A PROJECT

On

STUDENT DATABASE ANALYSIS USING PYTHON

BACHELOR OF TECHNOLOGY

By

DEPARTMENT OF DATA SCIENCE

SANIKOMMU HEMASANJUSHA 21KP1A4491

Under the esteemed Guidance of

Er.S AKSHAY KUMAR

CS CODENZ

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GUDIVADA – 521 323, ANDHRA PRADESH., INDIA

2022-2023

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2022-2023

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CERTIFICATE

This is to certify that dissertation entitled **"STUDENT DATABASE ANALYSIS USING PYTHON"** submitted by **SANIKOMMU HEMASANJUSHA (21KP1A4491)** is a record of Bonafide work carried out by them under my guidance and supervision during the year 2022-2023.

Signature of the Supervisor

Er.S AKSHAY KUMAR

CS CODENZ

Signature of the HOD

D.KOTESWAR RAO,MTech

Associate Professor& HOD
DataScience, NRIIT

DECLARATION

I **SANIKOMMU HEMASANJUSHA (21KP1A4491)** declared that the dissertation report entitled**"STUDENT DATABASE ANALYSIS USING PYTHON"**is no more than 1,00,000 words in length including quotes and exclusive of tables, figures, bibliography, and references.

Roll No	Name	Signature
21KP1A4491	**SANIKOMMU HEMASANJUSHA**	_____

Date:

Place:

ACKNOWLEDGEMENT

This report dissertation could not have been written without the support of our guide **Er. S AKSHAY KUMAR, CS CODENZ** who not only served as our superior but also encouraged and challenged us throughout our academic program our foremost thanks goes to his. Without his this dissertation would not have been possible. We appreciate him vast knowledge in many areas, and his insights, suggestions and guidance that helped to shape our research skills

It is needed with a great sense of pleasure and immense sense of gratitude that we acknowledge the help of these individuals. We owe many thanks to many people who helped and supported us during the writing of this report

We are thankful to our project coordinator **Er. S AKSHAY KUMAR, CS CODENZ**,for his continuous support

We express our sincere thanks to our respected for bet valuable suggestion and constant motivation that greatly helped us in successful completion of project we also take the privilege to express our heartfelt gratitude to **Er. S AKSHAY KUMAR, CS CODENZ**

We are thankful to all faculty members for extending their kind cooperation and assistance finally, we are extremely thankful to our parents and friends for their constant helped moral support.

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ABSTRACT

The Primary objective of this "**STUDENT DATABASE ANALYSIS USING PYTHON**" is to collecting the student data from different branches and analyze the data and grouping them based on their marks,age,branch and ranking them based on marks and visualizing the data.

The project is mainly for understanding what is Data analysis and visualization we perform various Data Visualization and Analysis tasks on the taken Student dataset.

REQUIREMENTS

HARDWARE REQUIREMENTS

- Personal Computer / Laptop with minimum RAM (8 GB), ROM (126 GB) and Processor (i3)
- Good latency internet access
- Graphical Processing Unit(GPU)
- Operating Systems
- Network Connectivity

SOFTWARE REQUIREMENTS

- Basic Search Engine (Google)
- Python
- Data Visualization Tools
- Data Manipulation Libraries

FUNCTIONAL REQUIREMENTS

- Data Cleaning
- Help in manipulating data and easy process.
- Graphical representation of Datasets

DESCRIPTION

In the realm of educational institutions, understanding student performance and behaviour is essential for effective decision-making and improvement strategies. This project focuses on analysing a student database using Python, a versatile programming language well-suited for data manipulation, analysis, and visualization.

DATA MUNGING

It is a process of transferring unstructured data into structured format. The goal is to make the data more usable and valuable for analytics or other purposes.

STEPS OF DATA ANALYSIS

1. Collecting the data
2. Cleaning the data
3. Analysing the data
4. Sharing your results
5. Summary

CODE

1) DEFINING THE QUESTION

The first step in any data analysis process is to define your objective. In data analytics **jargon**, this is sometimes called the 'problem statement'. The problem at hand is to develop an efficient and accurate warranty claim fraud detection system.

2) COLLECTING THE DATA

Pandas - Helps to create a dataset and it is also a library in python.

Pandas Package – It's a group of Panal Data's which are used to analyze the labelled data and relational data.

Matplotlib – Helps to create high quality charts, plots and figures to represent data visually.

Numpy-Helps to create arrays and it is also a library in python.

Loading a dataset:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
df=pd.read_csv('dsdb.csv')#reading
data from csv file
print(df)
```

OUTPUT:

```
Timestamp                         Email address  \
0   6/13/2023 14:24:59           vennachandana1@gmail.com
1   6/13/2023 14:25:16           adilakshmi4765@gmail.com
2   6/13/2023 14:25:51          sravankumar7156@gmail.com
3   6/13/2023 14:26:02         sandeepyeruva1124@gmail.com
4   6/13/2023 14:26:14            sivajibejjanki@gmail.com
5   6/13/2023 14:26:23         ramyayalabolu123r@gmail.com
6   6/13/2023 14:27:05         charithareddy3914@gmail.com
7   6/13/2023 14:27:17       gayathripolepalli70@gmail.com
8   6/13/2023 14:27:41             syedtasleem07@gmail.com
9   6/13/2023 14:28:10           sowjanyathota11@gmail.com
10 6/13/2023 14:28:11             tammasahithi1@gmail.com
11  6/13/2023 14:28:34            podilisarayu6@gmail.com
12  6/13/2023 14:28:43          shaikkarishma811@gmail.com
13  6/13/2023 14:28:57         kumarvalaparla890@gmail.com
14  6/13/2023 14:30:05             patchachinnu3@gmail.com
15  6/13/2023 14:30:06                manu952041@gmail.com

                      STUDENT NAME ROLL NUMBER                    FATHER NAM
E  \
0                  VennaChandana    21KP1A44C5          VennaRamanared
```

1	N.Venkatesh	21KP1A4468	N.Manikya	
2	Sravan Kumar	21KP1A4488	Rama Chandra	
3	Yeruvasandeepreddy	21KP1A44D1	Yeruva Ajay Kumar	
4	B.sivaji	22kp5a4402B.lakshmai		
5	Y.Ramya	21KP1A44C8	Y.Anjai	
6	P.charithareddy	21KP1A4475	P.Madhava Re	
7	POLEPALLI. GAYATHRI	21KP1A4481	POLEPALLI. GURUBRAHMA CHAR	
8	Syed TasleemAfroze	21KP1A44A9	Syed Rahi	
9	T.SOWJANYA	21KP1A44B6	T.SAMBA SIVA	
10	TammaSahithi	21KP1A44B0	Tammakrishna red	
11	PODILI LAKSHMISARAYU	21KP1A4480	PODILI RAME	
12	shaikkarishma	21KP1A4496	SHAIK BA	
13	VenkataAravindKumar.V	21KP1A44C0	Veeraswamy	
14	PatchaJaswanth	21KP1A4477	Patchaappa	
15	PachipulusuManohar	21KP1A4472	PachipulusuPras	

	MOTHER NAME	COURSE	CGPA	AGE
0	VennaLakshmidevi	DS	8	19
1	N.Sri Lakshmi	CSE	83	19
2	Venkateswaramma	MECH	7	20
3	Yeruva Anjali Devi	CSE	9.5	20
4	B.verammaDS	72%	23	
5	Y Lakshmi Rajyam	DS	80	19
6	P.Kavitha	DS	70	19
7	POLEPALLI.SRIDEVI	DS	10	19
8	Syed Naseema	MECH	8	19
9	T.ARUNA KUMARI	DS	8	19
10	TammaPadmavathiDS	7.7	19	
11	PODILI ADILAKSHMI	DS	7.5	19
12	SHAIK KHADRUN	DS	9	19
13	Lakshmi.vDS	98%	20	
14	PatchasukanyaCSE	99%	20	
15	PachipulusuBhavaniMECH	8.5	19	

	BRANCH	CURRENT SEMISTER
0	Data science	2-2
1	CSE-DS	II-II
2	mech	4
3	CSE	2-3
4	Computer science	2-2
5	CSD	2-2
6	CSD	2.2
7	Data Science	2-2
8	DS	2-2
9	DATA SCIENCE	2-2
10	CSE (Data science)	2-2
11	DATA SCIENCE	2-2
12	ds	2-2
13	Data Science	2-2
14	Data science	2-2
15	NaN	2-2

	AADHAAR NO
0	636336922883

```
1     602515258256
2     930319053088
3     576154990146
4     895444662410
5     724574588425
6     810177524502
7     721819168061
8     617020354793
9     338666948901
10    685349832128
11    458689741091
12    663048521599
13    510305345824
14    744020413963
15    559366114423
```

Displaying the information about dataset:

```
df.info()
```

OUTPUT:

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 52 entries, 0 to 51
Data columns (total 13 columns):
 #   Column            Non-Null Count  Dtype
---  ------            --------------  -----
 0   Timestamp         52 non-null     object
 1   Email address     52 non-null     object
 2   STUDENT NAME      52 non-null     object
 3   ROLL NUMBER       52 non-null     object
 4   FATHER NAME       52 non-null     object
 5   MOTHER NAME       52 non-null     object
 6   COURSE            52 non-null     object
 7   CGPA              52 non-null     object
 8   AGE               52 non-null     object
 9   EMAIL             52 non-null     object
 10  BRANCH            48 non-null     object
 11  CURRENT SEMISTER  52 non-null     object
 12  AADHAAR NO        52 non-null     object
dtypes: object(13)
memory usage: 5.4+ KB
```

```
df.drop(['EMAIL','Timestamp'], axis=1,inplace=True)#email
and timestamp are already deleted we are trying

print(df)
```

Droping the columns:

OUTPUT:

```
                      Email address                    STUDENT NAME  \
0             vennachandana1@gmail.com                VennaChandana
1             adilakshmi4765@gmail.com                    N.Venkatesh
2            sravankumar7156@gmail.com                  Sravan Kumar
3          sandeepyeruva1124@gmail.com           Yeruvasandeepreddy
4             sivajibejjanki@gmail.com                       B.sivaji
5           ramyayalabolu123r@gmail.com                     Y.Ramya
6           charithareddy3914@gmail.com               P.charithareddy
7         gayathripolepalli70@gmail.com            POLEPALLI. GAYATHRI
8               syedtasleem07@gmail.com             Syed TasleemAfroze
9             sowjanyathota11@gmail.com                    T.SOWJANYA
10              tammasahithi1@gmail.com                 TammaSahithi
11              podilisarayu6@gmail.com            PODILI LAKSHMISARAYU
12           shaikkarishma811@gmail.com                  shaikkarishma
13          kumarvalaparla890@gmail.com        VenkataAravindKumar.V
14              patchachinnu3@gmail.com                 PatchaJaswanth
15                 manu952041@gmail.com              PachipulusuManohar
    ROLL NUMBER                    FATHER NAME               MOTHER NAME  \
0    21KP1A44C5            VennaRamanareddyVennaLakshmidevi
1    21KP1A4468                 N.Manikya Rao              N.Sri Lakshmi
2    21KP1A4488               Rama Chandra Rao           Venkateswaramma
3    21KP1A44D1       Yeruva Ajay Kumar reddyYeruva Anjali Devi
4    22kp5a4402                  B.lakshmaiahB.veramma
5    21KP1A44C8                     Y.Anjaiah          Y Lakshmi Rajyam
6    21KP1A4475                P.Madhava Reddy                 P.Kavitha
7    21KP1A4481  POLEPALLI. GURUBRAHMA CHARI           POLEPALLI.SRIDEVI
8    21KP1A44A9                   Syed Rahiman              Syed Naseema
9    21KP1A44B6               T.SAMBA SIVA RAO            T.ARUNA KUMARI
10   21KP1A44B0           TammakrishnareddyTammaPadmavathi
11   21KP1A4480                 PODILI RAMESH         PODILI ADILAKSHMI
12   21KP1A4496                    SHAIK BAJI            SHAIK  KHADRUN
13  21KP1A44C0Veeraswamy.vLakshmi.v
14   21KP1A4477                PatchaapparaoPatchasukanya
15   21KP1A4472            Pachipulusu Prasad       PachipulusuBhavani
   COURSE CGPA  AGE                                        BRANCH  \
0      DS    8   19                                  Data science
1     CSE   83   19                                         CSE-DS
2    MECH    7   20                                           mech
```

```
3     CSE  9.5   20                                          CSE
4      DS  72%   23                            Computer science
5      DS   80   19                                          CSD
6      DS   70   19                                          CSD
7      DS   10   19                                 Data Science
8    MECH    8   19                                           DS
9      DS    8   19                                 DATA SCIENCE
10     DS  7.7   19                          CSE (Data science)
11     DS  7.5   19                                 DATA SCIENCE
12     DS    9   19                                           ds
13     DS  98%   20                                 Data Science
14    CSE  99%   20                                 Data science
15   MECH  8.5   19                                          NaN
   CURRENT SEMISTER      AADHAAR NO
0                2-2    636336922883
1              II-II    602515258256
2                  4    930319053088
3                2-3    576154990146
4                2-2    895444662410
5                2-2    724574588425
6                2.2    810177524502
7                2-2    721819168061
8                2-2    617020354793
9                2-2    338666948901
10               2-2    685349832128
11               2-2    458689741091
12               2-2    663048521599
13               2-2    510305345824
14               2-2    744020413963
15               2-2    559366114423
```

Checking null values:

```
df.isnull().sum()
```

OUTPUT:

```
Email address       0
STUDENT NAME        0
ROLL NUMBER         0
FATHER NAME         0
MOTHER NAME         0
COURSE              0
CGPA                0
AGE                 0
BRANCH              4
CURRENT SEMISTER    0
AADHAAR NO          0
dtype: int64
```

```
df.isnull()
print(df)
```

OUTPUT:

```
                        Email address                  STUDENT NAME  \
0             vennachandana1@gmail.com                VennaChandana
```

```
1              adilakshmi4765@gmail.com                      N.Venkatesh
2            sravankumar7156@gmail.com                     Sravan Kumar
3          sandeepyeruva1124@gmail.com              Yeruvasandeepreddy
4             sivajibejjanki@gmail.com                           B.sivaji
5           ramyayalabolu123r@gmail.com                         Y.Ramya
6           charithareddy3914@gmail.com                  P.charithareddy
7         gayathripolepalli70@gmail.com               POLEPALLI. GAYATHRI
8               syedtasleem07@gmail.com               Syed TasleemAfroze
9             sowjanyathota11@gmail.com                       T.SOWJANYA
10              tammasahithi1@gmail.com                    TammaSahithi
11              podilisarayu6@gmail.com               PODILI LAKSHMISARAYU
12           shaikkarishma811@gmail.com                    shaikkarishma
13          kumarvalaparla890@gmail.com          VenkataAravindKumar.V
14              patchachinnu3@gmail.com                   PatchaJaswanth
15                 manu952041@gmail.com                PachipulusuManohar
    ROLL NUMBER                    FATHER NAME                MOTHER NAME  \
0    21KP1A44C5             VennaRamanareddyVennaLakshmidevi
1    21KP1A4468                  N.Manikya Rao              N.Sri Lakshmi
2    21KP1A4488                Rama Chandra Rao           Venkateswaramma
3    21KP1A44D1        Yeruva Ajay Kumar reddyYeruva Anjali Devi
4    22kp5a4402                    B.lakshmaiahB.veramma
5    21KP1A44C8                       Y.Anjaiah          Y Lakshmi Rajyam
6    21KP1A4475                  P.Madhava Reddy                 P.Kavitha
7    21KP1A4481 POLEPALLI. GURUBRAHMA CHARI          POLEPALLI.SRIDEVI
8    21KP1A44A9                    Syed Rahiman              Syed Naseema
9    21KP1A44B6                T.SAMBA SIVA RAO            T.ARUNA KUMARI
10   21KP1A44B0            TammaKrishnareddyTammaPadmavathi
11   21KP1A4480                  PODILI RAMESH         PODILI ADILAKSHMI
12   21KP1A4496                     SHAIK BAJI            SHAIK  KHADRUN
13  21KP1A44C0                   Veeraswamy.vLakshmi.v
14   21KP1A4477                PatchaapparaoPatchasukanya
15   21KP1A4472             Pachipulusu Prasad       PachipulusuBhavani
   COURSE CGPA AGEBRANCH \
0      DS    8   19                                  Data science
1     CSE   83   19                                         CSE-DS
2    MECH    7   20                                           mech
3     CSE 9.5   20                                           CSE
4      DS 72%   23                             Computer science
5      DS   80   19                                           CSD
6      DS   70   19                                           CSD
7      DS   10   19                                  Data Science
8    MECH    8   19                                           DS
9      DS    8   19                                   DATA SCIENCE
10     DS 7.7   19                          CSE (Data science)
11     DS 7.5   19                                  DATA SCIENCE
12     DS    9   19                                           ds
13     DS 98%   20                                Data Science
14    CSE 99%   20                                Data science
15   MECH 8.5   19                                         NaN

   CURRENT SEMISTER      AADHAAR NO
0              2-2    636336922883
1            II-II    602515258256
```

```
2                  4    930319053088
3                2-3    576154990146
4                2-2    895444662410
5                2-2    724574588425
6                2.2    810177524502
7                2-2    721819168061
8                2-2    617020354793
9                2-2    338666948901
10               2-2    685349832128
11               2-2    458689741091
12               2-2    663048521599
13               2-2    510305345824
14               2-2    744020413963
15               2-2    559366114423
```

