



Centurion
UNIVERSITY

School: SOET Campus: VZN

Academic Year: 2024-25 Subject Name: DAVP Subject Code:

Semester: 1ST Program: B.Tech Branch: CSE Specialization: CM

Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment:

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code to read csv files:-

- 1) Import pandas as pd
- 2) Read the csv file into a data frame
- 3) print the data frame.

Pseudo code to visualize the csv file:-

- 1) Import seaborn, matplotlib.pyplot & numpy libraries
- 2) create a data frame with "data" columns name "marks" & size
- 3) create a scatterplot with "name" on x-axis & marks on y-axis.
- 4) display the scatter plot.

Pseudo code to visualize the csv file on box plot:-

- 1) Import seaborn, matplotlib.pyplot and numpy libraries
- 2) create a boxplot with "name" on x-axis and "marks" on y-axis.
- 3) set the title of plot
- 4) Display the plot.

Page No.

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used

* Testing Phase: Compilation of Code (error detection)

```
import matplotlib.pyplot as plt
data = (1, 1, 2, 2, 2, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, 5, 5)
```

create a histogram

```
PH = plt.hist(data, bins=5, color="blue", edgecolor="black")
PH.title("Histogram")
PH.xlabel("frequency")
PH.show()
```

```
import matplotlib as plt
```

create a data

```
categories = ("CN", "CP", "IC", "CM", "BA")
```

```
values = (0.5, 1, 1, 0.5, 0.5)
```

create bar plot

```
PH.title("Bar plot")
```

```
PH.xlabel("Domain")
```

```
PH.ylabel("values")
```

```
PH.show()
```

School:	SOET	Campus:	VZM
Academic Year:	2024-25	Subject Name:	DAVP
Semester:	1 st	Program:	B-Tech
Date:	Applied and Action Learning (Learning by Doing and Discovery)		

Time of the Experiment :

Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code for histogram:

-) start
-) Import
-) Define data list
-) Create Histogram with (bias, colour, edge, colour)
-) set title as "Histogram"
-) set x-label as "data values" and y-label as "frequency".
-) show plot
-) END

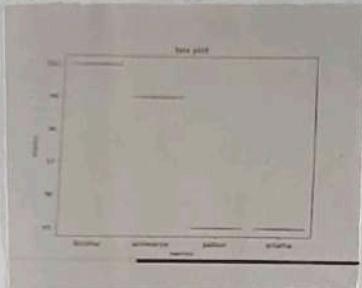
Pseudo code for bar plot:

-) start
-) import mat plot lib
-) Define categories and values
-) set title as "bar plot".
-) show plot
-) END

Page No.....

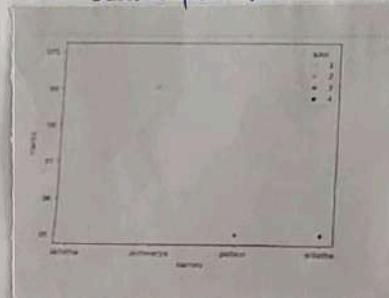
*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Implementation Phase: Final Output (no error)



This csv file gives data
in the box plot form

This csv file gives data in
the scatter plot form



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	10	
Planning and Execution/ Practical Simulation/ Programming	10	9	
Result and Interpretation	10	9	
Record of Applied and Action Learning	10	10	
Viva	10	10	
Total	50	48	

Signature of the Faculty

Signature of the Student: Avinash

Name: I. Avinash
Regn. No.: Q41801350014
Two sheets per experiment. Not applicable according to the experiment.

* Testing Phase: Compilation of Code (error detection)

Read CSV file

```
import pandas as pd
```

```
data = pd.read_csv("Avinash.csv")
```

```
print(data)
```

To visualise the data in scatter plot

```
import seaborn as sns
```

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

```
import numpy as np
```

```
sns.scatterplot(x="name", y="marks", hue="sinh")
```

```
data = data_alpha = 1
```

To visualise data plot

```
import seaborn as sns
```

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

```
import numpy as np
```

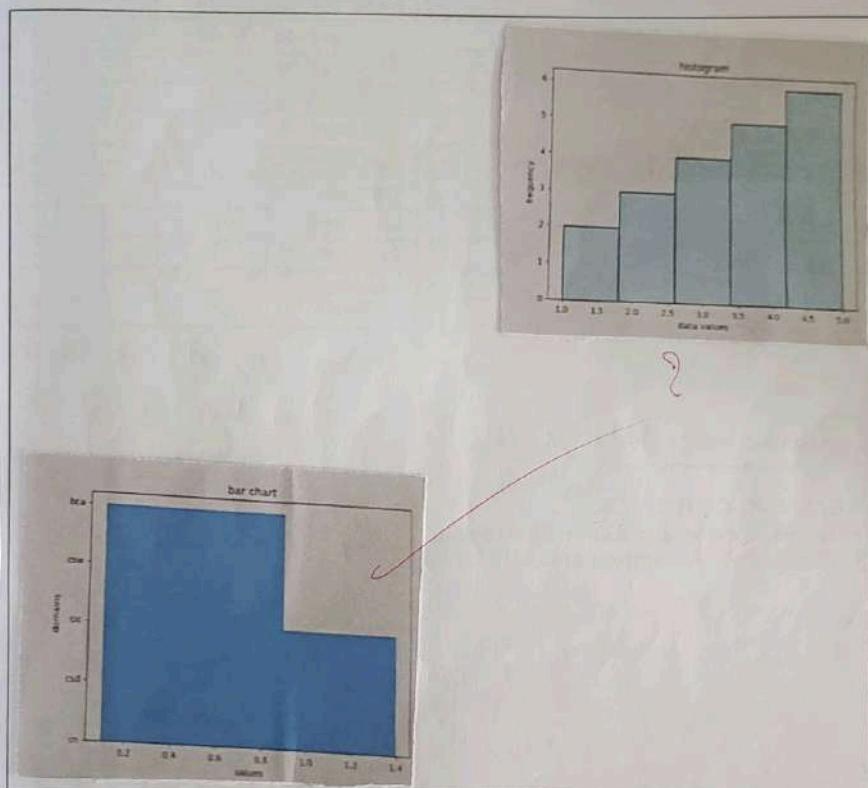
```
sns.bowplot(x="name", y="marks", data = data)
```

```
plt.title("Bow plot")
```

```
plt.show()
```

Applied and Action Learning

* Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	10	
Planning and Execution/ Practical Simulation/ Programming	10	09	
Result and Interpretation	10	08	
Record of Applied and Action Learning	10	09	
Viva	10	10	
Total	50	45	

Signature of the Faculty

Signature of the Student: Avinash
Name: I. Avinash As applicable according to the experiment.
Regn. No.: 241801380014 Two sheets per experiment. Previous notes be used.

* Testing Phase: Compilation of Code (error detection)

compilation of line plot:

import matplotlib lib as plt.

