

# AQAR 2023 - 2024



## **SANTHIGIRI COLLEGE OF COMPUTER SCIENCES**

Affiliated to M.G. University, Approved by AICTE and Accredited by NAAC



## **CRITERION 1**

### **1.2.2 Add-on Course**

**Course Name: Data Visualization in Python**

**Course Code: ADD-CS-10**





**Academic Year:** 2023-2024

**Course Name:** Data Visualization using Python

**Course Code:**

**Training Firm:** Santhisoft Technologies

### **Syllabus**

#### **Chapter 1 [8 Hours]**

**Introduction to Python:** - What is Python, The application areas of Python, Download and install Python, Execute Python program from command prompt and using IDLE.

#### **Chapter 2 [8 Hours]**

**Python Language Basics:** - Data types and variables, Operators and operator precedence, Data type conversions, Data input, Comments.

**Python Flow Control:** If statement, If. if... else statement, While loop, For loop, Break & continue, Else clause

#### **Chapter 3 [12 Hours]**

**Python Sequences:** - String, List, Tuple, Dictionary, Set.

**Data visualization using Tableau:** Introduction to Data Analytics, Data Cleaning using Excel, Data Visualization, Visualization using Tableau







# **SANTHIGIRI**

## **COLLEGE OF COMPUTER SCIENCES**

Affiliated to MG University and Approved by AICTE

### **Data Visualization in Python**

**Date:** 22-10-2023

**Time:** 25 Minutes

1. Which Python library is most commonly used for creating static, animated, and interactive visualizations?
2. Which library is used for creating advanced and interactive visualizations in Python?
3. What is the function in matplotlib used to create a basic line plot?
4. Which function in matplotlib is used to display the plot?
5. What is the purpose of the plt.xlabel() and plt.ylabel() functions in matplotlib?
6. Which library provides a high-level interface for drawing attractive statistical graphics?
7. How do you import the matplotlib.pyplot module?
8. Which Seaborn function is used to create a heatmap?
9. What does the sns.histplot() function in Seaborn do?
10. Which function in Seaborn is used to create a pairwise relationship plot?
11. What parameter in Seaborn plots is used to add color based on a specific column?
12. Which function in Seaborn is used to create a boxplot?
13. Which library is commonly used for creating interactive visualizations in Python?
14. What is the command to create a scatter plot in Plotly?
15. Which Plotly function is used to create a bar chart?
16. How do you create a line plot directly from a pandas DataFrame?
17. What method in pandas is used to create a histogram?
18. Which pandas method is used to create a scatter plot?
19. What is the purpose of the plt.title() function in matplotlib?
20. Which library can be used for 3D plotting in Python?

  
PRINCIPAL  
SANTHIGIRI COLLEGE OF COMPUTER SCIENCES  
VAZHITHALA P. O. INDUPUZHA  
KERALA, PIN - 685 583



## SUMMARY REPORT

**Academic Year:** 2023-2024

**Course Name:** Data Visualization in Python

**Course Code:**

Data Visualization in Python ( ) was successfully completed during academic year 2023-2024 for BCA 2021-2024 Batch Students. There are 124 students who have completed the course. It took 30 hours to complete the course and there was 100% result. Out of 124 Students 76 Students achieved A+, 34 Students got A grade and 14 Students got B Grade.

Total Students Enrolled	124
Total Students Passed	124
A+	76
A	34
B	14
C	0
D	0
E	0

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VAZHITHALA P.O., THODUPUZHA  
KERALA, PIN - 685 583  
Signature of Principal



HEAD OF THE DEPARTMENT  
DEPT. OF COMPUTER SCIENCE  
SANTHIGIRI COLLEGE OF COMPUTER SCIENCES  
VAZHITHALA P.O., THODUPUZHA  
IDUKKI, KERALA - 685 583  
Signature of HOD