Filling null values with forward fill:

```
df.isnull().sum()
df.ffill(axis=1,inplace=True)
print(df)
```

OUTPUT:

```
                       Email address                    STUDENT NAME  \
0              vennachandana1@gmail.com                  VennaChandana
1              adilakshmi4765@gmail.com                      N.Venkatesh
2             sravankumar7156@gmail.com                    Sravan Kumar
3           sandeepyeruva1124@gmail.com             Yeruvasandeepreddy
4              sivajibejjanki@gmail.com                        B.sivaji
5           ramyayalabolu123r@gmail.com                        Y.Ramya
6           charithareddy3914@gmail.com                P.charithareddy
7         gayathripolepalli70@gmail.com             POLEPALLI. GAYATHRI
8               syedtasleem07@gmail.com              Syed TasleemAfroze
9             sowjanyathota11@gmail.com                      T.SOWJANYA
10              tammasahithi1@gmail.com                   TammaSahithi
11              podilisarayu6@gmail.com             PODILI LAKSHMISARAYU
12           shaikkarishma811@gmail.com                   shaikkarishma
13          kumarvalaparla890@gmail.com         VenkataAravindKumar.V
14              patchachinnu3@gmail.com                  PatchaJaswanth
15                 manu952041@gmail.com               PachipulusuManohar

    ROLL NUMBER                    FATHER NAME                MOTHER NAME  \
0    21KP1A44C5             VennaRamanareddyVennaLakshmidevi
1    21KP1A4468                 N.Manikya Rao              N.Sri Lakshmi
2    21KP1A4488               Rama Chandra Rao           Venkateswaramma
3    21KP1A44D1       Yeruva Ajay Kumar reddyYeruva Anjali Devi
4    22kp5a4402                  B.lakshmaiahB.veramma
5    21KP1A44C8                     Y.Anjaiah          Y Lakshmi Rajyam
6    21KP1A4475                 P.Madhava Reddy                P.Kavitha
7    21KP1A4481 POLEPALLI. GURUBRAHMA CHARI          POLEPALLI.SRIDEVI
8    21KP1A44A9                   Syed Rahiman              Syed Naseema
9    21KP1A44B6              T.SAMBA SIVA RAO            T.ARUNA KUMARI
```

```
10   21KP1A44B0           TammaKrishnareddyTammaPadmavathi
11   21KP1A4480                 PODILI RAMESH         PODILI ADILAKSHMI
12   21KP1A4496                    SHAIK BAJI            SHAIK  KHADRUN
13   21KP1A44C0Veeraswamy.vLakshmi.v
14   21KP1A4477               PatchaapparaoPatchasukanya
15   21KP1A4472            Pachipulusu Prasad       PachipulusuBhavani
   COURSE CGPA AGEBRANCH  \
0      DS    8   19                                  Data science
1     CSE   83   19                                         CSE-DS
2    MECH    7   20                                           mech
3     CSE  9.5   20                                            CSE
4      DS  72%   23                             Computer science
5      DS   80   19                                           CSD
6      DS   70   19                                           CSD
7      DS   10   19                                Data Science
8    MECH    8   19                                           DS
9      DS    8   19                                 DATA SCIENCE
10     DS  7.7   19                          CSE (Data science)
11     DS  7.5   19                                 DATA SCIENCE
12     DS    9   19                                           ds
13     DS  98%   20                                Data Science
14    CSE  99%   20                                Data science
15   MECH  8.5   19                                           19
   CURRENT SEMISTER      AADHAAR NO
0               2-2    636336922883
1             II-II    602515258256
2                 4    930319053088
3               2-3    576154990146
4               2-2    895444662410
5               2-2    724574588425
6               2.2    810177524502
7               2-2    721819168061
8               2-2    617020354793
9               2-2    338666948901
10              2-2    685349832128
11              2-2    458689741091
12              2-2    663048521599
13              2-2    510305345824
14              2-2    744020413963
15              2-2    559366114423
```

Descriptive statistics of dataframe:

```
df.describe()
```

OUTPUT:

	Email address	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	CURRENT SEMISTER	AADHAAR NO
count	52	52	52	52	52	52	52	52	52	52	52
unique	52	52	52	52	52	4	27	6	24	9	52
top	vennachandana1@gmail.com	Venna Chandana	21KP1A44C5	Venna Ramanareddy	Venna Lakshmidevi	DS	80	19	DS	2-2	636336922883
freq	1	1	1	1	1	40	7	30	7	37	1

Shape of dataframe:

```
df.shape()
```

OUTPUT:

```
(52, 11)
```

Replacing the null values:

```
df.replace(['************'],'654273218990',inplace=True)
print(df)
```

OUTPUT:

```
Email address                     STUDENT NAME  \
0             vennachandana1@gmail.com                 VennaChandana
1             adilakshmi4765@gmail.com                     N.Venkatesh
2            sravankumar7156@gmail.com                   Sravan Kumar
3          sandeepyeruva1124@gmail.com            Yeruvasandeepreddy
4             sivajibejjanki@gmail.com                        B.sivaji
5          ramyayalabolu123r@gmail.com                      Y.Ramya
6          charithareddy3914@gmail.com                P.charithareddy
7        gayathripolepalli70@gmail.com             POLEPALLI. GAYATHRI
8              syedtasleem07@gmail.com              Syed TasleemAfroze
9            sowjanyathota11@gmail.com                       T.SOWJANYA
10             tammasahithi1@gmail.com                    TammaSahithi
11             podilisarayu6@gmail.com             PODILI LAKSHMISARAYU
12          shaikkarishma811@gmail.com                   shaikkarishma
13         kumarvalaparla890@gmail.com        VenkataAravindKumar.V
14             patchachinnu3@gmail.com                  PatchaJaswanth
15                manu952041@gmail.com               PachipulusuManohar

    ROLL NUMBER                    FATHER NAME                MOTHER NAME  \
0    21KP1A44C5             VennaRamanareddyVennaLakshmidevi
1    21KP1A4468                  N.Manikya Rao              N.Sri Lakshmi
2    21KP1A4488               Rama Chandra Rao           Venkateswaramma
3    21KP1A44D1       Yeruva Ajay Kumar reddyYeruva Anjali Devi
4    22kp5a4402                  B.lakshmaiahB.veramma
5    21KP1A44C8                     Y.Anjaiah          Y Lakshmi Rajyam
6    21KP1A4475                 P.Madhava Reddy                 P.Kavitha
7    21KP1A4481  POLEPALLI. GURUBRAHMA CHARI           POLEPALLI.SRIDEVI
8    21KP1A44A9                   Syed Rahiman              Syed Naseema
9    21KP1A44B6               T.SAMBA SIVA RAO            T.ARUNA KUMARI
10   21KP1A44B0           TammakrishnareddyTammaPadmavathi
11   21KP1A4480                  PODILI RAMESH          PODILI ADILAKSHMI
12   21KP1A4496                     SHAIK BAJI             SHAIK  KHADRUN
13  21KP1A44C0Veeraswamy.vLakshmi.v
14   21KP1A4477                PatchaapparaoPatchasukanya
15   21KP1A4472             Pachipulusu Prasad       PachipulusuBhavani
   COURSE CGPA  AGE                                        BRANCH  \
0      DS    8   19                                  Data science
1     CSE   83   19                                         CSE-DS
2    MECH    7   20                                           mech
```

```
3     CSE  9.5   20                                          CSE
4      DS  72%   23                            Computer science
5      DS   80   19                                          CSD
6      DS   70   19                                          CSD
7      DS   10   19                                Data Science
8    MECH    8   19                                           DS
9      DS    8   19                                 DATA SCIENCE
10     DS  7.7   19                          CSE (Data science)
11     DS  7.5   19                                 DATA SCIENCE
12     DS    9   19                                           ds
13     DS  98%   20                                Data Science
14    CSE  99%   20                                Data science
15   MECH  8.5   19                                           19
   CURRENT SEMISTER      AADHAAR NO
0               2-2    636336922883
1             II-II    602515258256
2                 4    930319053088
3               2-3    576154990146
4               2-2    895444662410
5               2-2    724574588425
6               2.2    810177524502
7               2-2    721819168061
8               2-2    617020354793
9               2-2    338666948901
10              2-2    685349832128
11              2-2    458689741091
12              2-2    663048521599
13              2-2    510305345824
14              2-2    744020413963
15              2-2    559366114423
```

Displaying the column names:

```
df.columns
```

OUTPUT:

```
Index(['Email address', 'STUDENT NAME', 'ROLL NUMBER', 'FATHER NAME','MOTHE
R NAME', 'COURSE', 'CGPA', 'AGE', 'BRANCH', 'CURRENT SEMISTER','AADHAAR NO'
],dtype='object')
```

Renaming the column names:

```
df.rename(columns={'Emailaddress':'Gmail','CURRENTSEMISTE
R':'SEMISTER','AADHAAR NO':'UIDAINO'},inplace=True)
print(df.columns)
```

OUTPUT:

```
Index(['Gmail', 'STUDENT NAME', 'ROLL NUMBER', 'FATHER NAME', 'MOTHER NAME'
, 'COURSE', 'CGPA', 'AGE', 'BRANCH', 'SEMISTER', 'UIDAI NO'],
dtype='object')
```

Repalcing the string to integer and float:

```
df.replace({'7O':70},inplace=True)

print(df)
```

OUTPUT:

```
                              Gmail                     STUDENT NAME  \
0              vennachandana1@gmail.com                 VennaChandana
1              adilakshmi4765@gmail.com                     N.Venkatesh
2             sravankumar7156@gmail.com                   Sravan Kumar
3           sandeepyeruva1124@gmail.com           Yeruvasandeepreddy
4              sivajibejjanki@gmail.com                       B.sivaji
5            ramyayalabolu123r@gmail.com                      Y.Ramya
6            charithareddy3914@gmail.com                P.charithareddy
7         gayathripolepalli70@gmail.com             POLEPALLI. GAYATHRI
8               syedtasleem07@gmail.com              Syed TasleemAfroze
9             sowjanyathota11@gmail.com                       T.SOWJANYA
10              tammasahithi1@gmail.com                   TammaSahithi
11              podilisarayu6@gmail.com             PODILI LAKSHMISARAYU
12           shaikkarishma811@gmail.com                   shaikkarishma
13          kumarvalaparla890@gmail.com        VenkataAravindKumar.V
14              patchachinnu3@gmail.com                 PatchaJaswanth
15                 manu952041@gmail.com              PachipulusuManohar
    ROLL NUMBER                    FATHER NAME                MOTHER NAME  \
0    21KP1A44C5            VennaRamanareddyVennaLakshmidevi
1    21KP1A4468                 N.Manikya Rao              N.Sri Lakshmi
2    21KP1A4488               Rama Chandra Rao           Venkateswaramma
3    21KP1A44D1       Yeruva Ajay Kumar reddyYeruva Anjali Devi
4    22kp5a4402                   B.lakshmaiahB.veramma
5    21KP1A44C8                      Y.Anjaiah          Y Lakshmi Rajyam
6    21KP1A4475                P.Madhava Reddy                 P.Kavitha
7    21KP1A4481  POLEPALLI. GURUBRAHMA CHARI          POLEPALLI.SRIDEVI
8    21KP1A44A9                    Syed Rahiman              Syed Naseema
9    21KP1A44B6               T.SAMBA SIVA RAO            T.ARUNA KUMARI
10   21KP1A44B0           TammakrishnareddyTammaPadmavathi
11   21KP1A4480                  PODILI RAMESH         PODILI ADILAKSHMI
12   21KP1A4496                     SHAIK BAJI            SHAIK  KHADRUN
13  21KP1A44C0Veeraswamy.vLakshmi.v
14   21KP1A4477                PatchaapparaoPatchasukanya
15   21KP1A4472             Pachipulusu Prasad       PachipulusuBhavani

   COURSE CGPA  AGE                                      BRANCH  \
0      DS    8   19                                Data science
1     CSE   83   19                                      CSE-DS
2    MECH    7   20                                        mech
3     CSE  9.5   20                                         CSE
4      DS  72%   23                           Computer science
5      DS   80   19                                        CSD
6      DS   70   19                                        CSD
7      DS   10   19                             Data Science
8    MECH    8   19                                         DS
```

```
9      DS    8   19                                  DATA SCIENCE
10     DS  7.7   19                            CSE (Data science)
11     DS  7.5   19                                  DATA SCIENCE
12     DS    9   19                                            ds
13     DS  98%   20                                 Data Science
14    CSE  99%   20                                 Data science
15   MECH  8.5   19                                           19
        SEMISTER        UIDAI NO
0            2-2    636336922883
1          II-II    602515258256
2              4    930319053088
3            2-3    576154990146
4            2-2    895444662410
5            2-2    724574588425
6            2.2    810177524502
7            2-2    721819168061
8            2-2    617020354793
9            2-2    338666948901
10           2-2    685349832128
11           2-2    458689741091
12           2-2    663048521599
13           2-2    510305345824
14           2-2    744020413963
15           2-2    559366114423
```

```
df.CGPA=df.CGPA.str.replace("%",'').astype(float)
print(df)
```

