

df

Out[2]:

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	23/05/2021, 08:00:34
1	Akinul Islam Jony	Left	23/05/2021, 10:11:26
2	Akinul Islam Jony	Joined	23/05/2021, 10:11:46
3	MD. AL-EMRAN PARAG	Joined	23/05/2021, 08:00:50
4	MD. AL-EMRAN PARAG	Left	23/05/2021, 10:50:58
...
87	SAZZAD HASAN	Joined	23/05/2021, 08:07:46
88	SAZZAD HASAN	Left	23/05/2021, 09:20:55
89	SAZZAD HASAN	Joined	23/05/2021, 09:20:56
90	MOHAMMAD ALI	Joined	23/05/2021, 08:08:19
91	HIZBULLAH ATIK SIDDIQUE	Joined	23/05/2021, 09:13:44

92 rows × 3 columns

df.drop_duplicates(subset="Full Name",inplace = True) // Here we drop the duplicates values from the above dataset by using drop_duplicates. When inplace = True , the data is modified in place, which means it will return nothing and the dataframe is now updated.

```
In [3]: df.drop_duplicates(subset = "Full Name",inplace = True)
df
```

Out[3]:

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	23/05/2021, 08:00:34
3	MD. AL-EMRAN PARAG	Joined	23/05/2021, 08:00:50
6	MD. ASIKUR RAHMAN SAUMIK	Joined	23/05/2021, 08:00:51
7	MD. ARMAN UDDIN	Joined	23/05/2021, 08:00:53
8	TAHMID SHAHRIAR ARNOB	Joined	23/05/2021, 08:00:54
9	ABDUL MAJID	Joined	23/05/2021, 08:00:56
10	MEHEDI HASAN NILOY	Joined	23/05/2021, 08:00:57
11	SAIF HAQUE	Joined	23/05/2021, 08:00:58
16	REHENUMA TABASSUM MEGHLA	Joined	23/05/2021, 08:00:58
17	MEHRAB HOSSAIN SHARAN	Joined	23/05/2021, 08:00:59
20	SUMNOON-E-TAHA	Joined	23/05/2021, 08:01:07
21	MD MEHRAB SADIK	Joined	23/05/2021, 08:01:08
24	MD. MAHFUZUR RAHMAN	Joined	23/05/2021, 08:01:15
25	KASIRA - TUT- TARFI	Joined	23/05/2021, 08:01:16
26	S. M. A. WASEI	Joined	23/05/2021, 08:01:22
27	BIJON SAHA	Joined	23/05/2021, 08:01:24
28	BHUIYAN SAAD BIN MOBARAK	Joined	23/05/2021, 08:01:27
31	RAIHAN UDDIN	Joined	23/05/2021, 08:01:27

df // Print the file.

```
In [3]: df.drop_duplicates(subset = "Full Name", inplace = True)
df
```

```
Out[3]:
```

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	23/05/2021, 08:00:34
3	MD. AL-EMRAN PARAG	Joined	23/05/2021, 08:00:50
6	MD. ASIKUR RAHMAN SAUMIK	Joined	23/05/2021, 08:00:51
7	MD. ARMAN UDDIN	Joined	23/05/2021, 08:00:53
8	TAHMID SHAHRIAR ARNOB	Joined	23/05/2021, 08:00:54
9	ABDUL MAJID	Joined	23/05/2021, 08:00:56
10	MEHEDI HASAN NILOY	Joined	23/05/2021, 08:00:57
11	SAIF HAQUE	Joined	23/05/2021, 08:00:58
16	REHENUMA TABASSUM MEGHLA	Joined	23/05/2021, 08:00:58
17	MEHRAB HOSSAIN SHARAN	Joined	23/05/2021, 08:00:59
20	SUMNOON-E-TAHA	Joined	23/05/2021, 08:01:07
21	MD MEHRAB SADIK	Joined	23/05/2021, 08:01:08
24	MD. MAHFUZUR RAHMAN	Joined	23/05/2021, 08:01:15
25	KASIRA - TUT- TARFI	Joined	23/05/2021, 08:01:16
26	S. M. A. WASEI	Joined	23/05/2021, 08:01:22
27	BIJON SAHA	Joined	23/05/2021, 08:01:24
28	BHUIYAN SAAD BIN MOBARAK	Joined	23/05/2021, 08:01:27
31	RAIHAN UDDIN	Joined	23/05/2021, 08:01:27

df = df.drop(df.index[0]) // Here we drop the first row using drop method by using the index number [0].

```
In [4]: df = df.drop(df.index[0])
df
```

```
Out[4]:
```

	Full Name	User Action	Timestamp
3	MD. AL-EMRAN PARAG	Joined	23/05/2021, 08:00:50
6	MD. ASIKUR RAHMAN SAUMIK	Joined	23/05/2021, 08:00:51
7	MD. ARMAN UDDIN	Joined	23/05/2021, 08:00:53
8	TAHMID SHAHRIAR ARNOB	Joined	23/05/2021, 08:00:54
9	ABDUL MAJID	Joined	23/05/2021, 08:00:56
10	MEHEDI HASAN NILOY	Joined	23/05/2021, 08:00:57
11	SAIF HAQUE	Joined	23/05/2021, 08:00:58
16	REHENUMA TABASSUM MEGHLA	Joined	23/05/2021, 08:00:58
17	MEHRAB HOSSAIN SHARAN	Joined	23/05/2021, 08:00:59
20	SUMNOON-E-TAHA	Joined	23/05/2021, 08:01:07
21	MD MEHRAB SADIK	Joined	23/05/2021, 08:01:08
24	MD. MAHFUZUR RAHMAN	Joined	23/05/2021, 08:01:15

df // Print the file.

```
In [4]: df = df.drop(df.index[0])
df
```

Out[4]:

	Full Name	User Action	Timestamp
3	MD. AL-EMRAN PARAG	Joined	23/05/2021, 08:00:50
6	MD. ASIKUR RAHMAN SAUMIK	Joined	23/05/2021, 08:00:51
7	MD. ARMAN UDDIN	Joined	23/05/2021, 08:00:53
8	TAHMID SHAHRIAR ARNOB	Joined	23/05/2021, 08:00:54
9	ABDUL MAJID	Joined	23/05/2021, 08:00:56
10	MEHEDI HASAN NILOY	Joined	23/05/2021, 08:00:57
11	SAIF HAQUE	Joined	23/05/2021, 08:00:58
16	REHENUMA TABASSUM MEGHLA	Joined	23/05/2021, 08:00:58
17	MEHRAB HOSSAIN SHARAN	Joined	23/05/2021, 08:00:59
20	SUMNOON-E-TAHA	Joined	23/05/2021, 08:01:07
21	MD MEHRAB SADIK	Joined	23/05/2021, 08:01:08
24	MD. MAHFUZUR RAHMAN	Joined	23/05/2021, 08:01:15

TotalGrade

df1 = pd.read_csv('./TotalGrade/TotalGrade.csv') // Read CSV Files CSV files (comma separated files) are used to store big data sets. Here we read the **TotalGrade.csv** file using **read_csv()** function from the folder which is namely TotalGrade.

//We fetch the columns from **TotalGrade.csv** file and store it in a dataframe name TotalGrade . Here we use **to_csv()** method from dataframe object it uses the fetch data to convert it in a form of a csv file.

```
In [6]: df1 = pd.read_csv ('./TotalGrade/TotalGrade.csv')
df1
```

```
Out[6]:
```

	Unnamed: 0	Unnamed: 0.1	SL	Student ID	Full Name	Ass.
0	0	0	1	17-34409-1	KHALID MASRUR	17
1	1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15
2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20
3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19
4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19
5	5	5	6	18-37027-1	KHAN MD. EHSAN	17
6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19
7	7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17
8	8	8	9	18-37827-2	MD. FARHAN TANVIR	19
9	9	9	10	18-37912-2	SAZZAD HASAN	18
10	10	10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18
11	11	11	12	18-39130-3	MD. RATUL AMAN	20
12	12	12	13	18-39243-3	MD. IMRAN HOSSAIN	20
13	13	13	14	19-39342-1	MD. ASIKUR RAHMAN SAUMIK	20
14	14	14	15	19-39434-1	MD. SAMIN ANJUM	19

```
for x in df1.index:
```

```
    df1.loc [x, "labday1"] = 0
```

```
    for y in df.index:
```

```
        if df1.loc [x, "Full Name"]==df.loc [y, "Full Name"]:
```

```
            df1.loc [x, "labday1"] = 1
```

// Now we assigning the labday1 mark on our TatalGrade.csv file. We used nested for loop to assign mark by comparing the two dataframes , we got the result final result how many students are presents or not. According to that we assign zero those are absent and assign one for those are present.

```
In [7]: for x in df1.index:
        df1.loc [x, "labday1"] = 0
        for y in df.index:
            if df1.loc [x, "Full Name"]==df.loc [y, "Full Name"] :
                df1.loc [x, "labday1"] = 1
```

```
In [8]: df1
```

```
Out[8]:
```

	Unnamed: 0	Unnamed: 0.1	SL	Student ID	Full Name	Ass.	labday1
0	0	0	1	17-34409-1	KHALID MASRUR	17	1.0
1	1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0
2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0
3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0
4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0
5	5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0
6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0
7	7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0
8	8	8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0
9	9	9	10	18-37912-2	SAZZAD HASAN	18	1.0
10	10	10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0
11	11	11	12	18-39130-3	MD. RATUL AMAN	20	1.0
12	12	12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0

```
df1.to_csv('./TotalGrade/TotalGrade.csv')
```

