

```
In [ ]: NAME:HARSH ARORA
        ROLL NO:AE-1218
```

```
In [2]: # Creating a DataFrame from the given dataset by using DataFrame() function in pandas
```

```
import pandas as pd
StudentData = {'Student Name':['Aman', 'Rahul', 'Shreya', 'Vinita'],
               'Physics':[78,67,85,96],
               'Chemistry': [80,77,85,90],
               'Maths': [88,95,100,90]}
STUDENT_DATA = pd.DataFrame(StudentData)
print(STUDENT_DATA)
```

	Student Name	Physics	Chemistry	Maths
0	Aman	78	80	88
1	Rahul	67	77	95
2	Shreya	85	85	100
3	Vinita	96	90	90

```
In [11]: #reading data from a data frame using locate row,loc[] and iloc[] function
```

```
StudentData = {'Student Name':['Aman', 'Rahul', 'Shreya', 'Vinita'],
               'Physics':[78,67,85,96],
               'Chemistry': [80,77,85,90],
               'Maths': [88,95,100,90]}
STUDENT_DATA = pd.DataFrame(StudentData)
print(STUDENT_DATA.loc[1])#can use index name after adding index
print(STUDENT_DATA.iloc[0])
```

	Student Name	Physics	Chemistry	Maths
1	Rahul	67	77	95

  

	Student Name	Physics	Chemistry	Maths
0	Aman	78	80	88

```
In [4]: #Adding name to each row using 'index'
```

```
StudentData = {'Student Name':['Aman', 'Rahul', 'Shreya', 'Vinita'],
               'Physics':[78,67,85,96],
               'Chemistry': [80,77,85,90],
               'Maths': [88,95,100,90]}
STUDENT_DATA = pd.DataFrame(StudentData,index = ['std1', 'std2', 'std3', 'std4'])
print(STUDENT_DATA.to_string())
print(STUDENT_DATA.loc[['std1']])
```

	Student Name	Physics	Chemistry	Maths
std1	Aman	78	80	88
std2	Rahul	67	77	95
std3	Shreya	85	85	100
std4	Vinita	96	90	90

  

	Student Name	Physics	Chemistry	Maths
std1	Aman	78	80	88

```
In [13]: # To access data of a row using row index name
```

```
StudentData = {'Student Name':['Aman', 'Rahul', 'Shreya', 'Vinita'],
               'Physics':[78,67,85,96],
               'Chemistry': [80,77,85,90],
               'Maths': [88,95,100,90]}
STUDENT_DATA = pd.DataFrame(StudentData,index = ['std1', 'std2', 'std3', 'std4'])
print(STUDENT_DATA.loc[['std1']])
```

	Student Name	Physics	Chemistry	Maths
std1	Aman	78	80	88

```
In [14]: #to access data of a student by specifying student name
```

```
StudentData = {'Student Name':['Aman', 'Rahul', 'Shreya', 'Vinita'],
               'Physics':[78,67,85,96],
               'Chemistry': [80,77,85,90],
               'Maths': [88,95,100,90]}
STUDENT_DATA = pd.DataFrame(StudentData)
STUDENT_DATA=STUDENT_DATA.set_index(['Student Name'])
print(STUDENT_DATA.loc[['Rahul']])
```

	Physics	Chemistry	Maths
Student Name			
Rahul	67	77	95

```
In [23]: # Reading data from a spreadsheet (.xlsx/.xls) file
```

```
import pandas as pd
import openpyxl
STUDENT_DATA = pd.read_excel(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.xlsx")#using r so that we can read the file
print(STUDENT_DATA)
```

	Student Name	Physics	Chemistry	Maths
0	Aman	78	80	88
1	Rahul	67	77	95
2	Shreya	85	85	100
3	Vinita	96	90	90

```
In [24]: #reading data from a csv file
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.csv")#using r so that we can read the file
print(STUDENT_DATA)
```

	Student Name	Physics	Chemistry	Maths
0	Aman	78	80	88
1	Rahul	67	77	95
2	Shreya	85	85	100
3	Vinita	96	90	90

```
In [25]: #reading data from a json file
STUDENT_DATA = pd.read_json(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.json")#using r so that we can read the file
print(STUDENT_DATA)
```