No	Name of Student	Class	18/10/23	19/10/23	26/10/23
1.	Abheja Biju	S5 BCA A	Abheja	Abheja	abs
2.	Abhejith Vinod	S5 BCA A	Abhejith	Abhejith	abs
3.	Abhinav Nileep	S5 BCA A	Abhinav	Abhinav	abs
4.	Abhiram Babu	S5 BCA A	abs	Abhiram	abs
5.	Adithyan R	S5 BCA A	Adithyan	Adithyan	abs
6.	Adithyan Sasidharan	S5 BCA A	Adithyan	Adithyan	abs
7.	Adithyan Aray	S5 BCA A	Adithyan	Adithyan	abs
8.	Adithyan Ashok	S5 BCA A	Adithyan	Adithyan	abs
9.	Adithyan K Murali	S5 BCA A	Adithyan	Adithyan	abs
10.	Agnel Antony	S5 BCA A	Agnel	Agnel	abs
11.	Ajay Biju	S5 BCA A	Ajay	Ajay	abs
12.	Ajay R Nair	S5 BCA A	Ajay	Ajay	abs
13.	Ajith Babu	S5 BCA A	Ajith	Ajith	abs
14.	Ajith Phaji	S5 BCA A	Ajith	Ajith	abs
15.	Akshay R	S5 BCA A	Akshay	Akshay	abs
16.	Alan George	S5 BCA A	Alan	Alan	abs
17.	Alan Jay	S5 BCA A	Alan	Alan	abs
18.	Alan Mathew Francis	S5 BCA A	abs	Alan	abs
19.	Albin Abraham	S5 BCA A	Albin	Albin	abs
20.	Albin Francis	S5 BCA A	Albin	Albin	abs
21.	Albin P Benny	S5 BCA A	Albin	Albin	abs
22.	Albin P Devanar	S5 BCA A	Albin	Albin	abs
23.	Aldrin Benny	S5 BCA A	abs	Aldrin	abs
24.	Alex Abhilash	S5 BCA A	Alex	Alex	abs
25.	Alex Jose	S5 BCA A	Alex	Alex	abs
26.	Alex Varghese	S5 BCA A	Alex	Alex	abs
28.	Alfar Phaji	S5 BCA A	Alfar	Alfar	abs
29.	Aliyona Tomy	S5 BCA A	Aliyona	Aliyona	abs
30.	Allan Phyllon	S5 BCA A	Allan	Allan	abs
30.1	Almas Thabir	S5 BCA A	Almas	Almas	abs
32.	Amal Aji	S5 BCA A	Amal	Amal	abs
33.	Amal Punny	S5 BCA A	Amal	Amal	abs
34.	Amel Ali P B	S5 BCA A	abs	Amel	abs
35.	Amira MH	S5 BCA A	Amira	Amira	abs
36.	Amratha Lal	S5 BCA A	Amratha	Amratha	abs

27/10/23	30/10/23	31/10/23	1/11/23	2/11/23	3/11/23
abs	Abheja	abs	Abheja	Abheja	Abheja
abs	Abhejith	abs	Abhejith	Abhejith	abs
abs	Abhinav	abs	Abhinav	Abhinav	abs
abs	Abhiram	abs	abs	Abhiram	abs
abs	Adithyan	abs	Adithyan	Adithyan	abs
abs	Adithyan	abs	Adithyan	Adithyan	abs
abs	Adithyan	abs	Adithyan	Adithyan	abs
abs	Adithyan	abs	Adithyan	Adithyan	abs
abs	Adithyan	abs	Adithyan	Adithyan	abs
abs	Agnel	abs	Agnel	Agnel	abs
abs	Ajay	abs	Ajay	Ajay	abs
abs	Ajay	abs	Ajay	Ajay	abs
abs	Ajith	abs	Ajith	Ajith	abs
abs	Ajith	abs	Ajith	Ajith	abs
abs	Akshay	abs	Akshay	Akshay	abs
abs	Alan	abs	Alan	Alan	abs
abs	Alan	abs	Alan	Alan	abs
abs	Alan	abs	Alan	Alan	abs
abs	Albin	abs	Albin	Albin	abs
abs	Albin	abs	Albin	Albin	abs
abs	Albin	abs	Albin	Albin	abs
abs	Albin	abs	Albin	Albin	abs
abs	Aldrin	abs	Aldrin	Aldrin	abs
abs	Alex	abs	Alex	Alex	abs
abs	Alex	abs	Alex	Alex	abs
abs	Alfar	abs	Alfar	Alfar	abs
abs	Aliyona	abs	Aliyona	Aliyona	abs
abs	Allan	abs	Allan	Allan	abs
abs	Almas	abs	Almas	Almas	abs
abs	Amal	abs	Amal	Amal	abs
abs	Amal	abs	Amal	Amal	abs
abs	Amel	abs	Amel	Amel	abs
abs	Amira	abs	Amira	Amira	abs
abs	Amratha	abs	Amratha	Amratha	abs