$x = [1, 4, 9, 16, 25]$

$y = [1, 2, 3, 4, 5]$

Create a line plot

plt.plot(x,y)

plt.xlabel ("x-values")

plt.ylabel ("y-values")

plt.title("lines")

plt.show()

compilation of bar plot:

import matplotlib lib as plt cte

(CN, "CB", "CC", "CW", "BCA")

values (1, 0.5, 0.3, 0.5, 0.5)

plt.bar (categories, values)

plt.title ("Bar-plot")

plt.xlabel ("Domain")

plt.ylabel ("Values")

plt.show()

compilation of hist plot:

import matplotlib lib as plt

data = (2, 2, 3, 3, 3, 4, 4, 4, 4, 5, 5, 5, 5, 5, 6, 6, 6)

plt.hist (data, color = "sky blue",
edge color = black)

plt.title ("hist plot")

compilation of scatter plot:

import matplotlib lib as plt.

$x = (2, 4, 6, 8, 10)$

$y = (1, 2, 3, 4, 5)$

plt.scatter (x, y, color = "blue",
marker = "o")

	School: SOET	Campus: VZM
Centurion UNIVERSITY	Academic Year: 2024-25	Subject Name: DAVP
	Semester: 1 st	Subject Code: _____
	Program: B.Tech	Branch: CSE
	Date: _____	Specialization: CN

Applied and Action Learning
(Learning by Doing and Discovery)

Name of the Experiment:

Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code for line plot:

- 1) start
- 2) import the matplotlib
- 3) def the data points for key
- 4) create a line plot with the data points
- 5) Label the x-axis & y-axis
- 6) Add line plot title
- 7) end.

Pseudo code for this plot:

- 1) start
- 2) Import metplotlib
- 3) Define data cut
- 4) create a histogram with colour & edge colour
- 5) set title as hist plot
- 6) Label axis
- 7) show plot
- 8) end.

Pseudo code for bar plot:

- 1) start
- 2) import the matplotlib lib
- 3) define the list of categories
- 4) def the list of values corresponding to each categories
- 5) set the title of the plot to "Bar plot"
- 6) Label the x-axis as "domain".
- 7) Label the y-axis as "value"
- 8) Display the plot
- 9) end.

Pseudo code for scatter plot:

- 1) start
- 2) import matplotlib
- 3) Define x & y
- 4) Create scatter plot
- 5) set title & labels
- 6) show plot
- 7) end.

Page No.

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	09	
Planning and Execution/ Practical Simulation/ Programming	10	09	
Result and Interpretation	10	09	
Record of Applied and Action Learning	10	09	
Viva	10	09	
Total	50	45	

Signature of the Student: Avinash

Name: I. Avinash *As applicable according to the experiment.
Regn. No.: 241801330010 Two sheets per experiment. Page Note be used.

Signature of the Faculty



School: SOET

Campus: VZM

Academic Year: 2024-25 Subject Name: DAVP

Subject Code:

Semester: 1st Program: B-Tech Branch: CSE Specialization: CN

Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment:

Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code for Bar plot:

- 1) Import matplotlib
- 2) Define categories and values
- 3) Define colours
- 4) Create a bar chart
- 5) Add title
- 6) Add labels
- 7) Display the chart

Pseudo code for scatter plot:

- 1) Import matplotlib
- 2) Define X-value
- 3) Define Y-value
- 4) Create a scatter plot
- 5) Add title
- 6) Add labels
- 7) Display chart

Page No.....

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.



S.D.E.T Campus:

Academic Year: 2024 Subject Name: D.A.V.P Subject Code:

Semester: I Program: B-TECH Branch: CSE Specialization: CN

Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment:

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code for scatter plot:

- 1) Import matplotlib.pyplot as plt
- 2) Create a list of x & y
- 3) Set title for plot
- 4) Label the x-axis & y-axis
- 5) Display the plot.

Pseudo code for line plot:

- 1) Import matplotlib.pyplot as plt
- 2) Create a list of x and y
- 3) Plot the data with specific markers, colours & line style
- 4) Label the x-axis & y-axis
- 5) Display the plot.

Pseudo code for histogram:

- 1) Import matplotlib.pyplot as plt
- 2) Create a list data
- 3) Create a histogram with colours and edge colours
- 4) Set the title of the plot
- 5) Display the plot.

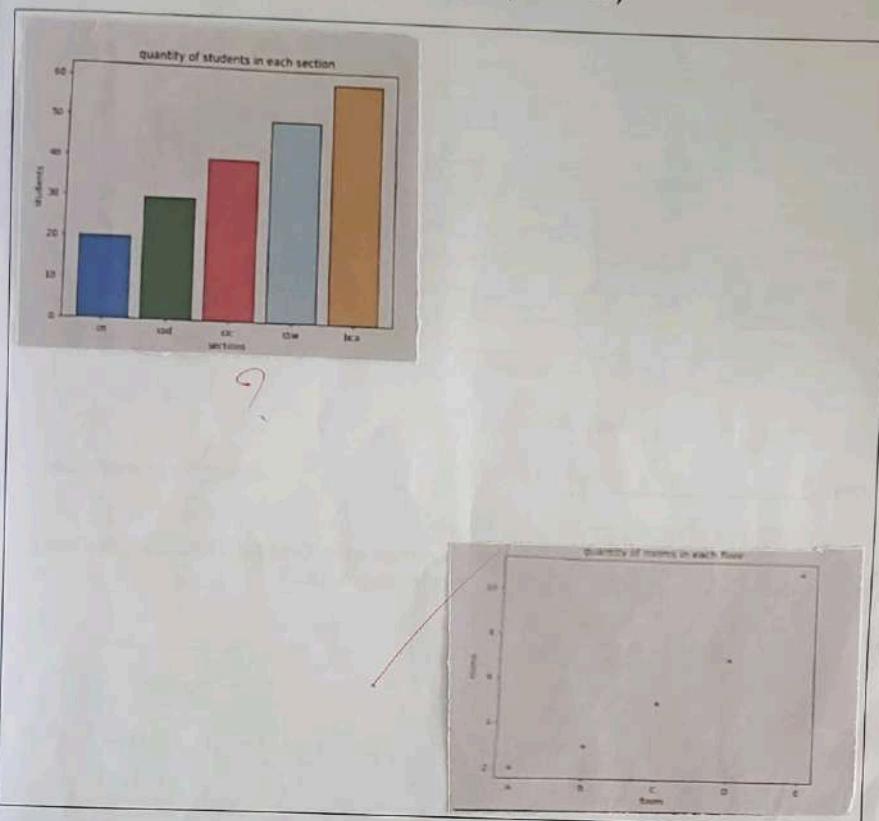
Pseudo code for Bar chart:

- 1) Import matplotlib.pyplot as plt
- 2) Create lists for categories values
- 3) Set the title of the plot
- 4) Label the x-axis & y-axis
- 5) Display the plot.