OUTPUT:

```
                          Gmail                     STUDENT NAME  \
0             vennachandana1@gmail.com                VennaChandana
1             adilakshmi4765@gmail.com                    N.Venkatesh
2            sravankumar7156@gmail.com                  Sravan Kumar
3          sandeepyeruva1124@gmail.com           Yeruvasandeepreddy
4             sivajibejjanki@gmail.com                      B.sivaji
5          ramyayalabolu123r@gmail.com                     Y.Ramya
6          charithareddy3914@gmail.com                P.charithareddy
7        gayathripolepalli70@gmail.com             POLEPALLI. GAYATHRI
8              syedtasleem07@gmail.com             Syed TasleemAfroze
9            sowjanyathota11@gmail.com                      T.SOWJANYA
10             tammasahithi1@gmail.com                   TammaSahithi
11             podilisarayu6@gmail.com             PODILI LAKSHMISARAYU
12          shaikkarishma811@gmail.com                   shaikkarishma
13         kumarvalaparla890@gmail.com        VenkataAravindKumar.V
14             patchachinnu3@gmail.com                 PatchaJaswanth
15                manu952041@gmail.com              PachipulusuManohar
    ROLL NUMBER                   FATHER NAME                MOTHER NAME  \
0    21KP1A44C5            VennaRamanareddyVennaLakshmidevi
1    21KP1A4468                 N.Manikya Rao              N.Sri Lakshmi
2    21KP1A4488               Rama Chandra Rao           Venkateswaramma
3    21KP1A44D1       Yeruva Ajay Kumar reddyYeruva Anjali Devi
4    22kp5a4402                  B.lakshmaiahB.veramma
5    21KP1A44C8                    Y.Anjaiah          Y Lakshmi Rajyam
```

```
6    21KP1A4475                P.Madhava Reddy                  P.Kavitha
7    21KP1A4481  POLEPALLI. GURUBRAHMA CHARI           POLEPALLI.SRIDEVI
8    21KP1A44A9                   Syed Rahiman              Syed Naseema
9    21KP1A44B6               T.SAMBA SIVA RAO            T.ARUNA KUMARI
10   21KP1A44B0          TammakrishnareddyTammaPadmavathi
11   21KP1A4480                 PODILI RAMESH         PODILI ADILAKSHMI
12   21KP1A4496                    SHAIK BAJI            SHAIK  KHADRUN
13  21KP1A44C0Veeraswamy.vLakshmi.v
14   21KP1A4477               PatchaapparaoPatchasukanya
15   21KP1A4472            Pachipulusu Prasad       PachipulusuBhavani
COURSE  CGPA  AGE                                        BRANCH  \
0       DS   8.0   19                                Data science
1      CSE  83.0   19                                       CSE-DS
2     MECH   7.0   20                                         mech
3      CSE   9.5   20                                          CSE
4       DS  72.0   23                           Computer science
5       DS  80.0   19                                         CSD
6       DS  70.0   19                                         CSD
7       DS  10.0   19                             Data Science
8     MECH   8.0   19                                          DS
9       DS   8.0   19                            DATA SCIENCE
10      DS   7.7   19                       CSE (Data science)
11      DS   7.5   19                            DATA SCIENCE
12      DS   9.0   19                                      ds
13      DS  98.0   20                             Data Science
14     CSE  99.0   20                             Data science
15    MECH   8.5   19                                      19
SEMISTER        UIDAI NO
0             2-2    636336922883
1           II-II    602515258256
2               4    930319053088
3             2-3    576154990146
4             2-2    895444662410
5             2-2    724574588425
6             2.2    810177524502
7             2-2    721819168061
8             2-2    617020354793
9             2-2    338666948901
10            2-2    685349832128
11            2-2    458689741091
12            2-2    663048521599
13            2-2    510305345824
14            2-2    744020413963
15            2-2    559366114423
```

Filtering the dataframe:

```
df[df['CGPA']>7.0]
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
0	vennachandana1@gmail.com	Venna Chandana	21KP1A44C5	Venna Ramanareddy	Venna Lakshmidevi	DS	8.0	19	Data science	2-2	636336922883
1	adilakshmi4765@gmail.com	N.Venkatesh	21KP1A4468	N.Manikya Rao	N.Sri Lakshmi	CSE	83.0	19	CSE-DS	II-II	602515258256
3	sandeepyeruva1124@gmail.com	Yeruva sandeep reddy	21KP1A44D1	Yeruva Ajay Kumar reddy	Yeruva Anjali Devi	CSE	9.5	20	CSE	2-3	576154990146
4	sivajibejjanki@gmail.com	B.sivaji	22kp5a4402	B.lakshmaiah	B.veramma	DS	72.0	23	Computer science	2-2	895444662410
5	ramyayalabolu123r@gmail.com	Y.Ramya	21KP1A44C8	Y.Anjaiah	Y Lakshmi Rajyam	DS	80.0	19	CSD	2-2	724574588425
6	charithareddy3914@gmail.com	P.charitha reddy	21KP1A4475	P.Madhava Reddy	P.Kavitha	DS	70.0	19	CSD	2,2	810177524502
7	gayathripolepalli70@gmail.com	POLEPALLI. GAYATHRI	21KP1A44B1	POLEPALLI. GURUBRAHMA CHARI	POLEPALLI.SRIDEVI	DS	10.0	19	Data Science	2-2	721819168061
8	syedtasleem07@gmail.com	Syed Tasleem Afroze	21KP1A44A9	Syed Rahiman	Syed Naseema	MECH	8.0	19	DS	2-2	617020354793
9	sowjanyathota11@gmail.com	T.SOWJANYA	21KP1A44B6	T.SAMBA SIVA RAO	T.ARUNA KUMARI	DS	8.0	19	DATA SCIENCE	2-2	338666948901
10	tammasahithi1@gmail.com	Tamma Sahithi	21KP1A4480	Tamma krishna reddy	Tamma Padmavathi	DS	7.7	19	CSE (Data science)	2-2	685349832128
11	podilisarayu6@gmail.com	PODILI LAKSHMISARAYU	21KP1A4480	PODILI RAMESH	PODILI ADILAKSHMI	DS	7.5	19	DATA SCIENCE	2-2	458689741091
12	shaikkarishma811@gmail.com	shaik karishma	21KP1A4496	SHAIK BAJI	SHAIK KHADRUN	DS	9.0	19	ds	2-2	663048521599
13	kumarvalaparla890@gmail.com	Venkata Aravind Kumar.V	21KP1A44C0	Veeraswamy.v	Lakshmi.v	DS	98.0	20	Data Science	2-2	510305345824
14	patchachinnu3@gmail.com	Patcha Jaswanth	21KP1A4477	Patcha apparao	Patcha sukanya	CSE	99.0	20	Data science	2-2	744020413963
15	manu952041@gmail.com	Pachipulusu Manohar	21KP1A4472	Pachipulusu Prasad	Pachipulusu Bhavani	MECH	8.5	19	19	2-2	559366114423
17	shaiksakina05@gmail.com	Shaik sameer	21KP1A44A3	Shaik Rahim babu	Shaik Raziya	DS	80.0	20	DS	2-2	529261464345
18	us465249@gmail.com	S sk usman	21KP1A4492	S sk mastan vali	Mahabobba	DS	50.0	19	DS	2-2	568753875709
19	vallu.srinu756939@gmail.com	Vallu Srinu Siva Subrahmanyam	21KP1A44C1	Vallu Srinivasa Rao	Vallu Surya kumari	DS	73.0	20	Computer Science Engineering& Data Science	4	654273218990
20	undelachandraobulareddy@gmail.com	Undela Chandra Obula Reddy	21KP1A44B9	Undela Chinna Obula Reddy	Undela GuruLakshmi	DS	9.2	20	Computer Science	2-2	693621780842
21	farukh.786syed@gmail.com	SYED.FARUKH	21KP1A44A7	SYED.BAJI	SYED.SARTHAJ BEGUM	DS	70.0	19	DS	2-2	764320730678
22	anushayalabolu12@gmail.com	Anusha yalabolu	21KP1A44C7	Chinna anjayya	Lakshmi narayanama	DS	75.0	19	CSD	2-2	830785066037
23	madhulathasure9@gmail.com	SURE. MADHULATHA	21KP1A44A4	SURE.VISWANADHAM	SURE.SAI LAKSHMI	DS	10.0	20	Data science	2-2	776486062608
24	thammisettysrikanthraj9@gmail.com	T.Srikanth	21KP1A4485	T.vasu	T.jaya	DS	75.0	19	Data Science	2-2	673112205183
25	shiakmobin2002@gmail.com	Shaikmobin	21KP1A4497	shaik karimullah	Shaik rihana	DS	8.8	21	Ds	2,2	904355656468
26	abdulkhadar6842@gmail.com	Shaik.Abdul Khadar	21KP1A4493	Shaik.Kareem	Shaik.Farjana	ECE	8.0	20	20	2-2	334708289154
27	ravuakshaya@gmail.com	Ravu.akshaya	21KP1A4485	Ravu.srinivasrao	Ravu.aruna kumari	DS	80.0	19	Ds	2,2	544305783128
28	hemasanjushasanikommu828@gmail.com	hema sanjusha	21KP1A4491	rnusalareddy	sivaparvathi	CSE	73.0	18h	cse	2-2	422314863763
29	ynagasasikumar@gmail.com	Y Naga Sasi Kumar	21KP1A44D0	Y Rama mohanarao	Y Lalitha	DS	9.2	20	20	2-2	448172496292
30	rahamtunnisashaik09@gmail.com	Shaik Rahamtunnisa	21KP1A44A0	Shaik.mahaboobjani	Shaik.munni	DS	8.0	18	Data science	2-2	406976169351
31	harikabangaram313@gmail.com	Harika	22KP5A4401	A.Subramanyam	A.Dhana Bhagyam	DS	75.0	19	Data science	2-2	574930568520
32	indupriya72216@gmail.com	Indu Priya Patcha	21KP1A4476	Appa rao Patcha	Renuka Patcha	DS	75.0	18	Data Science	2-2	573041880949
33	bhavyasrisajja2003@gmail.com	Bhavya sri	21KP1A4490	Mohan krishna	Usha rani	DS	70.0	19	Ds	2-2	274736890047
34	sudhamshavejendla@gmail.com	Vejendla Devi Sri Sudhamsha	21KP1A44C4	Vejendla Srinivass Rao	Vejendla Laxmi Prasanna	CSE	70.0	19	Cse- Data Science	2_2	587480445790
35	bhanuthanirru@gmail.com	Thanirru Bhanu venkata prasad	21KP1A44B2	T sathyanarayana	T rama devi	DS	9.6	19	19	2-2	357228202835
36	nikitharayapati9@gmail.com	Nikhitha Rayapati	21KP1A4487	Rayapati hanumathrao	Rayapati malleswari	DS	80.0	19	Ds	2-2	963360828294
37	indhupotla123@gmail.com	indhu priya	21KP1A4483	Lakshmanarayana	Sujatha	CSE	72.0	19	cse	2-2	524345891620
38	abdulabdul22070@gmail.com	Syed.Abdul Rehaman	21KP1A44A6	Syed.Meera Sharif	Bandi.Krishna veni	DS	90.0	20	DS	2-2	347853509974
40	rabbanishaik7356@gmail.com	SHAIK RABBANI	21KP1A4499	SHAIK MOHAMMAD HANIF	SHAIK MALIN	DS	9.5	21	CSD	2-2	205933956204
41	reshmayalamanchi@gmail.com	Reshma yalamanchi	21KP1A44C9	Yalamanchi subba Rao	Yalamanchi sunitha	DS	75.0	19	DS	4	742366316353
42	thiriveedhinagajyothi@gmail.com	T. Nagajyothi	21KP1A4487	T. Venkayya	T. Ramanjamma	DS	75.0	19	DS	4	330477145525
43	paladugudurga1@gmail.com	P. Durga Sri	21KP1A4473	P. Amareswara rao	P. Seshu Kumari	DS	80.0	20	CSD(Data Science)	2-2	692162661608
44	saidashaik371@gmail.com	SHAIK SAIDA ANWAR BASHA	21KP1A44A2	SHAIK KUDHAN VALI	SHAIK SAIDA HUSSANBI	DS	80.0	20	DATASCIENCE	2-2	466722650274
46	nrajasambasivarao@gmail.com	Narra Raja Samba Siva Rao	21KP1A4471	Narra SrinivasaRao	Narra Ramadevi	DS	7.5	19	CSD (Data science)	4	835457902826
47	saisairam068@gmail.com	Sairam	21kp1a44b4	Venkata subbiah	Ravanamma	CSE	10.0	19	Da	2-2	746109575146
48	sriharshanallabothu@gmail.com	Nallabothu. Sri Harsha	21KP1A4469	Nallabothu. Anjaneyulu	Nallabothu. Anitha	DS	90.0	21	CSD	2-2	208611060176
49	bhuvanstarpuli@gmail.com	Puli bhuvaneswar	21KP1A4484	Puli mallikarjuna	Puli ramadevi	DS	8.3	21	Data science	2.2	950519207474
50	arundathi0508@gmail.com	PANDA UMA ARUNDATHI	21KP1A4474	PANDA NARAYANA RAO	PANDA PRASANNA LAKSHMI	DS	87.0	19	CSD	2-2	652650486629
51	chinnivignesh144@gmail.com	chinni vignesh teja yadav	21KP1A44C6	Chinni Pratap Kumar	Chinni Bhargavi	DS	80.0	19	Data Science	4th semester	639534870436

```
df.nsmallest(10,['CGPA'])
```

OUTPUT:

°j.

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
2	sravankumar7156@gmail.com	Sravan Kumar	21KP1A4488	Rama Chandra Rao	Venkateswaramma	MECH	7.0	20	mech	4	930319053088
16	vanukuri.raghava@gmail.com	Raghava	21KP1A44C3	Srinivasa reddy	Jyothi	DS	7.0	19	Data science	2-2	424973081348
45	mvkbn1312@gmail.com	R.M.V.K.Brahma Naidu	21KP1A4489	Yedukondalu	Nirmala	DS	7.0	20	Data science	2-2	2387 7088 9424
11	podilisarayu6@gmail.com	PODILI LAKSHMISARAYU	21KP1A4480	PODILI RAMESH	PODILI ADILAKSHMI	DS	7.5	19	DATA SCIENCE	2-2	458689741091
46	nrajasambasivarao@gmail.com	Narra Raja Samba Siva Rao	21KP1A4471	Narra SrinivasaRao	Narra Ramadevi	DS	7.5	19	CSD (Data science)	4	835457902826
10	tammasahithi1@gmail.com	Tamma Sahithi	21KP1A44B0	Tamma krishna reddy	Tamma Padmavathi	DS	7.7	19	CSE (Data science)	2-2	685349832128
0	vennachandana1@gmail.com	Venna Chandana	21KP1A44C5	Venna Ramanareddy	Venna Lakshmidevi	DS	8.0	19	Data science	2-2	636336922883
8	syedtasleem07@gmail.com	Syed Tasleem Afroze	21KP1A44A9	Syed Rahiman	Syed Naseema	MECH	8.0	19	DS	2-2	617020354793
9	sowjanyathota11@gmail.com	T.SOWJANYA	21KP1A44B6	T.SAMBA SIVA RAO	T.ARUNA KUMARI	DS	8.0	19	DATA SCIENCE	2-2	338666948901
26	abdulkhadar6842@gmail.com	Shaik.Abdul Khadar	21KP1A4493	Shaik.Kareem	Shaik.Farjana	ECE	8.0	20	20	2-2	334708289154

```
df.nlargest(10,['CGPA'])
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
14	patchachinnu3@gmail.com	Patcha Jaswanth	21KP1A4477	Patcha apparao	Patcha sukanya	CSE	99.0	20	Data science	2-2	744020413963
13	kumarvalaparla890@gmail.com	Venkata Aravind Kumar.V	21KP1A44C0	Veeraswamy.v	Lakshmi.v	DS	98.0	20	Data Science	2-2	510305345824
38	abdulabdul22070@gmail.com	Syed.Abdul Rehaman	21KP1A44A6	Syed.Meera Sharif	Bandi.Krishna veni	DS	90.0	20	DS	2-2	347853509974
48	sriharshanallabothu@gmail.com	Nallabothu. Sri Harsha	21KP1A4469	Nallabothu. Anjaneyulu	Nallabothu. Anitha	DS	90.0	21	CSD	2-2	208611060176
50	arundathi0508@gmail.com	PANDA UMA ARUNDATHI	21KP1A4474	PANDA NARAYANA RAO	PANDA PRASANNA LAKSHMI	DS	87.0	19	CSD	2-2	652650486629
1	adilakshmi4765@gmail.com	N.Venkatesh	21KP1A4468	N.Manikya Rao	N.Sri Lakshmi	CSE	83.0	19	CSE-DS	II-II	602515258256
5	ramyayalabolu123r@gmail.com	Y.Ramya	21KP1A44C8	Y.Anjaiah	Y Lakshmi Rajyam	DS	80.0	19	CSD	2-2	724574588425
17	shaiksakina05@gmail.com	Shaik sameer	21KP1A44A3	Shaik Rahim babu	Shaik Raziya	DS	80.0	20	DS	2-2	529261464345
27	ravuakshaya@gmail.com	Ravu.akshaya	21KP1A4485	Ravu.srinivasrao	Ravu.aruna kumari	DS	80.0	19	Ds	2.2	544305783128
36	nikitharayapati9@gmail.com	Nikhitha Rayapati	21KP1A4487	Rayapati hanumathrao	Rayapati malleswari	DS	80.0	19	Ds	2-2	963360828294

