IARE
INSTITUTE OF
AERONAUTICAL ENGINEERING
(An Autonomous Institute affiliated to JNTUH, Hyderabad)
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LABORATORY WORK BOOK

Name of the Student: HIMAKAR C

Class: CSE-B Semester: VI

Roll Number									
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Course Code: ACIC08 Course Name: BMKD Laboratory

Name of the Course Faculty: Dr. D Durga Bhavani Faculty ID: IARE 10921

Exercise Number: Week Number: 03 Date: 2/4/24

S. No.	Exercise Number	EXERCISE NAME	MARKS AWARDED						
			Aim/ Preparation	Algorithm / Procedure / Performance in the Lab		Source Code / Calculations and Graphs	Program Execution / Results and Error Analysis	Viva - Voce	Total
			4	4		4	4	4	20
1	3.1	loading Data from CSV file	4	2	2	4	4	4	20
2	3.2	compute the basic statistics of given data							
3	.								
4	3.3	splitting a dataframe on values of variable							
5	3.4	visualize each Attribute							
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Signature of the Student

Signature of the Faculty

START WRITING FROM HERE

3.1 Loading data from csv file

```
import pandas as pd
d = pd.read_csv("nothing.csv")
Print('First few rows of dataset is:')
Print(d.head())
```

INPUT/OUTPUT:

First few rows of dataset is:

	Name	Age
0	Himakar	20
1	Jyotsna	21
2	Haasini	17
3	Sai	15

3.2 compute basic statistics, shape, mean, no. of colu.

```
import numpy as np
import pandas as pd
d = pd.read_csv("nothing.csv")
Print('Shape of Dataframe is : ', d.shape)
Print('Number of columns: ', len(d.columns))
Print('Mean of numerical columns is: ')
fL = d.select_dtypes(include = np.number).colum
for j in fL:
    Print('Mean of ' + j + ':', d[j].mean())
```

INPUT/OUTPUT:

```
Shape of Dataframe is : (4, 2)
Number of columns : 2
Mean of numerical columns is:
Mean of Age : 18.25
```

3.3 splitting a data frame on values of categorical variables

```
import pandas as Pd
d = Pd.read_csv('nothing.csv')
SPd = d.groupby ('Age')
for i, j in SPd:
    print ('Group :', i)
    print (j)
```

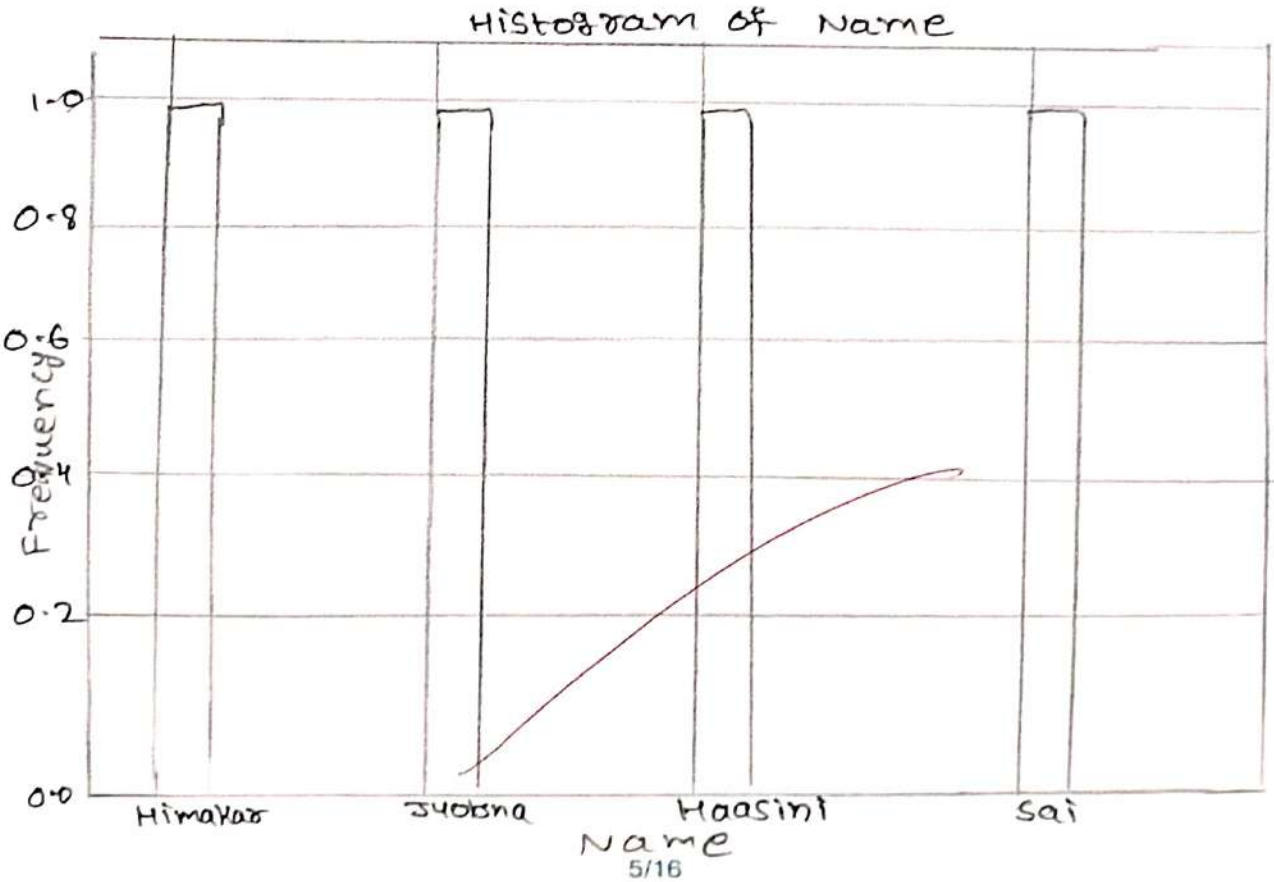
INPUT/OUTPUT:

```
Group: 15
    Name  Age
3   Sai   15
Group: 17
      Name  Age
2   Haasini  17
Group: 20
      Name  Age
0   Himalkar  20
Group: 21
      Name  Age
1   Jyotsna  21
```