	Student Names	Physics	Chemistry	Maths
0	Aman	78	80	88
1	Rahul	67	77	95
2	Shreya	85	85	100
3	Vinita	96	90	90

```
In [44]: # To determine the shape ( no.of ROWs x no. of COLUMNS) in a given data frame
STUDENT_DATA = pd.DataFrame(StudentData)
print("(ROWS, COLUMNS) in the given data set is",STUDENT_DATA.shape)
```

(ROWS, COLUMNS) in the given data set is (4, 4)

```
In [27]: # To determine the size ( no.of data elements) in a given data frame
STUDENT_DATA = pd.DataFrame(StudentData)
print("No. of elements in the given data set are",STUDENT_DATA.size)
```

No. of elements in the given data set are 16

```
In [28]: #display first few rows of a dataframe using head function
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.csv")
print(STUDENT_DATA.head(2))
```

	Student Name	Physics	Chemistry	Maths
0	Aman	78	80	88
1	Rahul	67	77	95

```
In [29]: #display last few rows of a dataframe using tail function
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.csv")
print(STUDENT_DATA.tail(2))
```

	Student Name	Physics	Chemistry	Maths
2	Shreya	85	85	100
3	Vinita	96	90	90

```
In [30]: #displaying information about the type of data in a dataframe using info function
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.csv")
print(STUDENT_DATA.info())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 4 entries, 0 to 3
Data columns (total 4 columns):
#   Column          Non-Null Count  Dtype
---  -
0   Student Name    4 non-null     object
1   Physics         4 non-null     int64
2   Chemistry       4 non-null     int64
3   Maths          4 non-null     int64
dtypes: int64(3), object(1)
memory usage: 256.0+ bytes
None
```

```
In [31]: #Listing names of all the columns in a dataset
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.csv")
print(STUDENT_DATA.columns)
```

Index(['Student Name', 'Physics', 'Chemistry', 'Maths'], dtype='object')

```
In [32]: #inserting a new column in an existing dataframe using insert function
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.csv")
STUDENT_DATA.insert(4,'English',[96,75,88,80],True)
print(STUDENT_DATA)
```

	Student Name	Physics	Chemistry	Maths	English
0	Aman	78	80	88	96
1	Rahul	67	77	95	75
2	Shreya	85	85	100	88
3	Vinita	96	90	90	80

In [34]: *#inserting a new column in an existing dataframe without using insert function*

```
English =[96,75,88,80]
STUDENT_DATA['English']=English
print(STUDENT_DATA)
```

	Student Name	Physics	Chemistry	Maths	English
0	Aman	78	80	88	96
1	Rahul	67	77	95	75
2	Shreya	85	85	100	88
3	Vinita	96	90	90	80

In [37]: *#inserting a new row in an existing dataframe using loc function#*

```
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.csv")
STUDENT_DATA.loc[4]=['Vishal',88,97,100]
print(STUDENT_DATA)
```

	Student Name	Physics	Chemistry	Maths
0	Aman	78	80	88
1	Rahul	67	77	95
2	Shreya	85	85	100
3	Vinita	96	90	90
4	Vishal	88	97	100

In [38]: *#concatenation of two dataframes using concat function*

```
StudentData1={'Student Name':['Aman','Rahul','Shreya'],
              'Physics':[78,67,85],
              'Chemistry':[80,77,85],
              'Maths':[88,95,100]}
StudentData2={'Student Name':['Vinita','Vishal'],
              'Physics':[96,88],
              'Chemistry':[90,97],
              'Maths':[90,100]}
STUDENT_DATA1=pd.DataFrame(StudentData1)
STUDENT_DATA2=pd.DataFrame(StudentData2)
STUDENT_DATA = pd.concat([STUDENT_DATA1,STUDENT_DATA2],ignore_index=True)
print(STUDENT_DATA)
```