Grouping the dataset by column names:

```
df.groupby('BRANCH').mean()
```

OUTPUT:

BRANCH	CGPA
19	9.050000
20	8.600000
CSD	68.583333
CSD (Data science)	7.500000
CSD(Data Science)	80.000000
CSE	9.500000
CSE (Data science)	7.700000
CSE-DS	83.000000
Computer Science	9.200000
Computer Science Engineering& Data Science	73.000000
Computer science	72.000000
Cse- Data Science	70.000000
DATA SCIENCE	7.750000
DATASCIENCE	80.000000
DS	64.000000
Da	10.000000
Data Science	77.500000
Data Science	61.000000
Data science	7.000000
Data science	34.716667
Ds	59.700000
cse	72.500000
ds	9.000000
mech	7.000000

```
df.groupby('AGE').mean()
```

OUTPUT:

AGE	CGPA
18	41.500000
18h	73.000000
19	47.165517
20	47.135714
21	29.150000
23	72.000000

Replace the value:

```
df.replace(['18h'],18,inplace=True)
print(df)
```

OUTPUT:

```
                          Gmail                     STUDENT NAME  \
0             vennachandana1@gmail.com                   VennaChandana
1             adilakshmi4765@gmail.com                       N.Venkatesh
2            sravankumar7156@gmail.com                     Sravan Kumar
3          sandeepyeruva1124@gmail.com   Yeruvasandeepreddy

4             sivajibejjanki@gmail.com                          B.sivaji
5          ramyayalabolu123r@gmail.com                          Y.Ramya
6          charithareddy3914@gmail.com                P.charithareddy
7        gayathripolepalli70@gmail.com            POLEPALLI. GAYATHRI
8              syedtasleem07@gmail.com             Syed TasleemAfroze
9            sowjanyathota11@gmail.com                     T.SOWJANYA
10             tammasahithi1@gmail.com                   TammaSahithi
11             podilisarayu6@gmail.com            PODILI LAKSHMISARAYU
12          shaikkarishma811@gmail.com                  shaikkarishma
13         kumarvalaparla890@gmail.com        VenkataAravindKumar.V
14             patchachinnu3@gmail.com                  PatchaJaswanth
15                manu952041@gmail.com             PachipulusuManohar

    ROLL NUMBER                    FATHER NAME                MOTHER NAME  \
0    21KP1A44C5            VennaRamanareddyVennaLakshmidevi
1    21KP1A4468                 N.Manikya Rao              N.Sri Lakshmi
2    21KP1A4488               Rama Chandra Rao           Venkateswaramma
3    21KP1A44D1       Yeruva Ajay Kumar reddyYeruva Anjali Devi
4    22kp5a4402                   B.lakshmaiahB.veramma
5    21KP1A44C8                     Y.Anjaiah          Y Lakshmi Rajyam
6    21KP1A4475                P.Madhava Reddy                 P.Kavitha
7    21KP1A4481  POLEPALLI. GURUBRAHMA CHARI          POLEPALLI.SRIDEVI
```

```
8    21KP1A44A9                  Syed Rahiman              Syed Naseema
9    21KP1A44B6              T.SAMBA SIVA RAO            T.ARUNA KUMARI
10   21KP1A44B0          TammakrishnareddyTammaPadmavathi
11   21KP1A4480                PODILI RAMESH         PODILI ADILAKSHMI
12   21KP1A4496                  SHAIK BAJI             SHAIK  KHADRUN
13  21KP1A44C0Veeraswamy.vLakshmi.v
14   21KP1A4477               PatchaapparaoPatchasukanya
15   21KP1A4472           Pachipulusu Prasad       PachipulusuBhavani
COURSE  CGPA AGE                                        BRANCH  \
0       DS   8.0  19                                 Data science
1      CSE  83.0  19                                       CSE-DS
2     MECH   7.0  20mech
3      CSE   9.5  20                                          CSE
4       DS  72.0  23                           Computer science
5       DS  80.0  19                                          CSD
6       DS  70.0  19                                          CSD
7       DS  10.0  19                              Data Science
8     MECH   8.0  19                                        DS
9       DS   8.0  19                             DATA SCIENCE
10      DS   7.7  19                        CSE (Data science)
11      DS   7.5  19                             DATA SCIENCE
12      DS   9.0  19                                        ds
13      DS  98.0  20                              Data Science
14     CSE  99.0  20                              Data science
15    MECH   8.5  19                                        19
0            2-2    636336922883
1          II-II    602515258256
2              4    930319053088
3            2-3    576154990146
4            2-2    895444662410
5            2-2    724574588425
6            2.2    810177524502
7            2-2    721819168061
8            2-2    617020354793
9            2-2    338666948901
10           2-2    685349832128
11           2-2    458689741091
12           2-2    663048521599
13           2-2    510305345824
14           2-2    744020413963
15           2-2    559366114423
```

Grouping the dataset by using specific conditions:

```
x=df.groupby('COURSE').get_group('DS')
 print(x)
```

OUTPUT:

```
                    Gmail                    STUDENT NAME  \
0           vennachandana1@gmail.com                VennaChandana
4           sivajibejjanki@gmail.com                       B.sivaji
5         ramyayalabolu123r@gmail.com                        Y.Ramya
```

```
6         charithareddy3914@gmail.com                P.charithareddy
7       gayathripolepalli70@gmail.com            POLEPALLI. GAYATHRI
9           sowjanyathota11@gmail.com                     T.SOWJANYA
10            tammasahithi1@gmail.com                   TammaSahithi
11            podilisarayu6@gmail.com            PODILI LAKSHMISARAYU
12         shaikkarishma811@gmail.com                  shaikkarishma
13        kumarvalaparla890@gmail.com        VenkataAravindKumar.V
16         vanukuri.raghava@gmail.com                         Raghava
17            shaiksakina05@gmail.com                    Shaiksameer
18                 us465249@gmail.com                      S skusman
19        vallu.srinu756939@gmail.com ValluSrinu Siva Subrahmanyam
20 undelachandraobulareddy@gmail.comUndela Chandra Obula Reddy

    ROLL NUMBER                    FATHER NAME             MOTHER NAME COURS
E  \
0    21KP1A44C5            VennaRamanareddyVennaLakshmidevis
4    22kp5a4402                  B.lakshmaiahB.verammaD
5    21KP1A44C8                     Y.Anjaiah        Y Lakshmi Rajyam     D
S
6    21KP1A4475               P.Madhava Reddy               P.Kavitha     D
S
7    21KP1A4481  POLEPALLI. GURUBRAHMA CHARI        POLEPALLI.SRIDEVI     D
S
9    21KP1A44B6              T.SAMBA SIVA RAO          T.ARUNA KUMARI     D
S
10   21KP1A44B0           TammakrishnareddyTammaPadmavathi     DS
11   21KP1A4480                  PODILI RAMESH       PODILI ADILAKSHMI     D
S
12   21KP1A4496                    SHAIK BAJI          SHAIK  KHADRUN     D
S
13  21KP1A44C0Veeraswamy.vLakshmi.v     DS
16   21KP1A44C3               SrinivasareddyJyothi     DS
17   21KP1A44A3             Shaik Rahim babuShaikRaziya     DS
18   21KP1A4492              S skmastanvaliMahabobba     DS
19  21KP1A44C1ValluSrinivasa Rao      Vallu Surya kumari     DS
20   21KP1A44B9     UndelaChinnaObula Reddy      UndelaGuruLakshmi
    CGPA AGE                                        BRANCH      SEMISTER  \
0    8.0  19                                 Data science            2-2
4   72.0  23                           Computer science              2-2
5   80.0  19                                       CSD               2-2
6   70.0  19                                       CSD               2.2
7   10.0  19                                  Data Science           2-2
9    8.0  19                                   DATA SCIENCE          2-2
10   7.7  19                           CSE (Data science)            2-2
11   7.5  19                                  DATA SCIENCE           2-2
12   9.0  19                                        ds               2-2
13  98.0  20                                  Data Science           2-2
16   7.0  19                                   Data science          2-2
17  80.0  20                                        DS               2-2
18  50.0  19                                        DS               2-2
19  73.0  20  Computer Science Engineering& Data Science               4
20   9.2  20                             Computer Science             2-2
          UIDAI NO
```

```
0     636336922883
4     895444662410
5     724574588425
6     810177524502
7     721819168061
9     338666948901
10    685349832128
11    458689741091
12    663048521599
13    510305345824
16    424973081348
17    529261464345
18    568753875709
19    654273218990
20    693621780842
```

```
x1=df.groupby('COURSE').get_group('MECH')
print(x1)
```

OUTPUT:

```
                          Gmail          STUDENT NAME ROLL NUMBER  \
2   sravankumar7156@gmail.com          SravanKumar  21KP1A4488
8     syedtasleem07@gmail.com  SyedTasleemAfroze  21KP1A44A9
15       manu952041@gmail.com  PachipulusuManohar  21KP1A4472

            FATHER NAME          MOTHER NAME COURSE  CGPA AGE BRANCH SEMISTE
R  \
2     Rama Chandra Rao      Venkateswaramma   MECH   7.0  20mech        4

8         Syed Rahiman         Syed Naseema   MECH   8.0  19     DS      2-
2
15  Pachipulusu Prasad  PachipulusuBhavani   MECH   8.5  19     19      2-2


        UIDAI NO
2   930319053088
8   617020354793
15  559366114423
```

```
x2=df.groupby('COURSE').get_group('CSE')

print(x2)
```

OUTPUT:

```
                                  Gmail                   STUDENT NAME  \
1             adilakshmi4765@gmail.com                    N.Venkatesh
3          sandeepyeruva1124@gmail.com          Yeruvasandeepreddy
14            patchachinnu3@gmail.com                PatchaJaswanth
28  hemasanjushasanikommu828@gmail.comhemasanjusha
```

```
34         sudhamshavejendla@gmail.com  Vejendla Devi Sri Sudhamsha
37             indhupotla123@gmail.com                   indhupriya
39            jaffershaik718@gmail.com                  Jaffershaik
47              saisairam068@gmail.com                       Sairam

   ROLL NUMBER              FATHER NAME               MOTHER NAME COURSE  \
1   21KP1A4468           N.Manikya Rao             N.Sri Lakshmi    CSE
3   21KP1A44D1  Yeruva Ajay Kumar reddyYeruva Anjali Devi    CSE
14  21KP1A4477PatchaapparaoPatchasukanya    CSE
28  21KP1A4491musalareddysivaparvathi    CSE
34  21KP1A44C4VejendlaSrinivass Rao  VejendlaLaxmiPrasanna     CSE
37  21KP1A4483LakshmanarayanaSujatha    CSE
39  21KP1A4495shaik.LaiLahashaik.Ramjan bee    CSE
47  21kp1a44b4VenkatasubbiahRavanamma    CSE

    CGPA AGE              BRANCH SEMISTER      UIDAI NO
1   83.0  19              CSE-DS    II-II  602515258256
3    9.5  20                 CSE      2-3  576154990146
14  99.0  20       Data science       2-2  744020413963
28  73.0  18                 cse      2-2  422314863763
34  70.0  19  Cse- Data Science       2_2  587480445790
37  72.0  19                 cse      2-2  524345891620
39   NaN  19cse      2nd  912229276699
47  10.0  19                  Da      2-2  746109575146
```

```
x3=df.groupby('COURSE').get_group('ECE')

print(x3)
```

OUTPUT:

```
                  Gmail        STUDENT NAME ROLL NUMBER   FATHER NAME  \
26  abdulkhadar6842@gmail.comShaik.AbdulKhadar  21KP1A4493  Shaik.Kareem

      MOTHER NAME COURSE  CGPA AGE BRANCH SEMISTER      UIDAI NO
26  Shaik.Farjana    ECE   8.0  20     20       2-2  334708289154
```

```
df1=df.groupby('AGE').get_group(18)

print(df1)
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
28	hemasanjushasanikommu828@gmail.com	hema sanjusha	21KP1A4491	musalareddy	sivaparvathi	CSE	73.0	18	cse	2-2	422314863763
30	rahamtunnisashaik09@gmail.com	Shaik Rahamtunnisa	21KP1A44A0	Shaik.mahaboobjani	Shaik.munni	DS	8.0	18	Data science	2-2	406976169351
32	indupriya72216@gmail.com	Indu Priya Patcha	21KP1A4476	Appa rao Patcha	Renuka Patcha	DS	75.0	18	Data Science	2-2	573041880949

```
df2=df.groupby('AGE').get_group(19)

print(df2)
```

OUTPUT :

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
0	vennachandana1@gmail.com	Venna Chandana	21KP1A44C5	Venna Ramanareddy	Venna Lakshmidevi	DS	8.0	19	Data science	2-2	636336922883
1	adilakshmi4765@gmail.com	N.Venkatesh	21KP1A4468	N.Manikya Rao	N.Sri Lakshmi	CSE	83.0	19	CSE-DS	II-II	602515258256
5	ramyayalabolu123r@gmail.com	Y.Ramya	21KP1A44C8	Y.Anjaiah	Y Lakshmi Rajyam	DS	80.0	19	CSD	2-2	724574588425
6	charithareddy3914@gmail.com	P.charitha reddy	21KP1A4475	P.Madhava Reddy	P.Kavitha	DS	70.0	19	CSD	2.2	810177524502
7	gayathripolepalli70@gmail.com	POLEPALLI. GAYATHRI	21KP1A4481	POLEPALLI. GURUBRAHMA CHARI	POLEPALLI.SRIDEVI	DS	10.0	19	Data Science	2-2	721819168061
8	syedtasleem07@gmail.com	Syed Tasleem Afroze	21KP1A44A9	Syed Rahiman	Syed Naseema	MECH	8.0	19	DS	2-2	617020354793
9	sowjanyathota11@gmail.com	T.SOWJANYA	21KP1A44B6	T.SAMBA SIVA RAO	T.ARUNA KUMARI	DS	8.0	19	DATA SCIENCE	2-2	338666948901
10	tammasahithi1@gmail.com	Tamma Sahithi	21KP1A44B0	Tamma krishna reddy	Tamma Padmavathi	DS	7.7	19	CSE (Data science)	2-2	685349832128
11	podilisarayu6@gmail.com	PODILI LAKSHMISARAYU	21KP1A4480	PODILI RAMESH	PODILI ADILAKSHMI	DS	7.5	19	DATA SCIENCE	2-2	458689741091
12	shaikkarishma811@gmail.com	shaik karishma	21KP1A4496	SHAIK BAJI	SHAIK KHADRUN	DS	9.0	19	ds	2-2	663048521599
15	manu952041@gmail.com	Pachipulusu Manohar	21KP1A4472	Pachipulusu Prasad	Pachipulusu Bhavani	MECH	8.5	19	19	2-2	559366114423
16	vanukuri.raghava@gmail.com	Raghava	21KP1A44C3	Srinivasa reddy	Jyothi	DS	7.0	19	Data science	2-2	424973081348
18	us465249@gmail.com	S sk usman	21KP1A4492	S sk mastan vali	Mahabobba	DS	50.0	19	DS	2-2	568753875709
21	farukh.786syed@gmail.com	SYED.FARUKH	21KP1A44A7	SYED.BAJI	SYED.SARTHAJ BEGUM	DS	70.0	19	DS	2-2	764320730678
22	anushayalabolu12@gmail.com	Anusha yalabolu	21KP1A44C7	Chinna anjayya	Lakshmi narayanama	DS	75.0	19	CSD	2-2	830785066037
24	thammisettysrikanthraj9@gmail.com	T.Srikanth	21KP1A44B5	T.vasu	T.jaya	DS	75.0	19	Data Science	2-2	673112205183
27	ravuakshaya@gmail.com	Ravu.akshaya	21KP1A4485	Ravu.srinivasrao	Ravu.aruna kumari	DS	80.0	19	Ds	2.2	544305783128
31	harikabangaram313@gmail.com	Harika	22KP5A4401	A.Subramanyam	A.Dhana Bhagyam	DS	75.0	19	Data science	2-2	574930568520
33	bhavyasrisajja2003@gmail.com	Bhavya sri	21KP1A4490	Mohan krishna	Usha rani	DS	70.0	19	Ds	2-2	274736890047
34	sudhamshavejendla@gmail.com	Vejendla Devi Sri Sudhamsha	21KP1A44C4	Vejendla Srinivass Rao	Vejendla Laxmi Prasanna	CSE	70.0	19	Cse- Data Science	2_2	587480445790
35	bhanuthanirru@gmail.com	Thanirru Bhanu venkata prasad	21KP1A44B2	T sathyanarayana	T rama devi	DS	9.6	19	19	2-2	357228202835
36	nikitharayapati9@gmail.com	Nikhitha Rayapati	21KP1A4487	Rayapati hanumathrao	Rayapati malleswari	DS	80.0	19	Ds	2-2	963360828294
37	indhupotla123@gmail.com	indhu priya	21KP1A4483	Lakshmanarayana	Sujatha	CSE	72.0	19	cse	2-2	524345891620
39	jaffershaik718@gmail.com	Jaffer shaik	21KP1A4495	shaik.LaiLaha	shaik.Ramjan bee	CSE	NaN	19	cse	2nd	912229276699
41	reshmayalamanchi@gmail.com	Reshma yalamanchi	21KP1A44C9	Yalamanchi subba Rao	Yalamanchi sunitha	DS	75.0	19	DS	4	742366316353
42	thiriveedhinagajyothi@gmail.com	T. Nagajyothi	21KP1A44B7	T. Venkayya	T. Ramanjamma	DS	75.0	19	DS	4	330477145525
46	nrajasambasivarao@gmail.com	Narra Raja Samba Siva Rao	21KP1A4471	Narra SrinivasaRao	Narra Ramadevi	DS	7.5	19	CSD (Data science)	4	835457902826
47	saisairam068@gmail.com	Sairam	21kp1a44b4	Venkata subbiah	Ravanamma	CSE	10.0	19	Da	2-2	746109575146
50	arundathi0508@gmail.com	PANDA UMA ARUNDATHI	21KP1A4474	PANDA NARAYANA RAO	PANDA PRASANNA LAKSHMI	DS	87.0	19	CSD	2-2	652650486629
51	chinnivignesh144@gmail.com	chinni vignesh teja yadav	21KP1A44C6	Chinni Pratap Kumar	Chinni Bhargavi	DS	80.0	19	Data Science	4th semester	639534870436