Page No.

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	09	
Planning and Execution/ Practical Simulation/ Programming	10	10	
Result and Interpretation	10	08	
Record of Applied and Action Learning	10	09	
Viva	10	09	
Total	50	45	

Signature of the Faculty

Signature of the Student: AvinashName: A. AvinashRegn. No.: 241601350014

As applicable according to the experiment.

Two sheets per experiment. Page 20 Note be used.

* Testing Phase: Compilation of Code (error detection)

```
import mat plot lib pyplot as plt
categories = ("CN", "CSO", "CIC", "CSW", "SCA")
values = [20, 30, 40, 50, 60]
colour = ("blue", "green", "red", "skyblue", "orange")
plt.bar(categories, values, colour=colour, edge color="black")
plt.xlabel("Section")
plt.ylabel("Students")
plt.title("Quantity of students in each section")
plt.show()
```

```
import mat plot lib pyplot as plt
x = ("A", "B", "C", "D", "E")
y = (2, 3, 5, 7, 11)
```

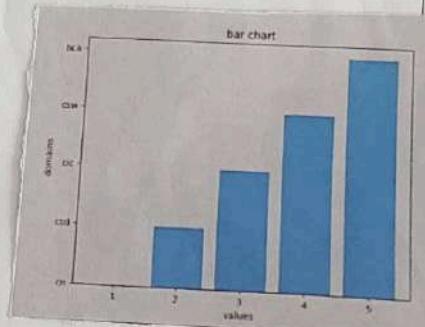
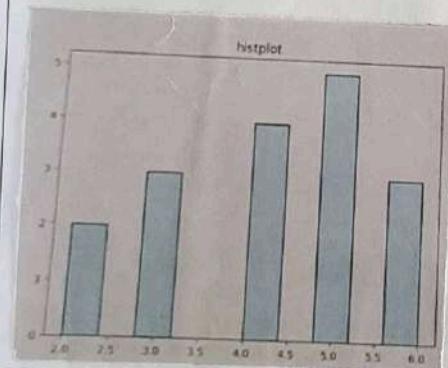
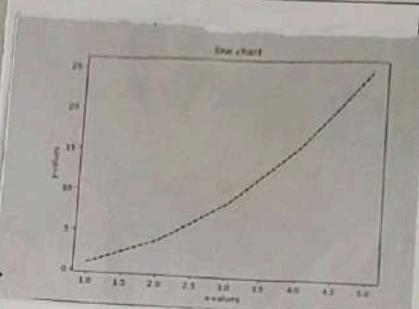
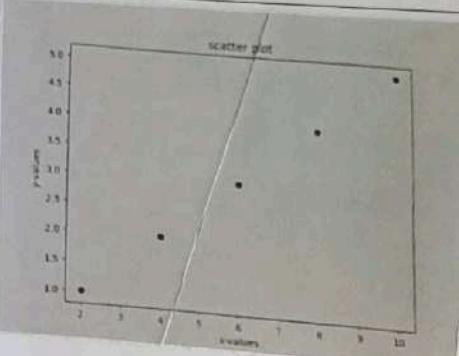
```
plt scatter(x, y, colour="red", marker="*")
plt.xlabel("Floors")
plt.ylabel("Rooms")
plt.show()
```

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Safety Precaution:

Applied and Action Learning

Application & Inference:



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	09	
Planning and Execution/ Practical Simulation/ Programming	10	09	
Result and Interpretation	10	09	
Record of Applied and Action Learning	10	10	
Viva	10	09	
Total	50	46	

Signature of the Student: Avinash

Name: J. Avinash

Regn. No.: 241801350014

Page No.....

Signature of the Faculty:

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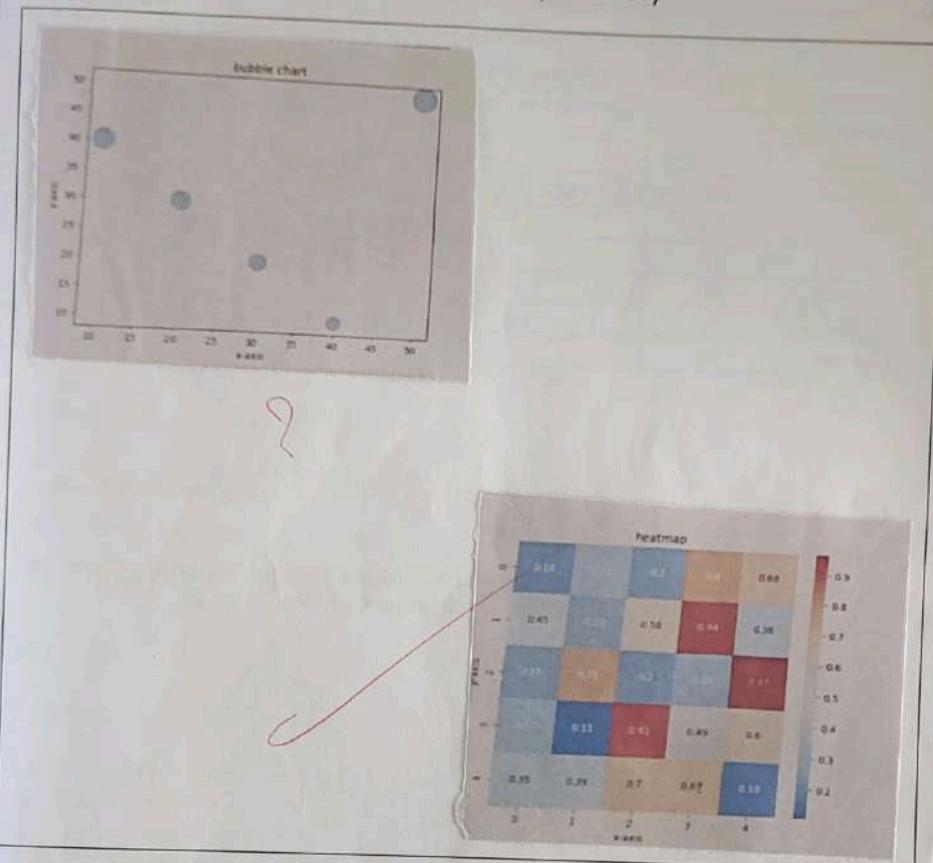
* Testing Phase: Compilation of Code (error detection)

# scatter plot	# line plot
import matplotlib.pyplot as plt	import matplotlib.pyplot as plt
X = [1, 4, 6, 8, 10]	X = [1, 2, 3, 4, 5]
Y = [1, 1, 3, 4, 5]	Y = [1, 4, 9, 16, 25]
plt.title("scatter plot")	plt.plot(X, Y, marker="o", color="black", linestyle="solid")
plt.xlabel("X-values")	plt.xlabel("X-value")
plt.scatter(X, Y, color="blue")	plt.title("line chart")
Marker = "o"	plt.show()
plt.show()	
# histogram	# bar chart
data = [1, 1, 2, 2, 2, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, 5, 5]	categories = ["EN", "CSD", "CIC", "CSL"]
plt.hist(data, color="blue", edgecolor="black")	values = [1, 3, 5, 9]
plt.title("Histogram")	plt.bar(categories, values)
plt.xlabel("Values")	plt.title("Bar chart")
	plt.xlabel("Value")
	plt.ylabel("domain")

*As applicable according to the
Two sheets per experiment (10-20)

Applied and Action Learning

* Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	09	
Planning and Execution/ Practical Simulation/ Programming	10	09	
Result and Interpretation	10	10	
Record of Applied and Action Learning	10	09	
Viva	10	09	
Total	50	45	

ature of the Faculty

Signature of the Student: Avinash

Name: J. Avinash As applicable according to the experiment.
Regn. No.: R41101350014 Two sheets per experiment. Page No. 01 used.