	Student Name	Physics	Chemistry	Maths
0	Aman	78	80	88
1	Rahul	67	77	95
2	Shreya	85	85	100
3	Vinita	96	90	90
4	Vishal	88	97	100

In [41]: *# To evaluate percentage and display it in a separate column*

```
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet1_LAB2.csv")
Percentage =(STUDENT_DATA['Physics']+
              STUDENT_DATA['Chemistry']+
              STUDENT_DATA['Maths'])/3
STUDENT_DATA['Percentage']=Percentage
print(STUDENT_DATA)
```

	Student Name	Physics	Chemistry	Maths	Percentage
0	Aman	78	80	88	82.000000
1	Rahul	67	77	95	79.666667
2	Shreya	85	85	100	90.000000
3	Vinita	96	90	90	92.000000

```
In [ ]: #ADITYA MAURYA
#AE-1206
#BSC.(HONS.) COMPUTER SCIENCE
```

```
In [2]: # Creating a DataFrame from the given dataset by using DataFrame() function in pandas
import pandas as pd
StudentData = {'Roll':[1,2,3,4,5,6,7,8,9,10],
               'Student':['Agarwal V','Agnew P','Ahmad H','Alambritis G','Allen J','Anthony A','Antoniou V','Archy J','Armstrong B','A
               'Department':['Computer Sc','Computer Sc','Statistics','Physics','Economics','Maths','Computer Sc','Economics','Math','
               'General Sc': [78,45,78,65,87,54,76,76,86,68],
               'Maths': [80,78,30,68,50,30,70,40,30,70],
               'Computer': [66,66,50,70,60,30,70,40,40,80],
               'Remarks':['Pass','Pass','Fail','Pass','Pass','Fail','?','Fail','?','Pass']}
STUDENT_DATA = pd.DataFrame(StudentData)
print(STUDENT_DATA)
```

	Roll	Student	Department	General Sc	Maths	Computer	Remarks
0	1	Agarwal V	Computer Sc	78	80	66	Pass
1	2	Agnew P	Computer Sc	45	78	66	Pass
2	3	Ahmad H	Statistics	78	30	50	Fail
3	4	Alambritis G	Physics	65	68	70	Pass
4	5	Allen J	Economics	87	50	60	Pass
5	6	Anthony A	Maths	54	30	30	Fail
6	7	Antoniou V	Computer Sc	76	70	70	?
7	8	Archy J	Economics	76	40	40	Fail
8	9	Armstrong B	Math	86	30	40	?
9	10	Arvanitakis I	Physics	68	70	80	Pass

```
In [53]: #reading data from a data frame using locate row,loc[] and iloc[] function
STUDENT_DATA = pd.DataFrame(StudentData)
print(STUDENT_DATA.loc[[1]])#can use index name after adding index
print()
print(STUDENT_DATA.iloc[[0]])
```

	Roll	Student	Department	General Sc	Maths	Computer	Remarks
1	2	Agnew P	Computer Sc	45	78	66	Pass

  

	Roll	Student	Department	General Sc	Maths	Computer	Remarks
0	1	Agarwal V	Computer Sc	78	80	66	Pass

```
In [3]: #Adding name to each row using 'index'
STUDENT_DATA = pd.DataFrame(StudentData,index = ['std1','std2','std3','std4','std5','std6','std7','std8','std9','std10'])
print(STUDENT_DATA.to_string())
print(STUDENT_DATA.loc[['std1']])
```

	Roll	Student	Department	General Sc	Maths	Computer	Remarks
std1	1	Agarwal V	Computer Sc	78	80	66	Pass
std2	2	Agnew P	Computer Sc	45	78	66	Pass
std3	3	Ahmad H	Statistics	78	30	50	Fail
std4	4	Alambritis G	Physics	65	68	70	Pass
std5	5	Allen J	Economics	87	50	60	Pass
std6	6	Anthony A	Maths	54	30	30	Fail
std7	7	Antoniou V	Computer Sc	76	70	70	?
std8	8	Archy J	Economics	76	40	40	Fail
std9	9	Armstrong B	Math	86	30	40	?
std10	10	Arvanitakis I	Physics	68	70	80	Pass