We converted the dataframe into csv file.

```
In [9]: df1.to_csv('./TotalGrade/TotalGrade.csv')
```

Week 4 Lab Makeup

```
dflabmakeup = pd.read_csv ('./Attendance/Week_4_Lab_Makeup.csv')
```

dflabmakeup // Read CSV Files CSV files (comma separated files) are used to store big data sets. Here we read the **Week_4_Lab_Makeup.csv** file using read_csv() function from the folder which is namely Attendance_folder.

```
In [10]: dflabmakeup = pd.read_csv ('./Attendance/Week_4_Lab_Makeup.csv')
dflabmakeup
```

```
Out[10]:
```

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	17/06/2021, 09:00:45
1	MD. ASIKUR RAHMAN SAUMIK	Joined	17/06/2021, 09:01:04
2	RAIHAN UDDIN	Joined	17/06/2021, 09:01:09
3	MD. IMRAN HOSSAIN	Joined	17/06/2021, 09:01:19
4	MD. IMRAN HOSSAIN	Left	17/06/2021, 10:36:13
...
77	FARDIN HASAN KHAN	Joined	17/06/2021, 10:05:52
78	NURA YEASDANI	Joined	17/06/2021, 09:51:04
79	NURA YEASDANI	Left	17/06/2021, 09:51:24
80	NURA YEASDANI	Joined	17/06/2021, 09:51:31
81	MOHIM BHOWMICK	Joined	17/06/2021, 10:06:58

82 rows x 3 columns

dflabmakeup.drop_duplicates(subset ="Full Name",inplace = True)

dflabmakeup// Here we drop the duplicates values from the above dataset by using drop_duplicates. When inplace = True , the data is modified in place, which means it will return nothing and the dataframe is now updated.

```
In [12]: dflabmakeup.drop_duplicates(subset ="Full Name",inplace = True)
dflabmakeup
```

```
Out[12]:
```

	Full Name	User Action	Timestamp
1	MD. ASIKUR RAHMAN SAUMIK	Joined	17/06/2021, 09:01:04
2	RAIHAN UDDIN	Joined	17/06/2021, 09:01:09
3	MD. IMRAN HOSSAIN	Joined	17/06/2021, 09:01:19
5	BIJON SAHA	Joined	17/06/2021, 09:01:21
6	KHALID MASRUR	Joined	17/06/2021, 09:01:23
7	ABDULLAH AL MAMUN SHUVO	Joined	17/06/2021, 09:01:26
8	OASIF ASHRAF	Joined	17/06/2021, 09:01:30
9	MD. FARHAN TANVIR	Joined	17/06/2021, 09:01:32
10	BHUIYAN SAAD BIN MOBARAK	Joined	17/06/2021, 09:01:40
11	KASIRA - TUT- TARFI	Joined	17/06/2021, 09:01:50
14	MD. MAHFUZUR RAHMAN	Joined	17/06/2021, 09:01:51
15	MUHAMMAD AL AMIN	Joined	17/06/2021, 09:01:59
16	MD. RATUL AMAN	Joined	17/06/2021, 09:02:12
23	REHENUMA TABASSUM MEGHLA	Joined	17/06/2021, 09:02:17


```
dflabmakeup= dflabmakeup.drop(dflabmakeup.index[0])
```

```
dflabmakeup
```

```
// Here we drop the first row using drop method by using the index number [0].
```

```
In [17]: dflabmakeup= dflabmakeup.drop(dflabmakeup.index[0])
dflabmakeup
```

Out[17]:

	Full Name	User Action	Timestamp
7	ABDULLAH AL MAMUN SHUVO	Joined	17/06/2021, 09:01:26
8	OASIF ASHRAF	Joined	17/06/2021, 09:01:30
9	MD. FARHAN TANVIR	Joined	17/06/2021, 09:01:32
10	BHUIYAN SAAD BIN MOBARAK	Joined	17/06/2021, 09:01:40
11	KASIRA - TUT- TARFI	Joined	17/06/2021, 09:01:50
14	MD. MAHFUZUR RAHMAN	Joined	17/06/2021, 09:01:51
15	MUHAMMAD AL AMIN	Joined	17/06/2021, 09:01:59
16	MD. RATUL AMAN	Joined	17/06/2021, 09:02:12
23	REHENUMA TABASSUM MEGHLA	Joined	17/06/2021, 09:02:17
25	SAZZAD HASAN	Joined	17/06/2021, 09:02:17
26	WASIMUL ISLAM TALUKDER	Joined	17/06/2021, 09:02:21
27	SAIF HAQUE	Joined	17/06/2021, 09:02:25
30	MD. ARMAN UDDIN	Joined	17/06/2021, 09:02:33

```
for x in df1.index:
```

```
    df1.loc [x, "labmakeup"] = 0
```

```
    for y in dflabmakeup.index:
```

```
        if df1.loc [x, "Full Name"]==dflabmakeup.loc [y, "Full Name"] :
```

```
            df1.loc [x, "labmakeup"] = 1
```

```
// Now we assigning the labmakeup mark on our TatalGrade.csv file. We used nested for loop to assign mark by comparing the two dataframes , we got the result final result how many students are presents or not. According to that we assign zero those are absent and assign one for those are present.
```

In [21]: df1

Out[21]:

	Unnamed: 0	Unnamed: 0.1	SL	Student ID	Full Name	Ass.	labday1	labmakeup
0	0	0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0
1	1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0
2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0
3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0
4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0
5	5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0
6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0
7	7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0
8	8	8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0
9	9	9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0
10	10	10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0
11	11	11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0
12	12	12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0
13	13	13	14	19-39342-1	MD. ASIKUR RAHMAN SAUMIK	20	1.0	0.0
14	14	14	15	19-39434-1	MD. SAMIN ANJUM	19	1.0	0.0
15	15	15	16	19-39458-1	NURA YEASDANI	20	1.0	1.0
16	16	16	17	19-39573-1	LAMIA MANNAN	20	1.0	0.0

```
dflab5 = pd.read_csv('./Attendance/Week_5_Lab.csv')
```

dflab5

// Read CSV Files CSV files (comma separated files) are used to store big data sets. Here we read the Week_5_Lab.csv file using read_csv() function from the folder which is namely Attendance_folder.

In [22]: dflab5 = pd.read_csv('./Attendance/Week_5_Lab.csv')
dflab5

Out[22]:

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	20/06/2021, 08:01:08
1	BHUIYAN SAAD BIN MOBARAK	Joined	20/06/2021, 08:01:20
2	MOHIM BHOWMICK	Joined	20/06/2021, 08:01:29
3	HIZBULLAH ATIK SIDDIQUE	Joined	20/06/2021, 08:01:31
4	KASIRA - TUT- TARFI	Joined	20/06/2021, 08:01:32
...
91	MD. IMRAN HOSSAIN	Joined	20/06/2021, 08:55:09
92	MD. RATUL AMAN	Joined	20/06/2021, 09:11:41
93	MD. RATUL AMAN	Left	20/06/2021, 10:21:07
94	MD. RATUL AMAN	Joined	20/06/2021, 10:23:05
95	SAFIQUL ISLAM SOIKAT	Joined	20/06/2021, 10:24:37

96 rows x 3 columns

```
dflab5.drop_duplicates(subset ="Full Name",inplace = True)
```

dflab5

Here we drop the duplicates values from the above dataset by using drop_duplicates. When inplace = True , the data is modified in place, which means it will return nothing and the dataframe is now updated.

```
In [23]: dflab5.drop_duplicates(subset ="Full Name",inplace = True)
dflab5
```

```
Out[23]:
```

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	20/06/2021, 08:01:08
1	BHUIYAN SAAD BIN MOBARAK	Joined	20/06/2021, 08:01:20
2	MOHIM BHOWMICK	Joined	20/06/2021, 08:01:29
3	HIZBULLAH ATIK SIDDIQUE	Joined	20/06/2021, 08:01:31
4	KASIRA - TUT- TARFI	Joined	20/06/2021, 08:01:32
11	WASIMUL ISLAM TALUKDER	Joined	20/06/2021, 08:01:38
13	MD. MAHMUDUL HASAN	Joined	20/06/2021, 08:01:38
14	ASIF IQBAL BIN HARUN	Joined	20/06/2021, 08:01:43
15	ABDULLAH AL MAMUN SHUVO	Joined	20/06/2021, 08:01:47
16	SAIF HAQUE	Joined	20/06/2021, 08:01:50
17	MEHEDI HASAN NILOY	Joined	20/06/2021, 08:01:50
18	MD. AL-EMRAN PARAG	Joined	20/06/2021, 08:01:58
19	MOHAMMED MOHAIMENUL ISLAM	Joined	20/06/2021, 08:02:13
20	MD. MAHFUZUR RAHMAN	Joined	20/06/2021, 08:02:19
21	S. M. A. WASEI	Joined	20/06/2021, 08:02:21

```
dflab5= dflab5.drop(dflab5.index[0])
```

dflab5

// Here we drop the first row using drop method by using the index number [0].

```
In [48]: dflab5= dflab5.drop(dflab5.index[0])
dflab5
```

```
Out[48]:
```