```
df3=df.groupby('AGE').get_group(20)

print(df3)
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
2	sravankumar7156@gmail.com	Sravan Kumar	21KP1A4488	Rama Chandra Rao	Venkateswaramma	MECH	7.0	20	mech	4	930319053088
3	sandeepyeruva1124@gmail.com	Yeruva sandeep reddy	21KP1A44D1	Yeruva Ajay Kumar reddy	Yeruva Anjali Devi	CSE	9.5	20	CSE	2-3	576154990146
13	kumarvalaparla890@gmail.com	Venkata Aravind Kumar.V	21KP1A44C0	Veeraswamy.v	Lakshmi.v	DS	98.0	20	Data Science	2-2	510305345824
14	patchachinnu3@gmail.com	Patcha Jaswanth	21KP1A4477	Patcha apparao	Patcha sukanya	CSE	99.0	20	Data science	2-2	744020413963
17	shaiksakina05@gmail.com	Shaik sameer	21KP1A44A3	Shaik Rahim babu	Shaik Raziya	DS	80.0	20	DS	2-2	529261464345
19	vallu.srinu756939@gmail.com	Vallu Srinu Siva Subrahmanyam	21KP1A44C1	Vallu Srinivasa Rao	Vallu Surya kumari	DS	73.0	20	Computer Science Engineering& Data Science	4	654273218990
20	undelachandraobulareddy@gmail.com	Undela Chandra Obula Reddy	21KP1A4489	Undela Chinna Obula Reddy	Undela GuruLakshmi	DS	9.2	20	Computer Science	2-2	693621780842
23	madhulathasure9@gmail.com	SURE. MADHULATHA	21KP1A44A4	SURE.VISWANADHAM	SURE.SAI LAKSHMI	DS	10.0	20	Data science	2-2	776486062608
26	abdulkhadar6842@gmail.com	Shaik.Abdul Khadar	21KP1A4493	Shaik.Kareem	Shaik.Farjana	ECE	8.0	20	20	2-2	334708289154
29	ynagasasikumar@gmail.com	Y Naga Sasi Kumar	21KP1A44D0	Y Rama mohanarao	Y Lalitha	DS	9.2	20	20	2-2	448172496292
38	abdulabdul22070@gmail.com	Syed.Abdul Rehaman	21KP1A44A6	Syed.Meera Sharif	Bandi.Krishna veni	DS	90.0	20	DS	2-2	347853509974
43	paladugudurga1@gmail.com	P. Durga Sri	21KP1A4473	P. Amareswara rao	P. Seshu Kumari	DS	80.0	20	CSD(Data Science)	2-2	692162661608
44	saidashaik371@gmail.com	SHAIK SAIDA ANWAR BASHA	21KP1A44A2	SHAIK KUDHAN VALI	SHAIK SAIDA HUSSANBI	DS	80.0	20	DATASCIENCE	2-2	466722650274
45	mvkbn1312@gmail.com	R.M.V.K.Brahma Naidu	21KP1A4489	Yedukondalu	Nirmala	DS	7.0	20	Data science	2-2	2387 7088 9424

```
df4=df.groupby('AGE').get_group(21)

print(df4)
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
25	shiakmobin2002@gmail.com	Shaikmobin	21KP1A4497	shaik karimullah	Shaik rihana	DS	8.8	21	Ds	2.2	904355656468
40	rabbanishaik7356@gmail.com	SHAIK RABBANI	21KP1A4499	SHAIK MOHAMMAD HANIF	SHAIK MALIN	DS	9.5	21	CSD	2-2	205933956204
48	sriharshanallabothu@gmail.com	Nallabothu. Sri Harsha	21KP1A4469	Nallabothu. Anjaneyulu	Nallabothu. Anitha	DS	90.0	21	CSD	2-2	208611060176
49	bhuvanstarpuli@gmail.com	Puli bhuvaneswar	21KP1A4484	Puli mallikarjuna	Puli ramadevi	DS	8.3	21	Data science	2.2	950519207474

```
df5=df.groupby('AGE').get_group(23)

print(df5)
```

OUTPUT:

```
 Gmail STUDENT NAME ROLL NUMBER   FATHER NAME  \
4  sivajibejjanki@gmail.comB.sivaji  22kp5a4402  B.lakshmaiah

  MOTHER NAME COURSE  CGPA  AGE             BRANCH SEMISTER      UIDAI NO
4   B.verammaDS  72.0   23  Computer science       2-2  895444662410
```

Converting the AGE to integer type:

```
df.AGE=df.AGE.astype(int)

print(df)
```

OUTPUT:

```
                              Gmail                    STUDENT NAME  \
0             vennachandana1@gmail.com                 VennaChandana
1             adilakshmi4765@gmail.com                     N.Venkatesh
2            sravankumar7156@gmail.com                   Sravan Kumar
3          sandeepyeruva1124@gmail.com           Yeruvasandeepreddy
4             sivajibejjanki@gmail.com                        B.sivaji
5          ramyayalabolu123r@gmail.com                      Y.Ramya
6          charithareddy3914@gmail.com                P.charithareddy
7        gayathripolepalli70@gmail.com             POLEPALLI. GAYATHRI
8              syedtasleem07@gmail.com              Syed TasleemAfroze
9            sowjanyathota11@gmail.com                      T.SOWJANYA
10             tammasahithi1@gmail.com                  TammaSahithi
11             podilisarayu6@gmail.com             PODILI LAKSHMISARAYU
12          shaikkarishma811@gmail.com                   shaikkarishma
13         kumarvalaparla890@gmail.com        VenkataAravindKumar.V
14             patchachinnu3@gmail.com                 PatchaJaswanth
15                manu952041@gmail.com              PachipulusuManohar

    ROLL NUMBER                    FATHER NAME                MOTHER NAME \
0    21KP1A44C5             VennaRamanareddyVennaLakshmidevi
1    21KP1A4468                  N.Manikya Rao              N.Sri Lakshmi
2    21KP1A4488               Rama Chandra Rao           Venkateswaramma
3    21KP1A44D1        Yeruva Ajay Kumar reddyYeruva Anjali Devi
4    22kp5a4402                   B.lakshmaiahB.veramma
5    21KP1A44C8                      Y.Anjaiah          Y Lakshmi Rajyam
6    21KP1A4475                 P.Madhava Reddy                 P.Kavitha
7    21KP1A4481 POLEPALLI. GURUBRAHMA CHARI           POLEPALLI.SRIDEVI
8    21KP1A44A9                    Syed Rahiman               Syed Naseema
9    21KP1A44B6               T.SAMBA SIVA RAO            T.ARUNA KUMARI
10   21KP1A44B0            TammaKrishnareddyTammaPadmavathi
11   21KP1A4480                  PODILI RAMESH          PODILI ADILAKSHMI
12   21KP1A4496                     SHAIK BAJI             SHAIK KHADRUN
13  21KP1A44C0                    Veeraswamy.vLakshmi.v
14   21KP1A4477                PatchaapparaoPatchasukanya
15   21KP1A4472             Pachipulusu Prasad       PachipulusuBhavani
   COURSE CGPA AGE                                          BRANCH \
0      DS   8.0   19                                  Data science
1     CSE 83.0   19                                        CSE-DS
2    MECH   7.0   20                                          mech
```

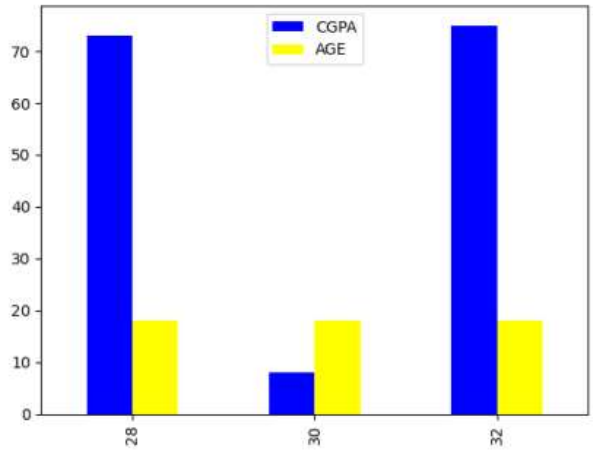
```
3     CSE   9.5   20                                                  CSE
4      DS 72.0   23                                  Computer science
5      DS 80.0   19                                               CSD
6      DS 70.0   19                                               CSD
7      DS 10.0   19                                      Data Science
8    MECH   8.0   19                                                DS
9      DS   8.0   19                                     DATA SCIENCE
10     DS   7.7   19                                  CSE (Data science)
11     DS   7.5   19                                     DATA SCIENCE
12     DS   9.0   19                                               ds
13     DS 98.0   20                                      Data Science
14    CSE 99.0   20                                      Data science
15   MECH   8.5   19                                               19
        SEMISTER        UIDAI NO
0            2-2    636336922883
1          II-II    602515258256
2              4    930319053088
3            2-3    576154990146
4            2-2    895444662410
5            2-2    724574588425
6            2.2    810177524502
7            2-2    721819168061
8            2-2    617020354793
9            2-2    338666948901
10           2-2    685349832128
11           2-2    458689741091
12           2-2    663048521599
13           2-2    510305345824
14           2-2    744020413963
15           2-2    559366114423
```

Visualizing the data using bar, pie, line and scatter plots:

```
df1.plot.bar(color=['blue','yellow'])
df1
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
28	hemasanjushasanikommu828@gmail.com	hema sanjusha	21KP1A4491	musalareddy	sivaparvathi	CSE	73.0	18	cse	2-2	422314863763
30	rahamtunnisashaik09@gmail.com	Shaik Rahamtunnisa	21KP1A44A0	Shaik.mahaboobjani	Shaik.munni	DS	8.0	18	Data science	2-2	406976169351
32	indupriya72216@gmail.com	Indu Priya Patcha	21KP1A4476	Appa rao Patcha	Renuka Patcha	DS	75.0	18	Data Science	2-2	573041880949