  

	Roll	Student	Department	General Sc	Maths	Computer	Remarks
std1	1	Agarwal V	Computer Sc	78	80	66	Pass

```
In [8]: # To access data of a row using row index name
STUDENT_DATA = pd.DataFrame(StudentData,index = ['std1','std2','std3','std4','std5','std6','std7','std8','std9','std10'])
print(STUDENT_DATA.loc[['std1']])
```

	Roll	Student	Department	General Sc	Maths	Computer	Remarks
std1	1	Agarwal V	Computer Sc	78	80	66	Pass

```
In [11]: #to access data of a student by specifying student name
STUDENT_DATA = pd.DataFrame(StudentData)
STUDENT_DATA=STUDENT_DATA.set_index(['Student'])
print(STUDENT_DATA.loc[['Agarwal V']])
```

	Roll	Department	General Sc	Maths	Computer	Remarks
Student						
Agarwal V	1	Computer Sc	78	80	66	Pass

In [12]: *# Reading data from a spreadsheet (.xlsx/.xls) file*

```
import pandas as pd
import openpyxl
STUDENT_DATA = pd.read_excel(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.xlsx")#using r so that we can read the file
print(STUDENT_DATA)
```

	Roll	Student	Department	General Sc.	Maths's	Computer	Remarks
0	1	Agarwal V	Computer Sc	78	80	66	Pass
1	2	Agnew P	Computer Sc	45	78	66	Pass
2	3	Ahmad H	Statistics	78	30	50	Fail
3	4	Alambritis G	Physics	65	68	70	Pass
4	5	Allen J	Economics	87	50	60	Pass
5	6	Anthony A	Math's	54	30	30	Fail
6	7	Antoniou V	Computer Sc	76	70	70	?
7	8	Archy J	Economics	76	40	40	Fail
8	9	Armstrong B	Math's	86	30	40	?
9	10	Arvanitakis I	Physics	68	70	80	Pass

In [56]: *#reading data from a csv file*

```
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.csv")#using r so that we can read the file
print(STUDENT_DATA)
```

	Roll	Students	Department	General Sc.	Maths	Computer	Remarks
0	1	Agarwal V	Computer Sc	78	80	66	Pass
1	2	Agnew P	Computer Sc	45	78	66	Pass
2	3	Ahmad H	Statistics	78	30	50	Fail
3	4	Alambritis G	Physics	65	68	70	Pass
4	5	Allen J	Economics	87	50	60	Pass
5	6	Anthony A	Math's	54	30	30	Fail
6	7	Antoniou V	Computer Sc	76	70	70	?
7	8	Archy J	Economics	76	40	40	Fail
8	9	Armstrong B	Math's	86	30	40	?
9	10	Arvanitakis I	Physics	68	70	80	Pass

In [57]: *#reading data from a json file*

```
STUDENT_DATA = pd.read_json(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.json")#using r so that we can read the file
print(STUDENT_DATA)
```

	Roll #	Student	Department	General Sc.	Math's	Computer	Remarks
0	1	Agarwal V	Computer Sc	78	80	66	Pass
1	2	Agnew P	Computer Sc	45	78	66	Pass
2	3	Ahmad H	Statistics	78	30	50	Fail
3	4	Alambritis G	Physics	65	68	70	Pass
4	5	Allen J	Economics	87	50	60	Pass
5	6	Anthony A	Math's	54	30	30	Fail
6	7	Antoniou V	Computer Sc	76	70	70	?
7	8	Archy J	Economics	76	40	40	Fail
8	9	Armstrong B	Math's	86	30	40	?
9	10	Arvanitakis I	Physics	68	70	80	Pass

In [29]: *# To determine the shape ( no.of ROWs x no. of COLUMNS) in a given data frame*

```
STUDENT_DATA = pd.DataFrame(StudentData)
print("(ROWS, COLUMNS) in the given data set is",STUDENT_DATA.shape)
```

(ROWS, COLUMNS) in the given data set is (10, 7)