* Testing Phase: Compilation of Code (error detection)

Import matplotlib.pyplot as plt.

X = (40, 30, 20, 10, 50)

Y = (10, 20, 30, 40, 50)

size = (200, 300, 400, 500, 600)

plt.scatter(X, Y, s = size, color = "blue", alpha = 0.5)

plt.title("bubble chart")

plt.xlabel("X-axis")

plt.ylabel("Y-axis")

plt.show()

import seaborn as sns

import matplotlib.pyplot as plt

import numpy as np

data = np.random.rand(5, 5)

sns.heatmap

plt.title("Heat map")

plt.xlabel("X-axis")

plt.ylabel("Y-axis")

plt.show()



School: S.P.G.T Campus:

Academic Year: 2024 Subject Name: D.A.V.P. Subject Code:

Semester: 1 Program: B.TECH Branch: C.S.C Specialization: C.S.I.

Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment:

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code for bubble chart.

- 1) Import matplolib.pyplot
- 2) Create lists x,y and size for coordinate & bubbles
- 3) Plot the bubble chart using the x,y
- 4) Set title of the plot
- 5) Label the x-axis and y-axis
- 6) Display the plot.

Pseudo code for Heatmap:

- 1) Plot the heatmap with the "coolwarm" and colors.
- 2) Set the title of the plot
- 3) Label x-axis & y-axis
- 4) Show the plot.

* Testing Phase: Compilation of Code (error detection)

```

import matplotlib.pyplot as plt
categories = ('CN', 'AO', 'IC', 'CWL', 'SCA')
values = (0, 30, 40, 50, 60)
explode = (0, 0.2, 0, 0, 0)
colours = ('yellow', 'gold', 'blue', 'green', 'orange')

Pie = Pie ( values, labels = categories, startangle = 90, counterclockwise = True,
            shadow = True, explode = explode, colors = colours)
plt.title('Pie plot of domains')
plt.show()

```

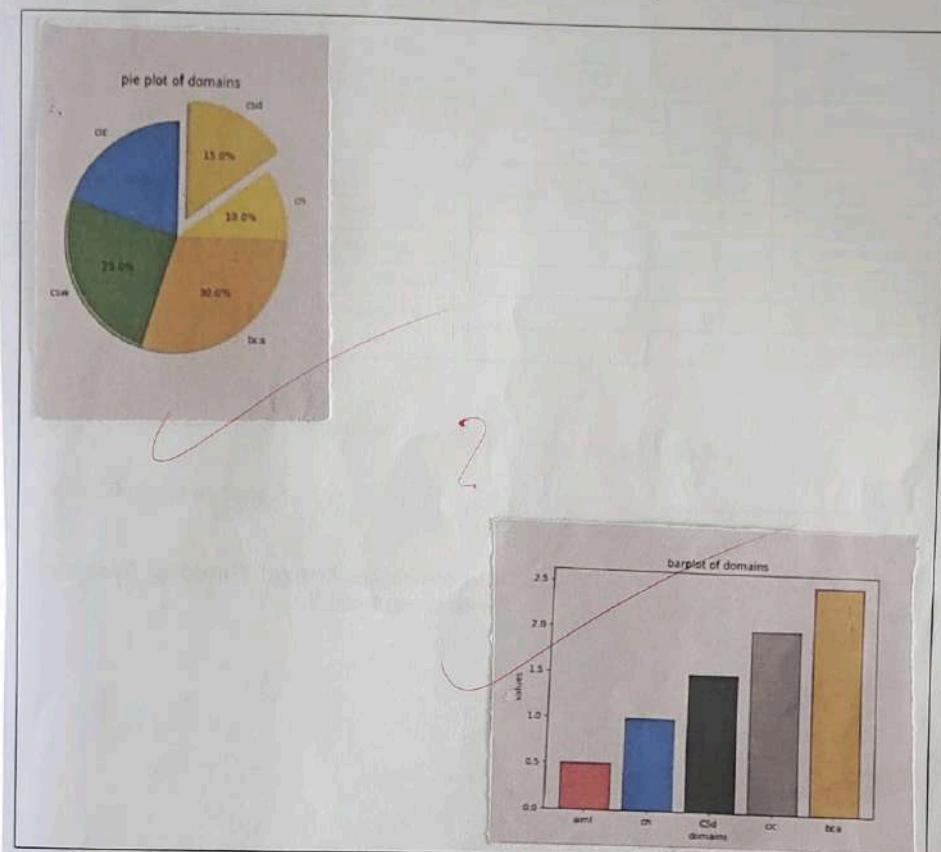
```

import matplotlib.pyplot as plt
categories = ('Aiml', 'CN', 'CJP', 'IC', 'SCA')
values = (0.5, 1, 1.5, 2, 2.5)
colours = ('red', 'blue', 'black', 'gray', 'orange')
plt.bar

plt.title('Barplot of Domains')
plt.xlabel('Domain')
plt.ylabel('Values')
plt.show()

```

* Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	09	
Planning and Execution/ Practical Simulation/ Programming	10	09	
Result and Interpretation	10	09	
Record of Applied and Action Learning	10	09	
Viva	10	08	
Total	50	47	

Signature of the Faculty

Signature of the Student: Arinash

Name : I. Avinash As applicable according to the experiment.
 Regn. No. : Q41801350014 Two sheets per experiment. Page 20 Note book used.



School: SDET Campus:

Academic Year: 2024 Subject Name: DAVP Subject Code:

Semester: 1 Program: B-Tech Branch: CSE Specialization: CN

Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment :

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code for pie plot:

- 1) start
- 2) import mat plot lib
- 3) define categories and values
- 4) Define explode and colours.
- 5) create pie chart
- 6) set title as pie plot of domains
- 7) show plot
- 8) end.

Pseudo code for bar plot:

- 1) start
- 2) Import matplotlib
- 3) Define categories list
- 4) Define values list
- 5) Create plot with (color, edge, color)
- 6) set title as "Bar plot of domains"
- 7) Label the axis
- 8) end.