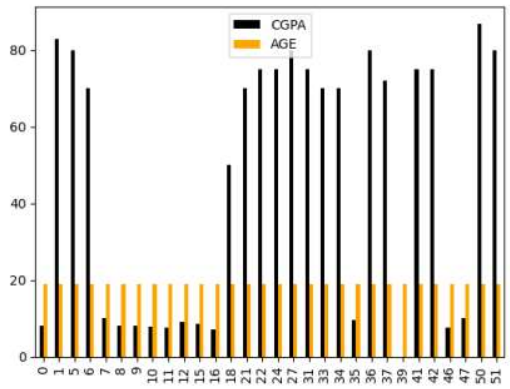



```
df2.plot.bar (color= ['black','orange'])

df2
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
0	vennachandana1@gmail.com	Venna Chandana	21KP1A44C5	Venna Ramanareddy	Venna Lakshmidevi	DS	8.0	19	Data science	2-2	636336922883
1	adilakshmi4765@gmail.com	N.Venkatesh	21KP1A4468	N.Manikya Rao	N.Sri Lakshmi	CSE	83.0	19	CSE-DS	II-II	602515258256
5	ramyayalabolu123r@gmail.com	Y.Ramya	21KP1A44C8	Y.Anjaiah	Y Lakshmi Rajyam	DS	80.0	19	CSD	2-2	724574588425
6	charithareddy3914@gmail.com	P.charitha reddy	21KP1A4475	P.Madhava Reddy	P.Kavitha	DS	70.0	19	CSD	2.2	810177524502
7	gayathripolepalli70@gmail.com	POLEPALLI. GAYATHRI	21KP1A4481	POLEPALLI. GURUBRAHMA CHARI	POLEPALLI.SRIDEVI	DS	10.0	19	Data Science	2-2	721819168061
8	syedtasleem07@gmail.com	Syed Tasleem Afroze	21KP1A44A9	Syed Rahiman	Syed Naseema	MECH	8.0	19	DS	2-2	6170203S4793
9	sowjanyathota11@gmail.com	T.SOWJANYA	21KP1A44B6	T.SAMBA SIVA RAO	T.ARUNA KUMARI	DS	8.0	19	DATA SCIENCE	2-2	338666948901
10	tammasahithi1@gmail.com	Tamma Sahithi	21KP1A44B0	Tamma krishna reddy	Tamma Padmavathi	DS	7.7	19	CSE (Data science)	2-2	685349832128
11	podilisarayu6@gmail.com	PODILI LAKSHMISARAYU	21KP1A4480	PODILI RAMESH	PODILI ADILAKSHMI	DS	7.5	19	DATA SCIENCE	2-2	458689741091
12	shaikkarishma811@gmail.com	shaik karishma	21KP1A4496	SHAIK BAJI	SHAIK KHADRUN	DS	9.0	19	ds	2-2	663048521599
15	manu952041@gmail.com	Pachipulusu Manohar	21KP1A4472	Pachipulusu Prasad	Pachipulusu Bhavani	MECH	8.5	19	19	2-2	559366114423
16	vanukuri.raghava@gmail.com	Raghava	21KP1A44C3	Srinivasa reddy	Jyothi	DS	7.0	19	Data science	2-2	424973081348
18	us465249@gmail.com	S sk usman	21KP1A4492	S sk mastan vali	Mahabobba	DS	50.0	19	DS	2-2	568753875709
21	farukh.786syed@gmail.com	SYED.FARUKH	21KP1A44A7	SYED.BAJI	SYED.SARTHAJ BEGUM	DS	70.0	19	DS	2-2	764320730678
22	anushayalabolu12@gmail.com	Anusha yalabolu	21KP1A44C7	Chinna anjayya	Lakshmi narayanama	DS	75.0	19	CSD	2-2	830785066037
24	thammisettysrikanthraj9@gmail.com	T.Srikanth	21KP1A44B5	T.vasu	T.jaya	DS	75.0	19	Data Science	2-2	673112205183
27	ravuakshaya@gmail.com	Ravu.akshaya	21KP1A4485	Ravu.srinivasrao	Ravu.aruna kumari	DS	80.0	19	Ds	2.2	544305783128
31	harikabangaram313@gmail.com	Harika	22KP5A4401	A.Subramanyam	A.Dhana Bhagyam	DS	75.0	19	Data science	2-2	574930568520
33	bhavyasrisajja2003@gmail.com	Bhavya sri	21KP1A4490	Mohan krishna	Usha rani	DS	70.0	19	Ds	2-2	274736890047
34	sudhamshavejendla@gmail.com	Vejendla Devi Sri Sudhamsha	21KP1A44C4	Vejendla Srinivass Rao	Vejendla Laxmi Prasanna	CSE	70.0	19	Cse- Data Science	2_2	587480445790
35	bhanuthanirru@gmail.com	Thanirru Bhanu venkata prasad	21KP1A44B2	T sathyanarayana	T rama devi	DS	9.6	19	19	2-2	357228202835
36	nikitharayapati9@gmail.com	Nikhitha Rayapati	21KP1A4487	Rayapati hanumathrao	Rayapati malleswari	DS	80.0	19	Ds	2-2	963360828294
37	indhupotla123@gmail.com	indhu priya	21KP1A4483	Lakshmanarayana	Sujatha	CSE	72.0	19	cse	2-2	524345891620
39	jaffershaik718@gmail.com	Jaffer shaik	21KP1A4495	shaik.LaiLaha	shaik.Ramjan bee	CSE	NaN	19	cse	2nd	912229276699
41	reshmayalamanchi@gmail.com	Reshma yalamanchi	21KP1A44C9	Yalamanchi subba Rao	Yalamanchi sunitha	DS	75.0	19	DS	4	742366316353
42	thiriveedhinagajyothi@gmail.com	T. Nagajyothi	21KP1A44B7	T. Venkayya	T. Ramanjamma	DS	75.0	19	DS	4	330477145525
46	nrajasambasivarao@gmail.com	Narra Raja Samba Siva Rao	21KP1A4471	Narra SrinivasaRao	Narra Ramadevi	DS	7.5	19	CSD (Data science)	4	835457902826
47	saisairam068@gmail.com	Sairam	21kp1a44b4	Venkata subbiah	Ravanamma	CSE	10.0	19	Da	2-2	746109575146
50	arundathi0508@gmail.com	PANDA UMA ARUNDATHI	21KP1A4474	PANDA NARAYANA RAO	PANDA PRASANNA LAKSHMI	DS	87.0	19	CSD	2-2	652650486629
51	chinnivignesh144@gmail.com	chinni vignesh teja yadav	21KP1A44C6	Chinni Pratap Kumar	Chinni Bhargavi	DS	80.0	19	Data Science	4th semester	639534870436

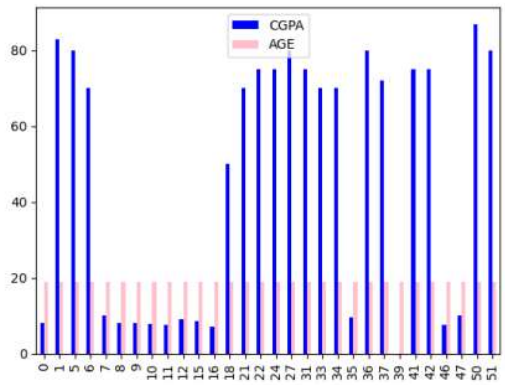



```
df2.plot.bar (color= ['blue','pink'])

df2
```

OUTPUT:

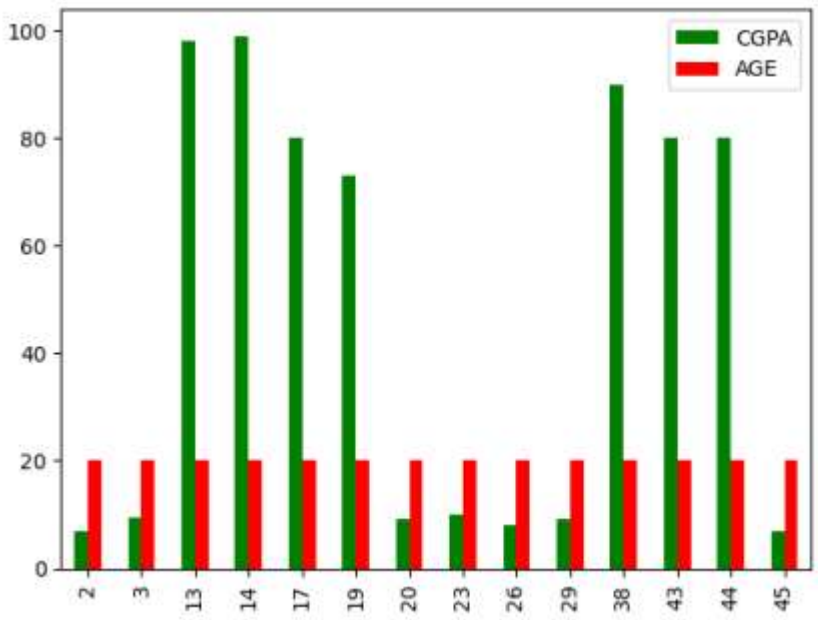
	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
0	vennachandana1@gmail.com	Venna Chandana	21KP1A44C5	Venna Ramanareddy	Venna Lakshmidevi	DS	8.0	19	Data science	2-2	636336922883
1	adilakshmi4765@gmail.com	N.Venkatesh	21KP1A4468	N.Manikya Rao	N.Sri Lakshmi	CSE	83.0	19	CSE-DS	II-II	602515258256
5	ramyayalabolu123r@gmail.com	Y.Ramya	21KP1A44C8	Y.Anjaiah	Y Lakshmi Rajyam	DS	80.0	19	CSD	2-2	724574588425
6	charithareddy3914@gmail.com	P.charitha reddy	21KP1A4475	P.Madhava Reddy	P.Kavitha	DS	70.0	19	CSD	2.2	810177524502
7	gayathripolepalli70@gmail.com	POLEPALLI. GAYATHRI	21KP1A4481	POLEPALLI. GURUBRAHMA CHARI	POLEPALLI.SRIDEVI	DS	10.0	19	Data Science	2-2	721819168061
8	syedtasleem07@gmail.com	Syed Tasleem Afroze	21KP1A44A9	Syed Rahiman	Syed Naseema	MECH	8.0	19	DS	2-2	617020354793
9	sowjanyathota11@gmail.com	T.SOWJANYA	21KP1A44B6	T.SAMBA SIVA RAO	T.ARUNA KUMARI	DS	8.0	19	DATA SCIENCE	2-2	338666948901
10	tammasahithi1@gmail.com	Tamma Sahithi	21KP1A44B0	Tamma krishna reddy	Tamma Padmavathi	DS	7.7	19	CSE (Data science)	2-2	685349832128
11	podilisarayu6@gmail.com	PODILI LAKSHMISARAYU	21KP1A4480	PODILI RAMESH	PODILI ADILAKSHMI	DS	7.5	19	DATA SCIENCE	2-2	458689741091
12	shaikkarishma811@gmail.com	shaik karishma	21KP1A4496	SHAIK BAJI	SHAIK KHADRUN	DS	9.0	19	ds	2-2	663048521599
15	manu952041@gmail.com	Pachipulusu Manohar	21KP1A4472	Pachipulusu Prasad	Pachipulusu Bhavani	MECH	8.5	19	19	2-2	559366114423
16	vanukuri.raghava@gmail.com	Raghava	21KP1A44C3	Srinivasa reddy	Jyothi	DS	7.0	19	Data science	2-2	424973081348
18	us465249@gmail.com	S sk usman	21KP1A4492	S sk mastan vali	Mahabobba	DS	50.0	19	DS	2-2	568753875709
21	farukh.786syed@gmail.com	SYED.FARUKH	21KP1A44A7	SYED.BAJI	SYED.SARTHAJ BEGUM	DS	70.0	19	DS	2-2	764320730678
22	anushayalabolu12@gmail.com	Anusha yalabolu	21KP1A44C7	Chinna anjayya	Lakshmi narayanama	DS	75.0	19	CSD	2-2	830785066037
24	thammisettysrikanthraj9@gmail.com	T.Srikanth	21KP1A44B5	T.vasu	T.jaya	DS	75.0	19	Data Science	2-2	673112205183
27	ravuakshaya@gmail.com	Ravu.akshaya	21KP1A4485	Ravu.srinivasrao	Ravu.aruna kumari	DS	80.0	19	Ds	2.2	544305783128
31	harikabangaram313@gmail.com	Harika	22KP5A4401	A.Subramanyam	A.Dhana Bhagyam	DS	75.0	19	Data science	2-2	574930568520
33	bhavyasrisajja2003@gmail.com	Bhavya sri	21KP1A4490	Mohan krishna	Usha rani	DS	70.0	19	Ds	2-2	274736890047
34	sudhamshavejendla@gmail.com	Vejendla Devi Sri Sudhamsha	21KP1A44C4	Vejendla Srinivass Rao	Vejendla Laxmi Prasanna	CSE	70.0	19	Cse- Data Science	2_2	587480445790
35	bhanuthanirru@gmail.com	Thanirru Bhanu venkata prasad	21KP1A44B2	T sathyanarayana	T rama devi	DS	9.6	19	19	2-2	357228202835
36	nikitharayapati9@gmail.com	Nikhitha Rayapati	21KP1A4487	Rayapati hanumathrao	Rayapati malleswari	DS	80.0	19	Ds	2-2	963360828294
37	indhupotla123@gmail.com	indhu priya	21KP1A4483	Lakshmanarayana	Sujatha	CSE	72.0	19	cse	2-2	524345891620
39	jaffershaik718@gmail.com	Jaffer shaik	21KP1A4495	shaik.LalLaha	shaik.Ramjan bee	CSE	NaN	19	cse	2nd	912229276699
41	reshmayalamanchi@gmail.com	Reshma yalamanchi	21KP1A44C9	Yalamanchi subba Rao	Yalamanchi sunitha	DS	75.0	19	DS	4	742366316353
42	thiriveedhinagajyothi@gmail.com	T. Nagajyothi	21KP1A44B7	T. Venkayya	T. Ramanjamma	DS	75.0	19	DS	4	330477145525
46	nrajasambasivarao@gmail.com	Narra Raja Samba Siva Rao	21KP1A4471	Narra SrinivasaRao	Narra Ramadevi	DS	7.5	19	CSD (Data science)	4	835457902826
47	saisairam068@gmail.com	Sairam	21kp1a44b4	Venkata subbiah	Ravanamma	CSE	10.0	19	Da	2-2	746109575146
50	arundathi0508@gmail.com	PANDA UMA ARUNDATHI	21KP1A4474	PANDA NARAYANA RAO	PANDA PRASANNA LAKSHMI	DS	87.0	19	CSD	2-2	652650486629
51	chinnivignesh144@gmail.com	chinni vignesh teja yadav	21KP1A44C6	Chinni Pratap Kumar	Chinni Bhargavi	DS	80.0	19	Data Science	4th semester	639534870436



```
df3.plot.bar(color=['green','red'])
df3
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
2	sravankumar7156@gmail.com	Sravan Kumar	21KP1A4488	Rama Chandra Rao	Venkateswaramma	MECH	7.0	20	mech	4	930319053088
3	sandeepyeruva1124@gmail.com	Yeruva sandeep reddy	21KP1A44D1	Yeruva Ajay Kumar reddy	Yeruva Anjali Devi	CSE	9.5	20	CSE	2-3	576154990146
13	kumarvalaparla890@gmail.com	Venkata Aravind Kumar.V	21KP1A44C0	Veeraswamy.v	Lakshmi.v	DS	98.0	20	Data Science	2-2	510305345824
14	patchachinnu3@gmail.com	Patcha Jaswanth	21KP1A4477	Patcha apparao	Patcha sukanya	CSE	99.0	20	Data science	2-2	744020413963
17	shaiksakina05@gmail.com	Shaik sameer	21KP1A44A3	Shaik Rahim babu	Shaik Raziya	DS	80.0	20	DS	2-2	529261464345
19	vallu.srinu756939@gmail.com	Vallu Srinu Siva Subrahmanyam	21KP1A44C1	Vallu Srinivasa Rao	Vallu Surya kumari	DS	73.0	20	Computer Science Engineering& Data Science	4	654273218990
20	undelachandraobulareddy@gmail.com	Undela Chandra Obula Reddy	21KP1A44B9	Undela Chinna Obula Reddy	Undela GuruLakshmi	DS	9.2	20	Computer Science	2-2	693621780842
23	madhulathasure9@gmail.com	SURE. MADHULATHA	21KP1A44A4	SURE.VISWANADHAM	SURE.SAI LAKSHMI	DS	10.0	20	Data science	2-2	776486062608
26	abdulkhadar6842@gmail.com	Shaik.Abdul Khadar	21KP1A4493	Shaik.Kareem	Shaik.Farjana	ECE	8.0	20	20	2-2	334708289154
29	ynagasasikumar@gmail.com	Y Naga Sasi Kumar	21KP1A44D0	Y Rama mohanarao	Y Lalitha	DS	9.2	20	20	2-2	448172496292
38	abdulabdul22070@gmail.com	Syed.Abdul Rehaman	21KP1A44A6	Syed.Meera Sharif	Bandi.Krishna veni	DS	90.0	20	DS	2-2	347853509974
43	paladugudurga1@gmail.com	P. Durga Sri	21KP1A4473	P. Amareswara rao	P. Seshu Kumari	DS	80.0	20	CSD(Data Science)	2-2	692162661608
44	saidashaik371@gmail.com	SHAIK SAIDA ANWAR BASHA	21KP1A44A2	SHAIK KUDHAN VALI	SHAIK SAIDA HUSSANBI	DS	80.0	20	DATASCIENCE	2-2	466722650274
45	mvkbn1312@gmail.com	R.M.V.K.Brahma Naidu	21KP1A4489	Yedukondalu	Nirmala	DS	7.0	20	Data science	2-2	2387 7088 9424

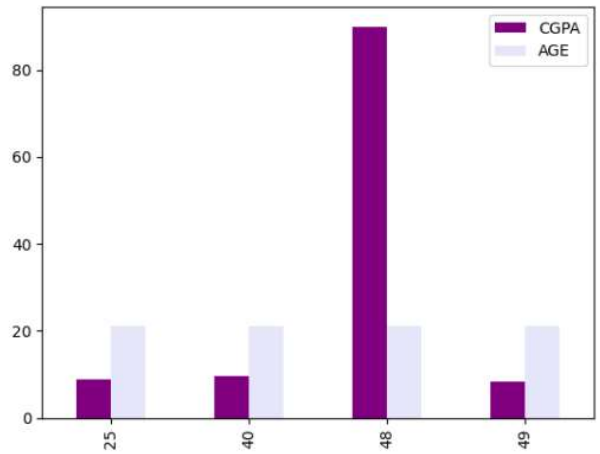



```
df4.plot.bar(color=['purple','lavender'])

df4
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
25	shiakmobin2002@gmail.com	Shaikmobin	21KP1A4497	shaik karimullah	Shaik rihana	DS	8.8	21	Ds	2.2	904355656468
40	rabbanishaik7356@gmail.com	SHAIK RABBANI	21KP1A4499	SHAIK MOHAMMAD HANIF	SHAIK MALIN	DS	9.5	21	CSD	2-2	205933956204
48	sriharshanallabothu@gmail.com	Nallabothu. Sri Harsha	21KP1A4469	Nallabothu. Anjaneyulu	Nallabothu. Anitha	DS	90.0	21	CSD	2-2	208611060176
49	bhuvanstarpuli@gmail.com	Puli bhuvaneswar	21KP1A4484	Puli mallikarjuna	Puli ramadevi	DS	8.3	21	Data science	2.2	950519207474



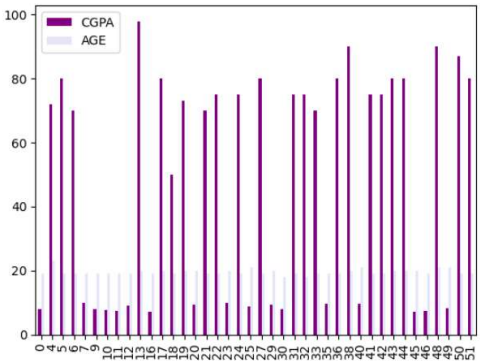