In [30]: *# To determine the size ( no.of data elements) in a given data frame*

```
STUDENT_DATA = pd.DataFrame(StudentData)
print("No. of elements in the given data set are",STUDENT_DATA.size)
```

No. of elements in the given data set are 70

In [32]: *#display first few rows of a dataframe using head function*

```
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.csv")
print(STUDENT_DATA.head(2))
```

	Roll	Students	Department	General Sc.	Math's	Computer	Remarks
0	1	Agarwal V	Computer Sc	78	80	66	Pass
1	2	Agnew P	Computer Sc	45	78	66	Pass

In [33]: *#display Last few rows of a dataframe using tail function*

```
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.csv")
print(STUDENT_DATA.tail(2))
```

	Roll	Students	Department	General Sc.	Math's	Computer	Remarks
8	9	Armstrong B	Math's	86	30	40	?
9	10	Arvanitakis I	Physics	68	70	80	Pass

```
In [34]: #displaying information about the type of data in a dataframe using info function
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.csv")
print(STUDENT_DATA.info())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 7 columns):
#   Column          Non-Null Count  Dtype
---  -
0    Roll            10 non-null    int64
1    Students        10 non-null    object
2    Department      10 non-null    object
3    General Sc.     10 non-null    int64
4    Math's          10 non-null    int64
5    Computer        10 non-null    int64
6    Remarks         10 non-null    object
dtypes: int64(4), object(3)
memory usage: 688.0+ bytes
None
```

```
In [35]: #Listing names of all the columns in a dataset
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.csv")
print(STUDENT_DATA.columns)
```

```
Index(['Roll', 'Students', 'Department', 'General Sc.', 'Math's', 'Computer',
       'Remarks'],
      dtype='object')
```

```
In [40]: #inserting a new column in an existing dataframe using insert function
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.csv")
STUDENT_DATA.insert(6, 'English', [96,75,88,80,45,67,89,78,68,90], True)
print(STUDENT_DATA)
```

	Roll	Students	Department	General Sc.	Math's	Computer	English \
0	1	Agarwal V	Computer Sc	78	80	66	96
1	2	Agnew P	Computer Sc	45	78	66	75
2	3	Ahmad H	Statistics	78	30	50	88
3	4	Alambritis G	Physics	65	68	70	80
4	5	Allen J	Economics	87	50	60	45
5	6	Anthony A	Math's	54	30	30	67
6	7	Antoniou V	Computer Sc	76	70	70	89
7	8	Archy J	Economics	76	40	40	78
8	9	Armstrong B	Math's	86	30	40	68
9	10	Arvanitakis I	Physics	68	70	80	90

  

	Remarks
0	Pass
1	Pass
2	Fail
3	Pass
4	Pass
5	Fail
6	?
7	Fail
8	?
9	Pass

```
In [39]: #inserting a new column in an existing dataframe without using insert function
English =[96,75,88,80,45,67,89,78,68,90]
STUDENT_DATA['English']=English
print(STUDENT_DATA)
```

	Roll	Students	Department	General Sc.	Math's	Computer	Remarks	\
0	1	Agarwal V	Computer Sc	78	80	66	Pass	
1	2	Agnew P	Computer Sc	45	78	66	Pass	
2	3	Ahmad H	Statistics	78	30	50	Fail	
3	4	Alambritis G	Physics	65	68	70	Pass	
4	5	Allen J	Economics	87	50	60	Pass	
5	6	Anthony A	Math's	54	30	30	Fail	
6	7	Antoniou V	Computer Sc	76	70	70	?	
7	8	Archy J	Economics	76	40	40	Fail	
8	9	Armstrong B	Math's	86	30	40	?	
9	10	Arvanitakis I	Physics	68	70	80	Pass	

  

	English
0	96
1	75
2	88
3	80
4	45
5	67
6	89
7	78
8	68
9	90

```
In [43]: #inserting a new row in an existing dataframe using loc function#
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.csv")
STUDENT_DATA.loc[4]=[5,'Vishal','Computer Sc',88,97,100,'Pass']
print(STUDENT_DATA)
```