	Full Name	User Action	Timestamp
1	BHUIYAN SAAD BIN MOBARAK	Joined	20/06/2021, 08:01:20
2	MOHIM BHOWMICK	Joined	20/06/2021, 08:01:29
3	HIZBULLAH ATIK SIDDIQUE	Joined	20/06/2021, 08:01:31
4	KASIRA - TUT- TARFI	Joined	20/06/2021, 08:01:32
11	WASIMUL ISLAM TALUKDER	Joined	20/06/2021, 08:01:38
13	MD. MAHMUDUL HASAN	Joined	20/06/2021, 08:01:38
14	ASIF IQBAL BIN HARUN	Joined	20/06/2021, 08:01:43
15	ABDULLAH AL MAMUN SHUVO	Joined	20/06/2021, 08:01:47
16	SAIF HAQUE	Joined	20/06/2021, 08:01:50
17	MEHEDI HASAN NILOY	Joined	20/06/2021, 08:01:50
18	MD. AL-EMRAN PARAG	Joined	20/06/2021, 08:01:58
19	MOHAMMED MOHAIMENUL ISLAM	Joined	20/06/2021, 08:02:13
20	MD. MAHFUZUR RAHMAN	Joined	20/06/2021, 08:02:19
21	S. M. A. WASEI	Joined	20/06/2021, 08:02:21

for x in df1.index:

df1.loc [x, "labday5"] = 0

for y in dflab5.index:

if df1.loc [x, "Full Name"]==dflab5.loc [y, "Full Name"] :

df1.loc [x, "labday5"] = 1

// Now we assigning the labday5 mark on our TatalGrade.csv file. We used nested for loop to assign mark by comparing the two dataframes , we got the result final result how many students are presents or not. According to that we assign zero those are absent and assign one for those are present.

```
In [25]: df1
```

```
Out[25]:
```

	Unnamed: 0	Unnamed: 0.1	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5
0	0	0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0
1	1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0
2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0
3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0
4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0
5	5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0
6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0
7	7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0
8	8	8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0
9	9	9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0
10	10	10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0
11	11	11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0
12	12	12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0
13	13	13	14	19-39342-1	MD. ASIKUR RAHMAN SAUMIK	20	1.0	0.0	1.0
14	14	14	15	19-39434-1	MD. SAMIN ANJUM	19	1.0	0.0	1.0

```
dftheory1 = pd.read_csv ('./Attendance/Week_1_Theory.csv')
```

```
dftheory1
```

// Read CSV Files CSV files (comma separated files) are used to store big data sets. Here we read the Week_1_Theory.csv file using read_csv() function from the folder which is namely Attendance_folder.

```
In [27]: dftheory1 = pd.read_csv ('./Attendance/Week_1_Theory.csv')
dftheory1
```

```
Out[27]:
```

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	25/05/2021, 10:00:33
1	MEHEDI HASAN NILOY	Joined	25/05/2021, 10:00:54
2	KASIRA - TUT- TARFI	Joined	25/05/2021, 10:00:58
3	SAFIQUL ISLAM SOIKAT	Joined	25/05/2021, 10:00:59
4	HIZBULLAH ATIK SIDDIQUE	Joined	25/05/2021, 10:01:05
...
62	MD. IBNA JAHID HASSAN	Joined	25/05/2021, 10:41:43
63	MD. IBNA JAHID HASSAN	Left	25/05/2021, 10:47:52
64	MD. SAMIN ANJUM	Joined	25/05/2021, 10:49:31
65	MD. SAMIN ANJUM	Left	25/05/2021, 10:55:39
66	MD. SAMIN ANJUM	Joined	25/05/2021, 10:56:02

67 rows x 3 columns

```
dftheory1.drop_duplicates(subset ="Full Name",inplace = True)
```

```
dftheory1
```

Here we drop the duplicates values from the above dataset by using drop_duplicates. When inplace = True , the data is modified in place, which means it will return nothing and the dataframe is now updated.

```
In [59]: dftheory1.drop_duplicates(subset = "Full Name", inplace = True)
dftheory1
```

```
Out[59]:
```

	Full Name	User Action	Timestamp
0	Akinul Islam Jony	Joined	25/05/2021, 10:00:33
1	MEHEDI HASAN NILOY	Joined	25/05/2021, 10:00:54
2	KASIRA - TUT- TARFI	Joined	25/05/2021, 10:00:58
3	SAFIQUL ISLAM SOIKAT	Joined	25/05/2021, 10:00:59
4	HIZBULLAH ATIK SIDDIQUE	Joined	25/05/2021, 10:01:05
5	BIJON SAHA	Joined	25/05/2021, 10:01:06
6	MD. ARMAN UDDIN	Joined	25/05/2021, 10:01:06
7	MEHRAB HOSSAIN SHARAN	Joined	25/05/2021, 10:01:06
8	ABDULLAH AL MAMUN SHUVO	Joined	25/05/2021, 10:01:15
9	MD. MAHFUZUR RAHMAN	Joined	25/05/2021, 10:01:17
12	FARDIN HASAN KHAN	Joined	25/05/2021, 10:01:20
13	ISHRAK AHMED ASIF	Joined	25/05/2021, 10:01:22
14	SAIF HAQUE	Joined	25/05/2021, 10:01:22

```
dftheory1= dftheory1.drop(dftheory1.index[0])
```

```
dftheory1
```

// Here we drop the first row using drop method by using the index number [0].

```
In [28]: dftheory1= dftheory1.drop(dftheory1.index[0])
dftheory1
```

```
Out[28]:
```

	Full Name	User Action	Timestamp
1	MEHEDI HASAN NILOY	Joined	25/05/2021, 10:00:54
2	KASIRA - TUT- TARFI	Joined	25/05/2021, 10:00:58
3	SAFIQUL ISLAM SOIKAT	Joined	25/05/2021, 10:00:59
4	HIZBULLAH ATIK SIDDIQUE	Joined	25/05/2021, 10:01:05
5	BIJON SAHA	Joined	25/05/2021, 10:01:06
...
62	MD. IBNA JAHID HASSAN	Joined	25/05/2021, 10:41:43
63	MD. IBNA JAHID HASSAN	Left	25/05/2021, 10:47:52
64	MD. SAMIN ANJUM	Joined	25/05/2021, 10:49:31
65	MD. SAMIN ANJUM	Left	25/05/2021, 10:55:39
66	MD. SAMIN ANJUM	Joined	25/05/2021, 10:56:02

66 rows x 3 columns

for x in df1.index:

```
df1.loc [x, "theoryday1"] = 0
```

```
for y in dftheory1.index:
```

```
    if df1.loc [x, "Full Name"]==dftheory1.loc [y, "Full Name"] :
```

```
        df1.loc [x, "theoryday1"] = 1
```

// Now we assigning the theoryday1 mark on our TatalGrade.csv file. We used nested for loop to assign mark by comparing the two dataframes , we got the result final result how many students are presents or not. According to that we assign zero those are absent and assign one for those are present.

```
In [29]: for x in df1.index:
          df1.loc [x, "theoryday1"] = 0
          for y in dftheory1.index:
              if df1.loc [x, "Full Name"]==dftheory1.loc [y, "Full Name"] :
                  df1.loc [x, "theoryday1"] = 1
```

```
In [30]: df1
```

```
Out[30]:
```

	Unnamed: 0	Unnamed: 0.1	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1
0	0	0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0
1	1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0
2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0
3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0
4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0
5	5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0
6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0
7	7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0
8	8	8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0
9	9	9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0
10	10	10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0
11	11	11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0	1.0
12	12	12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0

```
dftheory2 = pd.read_csv ('./Attendance/Week_2_Theory.csv')
```

// Read CSV Files CSV files (comma separated files) are used to store big data sets. Here we read the Week_2_theory.csv file using read_csv() function from the folder which is namely Attendance_folder.

```
dftheory2.drop_duplicates(subset="Full Name",inplace = True)
```

Here we drop the duplicates values from the above dataset by using drop_duplicates. When inplace = True , the data is modified in place, which means it will return nothing and the dataframe is now updated.

```
dftheory2= dftheory2.drop(dftheory2.index[0]) // Here we drop the first row using drop method by using the index number [0].
```

dftheory2

```
In [31]: dftheory2 = pd.read_csv ('./Attendance/Week_2_Theory.csv')
dftheory2.drop_duplicates(subset ="Full Name",inplace = True)
dftheory2= dftheory2.drop(dftheory2.index[0])
dftheory2
```

```
Out[31]:
```

	Full Name	User Action	Timestamp
3	S. M. A. WASEI	Joined	01/06/2021, 10:01:52
4	MD. ASIKUR RAHMAN SAUMIK	Joined	01/06/2021, 10:01:53
7	ISHRAK AHMED ASIF	Joined	01/06/2021, 10:01:56
8	SAFIQUL ISLAM SOIKAT	Joined	01/06/2021, 10:01:57
9	BHUIYAN SAAD BIN MOBARAK	Joined	01/06/2021, 10:01:57
10	KASIRA - TUT- TARFI	Joined	01/06/2021, 10:01:58
11	MOHIM BHOWMICK	Joined	01/06/2021, 10:01:58
12	SUMNOON-E-TAHA	Joined	01/06/2021, 10:01:59
13	TAHMID SHAHRIAR ARNOB	Joined	01/06/2021, 10:02:01
19	ABDULLAH AL MAMUN SHUVO	Joined	01/06/2021, 10:02:06
20	BIJON SAHA	Joined	01/06/2021, 10:02:06
21	ASIF IQBAL BIN HARUN	Joined	01/06/2021, 10:02:08
24	MD. FARHAN TANVIR	Joined	01/06/2021, 10:02:11
25	MEHEDI HASAN NILOY	Joined	01/06/2021, 10:02:16
26	NURA YEASDANI	Joined	01/06/2021, 10:02:17

for x in df1.index:

df1.loc [x, "theoryday2"] = 0

for y in dftheory2.index:

if df1.loc [x, "Full Name"]==dftheory2.loc [y, "Full Name"] :

df1.loc [x, "theoryday2"] = 1

// Now we assigning the theoryday2 mark on our TatalGrade.csv file. We used nested for loop to assign mark by comparing the two dataframes , we got the result final result how many students are presents or not. According to that we assign zero those are absent and assign one for those are present.

```
In [32]: for x in df1.index:
df1.loc [x, "theoryday2"] = 0
for y in dftheory2.index:
if df1.loc [x, "Full Name"]==dftheory2.loc [y, "Full Name"] :
df1.loc [x, "theoryday2"] = 1
```

```
In [33]: df1
```

```
Out[33]:
```