```
x.plot.bar(color=['purple','lavender'])

x
```

OUTPUT:

3]:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
0	vennachandana1@gmail.com	Venna Chandana	21KP1A44C5	Venna Ramanareddy	Venna Lakshmidevi	DS	8.0	19	Data science	2-2	636336922883
4	sivajibejjanki@gmail.com	B.sivaji	22kp5a4402	B.lakshmaiah	B.veramma	DS	72.0	23	Computer science	2-2	895444662410
5	ramyayalabolu123r@gmail.com	Y.Ramya	21KP1A44C8	Y.Anjaiah	Y Lakshmi Rajyam	DS	80.0	19	CSD	2-2	724574588425
6	charithareddy3914@gmail.com	P.charitha reddy	21KP1A4475	P.Madhava Reddy	P.Kavitha	DS	70.0	19	CSD	2.2	810177524502
7	gayathripolepalli70@gmail.com	POLEPALLI. GAYATHRI	21KP1A4481	POLEPALLI. GURUBRAHMA CHARI	POLEPALLI.SRIDEVI	DS	10.0	19	Data Science	2-2	721819168061
9	sowjanyathota11@gmail.com	T.SOWJANYA	21KP1A44B6	T.SAMBA SIVA RAO	T.ARUNA KUMARI	DS	8.0	19	DATA SCIENCE	2-2	338666948901
10	tammasahithi1@gmail.com	Tamma Sahithi	21KP1A44B0	Tamma krishna reddy	Tamma Padmavathi	DS	7.7	19	CSE (Data science)	2-2	685349832128
11	podilisarayu6@gmail.com	PODILI LAKSHMISARAYU	21KP1A4480	PODILI RAMESH	PODILI ADILAKSHMI	DS	7.5	19	DATA SCIENCE	2-2	458689741091
12	shaikkarishma811@gmail.com	shaik karishma	21KP1A4496	SHAIK BAJI	SHAIK KHADRUN	DS	9.0	19	ds	2-2	663048521599
13	kumarvalaparla890@gmail.com	Venkata Aravind Kumar.V	21KP1A44C0	Veeraswamy.v	Lakshmi.v	DS	98.0	20	Data Science	2-2	510305345824
16	vanukuri.raghava@gmail.com	Raghava	21KP1A44C3	Srinivasa reddy	Jyothi	DS	7.0	19	Data science	2-2	424973081348
17	shaiksakina05@gmail.com	Shaik sameer	21KP1A44A3	Shaik Rahim babu	Shaik Raziya	DS	80.0	20	DS	2-2	529261464345
18	us465249@gmail.com	S sk usman	21KP1A4492	S sk mastan vali	Mahabobba	DS	50.0	19	DS	2-2	568753875709
19	vallu.srinu756939@gmail.com	Vallu Srinu Siva Subrahmanyam	21KP1A44C1	Vallu Srinivasa Rao	Vallu Surya kumari	DS	73.0	20	Computer Science Engineering& Data Science	4	654273218990
20	undelachandraobulareddy@gmail.com	Undela Chandra Obula Reddy	21KP1A44B9	Undela Chinna Obula Reddy	Undela GuruLakshmi	DS	9.2	20	Computer Science	2-2	693621780842
21	farukh.786syed@gmail.com	SYED.FARUKH	21KP1A44A7	SYED.BAJI	SYED.SARTHAJ BEGUM	DS	70.0	19	DS	2-2	764320730678
22	anushayalabolu12@gmail.com	Anusha yalabolu	21KP1A44C7	Chinna anjayya	Lakshmi narayanama	DS	75.0	19	CSD	2-2	830785066037
23	madhulathasure9@gmail.com	SURE. MADHULATHA	21KP1A44A4	SURE.VISWANADHAM	SURE.SAI LAKSHMI	DS	10.0	20	Data science	2-2	776486062608
24	thammisettysrikanthraj9@gmail.com	T.Srikanth	21KP1A44B5	T.vasu	T.jaya	DS	75.0	19	Data Science	2-2	673112205183
25	shiakmobin2002@gmail.com	Shaikmobin	21KP1A4497	shaik karimullah	Shaik rihana	DS	8.8	21	Ds	2.2	904355656468
27	ravuakshaya@gmail.com	Ravu.akshaya	21KP1A4485	Ravu.srinivasrao	Ravu.aruna kumari	DS	80.0	19	Ds	2.2	544305783128
29	ynagasasikumar@gmail.com	Y Naga Sasi Kumar	21KP1A44D0	Y Rama mohanarao	Y Lalitha	DS	9.2	20	20	2-2	448172496292
30	rahamtunnisashaik09@gmail.com	Shaik Rahamtunnisa	21KP1A44A0	Shaik.mahaboobjani	Shaik.munni	DS	8.0	18	Data science	2-2	406976169351
31	harikabangaram313@gmail.com	Harika	22KP5A4401	A.Subramanyam	A.Dhana Bhagyam	DS	75.0	19	Data science	2-2	574930568520
32	indupriya72216@gmail.com	Indu Priya Patcha	21KP1A4476	Appa rao Patcha	Renuka Patcha	DS	75.0	18	Data Science	2-2	573041880949
33	bhavyasrisajja2003@gmail.com	Bhavya sri	21KP1A4490	Mohan krishna	Usha rani	DS	70.0	19	Ds	2-2	274736890047
35	bhanuthanirru@gmail.com	Thanirru Bhanu venkata prasad	21KP1A44B2	T sathyanarayana	T rama devi	DS	9.6	19	19	2-2	357228202835
36	nikitharayapati9@gmail.com	Nikhitha Rayapati	21KP1A4487	Rayapati hanumathrao	Rayapati malleswari	DS	80.0	19	Ds	2-2	963360828294
38	abdulabdul22070@gmail.com	Syed.Abdul Rehaman	21KP1A44A6	Syed.Meera Sharif	Bandi.Krishna veni	DS	90.0	20	DS	2-2	347853509974
40	rabbanishaik7356@gmail.com	SHAIK RABBANI	21KP1A4499	SHAIK MOHAMMAD HANIF	SHAIK MALIN	DS	9.5	21	CSD	2-2	205933956204
41	reshmayalamanchi@gmail.com	Reshma yalamanchi	21KP1A44C9	Yalamanchi subba Rao	Yalamanchi sunitha	DS	75.0	19	DS	4	742366316353
42	thiriveedhinagajyothi@gmail.com	T. Nagajyothi	21KP1A44B7	T. Venkayya	T. Ramanjamma	DS	75.0	19	DS	4	330477145525
43	paladugudurga1@gmail.com	P. Durga Sri	21KP1A4473	P. Amareswara rao	P. Seshu Kumari	DS	80.0	20	CSD(Data Science)	2-2	692162661608
44	saidashaik371@gmail.com	SHAIK SAIDA ANWAR BASHA	21KP1A44A2	SHAIK KUDHAN VALI	SHAIK SAIDA HUSSANBI	DS	80.0	20	DATASCIENCE	2-2	466722650274
45	mvkbn1312@gmail.com	R.M.V.K.Brahma Naidu	21KP1A4489	Yedukondalu	Nirmala	DS	7.0	20	Data science	2-2	2387 7088 9424
46	nrajasambasivarao@gmail.com	Narra Raja Samba Siva Rao	21KP1A4471	Narra SrinivasaRao	Narra Ramadevi	DS	7.5	19	CSD (Data science)	4	835457902826
48	sriharshanallabothu@gmail.com	Nallabothu. Sri Harsha	21KP1A4469	Nallabothu. Anjaneyulu	Nallabothu. Anitha	DS	90.0	21	CSD	2-2	208611060176
49	bhuvanstarpuli@gmail.com	Puli bhuvaneswar	21KP1A4484	Puli mallikarjuna	Puli ramadevi	DS	8.3	21	Data science	2.2	950519207474
50	arundathi0508@gmail.com	PANDA UMA ARUNDATHI	21KP1A4474	PANDA NARAYANA RAO	PANDA PRASANNA LAKSHMI	DS	87.0	19	CSD	2-2	652650486629
51	chinnivignesh144@gmail.com	chinni vignesh teja yadav	21KP1A44C6	Chinni Pratap Kumar	Chinni Bhargavi	DS	80.0	19	Data Science	4th semester	639534870436

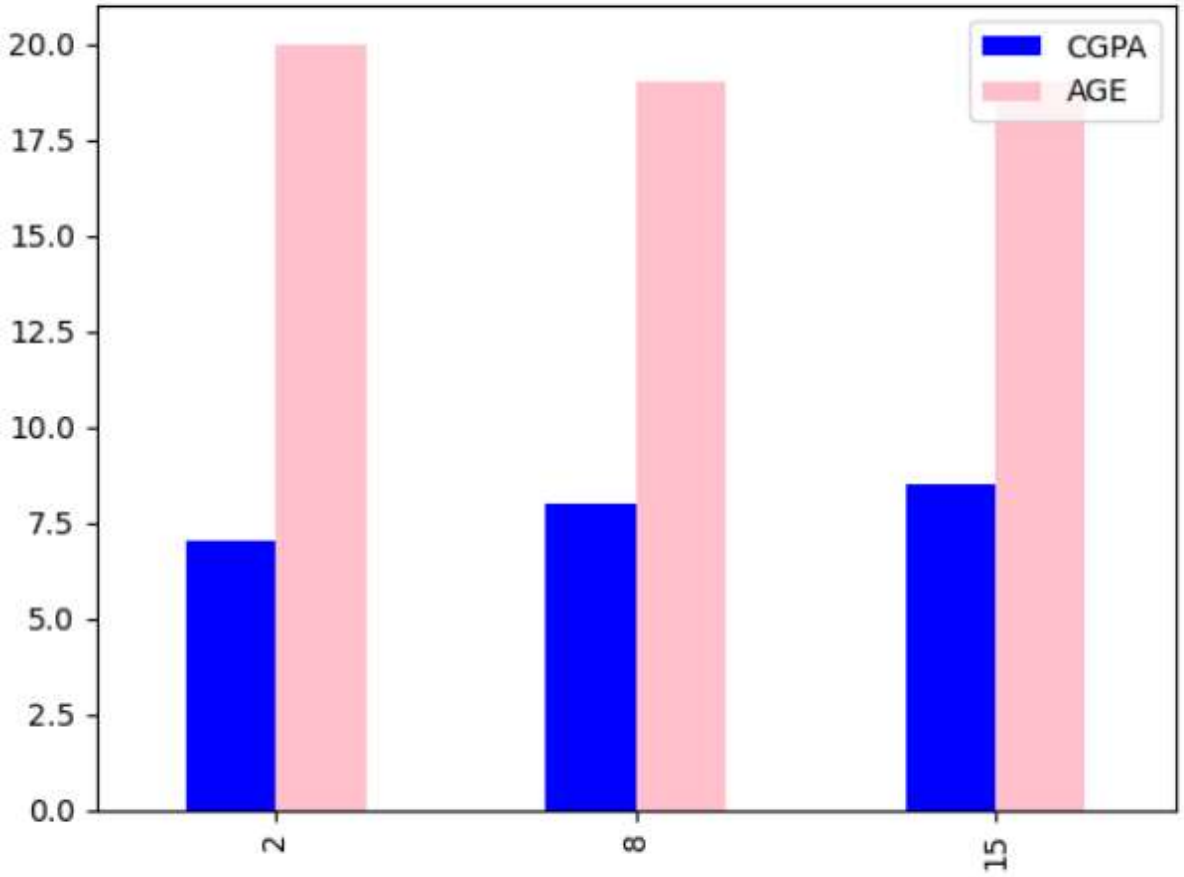



```
x1.plot.bar(color=['blue','pink'])

x1
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
2	sravankumar7156@gmail.com	Sravan Kumar	21KP1A4488	Rama Chandra Rao	Venkateswaramma	MECH	7.0	20	mech	4	930319053088
8	syedtasleem07@gmail.com	Syed Tasleem Afroze	21KP1A44A9	Syed Rahiman	Syed Naseema	MECH	8.0	19	DS	2-2	617020354793
15	manu952041@gmail.com	Pachipulusu Manohar	21KP1A4472	Pachipulusu Prasad	Pachipulusu Bhavani	MECH	8.5	19	19	2-2	559366114423

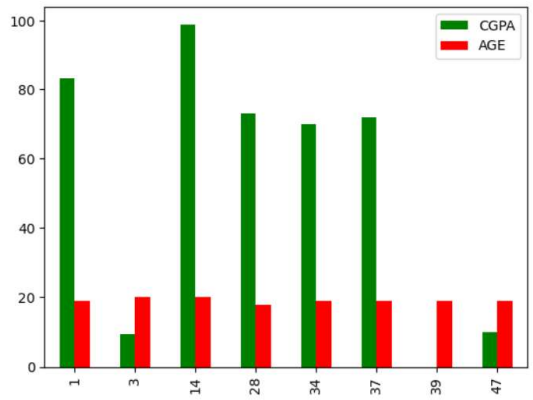



```
x2.plot.bar(color=['green','red'])

x2
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
1	adilakshmi4765@gmail.com	N.Venkatesh	21KP1A4468	N.Manikya Rao	N.Sri Lakshmi	CSE	83.0	19	CSE-DS	II-II	602515258256
3	sandeepyeruva1124@gmail.com	Yeruva sandeep reddy	21KP1A44D1	Yeruva Ajay Kumar reddy	Yeruva Anjali Devi	CSE	9.5	20	CSE	2-3	576154990146
14	patchachinnu3@gmail.com	Patcha Jaswanth	21KP1A4477	Patcha apparao	Patcha sukanya	CSE	99.0	20	Data science	2-2	744020413963
28	hemasanjushasanikommu828@gmail.com	hema sanjusha	21KP1A4491	musalareddy	sivaparvathi	CSE	73.0	18	cse	2-2	422314863763
34	sudhamshavejendla@gmail.com	Vejendla Devi Sri Sudhamsha	21KP1A44C4	Vejendla Srinivass Rao	Vejendla Laxmi Prasanna	CSE	70.0	19	Cse- Data Science	2_2	587480445790
37	indhupotla123@gmail.com	indhu priya	21KP1A4483	Lakshmanarayana	Sujatha	CSE	72.0	19	cse	2-2	524345891620
39	jaffershaik718@gmail.com	Jaffer shaik	21KP1A4495	shaik.LaiLaha	shaik.Ramjan bee	CSE	NaN	19	cse	2nd	912229276699
47	saisairam068@gmail.com	Sairam	21kp1a44b4	Venkata subbiah	Ravanamma	CSE	10.0	19	Da	2-2	746109575146

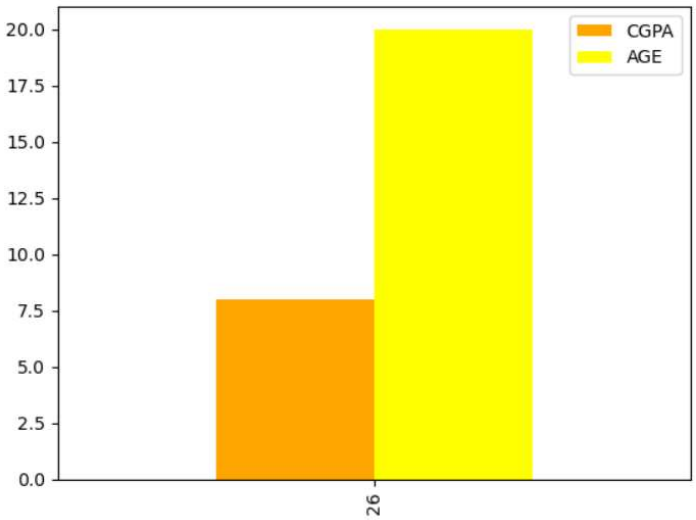