Page No.

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Testing Phase: Compilation of Code (error detection)

```
# read csv file  
import pandas as pd  
df = pd.read_csv ("Arineth.csv")  
print("df")
```

Implementation Phase: Final Output (no error)

	Name	Reg. NO	Age
0	Avinash	12305	17
1	Bhaai	12309	18
2	NTR	12344	19
3.	Devara	12332	20
4.	Salaar	12312	21

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	10	
Planning and Execution/ Practical Simulation/ Programming	10	09	
Result and Interpretation	10	09	
Record of Applied and Action Learning	10	09	
Viva	10	09	
Total	50	46	

Signature of the Faculty

Signature of the Student: Avinash

Name : A. Avinash

Regn. No. : Q41801350014 *As applicable according to the experiment.
Two sheets per experiment. Pre-Note used.



Centurion
UNIVERSITY

School: SOET Campus: VZM

Academic Year: 2024-25 Subject Name: DAUP Subject Code:

Semester: 1ST Program: B-Tech Branch: CSE Specialization: CAI

Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment:

Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code to read csv files:

- 1) Import pandas library
- 2) Read the csv file into a data frame using pd.read_csv
- 3) Print the data frame.

Page No.....

*As applicable according to the experiment
Two sheets per experiment (10-20) to be used



School: SOET Campus: VZM

Academic Year: 2024-25 Subject Name: DAVP Subject Code: _____

Semester: 1st Program: B-Tech Branch: CSE Specialization: LN

Date: _____

Applied and Action Learning (Learning by Doing and Discovery)

Name of the Experiment:

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

- 1) Import mat plot lib library.
- 2) Create lists of x, y, y₂ for the data.
- 3) Create 1st area plot b/w x, y with colour & transparency.
- 4) Set title for the plot.
- 5) Label x-axis and y-axis.
- 6) Add a legend to differentiate b/w two areas.
- 7) Display the plot.

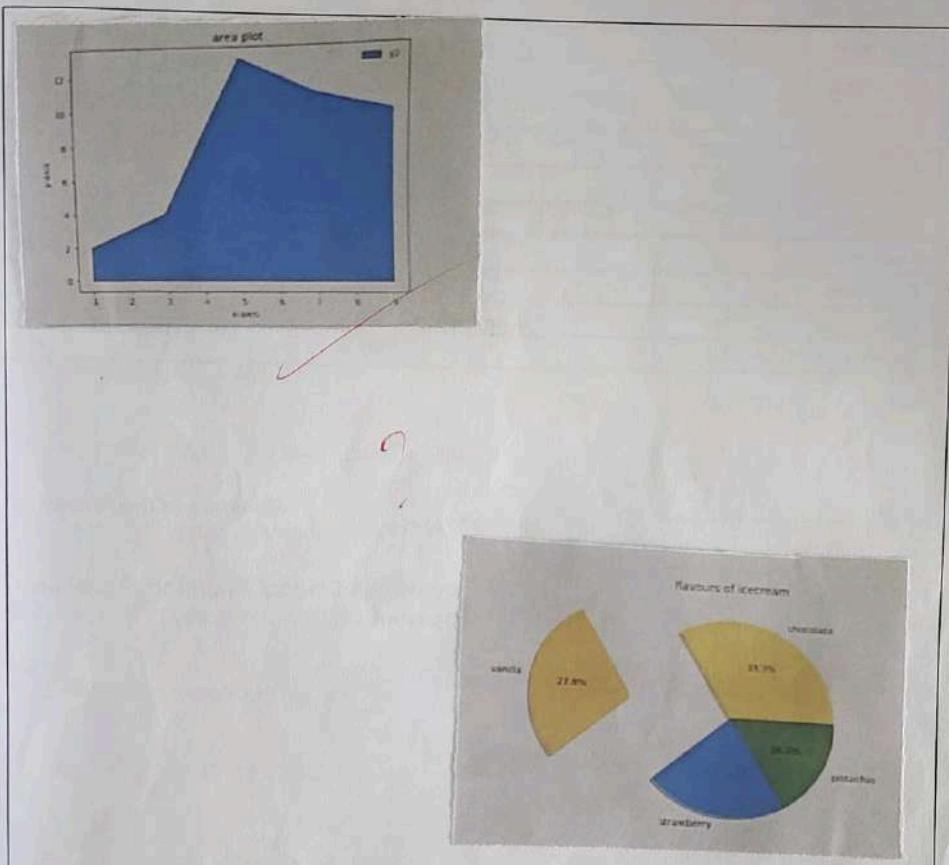
- 1) Import matplotlib library.
- 2) Create a list for labels, sizes, colours and edge colours.
- 3) Create pie chart with sizes, explode, labels.
- 4) Set title for the plot.
- 5) Display the plot.

Page No.

* As applicable according to the experiment
Two sheets per experiment (10-20) to be used

Applied and Action Lear

* Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	04	
Planning and Execution/ Practical Simulation/ Programming	10	09	
Result and Interpretation	10	09	
Record of Applied and Action Learning	10	09	
Viva	10	10	
Total	50	46	

Signature of the Faculty

Signature of the Student: Avinash

Name: A. Avinash
As applicable according to the experiment.
Two sheets per experiment. Pro20 No be used.
Regn. No.: Q4180150614

*** Testing Phase: Compilation of Code (error detection)**

```
# create area plot.  
import matplotlib.pyplot as plt  
x = (1, 3, 5, 7, 9)  
y1 = (2, 4, 13, 11, 10)  
y2 = (6, 3, 5, 7, 9)  
  
plt.fill(x, y1, color="blue", alpha=1, label="y1",  
         edgecolor="black")  
  
plt.title("Area plot")  
plt.xlabel("x-axis")  
plt.ylabel("y-axis")  
plt.legend()  
labels = ("chocolate", "vanilla", "strawberry", "pistachio")  
sizes = (30, 25, 20, 15)  
colours = ("brown", "white", "pink", "green")  
explode = (0, 0, 0, 0)  
  
plt.pie(sizes, explode=explode, labels=labels)  
plt.show()
```

* Testing Phase: Compilation of Code (error detection)

① Text styles

```
style = {"textAlign": "center", "color": "#4CAF50"}
```

② Dropdown style

```
style = {"width": "45%", "display": "inline-block",  
        "margin-right": "5px"}
```

③ styling

```
style = {"border": "2px solid #4CAF50", "border-radius":  
        "15px", "margin-top": "10px", "padding": "10px"}
```

④ Back ground

```
"Background colour": "#ffffdd"
```

⑤ Box shadowing

```
"box shadowing": "0 4px 8px rgba(0, 0, 0, 0.2)"
```

*As applicable according to the experiment
Two sheets per experiment (16-20) sheets



School: SOET Campus: UZM

Academic Year: 2024-25 Subject Name: DAVP Subject Code:

Semester: 1st Program: B-Tech Branch: CSE Specialization: CN

Date:

Applied and Action Learning (Learning by Doing and Discovery)

Name of the Experiment :

Coding Phase: Pseudo Code / Flow Chart / Algorithm

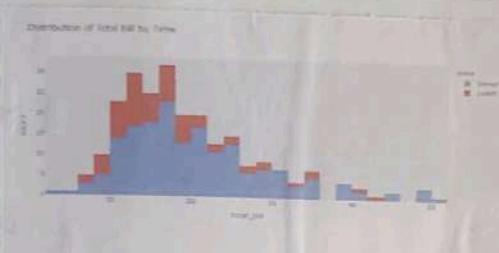
- ① start
- ② Pip install dash
- ③ import dash-components as dc
- ④ import dash-html-components as html
- ⑤ import numpy as np
- ⑥ import pandas as pd
- ⑦ import plotly-express as px
- ⑧ end.