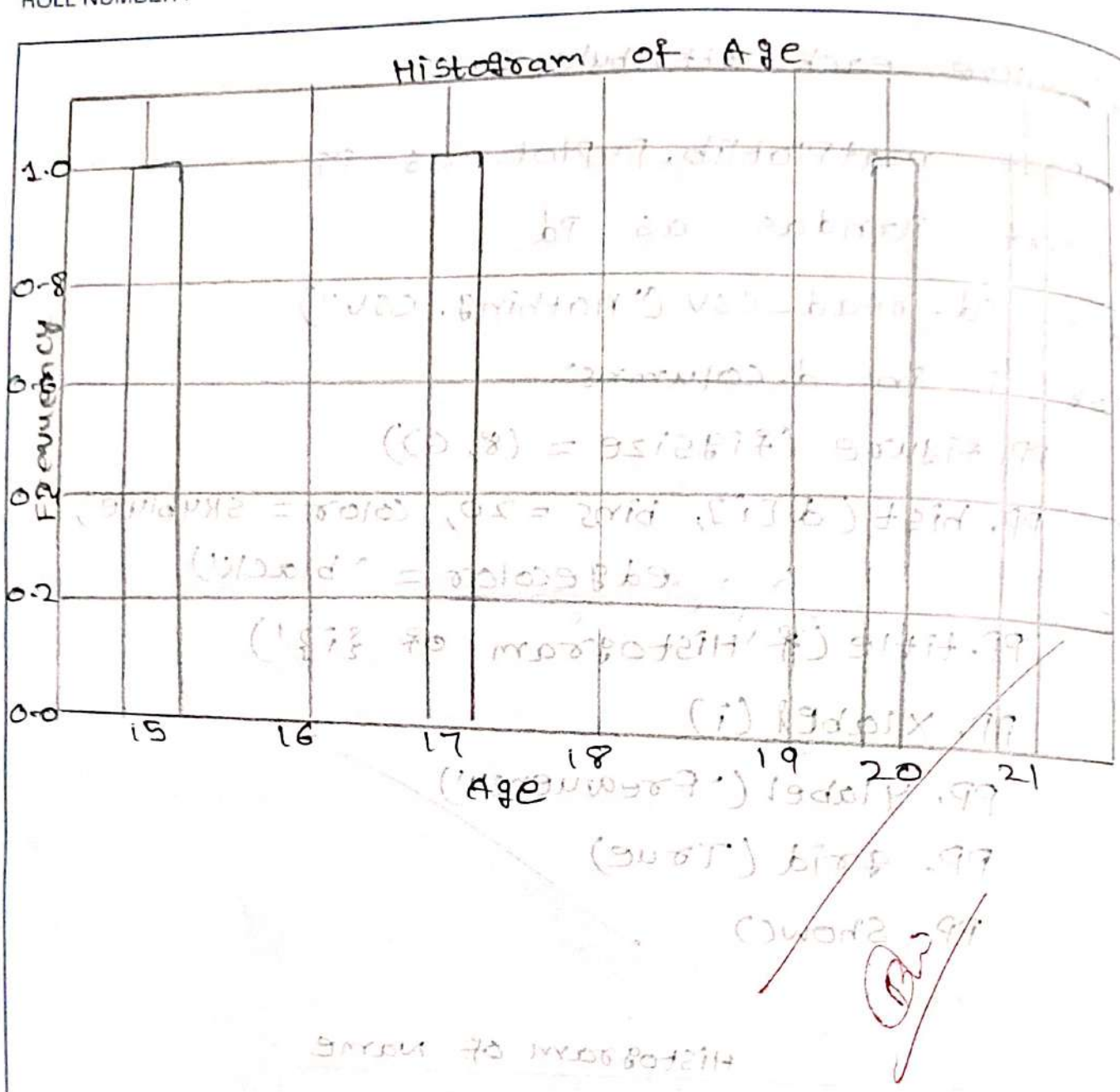
3.4 Visualize each attribute

```
import matplotlib.pyplot as pp
import pandas as pd
d = pd.read_csv("nothing.csv")
for i in d.columns:
    pp.figure(figsize = (8, 6))
    pp.hist(d[i], bins = 20, color = 'skyblue',
                edgecolor = 'black')
    pp.title(f'Histogram of {i}')
    pp.xlabel(i)
    pp.ylabel('Frequency')
    pp.grid(True)
    pp.show()
```

INPUT/OUTPUT:



ROLL NUMBER :


Histogram of Age
1.0
0.8
0.6
0.4
0.2
0.0
Frequency
15
16
17
18
19
20
21
Age