	Unnamed: 0	Unnamed: 0.1	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2
0	0	0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0
1	1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0
2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0
3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0
4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0
5	5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0
6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0
7	7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0
8	8	8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0
9	9	9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0
10	10	10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0
11	11	11	12	18-39130-3	MD. RATULAMAN	20	1.0	1.0	1.0	1.0	1.0
12	12	12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0	1.0


```
df1.to_csv('./TotalGrade/TotalGrade.csv')
```

We converted the dataframe into csv file.

Quiz File

Quiz.ipynb

```
import pandas as pd //First of all, we import the pandas library.
```

```
df = pd.read_excel('./Quizes/Quiz 1.xlsx', sheet_name='Sheet1')
```

```
// Read excel Files are used to store big data sets. Here we read the Quiz 1.xlsx file using  
read_excel()function from the folder which is namely Quizes_folder.
```

```
In [2]: df = pd.read_excel('./Quizes/Quiz 1.xlsx', sheet_name='Sheet1')
```

```
In [3]: df
```

```
Out[3]:
```

	ID	Start time	Completion time	Email	Name	Total points	Quiz feedback	C language is a subset of C++ language	Points - C language is a subset of C++ language	Feedback - C language is a subset of C++ language	...	Feedback - Which is the only function all C++ programs must contain?	How to represent an algorithm?	Points - How to represent an algorithm?
0	1	2021-06-08 10:25:08	2021-06-08 10:33:23	19-39458- 1@student.aiub.edu	19-39458- 1@student.aiub.edu	16	NaN	False	0	NaN	...	NaN	pseudocode	2
1	2	2021-06-08 10:25:19	2021-06-08 10:33:36	19-40223- 1@student.aiub.edu	19-40223- 1@student.aiub.edu	20	NaN	True	2	NaN	...	NaN	pseudocode	2
2	3	2021-06-08 10:25:16	2021-06-08 10:33:57	19-40359- 1@student.aiub.edu	19-40359- 1@student.aiub.edu	18	NaN	False	0	NaN	...	NaN	pseudocode	2

```
column = df[df.columns[4:6]]
```

```
// We have taken the columns Name and Total points.
```

```
In [10]: column = df[df.columns[4:6]]
```

```
In [11]: column
```

```
Out[11]:
```

	Name	Total points
0	19-39458-1@student.aiub.edu	16
1	19-40223-1@student.aiub.edu	20
2	19-40359-1@student.aiub.edu	18
3	19-39342-1@student.aiub.edu	18
4	19-40055-1@student.aiub.edu	10
5	19-40836-2@student.aiub.edu	20
6	19-41516-3@student.aiub.edu	20
7	19-39674-1@student.aiub.edu	18
8	19-41450-3@student.aiub.edu	14
9	19-41258-3@student.aiub.edu	20
10	17-35672-3@student.aiub.edu	12
11	19-40255-1@student.aiub.edu	12
12	18-37827-2@student.aiub.edu	14
13	19-41059-2@student.aiub.edu	20
14	19-40186-1@student.aiub.edu	10
15	17-35536-3@student.aiub.edu	14
16	19-40948-2@student.aiub.edu	20

```
result = column['Name']
```

```
column[['ID','Extra']] = result.str.split("@", n=1, expand=True)
```

```
column
```

```
// We split ID from the column Name based on @.
```

Out[26]:

	Name	Total points	ID	Extra
0	19-39458-1@student.aiub.edu	16	19-39458-1	student.aiub.edu
1	19-40223-1@student.aiub.edu	20	19-40223-1	student.aiub.edu
2	19-40359-1@student.aiub.edu	18	19-40359-1	student.aiub.edu
3	19-39342-1@student.aiub.edu	18	19-39342-1	student.aiub.edu
4	19-40055-1@student.aiub.edu	10	19-40055-1	student.aiub.edu
5	19-40836-2@student.aiub.edu	20	19-40836-2	student.aiub.edu
6	19-41516-3@student.aiub.edu	20	19-41516-3	student.aiub.edu
7	19-39674-1@student.aiub.edu	18	19-39674-1	student.aiub.edu
8	19-41450-3@student.aiub.edu	14	19-41450-3	student.aiub.edu
9	19-41258-3@student.aiub.edu	20	19-41258-3	student.aiub.edu
10	17-35672-3@student.aiub.edu	12	17-35672-3	student.aiub.edu
11	19-40255-1@student.aiub.edu	12	19-40255-1	student.aiub.edu
12	18-37827-2@student.aiub.edu	14	18-37827-2	student.aiub.edu
13	19-41059-2@student.aiub.edu	20	19-41059-2	student.aiub.edu

```
newcolumn = column[column.columns[1:3]]
```

newcolumn

// We have taken the columns ID and Total points from column dataframe.

```
In [27]: newcolumn = column[column.columns[1:3]]
```

```
In [28]: newcolumn
```

Out[28]:

	Total points	ID
0	16	19-39458-1
1	20	19-40223-1
2	18	19-40359-1
3	18	19-39342-1
4	10	19-40055-1
5	20	19-40836-2
6	20	19-41516-3
7	18	19-39674-1
8	14	19-41450-3
9	20	19-41258-3
10	12	17-35672-3
11	12	19-40255-1
12	14	18-37827-2
13	20	19-41059-2
14	10	19-40186-1

```
for x in df1.index:
```

```
    df1.loc[x, "quiz1"] = 0
```

```
for y in newcolumn.index:
```

```
    if df1.loc[x, "Student ID"]==newcolumn.loc[y, "ID"] :
```

```
        df1.loc[x, "quiz1"]=newcolumn.loc[y, "Total points"]
```

// Now we assigning the quiz1 mark on our df1 dataframe. We used nested for loop to assign mark by comparing the two dataframes according to ID , We assigned quiz1 marks in the df1 dataframe.

```
In [31]: df1
```

```
Out[31]:
```

	Unnamed: 0	Unnamed: 0.1	Unnamed: 0.1.1	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1
0	0	0	0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0
1	1	1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0
2	2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0
3	3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0
4	4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0
5	5	5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0
6	6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0
7	7	7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0
8	8	8	8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0
9	9	9	9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0
10	10	10	10	11	18-38923-2	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0	14.0

In the same way we have inserted quiz2, quiz3 and labquiz marks on df1.

```
quiz2 = pd.read_excel('./Quizes/Quiz 2.xlsx', sheet_name='Sheet1')
```

```
quiz2
```

```
In [32]: quiz2 = pd.read_excel('./Quizes/Quiz 2.xlsx', sheet_name='Sheet1')
quiz2
```

0	1	2021-06-22 10:30:04	2021-06-22 10:41:31	17-35677-3@student.aiub.edu	17-35677-3@student.aiub.edu	14	NaN	False	2	NaN	...	NaN	functions must have at least one return st...
1	2	2021-06-22 10:30:04	2021-06-22 10:41:33	19-41479-3@student.aiub.edu	19-41479-3@student.aiub.edu	10	NaN	True	0	NaN	...	NaN	none of the mentioned
2	3	2021-06-22 10:30:18	2021-06-22 10:41:41	19-40296-1@student.aiub.edu	19-40296-1@student.aiub.edu	12	NaN	False	2	NaN	...	NaN	all functions must have at least one return st...
3	4	2021-06-22	2021-06-22	19-40186-	19-40186-	16	NaN	False	2	NaN	...	NaN	return statement do not

```
quiz2column = quiz2[quiz2.columns[4:6]]
```

```
quiz2column
```

```
In [40]: quiz2column = quiz2[quiz2.columns[4:6]]
quiz2column
```

Out[40]:

	Name	Total points
0	17-35677-3@student.aiub.edu	14
1	19-41479-3@student.aiub.edu	10
2	19-40296-1@student.aiub.edu	12
3	19-40186-1@student.aiub.edu	16
4	19-41450-3@student.aiub.edu	12
5	19-39434-1@student.aiub.edu	16
6	19-39573-1@student.aiub.edu	10
7	19-40677-1@student.aiub.edu	8
8	17-34409-1@student.aiub.edu	8
9	19-40255-1@student.aiub.edu	16
10	19-40359-1@student.aiub.edu	14
11	19-40223-1@student.aiub.edu	14
12	19-40948-2@student.aiub.edu	10
13	19-39342-1@student.aiub.edu	16
14	19-40877-2@student.aiub.edu	8
15	19-40055-1@student.aiub.edu	16

```
quiz2result = quiz2column['Name']
```

```
quiz2column[['ID','Extra']] = quiz2result.str.split("@", n=1, expand=True)
```

```
quiz2column
```