Page No.....

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

Applied and Action Learning

* Implementation Phase: Final Output (no error)



ASSESSMENT

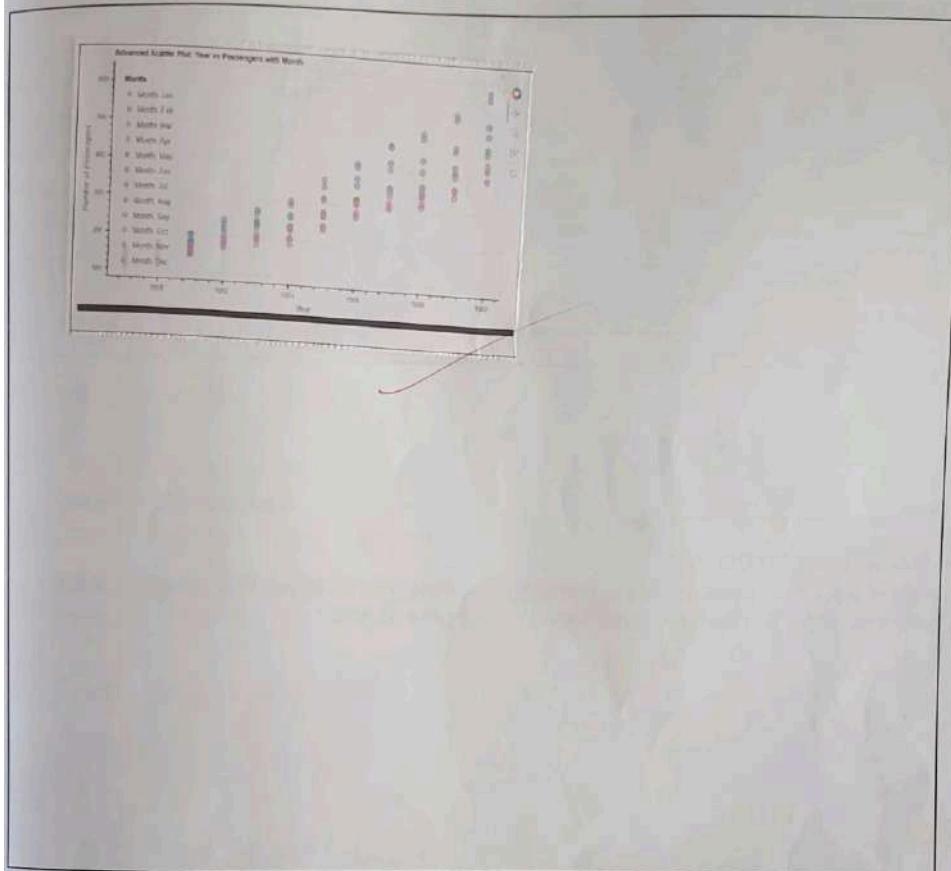
Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	9	
Planning and Execution/ Practical Simulation/ Programming	10	9	
Result and Interpretation	10	9	
Record of Applied and Action Learning	10	9	
Viva	10	10	
Total	50	46	

Signature of the Faculty

Signature of the Student: Avinash

Name : J. Avinash As applicable according to the experiment.
Regn. No. : 24160150014 Two sheets per experiment. Page No. 1 used.

* Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	10	
Planning and Execution/ Practical Simulation/ Programming	10	9	
Result and Interpretation	10	9	
Record of Applied and Action Learning	10	9	
Viva	10	10	
Total	50	47	

[Signature]
Signature of the Faculty

Signature of the Student: -Avinash

Name: J. Avinash
*As applicable according to the experiment.
Regn. No.: 241801358019 Two sheets per experiment. Page No. 1 be used.

* Testing Phase: Compilation of Code (error detection)

① search functionality

dcc. dropdown(

id='x-axis'; # unique identifier for callback.

options = [{label: col, 'value': col} for col in

tips - df columns]

value = 'total_bill'; # Default

style = { "width": { "width": "45%", "display": "inline-block" }}

"margin-right": "5px" }

html. Div(

html.label("select year (if applicable);", style={ "font-weight": "bold" })

dcc. dropdown(

id = 'filter-year'

options = [{label: year, 'value': year}]

*As applicable according to the experiment
Two sheets per experiment (10-20) to be used



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School: SOFT Campus: U2M

Academic Year: 2024-25 Subject Name: DAUP Subject Code:

Semester: 1st Program: B.Tech Branch: CSE Specialization: CN

Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment :

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

- ① start
- ② pip install dash
- ③ import dash
- ④ From dash import dcc
- ⑤ From dash import html
- ⑥ From dash import Input, output
- ⑦ Import plotly.express as px
- ⑧ import seaborn as sns.

Page No.....

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.



School: SOET Campus: VZN

Academic Year: 2024-25 Subject Name: DAVP Subject Code:

Semester: 1st Program: BTech Branch: CSE Specialization: CN

Date:

Applied and Action Learning (Learning by Doing and Discovery)

Name of the Experiment:

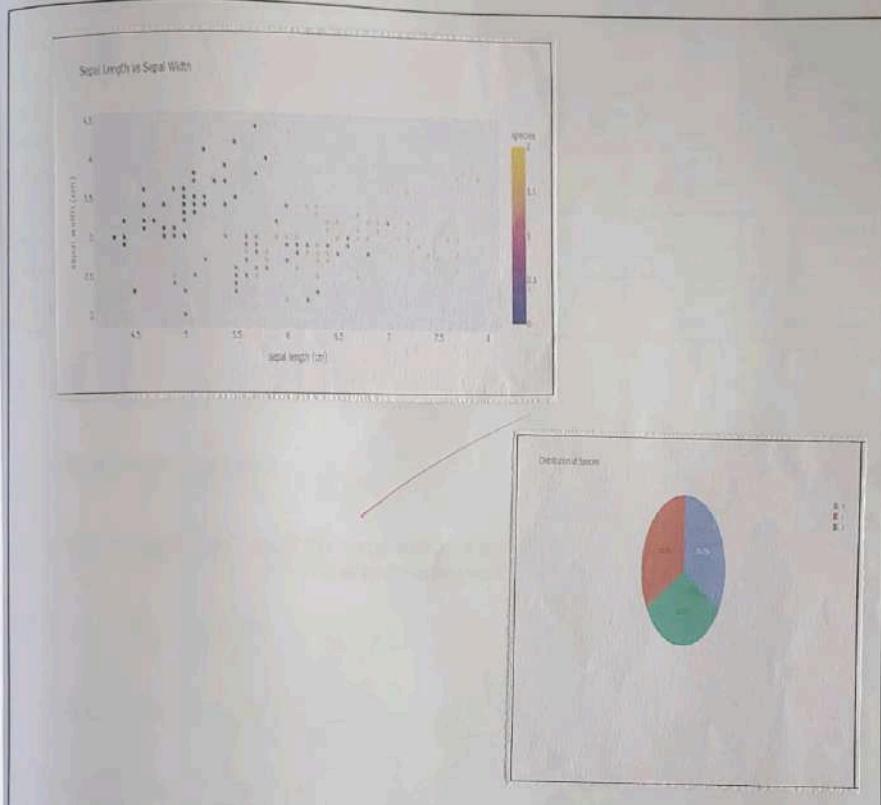
* Coding Phase: Pseudo Code / Flow Chart / Algorithm

- ① start
- ② Pip install dashboard (dash)
- ③ Import pandas as pd
- ④ Import numpy as np
- ⑤ Import plotly.express as px
- ⑥ Import seaborn as sns
- ⑦ From dash:import dash, html, dcc
- ⑧ app = Dash (— name —)
- ⑨ from dash import dash_table
- ⑩ From dash import dash, dcc, html, Input, output
- ⑪ END.

Page No.....

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	10	
Planning and Execution/ Practical Simulation/ Programming	10	10	
Result and Interpretation	10	10	
Record of Applied and Action Learning	10	10	
Viva	10	9	
Total	50	49	

Signature of the Student: Avinash

Name: J. Avinash As applicable according to the experiment.
Regn. No.: 241101630014 Two sheets per experiment. Please be used.

Signature of the Faculty

* Testing Phase: Compilation of Code (error detection)

Load dataset

```
df = sns.load_dataset("tips")
```

```
app = Dash(__name__)
```

Layout

```
app.layout = html.Div([
    html.H1("Tips dataset dashboard"),
    style = {"text-align": "center"}])
```

Dropdown to select column:

- html.label ("select x-axis for visualization")


```
dcc.dropdown(
        id = 'x-axis',
        options = [{"label": col, "value": col}])
```

Pie chart:

```
html.Label ("select column for pie chart")
dcc.dropdown(
    id = 'pie chart - col',
    value = "sex",
    options = [
        tips_df.columns]),
dcc.Graph(id = 'pie chart')
```



School: SOE7

Campus: VZN

Academic Year: 2024-25 Subject Name: DAUP

Subject Code: _____

Semester: 1st Program: B-Tech Branch: CIE Specialization: CN

Date: _____

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment:

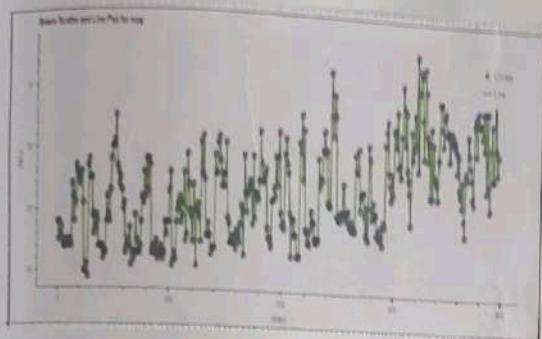
* Coding Phase: Pseudo Code / Flow Chart / Algorithm

- ① start
- ② From bokeh plotting import figure
- ③ from bokeh.embed import file_html
- ④ from bokeh import CDN
- ⑤ from dash import dash
- ⑥ from dash import html, dcc
- ⑦ from dae import input, output
- ⑧ import pandas as pd
- ⑨ import seaborn as sns
- * ⑩ End.

Page No.....

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

Implementation Phase: Final Output (no error)



ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	9	
Planning and Execution/ Practical Simulation/ Programming	10	9	
Result and Interpretation	10	9	
Record of Applied and Action Learning	10	10	
Total	50	47	

Signature of the Faculty

Signature of the Student: Avinash

Name : S. Avinash As applicable according to the experiment.
 Two sheets per experiment. Page No. 20
 Regn. No. : 241801370064

* Testing Phase: Compilation of Code (error detection)

```

Layout,
app.layout = html.Div([
    html.H1("Dash with Bokeh visualization"),
    style = {"text-align": "center"}),
    value = "total bill",
    style = {"width": "50%"; "margin": "auto"})
    @app.callback(
        output = ["bokeh plot", 'children'],
        input = ['Bokeh- feature', 'value']):
    p = figure(
        title = f"Bokeh scatter and line plot for {feature}",
        x-axis-label = 'Index',
        [Input('Bokeh- feature', value
    p.circle(x = tips['tip'].dt[feature], size = 10,
              color = 'gray', alpha = 0.6 legend-label = "circle")
    html-content = file.html(p, coll, "Bokeh plot").
run in app
if name_ = "main":
    app.run-server(reload = true)

```



School: SOFT Campus: U-2M

Academic Year: 2024-25 Subject Name: DAUP Subject Code:

Semester: 1st Program: B.Tech Branch: CSE Specialization: CN

Date:

Applied and Action Learning (Learning by Doing and Discovery)

Name of the Experiment :

Coding Phase: Pseudo Code / Flow Chart / Algorithm

- ① start
- ② Import plotting .figure, show from bokeh .plotting
- ③ Import output - notebook bokeh .io
- ④ Import column data source from Bokeh - models
- ⑤ Import seaborn As sns
- ⑥ import pandas as pd
- ⑦ import plotly. express as px
- ⑧ end.

Page No.....