```
x3.plot.bar(color=['orange','yellow'])

x3
```

OUTPUT:

	Gmail	STUDENT NAME	ROLL NUMBER	FATHER NAME	MOTHER NAME	COURSE	CGPA	AGE	BRANCH	SEMISTER	UIDAI NO
26	abdulkhadar6842@gmail.com	Shaik.Abdul Khadar	21KP1A4493	Shaik.Kareem	Shaik.Farjana	ECE	8.0	20	20	2-2	334708289154




```
y=df2.CGPA.value_counts ()

y
```

OUTPUT:

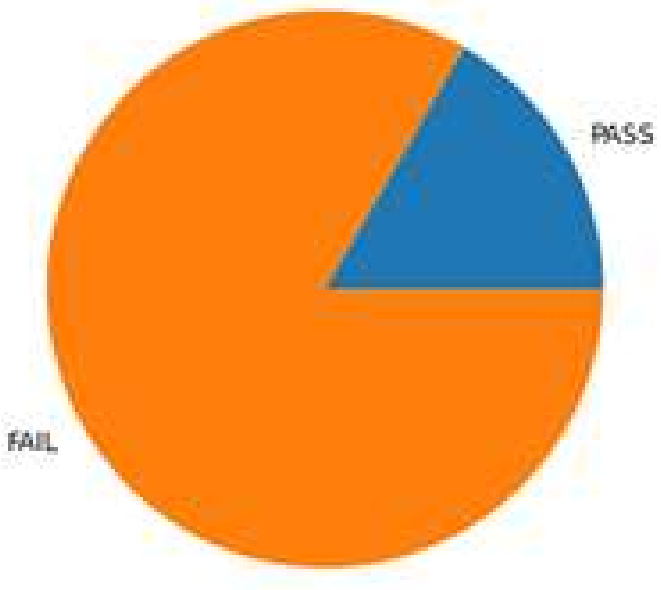
```
75.0    5
80.0    4
70.0    4
8.0     3
10.0    2
7.5     2
83.0    1
7.7     1
9.0     1
8.5     1
7.0     1
50.0    1
9.6     1
72.0    1
87.0    1
Name: CGPA, dtype: int64
```

```
z=pd.DataFrame ({"Result":['PASS','FAIL'],"vals":[6,30]})

plt.pie (z["vals"],labels=z["Result"])

plt.show ()
```

OUTPUT:




```
y1=df1.CGPA.value_counts()

y1
```

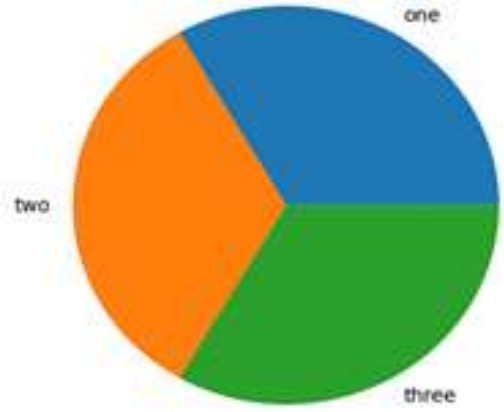
OUTPUT:

```
73.0    1
Name: CGPA, dtype: int64
```

```
z1=plt.pie(y1,labels=['one','two','three'])

z1
```

OUTPUT:




```
y2=df3.CGPA.value_counts()

y2
```

OUTPUT:

```
80.0    3
7.0     2
9.2     2
9.5     1
98.0    1
99.0    1
73.0    1
10.0    1
8.0     1
90.0    1
Name: CGPA, dtype: int64
```

```
z2=plt.pie(y2,shadow=True,explode=[0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1])

z2
```

OUTPUT:

```
t=df.BRANCH.value_counts()

t
```

OUTPUT:

```
DS                                                  7
Data science                                        6
CSD                                                 6
Ds                                                  4
cse                                                 3
Data Science                                        3
19                                                  2
Data Science                                        2
20                                                  2
Data science                                        2
DATA SCIENCE                                        2
ds                                                  1
CSE (Data science)                                  1
CSE-DS                                              1
Computer Science Engineering& Data Science          1
Computer Science                                    1
Computer science                                    1
CSE                                                 1
mech                                                1
Cse- Data Science                                   1
CSD(Data Science)                                   1
DATASCIENCE                                         1
CSD (Data science)                                  1
Da                                                  1
Name: BRANCH, dtype: int64
```

```
a=t.head()

a
```

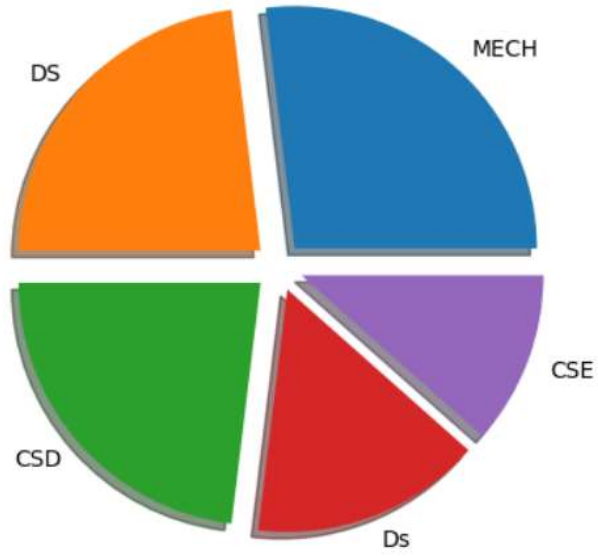
OUTPUT:

```
DS               7
```

```
Data science      6
CSD               6
Ds                4
Cse               3
Name: BRANCH, dtype: int64
```

```
a1=plt.pie(a,labels=['MECH','DS','CSD','Ds','CSE'],shadow=True,explode=[0.1,0.1
,0.1,0.1,0.1])
```

OUTPUT:




```
y3=df4.CGPA.value_counts ()

y3
```

OUTPUT:

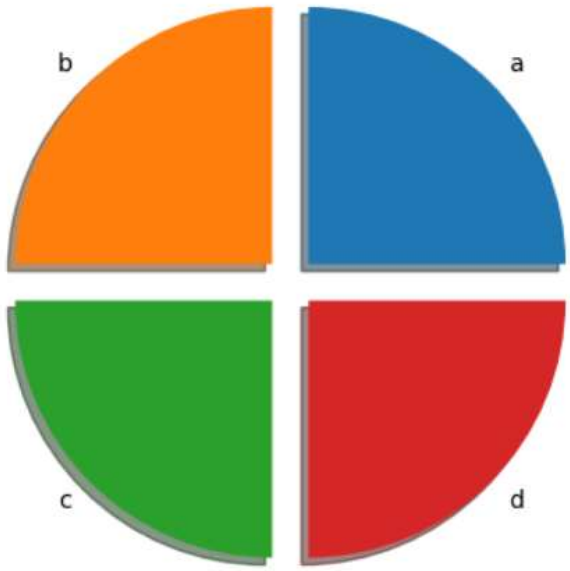
```
8.8     1
9.5     1
90.0    1
8.3     1
Name: CGPA, dtype: int64
```

```
z3=plt.pie(y3,labels=['a','b','c','d'],explode=[0.1,0.1,0.1,0.1],

shadow=True)

z3
```

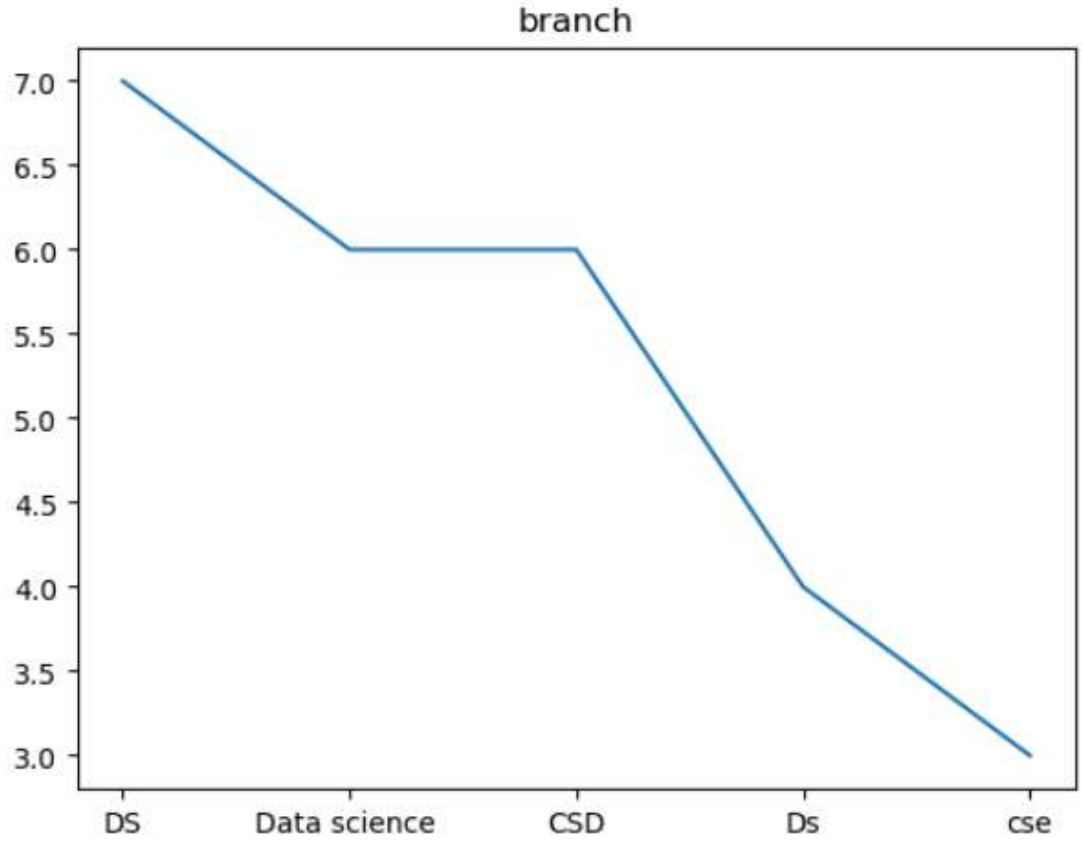
OUTPUT:




```
plt.plot(a)

plt.title('branch')
```

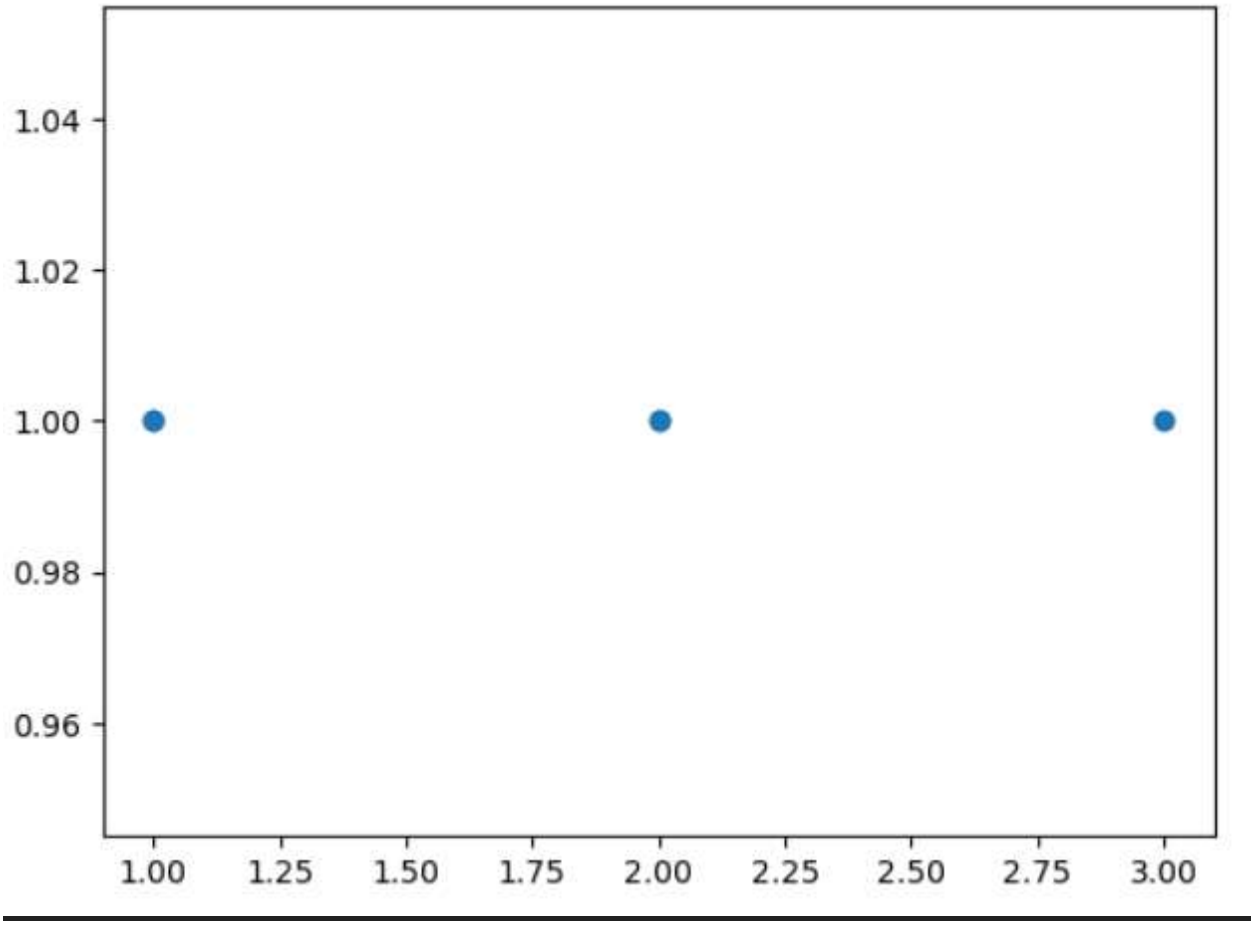
OUTPUT:




```
plt.scatter(y2.head(),y2.tail())

plt.show()
```

OUTPUT:


1.04
1.02
1.00
0.98
0.96
1.00
1.25
1.50
1.75
2.00
2.25
2.50
2.75
3.00

OUTPUT

STUDENT DATA IS ANALYSED USING DATA ANALYSIS WITH PYTHON

Student database analysis using data analytics can yield various outputs depending on the objectives of the analysis and the insights derived from the data.

Analyzing student data using data analytics can yield valuable insights into various aspects of academic performance, behavior patterns, and resource allocation.

SUMMARY

In this project, we aimed to develop a **STUDENT DATABASE ANALYSIS USING PYTHON** encompasses various key aspects, including tools, libraries, techniques, and processes involved in the practice of analyzing and deriving insights from data using the Python programming language.

Benefits:

- Python is versatile, supporting a board range of data analytics tasks from data cleaning to machine learning.
- Python's redable syntax facilities quick learning, making it accessible to beginners.
- Python provides robust data visualization tools like Matplotlib for creating charts and graphs.
- Python is open-source nature and free libraries contribute to cost-effectiveness.