Out[41]:

	Name	Total points	ID	Extra
0	17-35677-3@student.aiub.edu	14	17-35677-3	student.aiub.edu
1	19-41479-3@student.aiub.edu	10	19-41479-3	student.aiub.edu
2	19-40296-1@student.aiub.edu	12	19-40296-1	student.aiub.edu
3	19-40186-1@student.aiub.edu	16	19-40186-1	student.aiub.edu
4	19-41450-3@student.aiub.edu	12	19-41450-3	student.aiub.edu
5	19-39434-1@student.aiub.edu	16	19-39434-1	student.aiub.edu
6	19-39573-1@student.aiub.edu	10	19-39573-1	student.aiub.edu
7	19-40677-1@student.aiub.edu	8	19-40677-1	student.aiub.edu
8	17-34409-1@student.aiub.edu	8	17-34409-1	student.aiub.edu
9	19-40255-1@student.aiub.edu	16	19-40255-1	student.aiub.edu
10	19-40359-1@student.aiub.edu	14	19-40359-1	student.aiub.edu
11	19-40223-1@student.aiub.edu	14	19-40223-1	student.aiub.edu
12	19-40948-2@student.aiub.edu	10	19-40948-2	student.aiub.edu
13	19-39342-1@student.aiub.edu	16	19-39342-1	student.aiub.edu
14	19-40877-2@student.aiub.edu	8	19-40877-2	student.aiub.edu
15	19-40055-1@student.aiub.edu	16	19-40055-1	student.aiub.edu
16	19-40751-1@student.aiub.edu	14	19-40751-1	student.aiub.edu

```
newquiz2column = quiz2column[column.columns[1:3]]
```

```
newquiz2column
```

```
In [42]: newquiz2column = quiz2column[column.columns[1:3]]
newquiz2column
```

Out[42]:

	Total points	ID
0	14	17-35677-3
1	10	19-41479-3
2	12	19-40296-1
3	16	19-40186-1
4	12	19-41450-3
5	16	19-39434-1
6	10	19-39573-1
7	8	19-40677-1
8	8	17-34409-1
9	16	19-40255-1
10	14	19-40359-1
11	14	19-40223-1
12	10	19-40948-2
13	16	19-39342-1
14	8	19-40877-2
15	16	19-40055-1
16	14	19-40751-1

for x in df1.index:

df1.loc [x, "quiz2"] = 0

for y in newquiz2column.index:

if df1.loc [x, "Student ID"]==newquiz2column.loc [y, "ID"] :

df1.loc [x, "quiz2"]=newquiz2column.loc [y, "Total points"]

```
In [44]: df1
```

Out[44]:

	Unnamed: 0	Unnamed: 0.1	Unnamed: 0.1.1	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2
0	0	0	0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0
1	1	1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0
2	2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0
3	3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0
4	4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0
5	5	5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0
6	6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0
7	7	7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0
8	8	8	8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0
9	9	9	9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0

```
quiz3 = pd.read_excel('./Quizes/Quiz 3.xlsx', sheet_name='Sheet1')
```

```
quiz3
```

In [45]: `quiz3 = pd.read_excel('./Quizes/Quiz 3.xlsx', sheet_name='Sheet1')`
`quiz3`

Out[45]:

ID	Start time	Completion time	Email	Name	Total points	Quiz feedback	Points - An array only can contain the same type of elements.	Feedback - An array only can contain the same type of elements.	...	Feedback - Select the correct statement.	Snippet	Points
0	2021-06-29 10:10:04	2021-06-29 10:18:14	19-40186-1@student.aiub.edu	19-40186-1@student.aiub.edu	15	NaN	True	2	NaN	...	NaN	22 33

```
quiz3column = quiz3[quiz3.columns[4:6]]
```

```
quiz3column
```

In [46]: `quiz3column = quiz3[quiz3.columns[4:6]]`
`quiz3column`

Out[46]:

	Name	Total points
0	19-40186-1@student.aiub.edu	15
1	19-40223-1@student.aiub.edu	17
2	19-39458-1@student.aiub.edu	14
3	19-40359-1@student.aiub.edu	17
4	19-40255-1@student.aiub.edu	15
5	19-39342-1@student.aiub.edu	20
6	19-40055-1@student.aiub.edu	15
7	19-40703-1@student.aiub.edu	18
8	19-40194-1@student.aiub.edu	15
9	19-39674-1@student.aiub.edu	15
10	19-41479-3@student.aiub.edu	20
11	18-37827-2@student.aiub.edu	11
12	19-39573-1@student.aiub.edu	15
13	18-37144-1@student.aiub.edu	13


```
quiz3result = quiz3column['Name']
```

```
quiz3column[['ID','Extra']] = quiz3result.str.split("@", n=1, expand=True)
```

```
quiz3column
```

Out[47]:

	Name	Total points	ID	Extra
0	19-40186-1@student.aiub.edu	15	19-40186-1	student.aiub.edu
1	19-40223-1@student.aiub.edu	17	19-40223-1	student.aiub.edu
2	19-39458-1@student.aiub.edu	14	19-39458-1	student.aiub.edu
3	19-40359-1@student.aiub.edu	17	19-40359-1	student.aiub.edu
4	19-40255-1@student.aiub.edu	15	19-40255-1	student.aiub.edu
5	19-39342-1@student.aiub.edu	20	19-39342-1	student.aiub.edu
6	19-40055-1@student.aiub.edu	15	19-40055-1	student.aiub.edu
7	19-40703-1@student.aiub.edu	18	19-40703-1	student.aiub.edu
8	19-40194-1@student.aiub.edu	15	19-40194-1	student.aiub.edu
9	19-39674-1@student.aiub.edu	15	19-39674-1	student.aiub.edu
10	19-41479-3@student.aiub.edu	20	19-41479-3	student.aiub.edu
11	18-37827-2@student.aiub.edu	11	18-37827-2	student.aiub.edu
12	19-39573-1@student.aiub.edu	15	19-39573-1	student.aiub.edu
13	18-37144-1@student.aiub.edu	13	18-37144-1	student.aiub.edu

```
newquiz3column = quiz3column[column.columns[1:3]]
```

```
newquiz3column
```

```
In [48]: newquiz3column = quiz3column[column.columns[1:3]]
newquiz3column
```

```
Out[48]:
```

	Total points	ID
0	15	19-40186-1
1	17	19-40223-1
2	14	19-39458-1
3	17	19-40359-1
4	15	19-40255-1
5	20	19-39342-1
6	15	19-40055-1
7	18	19-40703-1
8	15	19-40194-1
9	15	19-39674-1
10	20	19-41479-3
11	11	18-37827-2
12	15	19-39573-1
13	13	18-37144-1

for x in df1.index:

```
df1.loc [x, "quiz3"] = 0
```

for y in newquiz3column.index:

```
if df1.loc [x, "Student ID"]==newquiz3column.loc [y, "ID"] :
```

```
df1.loc [x, "quiz3"]=newquiz3column.loc [y, "Total points"]
```

```
In [50]: df1
```

```
Out[50]:
```

	Unnamed: 0	Unnamed: 0.1	Unnamed: 0.1.1	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3
0	0	0	0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0
1	1	1	1	2	17-34746-2	SANJADULALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0
2	2	2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0
3	3	3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0
4	4	4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0
5	5	5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0
6	6	6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0

```
df1.to_csv('./TotalGrade/TotalGrade.csv')
```

```
df2 = pd.read_csv ('./TotalGrade/TotalGrade.csv')
```

```
df2
```

```
In [77]: df2 = pd.read_csv ('./TotalGrade/TotalGrade.csv')
df2
```

```
Out[77]:
```

	Unnamed: 0	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3
0	0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0
1	1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0
2	2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0
3	3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0
4	4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0
5	5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0
6	6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0
7	7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0
8	8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0
9	9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0	9.0
10	10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0	14.0	14.0	15.0
11	11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0	1.0	1.0	12.0	10.0	14.0
12	12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0	1.0	14.0	8.0	17.0
13	13	14	19-39342-1	MD. ASIKUR RAHMAN SAUMIK	20	1.0	0.0	1.0	1.0	1.0	18.0	16.0	20.0
14	14	15	19-39434-1	MD. SAMIN ANJUM	19	1.0	0.0	1.0	1.0	1.0	0.0	16.0	0.0

```
df2 = df2.drop(columns="Unnamed: 0.1")
```

```
df2 = df2.drop(columns="Unnamed: 0.1.1")
```

```
df2 = df2.drop(columns="Unnamed: 0.1.1.1")
```

```
df2
```

```
In [70]: df2 = df2.drop(columns="Unnamed: 0.1")
df2 = df2.drop(columns="Unnamed: 0.1.1")
df2 = df2.drop(columns="Unnamed: 0.1.1.1")
df2
```

```
Out[70]:
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0
6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0
7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0
8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0
9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0	9.0
10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0	14.0	14.0	15.0
11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0	1.0	1.0	12.0	10.0	14.0
12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0	1.0	14.0	8.0	17.0
13	14	19-39342-1	MD. ASIKUR RAHMAN SAUMIK	20	1.0	0.0	1.0	1.0	1.0	18.0	16.0	20.0
14	15	19-39434-1	MD. SAMIN ANJUM	19	1.0	0.0	1.0	1.0	1.0	0.0	16.0	0.0
15	16	19-39458-1	NURA YEASDANI	20	1.0	1.0	1.0	1.0	1.0	16.0	18.0	14.0