	Roll	Students	Department	General Sc.	Math's	Computer	Remarks
0	1	Agarwal V	Computer Sc	78	80	66	Pass
1	2	Agnew P	Computer Sc	45	78	66	Pass
2	3	Ahmad H	Statistics	78	30	50	Fail
3	4	Alambritis G	Physics	65	68	70	Pass
4	5	Vishal	Computer Sc	88	97	100	Pass
5	6	Anthony A	Math's	54	30	30	Fail
6	7	Antoniou V	Computer Sc	76	70	70	?
7	8	Archy J	Economics	76	40	40	Fail
8	9	Armstrong B	Math's	86	30	40	?
9	10	Arvanitakis I	Physics	68	70	80	Pass

```
In [44]: #concatenation of two dataframes using concat function
StudentData1 ={'Roll':[1,2,3,4,5],
               'Student':['Agarwal V','Agnew P','Ahmad H','Alambritis G','Allen J'],
               'Department':['Computer Sc','Computer Sc','Statistics','Physics','Economics'],
               'General Sc': [78,45,78,65,87],
               'Maths': [80,78,30,68,50],
               'Computer': [66,66,50,70,60],
               'Remarks': ['Pass','Pass','Fail','Pass','Pass']}
StudentData2 ={'Roll':[6,7,8,9,10],
               'Student':['Anthony A','Antoniou V','Archy J','Armstrong B','Arvanitakis I'],
               'Department':['Maths','Computer Sc','Economics','Math','Physics'],
               'General Sc': [54,76,76,86,68],
               'Maths': [30,70,40,30,70],
               'Computer': [30,70,40,40,80],
               'Remarks': ['Fail','?','Fail','?','Pass']}
STUDENT_DATA1=pd.DataFrame(StudentData1)
STUDENT_DATA2=pd.DataFrame(StudentData2)
STUDENT_DATA = pd.concat([STUDENT_DATA1,STUDENT_DATA2],ignore_index=True)
print(STUDENT_DATA)
```

	Roll	Student	Department	General Sc	Maths	Computer	Remarks
0	1	Agarwal V	Computer Sc	78	80	66	Pass
1	2	Agnew P	Computer Sc	45	78	66	Pass
2	3	Ahmad H	Statistics	78	30	50	Fail
3	4	Alambritis G	Physics	65	68	70	Pass
4	5	Allen J	Economics	87	50	60	Pass
5	6	Anthony A	Maths	54	30	30	Fail
6	7	Antoniou V	Computer Sc	76	70	70	?
7	8	Archy J	Economics	76	40	40	Fail
8	9	Armstrong B	Math	86	30	40	?
9	10	Arvanitakis I	Physics	68	70	80	Pass

```
In [51]: # To evaluate percentage and display it in a separate column
STUDENT_DATA = pd.read_csv(r"C:\Users\HP\Downloads\lab 2\StudentDataSet2.csv")
Percentage =(STUDENT_DATA['General Sc.']+
             STUDENT_DATA['Maths']+
             STUDENT_DATA['Computer'])/3
STUDENT_DATA['Percentage']=Percentage
print(STUDENT_DATA)
```

	Roll	Students	Department	General Sc.	Maths	Computer	Remarks	\
0	1	Agarwal V	Computer Sc	78	80	66	Pass	
1	2	Agnew P	Computer Sc	45	78	66	Pass	
2	3	Ahmad H	Statistics	78	30	50	Fail	
3	4	Alambritis G	Physics	65	68	70	Pass	
4	5	Allen J	Economics	87	50	60	Pass	
5	6	Anthony A	Math's	54	30	30	Fail	
6	7	Antoniou V	Computer Sc	76	70	70	?	
7	8	Archy J	Economics	76	40	40	Fail	
8	9	Armstrong B	Math's	86	30	40	?	
9	10	Arvanitakis I	Physics	68	70	80	Pass	

  

	Percentage
0	74.666667
1	63.000000
2	52.666667
3	67.666667
4	65.666667
5	38.000000
6	72.000000
7	52.000000
8	52.000000
9	72.666667