* As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Testing Phase: Compilation of Code (error detection)

After loading dataset tips

```
sex-colour = {"Male": "Blue", "Female": "red"}
```

```
smoke-shape = {"Yes": "triangle", "No": "circle"}
```

p = figure (title = "Advanced scatterplot: total bill vs tip
with sex and smoker.", x-axis-label = "total bill(\$)",
y-axis-label = "Tip(\$)")

for smoker, shape is smoke-shape-item()

p.scatter (

subset ["total_bill"]

subset["tip"]

marker = shape,

size = 15,

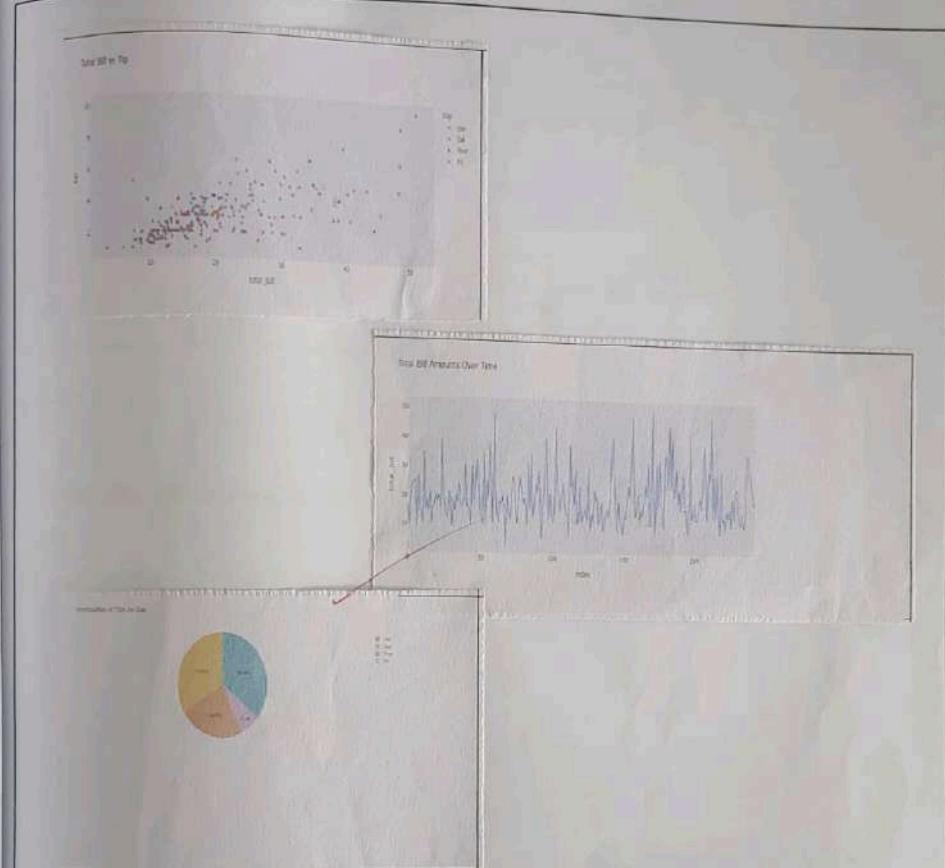
legend-label = f"marker: {smoker}"

p.legend location = "top-left"

p.legend title = "Legend".

show(p).

* Implementation Phase: Final Output (no error)

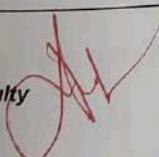


ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10	10	
Planning and Execution/ Practical Simulation/ Programming	10	9	
Result and Interpretation	10	9	
Record of Applied and Action Learning	10	9	
Viva	10	10	
Total	50	47	

Signature of the Student: Avinash

Name: J. Avinash As applicable according to the experiment.
Two sheets per experiment. Page No. _____
Regn. No.: 24180350014

Signature of the Faculty 

* Testing Phase: Compilation of Code (error detection)

```
import requests  
from bs4 import BeautifulSoup  
  
# fetch the web page content  
url = "https://www.imdb.com/chart/top"  
response = requests.get(url)  
  
# parse the HTML content  
soup = BeautifulSoup(response.content, 'html.parser')  
  
# extract data  
titles = soup.find_all('h3', class_='titleColumn')  
for title in titles:  
    print(title.a.text)  
  
# extract all the movie ratings.  
ratings = soup.find_all('div', class_='rating')  
for rating in ratings:  
    print(rating['aria-label'])  
  
print(url)
```

COURSE OUTCOMES (COs) ATTAINMENT

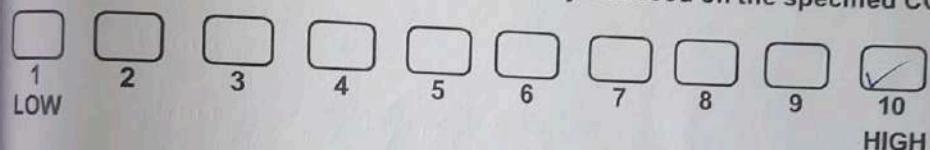
Applied and Action Learnin

Expected Course Outcomes (COs): (Refer to COs Statement in the Syllabus)

- * perform effective data analysis & cleaning.
- * create effective data visualisations using libraries.
- * communicate data insights effectively

Course Outcomes (COs) Attained:

How would you rate your learning of the subject based on the specified COs



Learning Gap (If any):

Basic syntax and data structure : syntax, control flow, data structures (lists, dictionaries, etc)
Data manipulation and Analysis.

Books/Manuals Referred:

Date: _____

Signature of the Student

Suggestions / Recommendations:

(by the Course Faculty)

Date: _____

Signature of the Faculty

Page No.

* One sheet per learning record to be used

ASSESSMENT

Applied and Action Learning

Experiment	Full Mark	Marks Obtained	Experiment	Full Mark	Marks Obtained
Experiment - 1	50		Experiment - 12	50	
Experiment - 2	50		Experiment - 13	50	
Experiment - 3	50		Experiment - 14	50	
Experiment - 4	50		Experiment - 15	50	
Experiment - 5	50		Experiment - 16	50	
Experiment - 6	50		Experiment - 17	50	
Experiment - 7	50		Experiment - 18	50	
Experiment - 8	50		Experiment - 19	50	
Experiment - 9	50		Experiment - 20	50	
Experiment - 10	50		Average Total	50	
Experiment - 11	50				

Date: _____

Signature of the Faculty

• LEARNING OUTCOMES:

How the Applied and Action Learning encourages Critical Thinking, Problem Solving, Idea Generation and Skill Development etc.?

- * Able to gain knowledge on visualization with good storyline and perform job of a data analyst.
- * Able to analyse and visualize the dataset.
- * Ability to design dashboard.

How the Applied and Action Learning encourages Leadership, Team Work, Reflection and Decision Making Capability etc.?

- * Leadership : Hands on- experience = learning provides opportunities to lead real-world projects.
- * Decision making
- * collaborative problem solving.

Date: _____

Signature of the Student

Page No.....

* One sheet per learning record to be used

School: SOET Campus: VZM
Academic Year: 2024-25 Subject Name: DAUP
Semester: 1st Program: B.Tech Subject Code:
Date: Branch: CSE Specialization: CN

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment :

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

Pseudo code:

1. Import libraries & beautiful soup
2. # fetch web pages content:
 - Define URL & send GET request
3. # parse HTML content
 - parse content with beautiful soup
4. Extract data:
 - find & print movie title
 - find & print movie ratings
5. print URL
 - Print the URL

Page No.....

* As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.