```
df2.to_csv('./TotalGrade/TotalGrade.csv')
```

```
labexam = pd.read_excel('./Quizes/Lab Exam.xlsx', sheet_name='Sheet1')
```

```
labexam
```

```
In [64]: labexam = pd.read_excel('./Quizes/Lab Exam.xlsx', sheet_name='Sheet1')
labexam
```

0	1	2021-06-27 08:15:13	2021-06-27 08:29:12	19-40836-2@student.aiub.edu	19-40836-2@student.aiub.edu	24	NaN	9	2	NaN	...	NaN
1	2	2021-06-27 08:15:10	2021-06-27 08:29:16	19-41516-3@student.aiub.edu	19-41516-3@student.aiub.edu	24	NaN	9	2	NaN	...	NaN
2	3	2021-06-27 08:15:09	2021-06-27 08:29:30	17-35677-3@student.aiub.edu	17-35677-3@student.aiub.edu	24	NaN	9	2	NaN	...	NaN
3	4	2021-06-27 08:15:03	2021-06-27 08:29:30	19-41258-3@student.aiub.edu	19-41258-3@student.aiub.edu	24	NaN	9	2	NaN	...	NaN
4	5	2021-06-27 08:15:00	2021-06-27 08:29:38	19-39674-1@student.aiub.edu	19-39674-1@student.aiub.edu	15	NaN	9	2	NaN	...	NaN

```
labquizcolumn = labexam[labexam.columns[4:6]]
```

```
labquizresult = labquizcolumn['Name']
```

```
labquizcolumn[['ID','Extra']] = labquizresult.str.split("@", n=1, expand=True)
```

```
labquizcolumn
```

Out[65]:

	Name	Total points	ID	Extra
0	19-40836-2@student.aiub.edu	24	19-40836-2	student.aiub.edu
1	19-41516-3@student.aiub.edu	24	19-41516-3	student.aiub.edu
2	17-35677-3@student.aiub.edu	24	17-35677-3	student.aiub.edu
3	19-41258-3@student.aiub.edu	24	19-41258-3	student.aiub.edu
4	19-39674-1@student.aiub.edu	15	19-39674-1	student.aiub.edu
5	19-40223-1@student.aiub.edu	10	19-40223-1	student.aiub.edu
6	19-40194-1@student.aiub.edu	18	19-40194-1	student.aiub.edu
7	19-39573-1@student.aiub.edu	18	19-39573-1	student.aiub.edu
8	19-39434-1@student.aiub.edu	21	19-39434-1	student.aiub.edu
9	18-38923-3@student.aiub.edu	15	18-38923-3	student.aiub.edu
10	19-40296-1@student.aiub.edu	15	19-40296-1	student.aiub.edu
11	19-41059-2@student.aiub.edu	20	19-41059-2	student.aiub.edu
12	19-40877-2@student.aiub.edu	18	19-40877-2	student.aiub.edu
13	18-39243-3@student.aiub.edu	18	18-39243-3	student.aiub.edu
14	19-40751-1@student.aiub.edu	21	19-40751-1	student.aiub.edu

```
newlabquizcolumn = labquizcolumn[column.columns[1:3]]
```

```
newlabquizcolumn
```

```
In [66]: newlabquizcolumn = labquizcolumn[column.columns[1:3]]
          newlabquizcolumn
```

Out[66]:

	Total points	ID
0	24	19-40836-2
1	24	19-41516-3
2	24	17-35677-3
3	24	19-41258-3
4	15	19-39674-1
5	10	19-40223-1
6	18	19-40194-1
7	18	19-39573-1
8	21	19-39434-1
9	15	18-38923-3
10	15	19-40296-1
11	20	19-41059-2
12	18	19-40877-2
13	18	18-39243-3
14	21	19-40751-1

for x in dflab.index:

 dflab.loc [x, "labquiz"] = 0

for y in newlabquizcolumn.index:

 if dflab.loc [x, "Student ID"]==newlabquizcolumn.loc [y, "ID"] :

 dflab.loc [x, "labquiz"]=newlabquizcolumn.loc [y, "Total points"]

```
In [87]: for x in dflab.index:
         dflab.loc [x, "labquiz"] = 0
         for y in newlabquizcolumn.index:
             if dflab.loc [x, "Student ID"]==newlabquizcolumn.loc [y, "ID"] :
                 dflab.loc [x, "labquiz"]=newlabquizcolumn.loc [y, "Total points"]
```

```
In [88]: dflab
```

```
Out[88]:
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0
6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0	15.0
7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0	24.0
8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0	9.0
9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0	9.0	21.0
10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0	14.0	14.0	15.0	15.0
11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0	1.0	1.0	12.0	10.0	14.0	15.0
12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0	1.0	14.0	8.0	17.0	18.0

dflab.to_csv('./TotalGrade/TotalGrade.csv')

Best Quiz

import pandas as pd

df1 = pd.read_csv ('./TotalGrade/TotalGrade.csv')

df1 = df1.drop(columns="Unnamed: 0")

df1

df = pd.read_csv ('./TotalGrade/TotalGrade.csv') // Read CSV File . Here we read the TotalGrade.csv file using read_csv() function from the folder which is namely TotalGrade_ folder.

```
In [24]: df1 = pd.read_csv ('./TotalGrade/TotalGrade.csv')
df1 = df1.drop(columns="Unnamed: 0")
df1
```

```
Out[24]:
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0
6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0	15.0
7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0	24.0
8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0	9.0
9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0	9.0	21.0
10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0	14.0	14.0	15.0	15.0
11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0	1.0	1.0	12.0	10.0	14.0	15.0
12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0	1.0	14.0	8.0	17.0	18.0

```
df1['minquiz'] = df1[['quiz1','quiz2','quiz3']].min(axis=1)
```

```
df1['sumquiz'] = df1[['quiz1','quiz2','quiz3']].sum(axis=1)
```

```
df1['Finalquizmark'] = df1[['quiz1','quiz2','quiz3']].sum(axis=1)-df1[['quiz1','quiz2','quiz3']].min(axis=1)
```

```
df1
```

// First we determine the minimum quiz mark from columns quiz1,quiz2, quiz3. Then we sum all quizzes Marks , assigned it on sumquiz column . After that we subtracted the mark of minimum quiz from the sumquiz columns and assign it on df1 dataframe.

```
In [26]: df1['minquiz'] = df1[['quiz1','quiz2','quiz3']].min(axis=1)
df1['sumquiz'] = df1[['quiz1','quiz2','quiz3']].sum(axis=1)
df1['Finalquizmark'] = df1[['quiz1','quiz2','quiz3']].sum(axis=1)-df1[['quiz1','quiz2','quiz3']].min(axis=1)
df1
```

```
Out[26]:
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz	minquiz	sumquiz	Finalquizmark
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0	0.0	25.0	25.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0	6.0	33.0	27.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0	12.0	41.0	29.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0	12.0	39.0	27.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0	14.0	45.0	31.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0	0.0	15.0	15.0
6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0	15.0	10.0	34.0	24.0
7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0	24.0	12.0	37.0	24.0
8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0	9.0	11.0	25.0	9.0
9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0	9.0	21.0	9.0	33.0	21.0
10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0	14.0	14.0	15.0	15.0	14.0	43.0	15.0
11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0	1.0	1.0	12.0	10.0	14.0	15.0	10.0	36.0	15.0
12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0	1.0	14.0	8.0	17.0	18.0	8.0	39.0	18.0

```
df1 = df1.drop(columns="minquiz")
```

```
df1 = df1.drop(columns="sumquiz")
```

```
df1
```

```
// We dropped the sumquiz and minquiz from df1 dataframe.
```

```
In [27]: df1 = df1.drop(columns="minquiz")
df1 = df1.drop(columns="sumquiz")
df1
```

```
Out[27]:
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz	Finalquizmark
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0	25.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0	27.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0	29.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0	27.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0	31.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0	15.0
6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0	15.0	24.0
7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0	24.0	25.0
8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0	9.0	28.0
9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0	9.0	21.0	26.0
10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0	14.0	14.0	15.0	15.0	29.0
11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0	1.0	1.0	12.0	10.0	14.0	15.0	26.0
12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0	1.0	14.0	8.0	17.0	18.0	31.0
13	14	19-39342-1	MD. ASIKUR RAHMAN SAUMIK	20	1.0	0.0	1.0	1.0	1.0	18.0	16.0	20.0	15.0	38.0
14	15	19-39434-1	MD. SAMIN ANJUM	19	1.0	0.0	1.0	1.0	1.0	0.0	16.0	0.0	21.0	16.0

```
df1.to_csv('./TotalGrade/TotalGrade.csv')
```

```
We converted the dataframe into csv file.
```

Attendance Mark

```
AttendanceMark.ipynb
```

```
import pandas as pd
```

```
df1 = pd.read_csv('./TotalGrade/TotalGrade.csv')
```

```
df1 = df1.drop(columns="Unnamed: 0")
```

```
df1
```

```
df = pd.read_csv('./TotalGrade/TotalGrade.csv') // Read CSV File . Here we read the TotalGrade.csv file using read_csv() function from the folder which is namely TotalGrade_folder.
```


5

```
In [2]: df1 = pd.read_csv ('./TotalGrade/TotalGrade.csv')
df1 = df1.drop(columns="Unnamed: 0")
df1
```

```
Out[2]:
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz	Finalquizmark
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0	25.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0	27.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0	29.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0	27.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0	31.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0	15.0
6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0	15.0	24.0
7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0	24.0	25.0
8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0	9.0	28.0
9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0	9.0	21.0	26.0
10	11	18-38923-3	MEHRAB HOSSAIN SHARAN	18	1.0	1.0	1.0	1.0	1.0	14.0	14.0	15.0	15.0	29.0
11	12	18-39130-3	MD. RATUL AMAN	20	1.0	1.0	1.0	1.0	1.0	12.0	10.0	14.0	15.0	26.0
12	13	18-39243-3	MD. IMRAN HOSSAIN	20	1.0	0.0	1.0	1.0	1.0	14.0	8.0	17.0	18.0	31.0
13	14	19-39342-1	MD. ASIKUR RAHMAN SAUMIK	20	1.0	0.0	1.0	1.0	1.0	18.0	16.0	20.0	15.0	38.0

df1['Attendance Mark'] =2* df1[['labday1','labmakeup','labday5','theoryday1','theoryday2']].sum(axis=1)

// First we sum the value of 'labday1','labmakeup','labday5','theoryday1','theoryday2' columns and multiply with 2. And insert it on Attendance Mark column.

```
In [3]: df1['Attendance Mark'] =2* df1[['labday1','labmakeup','labday5','theoryday1','theoryday2']].sum(axis=1)
```

```
In [4]: df1
```

```
Out[4]:
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz	Finalquizmark	Attendance Mark
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0	25.0	6.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0	27.0	6.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0	29.0	10.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0	27.0	10.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0	31.0	10.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0	15.0	4.0
6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0	15.0	24.0	10.0
7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0	24.0	25.0	10.0
8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0	9.0	28.0	10.0
9	10	18-37912-2	SAZZAD HASAN	18	1.0	1.0	1.0	1.0	1.0	14.0	12.0	9.0	21.0	26.0	10.0

df1.to_csv('./TotalGrade/TotalGrade.csv')

We converted the dataframe into csv file.

Total Mark Calculation

FinalMarkCalculation.ipynb

```
import pandas as pd
```

```
df1 = pd.read_csv ('./TotalGrade/TotalGrade.csv')
```

```
df1 = df1.drop(columns="Unnamed: 0")
```

```
df1
```

// Read CSV File . Here we read the TotalGrade.csv file using read_csv() function from the folder which is namely TotalGrade_folder.

```
In [1]: import pandas as pd
```

```
In [2]: df1 = pd.read_csv ('./TotalGrade/TotalGrade.csv')
df1 = df1.drop(columns="Unnamed: 0")
df1
```

Out[2]:

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz	Finalquizmark	Attendance Mark
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0	25.0	6.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0	27.0	6.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0	29.0	10.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0	27.0	10.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0	31.0	10.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0	15.0	4.0
6	7	18-37051-1	HIZBULLAH ATIK SIDDIQUE	19	1.0	1.0	1.0	1.0	1.0	12.0	10.0	12.0	15.0	24.0	10.0
7	8	18-37144-1	JAFRIN MONSUR KHAN	17	1.0	1.0	1.0	1.0	1.0	12.0	12.0	13.0	24.0	25.0	10.0
8	9	18-37827-2	MD. FARHAN TANVIR	19	1.0	1.0	1.0	1.0	1.0	14.0	14.0	11.0	9.0	28.0	10.0

```
df1['Total Mark'] = df1[['Ass.', 'labquiz', 'Finalquizmark', 'Attendance Mark']].sum(axis=1)
```

```
df1
```

// First we sum the value of 'Ass.', 'labquiz', 'Finalquizmark', 'Attendance Mark' columns. And insert it on Total Mark column.

[illegible]

We converted the dataframe into csv file.

GradeCalculation.ipynb

df1

```
In [2]: df1 = pd.read_csv ('../TotalGrade/TotalGrade.csv')
df1 = df1.drop(columns="Unnamed: 0")
df1
```

[illegible]

```
for x in df1.index:

    if df1.loc [x, "Total Mark"]>= 90 and df1.loc [x, "Total Mark"] <= 100 :

        df1.loc [x, "Grade"] = "A+"

        df1.loc [x, "GPA"] = 4.00

    if df1.loc [x, "Total Mark"]>= 85 and df1.loc [x, "Total Mark"] <= 89 :

        df1.loc [x, "Grade"] = "A"

        df1.loc [x, "GPA"] = 3.75

    if df1.loc [x, "Total Mark"]>= 80 and df1.loc [x, "Total Mark"] <= 84 :

        df1.loc [x, "Grade"] = "B+"

        df1.loc [x, "GPA"] = 3.50

    if df1.loc [x, "Total Mark"]>= 75 and df1.loc [x, "Total Mark"] <= 79 :

        df1.loc [x, "Grade"] = "B"

        df1.loc [x, "GPA"] = 3.25

    if df1.loc [x, "Total Mark"]>= 70 and df1.loc [x, "Total Mark"] <= 74 :

        df1.loc [x, "Grade"] = "C+"

        df1.loc [x, "GPA"] = 3.00

    if df1.loc [x, "Total Mark"]>= 65 and df1.loc [x, "Total Mark"] <= 69 :

        df1.loc [x, "Grade"] = "C"

        df1.loc [x, "GPA"] = 2.75

    if df1.loc [x, "Total Mark"]>= 60 and df1.loc [x, "Total Mark"] <= 64 :

        df1.loc [x, "Grade"] = "D+"

        df1.loc [x, "GPA"] = 2.50

    if df1.loc [x, "Total Mark"]>= 50 and df1.loc [x, "Total Mark"] <= 59 :

        df1.loc [x, "Grade"] = "D"

        df1.loc [x, "GPA"] = 2.25

    if df1.loc [x, "Total Mark"]<=49 :

        df1.loc [x, "Grade"] = "F"

        df1.loc [x, "GPA"] = 0.00
```

// Here we categorized the Grade and GPA based on the range of AIUB grading system.

```
In [10]: df1
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz	Finalquizmark	Attendance Mark	Total Mark	Grade	GPA
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0	25.0	6.0	66.0	C	2.75
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0	27.0	6.0	69.0	C	2.75
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0	29.0	10.0	77.0	B	3.25
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0	27.0	10.0	77.0	B	3.25
4	5	17-35677-3	MUHAMMAD ALAMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0	31.0	10.0	84.0	B+	3.50
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0	15.0	4.0	57.0	D	2.25
		18-	HIZBULLAH															

```
In [11]: df1.to_csv('./TotalGrade/TotalGrade.csv')
```

```
df1.to_csv('./TotalGrade/TotalGrade.csv')
```

We converted the dataframe into csv file.

Statistical analysis

```
import pandas as pd
```

```
df1 = pd.read_csv('./TotalGrade/TotalGrade.csv')
```

```
df1 = df1.drop(columns="Unnamed: 0")
```

```
df1
```

```
In [1]: import pandas as pd
```

```
In [12]: df1 = pd.read_csv ('./TotalGrade/TotalGrade.csv')
df1 = df1.drop(columns="Unnamed: 0")
df1
```

```
Out[12]:
```

	SL	Student ID	Full Name	Ass.	labday1	labmakeup	labday5	theoryday1	theoryday2	quiz1	quiz2	quiz3	labquiz	Finalquizmark	Attendance Mark	Total Mark
0	1	17-34409-1	KHALID MASRUR	17	1.0	0.0	1.0	1.0	0.0	0.0	8.0	17.0	18.0	25.0	6.0	66.0
1	2	17-34746-2	SANJADUL ALOM PIYAS	15	0.0	1.0	1.0	0.0	1.0	12.0	6.0	15.0	21.0	27.0	6.0	69.0
2	3	17-35536-3	SUMNOON-E-TAHA	20	1.0	1.0	1.0	1.0	1.0	14.0	12.0	15.0	18.0	29.0	10.0	77.0
3	4	17-35672-3	MEHEDI HASAN NILOY	19	1.0	1.0	1.0	1.0	1.0	12.0	12.0	15.0	21.0	27.0	10.0	77.0
4	5	17-35677-3	MUHAMMAD AL AMIN	19	1.0	1.0	1.0	1.0	1.0	16.0	14.0	15.0	24.0	31.0	10.0	84.0
5	6	18-37027-1	KHAN MD. EHSAN	17	0.0	0.0	1.0	1.0	0.0	0.0	0.0	15.0	21.0	15.0	4.0	57.0

```
grade = df1[df1.columns[16:17]]
```

```
grade['count'] = grade.groupby('Grade')['Grade'].transform('count')
```

```
grade.drop_duplicates(subset="Grade",inplace = True)
```

```
grade
```

```
// Here, we counted the students of each grade and eliminated the duplicate rows.
```

```
Out[13]:
```

	Grade	count
0	C	5
2	B	13
4	B+	8
5	D	1
10	C+	10
14	D+	1
31	A+	3
37	A	2

```
grade['Grade']
```

```
grade['count']
```

```
In [14]: grade['Grade']
```

```
Out[14]: 0      C
          2      B
          4     B+
          5      D
          10     C+
          14     D+
          31     A+
          37      A
          Name: Grade, dtype: object
```

```
In [15]: grade['count']
```

```
Out[15]: 0      5
          2     13
          4      8
          5      1
          10    10
          14      1
          31      3
          37      2
          Name: count, dtype: int64
```

```
import matplotlib as mpl
```

```
import matplotlib.pyplot as plt
```

```
// Import matplotlib library on jupyter lab.
```

```
In [6]: import matplotlib as mpl
import matplotlib.pyplot as plt
```

```
x=grade['Grade']
```

```
y=grade['count']
```

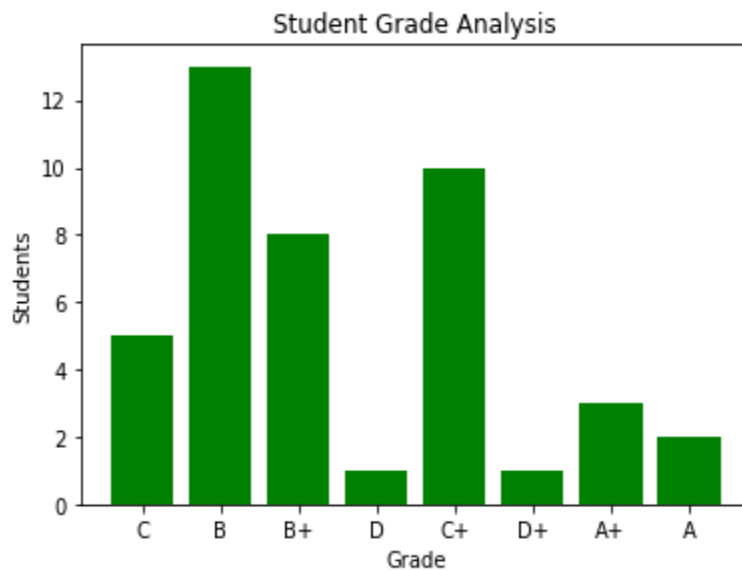
```
plt.xlabel('Grade')
```

```
plt.ylabel('Students')
```

```
plt.title('Student Grade Analysis')
plt.bar(x,y,color='green')
plt.show()
```

// Here, We showed the graphical representation of total number of students of each grade.

```
In [30]: x=grade['Grade']
y=grade['count']
plt.xlabel('Grade')
plt.ylabel('Students')
plt.title('Student Grade Analysis')
plt.bar(x,y,color='green')
plt.show()
```



```
attendance = df1[df1.columns[14:15]]
attendance['count'] = attendance.groupby('Attendance Mark')['Attendance Mark'].transform('count')
attendance.drop_duplicates(subset="Attendance Mark",inplace = True)
attendance
```

// Here, we counted the students of each Attendance mark and eliminated the duplicate rows.


```
Out[40]:
```

	Attendance Mark	count
0	6.0	4
2	10.0	31
5	4.0	1
12	8.0	7

```
In [41]: attendance['Attendance Mark']*10
```

```
Out[41]: 0      60.0
          2     100.0
          5      40.0
          12     80.0
          Name: Attendance Mark, dtype: float64
```

```
In [42]: attendance['count']
```

```
Out[42]: 0      4
          2     31
          5      1
          12     7
          Name: count, dtype: int64
```

```
x=attendance['Attendance Mark']*10
```

```
y=attendance['count']
```

```
plt.xlabel('Attendance % ')
```

```
plt.ylabel('Number of Students ')
```

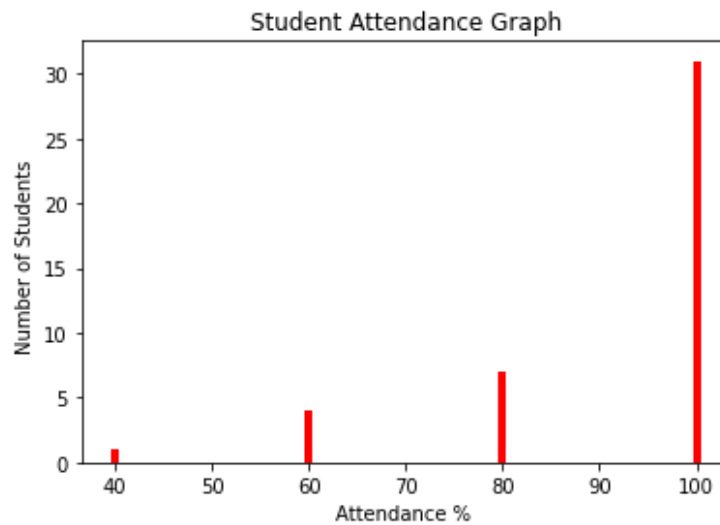
```
plt.title('Student Attendance Graph')
```

```
plt.bar(x,y,color='red')
```

```
plt.show()
```

```
// We showed the presence of attendance.
```

```
In [43]: x=attendance['Attendance Mark']*10  
y=attendance['count']  
plt.xlabel('Attendance % ' )  
plt.ylabel('Number of Students ' )  
plt.title('Student Attendance Graph')  
plt.bar(x,y,color='red')  
plt.show()
```



```
import seaborn as sns
```

```
grade_totalmark = df1[df1.columns[15:17]]
```

```
grade_totalmark
```

```
In [44]: import seaborn as sns
```

```
In [45]: grade_totalmark = df1[df1.columns[15:17]]  
grade_totalmark
```

```
Out[45]:
```

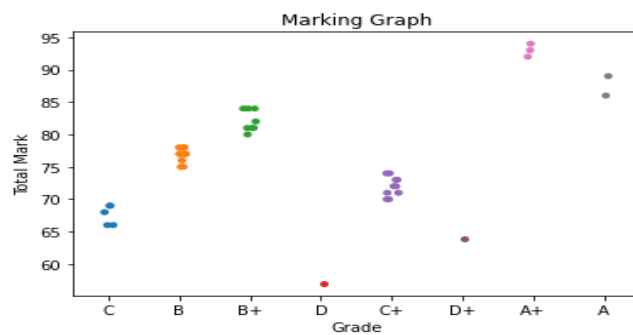
	Total Mark	Grade
0	66.0	C
1	69.0	C
2	77.0	B
3	77.0	B
4	84.0	B+
5	57.0	D
6	68.0	C
7	76.0	B
8	66.0	C
9	75.0	B
10	72.0	C+
11	71.0	C+
12	77.0	B

```
sns.stripplot(x='Grade', y='Total Mark', data=grade_totalmark)
```

```
plt.title("Marking Graph");
```

// Here we showed the marking graph.

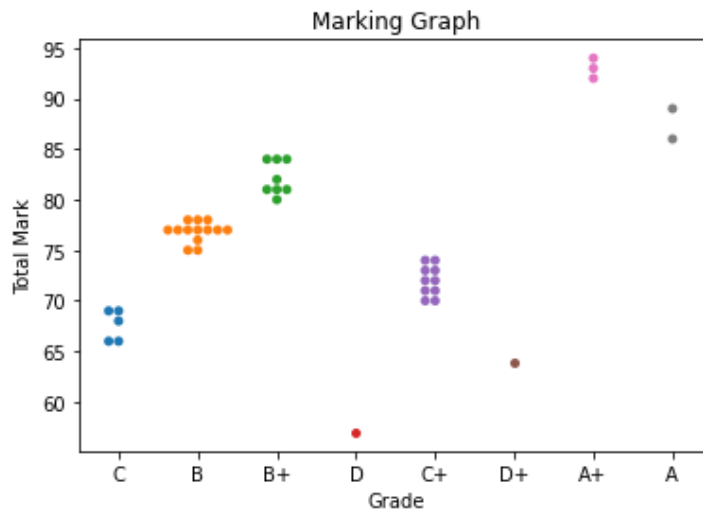
```
In [46]: sns.stripplot(x='Grade', y='Total Mark', data=grade_totalmark)  
plt.title("Marking Graph");
```



```
sns.swarmplot(x='Grade', y='Total Mark', data=grade_totalmark)
```

```
plt.title("Marking Graph");
```

```
In [47]: sns.swarmplot(x='Grade', y='Total Mark', data=grade_totalmark)
plt.title("Marking Graph");
```



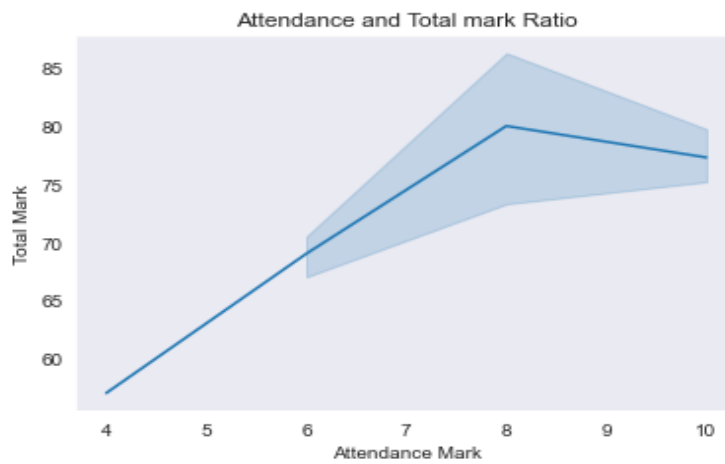
```
sns.set_style("dark")
```

```
sns.lineplot(x='Attendance Mark', y='Total Mark', data=df1)
```

```
plt.title("Attendance and Total mark Ratio");
```

```
//Attendance and Total mark ratio
```

```
In [58]: sns.set_style("dark")
sns.lineplot(x='Attendance Mark', y='Total Mark', data=df1)
plt.title("Attendance and Total mark Ratio");
```



```
// Here we showed a pie chart of which grade students got most.ss
```

[illegible]