No	Name of student	Class	18/10/23	19/10/23	26/10/23
37	Anamika Vijayan	SS BCA A	<del>Anamika</del>	<del>Anamika</del>	<del>Anamika</del>
38	Anand PS	SS BCA A	<del>Anand</del>	<del>Anand</del>	<del>abs</del>
39	Anaswara ER	SS BCA A	<del>Anaswara</del>	<del>Anaswara</del>	<del>Anaswara</del>
40	Andrews Biju	SS BCA A	<del>abs</del>	<del>abs</del>	<del>abs</del>
41	Anena Benny	SS BCA A	<del>Anena</del>	<del>Anena</del>	<del>abs</del>
42	Anisha CM	SS BCA A	<del>Anisha</del>	<del>Anisha</del>	<del>Anisha</del>
43	Ann Maria Tojo	SS BCA A	<del>Ann Maria</del>	<del>Ann Maria</del>	<del>Ann Maria</del>
44	Ann Theresa John	SS BCA A	<del>Ann Theresa</del>	<del>Ann Theresa</del>	<del>Ann Theresa</del>
45	Ann Treeta Joshy	SS BCA A	<del>Ann Treeta</del>	<del>Ann Treeta</del>	<del>Ann Treeta</del>
46	Ana Srazia	SS BCA A	<del>Ana</del>	<del>Ana</del>	<del>Ana</del>
47	Annamaiya Joshy	SS BCA A	<del>Annamaiya</del>	<del>Annamaiya</del>	<del>Annamaiya</del>
48	Anu Elizabeth Jose	SS BCA A	<del>Anu</del>	<del>Anu</del>	<del>Anu</del>
49	Anush Denny	SS BCA A	<del>Anush</del>	<del>Anush</del>	<del>abs</del>
50	Anto Evanijose	SS BCA A	<del>Anto</del>	<del>Anto</del>	<del>Anto</del>
51	Anumol Jose	SS BCA A	<del>Anumol</del>	<del>Anumol</del>	<del>Anumol</del>
52	Aparna Vinod	SS BCA A	<del>Aparna</del>	<del>Aparna</del>	<del>Aparna</del>
53	Axavind ttai	SS BCA A	<del>Axavind</del>	<del>Axavind</del>	<del>abs</del>
54	Axjun Saleesh	SS BCA A	<del>Axjun</del>	<del>Axjun</del>	<del>abs</del>
55	Axun Jose	SS BCA A	<del>Axun</del>	<del>Axun</del>	<del>abs</del>
56	Aswany Gosh	SS BCA A	<del>Aswany</del>	<del>Aswany</del>	<del>Aswany</del>
58	Arbul Krishna Bina	SS BCA A	<del>Arbul</del>	<del>abs</del>	<del>abs</del>
60	Augustine James	SS BCA A	<del>Augustine</del>	<del>Augustine</del>	<del>abs</del>
61	Ayalin Roy	SS BCA A	<del>Ayalin</del>	<del>Ayalin</del>	<del>Ayalin</del>
62	Badhin Prasad	SS BCA A	<del>Badhin</del>	<del>Badhin</del>	<del>Badhin</del>
63	Bioil George Baba	SS BCA A	<del>Bioil</del>	<del>Bioil</del>	<del>Bioil</del>
64	Charly Tony	SS BCA A	<del>Charly</del>	<del>Charly</del>	<del>abs</del>

27/10/23	30/10/23	31/10/23	1/11/23	2/11/23	3/11/23
<del>Anamika</del>	<del>abs</del>	<del>abs</del>	<del>Anamika</del>	<del>Anamika</del>	<del>Anamika</del>
<del>Anand</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>
<del>Anaswara</del>	<del>Anaswara</del>	<del>abs</del>	<del>Anaswara</del>	<del>abs</del>	<del>Anaswara</del>
<del>abs</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>
<del>Anena</del>	<del>abs</del>	<del>Anena</del>	<del>Anena</del>	<del>Anena</del>	<del>Anena</del>
<del>Anisha</del>	<del>Anisha</del>	<del>Anisha</del>	<del>Anisha</del>	<del>Anisha</del>	<del>Anisha</del>
<del>Ann Maria</del>	<del>Ann Maria</del>	<del>Ann Maria</del>	<del>Ann Maria</del>	<del>Ann Maria</del>	<del>Ann Maria</del>
<del>Ann Theresa</del>	<del>Ann Theresa</del>	<del>Ann Theresa</del>	<del>Ann Theresa</del>	<del>Ann Theresa</del>	<del>Ann Theresa</del>
<del>Ann Treeta</del>	<del>Ann Treeta</del>	<del>Ann Treeta</del>	<del>Ann Treeta</del>	<del>Ann Treeta</del>	<del>abs</del>
<del>Ana</del>	<del>abs</del>	<del>abs</del>	<del>Ana</del>	<del>Ana</del>	<del>Ana</del>
<del>Annamaiya</del>	<del>Annamaiya</del>	<del>Annamaiya</del>	<del>Annamaiya</del>	<del>Annamaiya</del>	<del>Annamaiya</del>
<del>Anu</del>	<del>Anu</del>	<del>Anu</del>	<del>Anu</del>	<del>Anu</del>	<del>Anu</del>
<del>Anush</del>	<del>Anush</del>	<del>Anush</del>	<del>Anush</del>	<del>abs</del>	<del>Anush</del>
<del>Anto</del>	<del>Anto</del>	<del>Anto</del>	<del>Anto</del>	<del>Anto</del>	<del>Anto</del>
<del>Anumol</del>	<del>Anumol</del>	<del>Anumol</del>	<del>Anumol</del>	<del>Anumol</del>	<del>Anumol</del>
<del>Aparna</del>	<del>Aparna</del>	<del>Aparna</del>	<del>Aparna</del>	<del>Aparna</del>	<del>Aparna</del>
<del>Axavind</del>	<del>Axavind</del>	<del>Axavind</del>	<del>Axavind</del>	<del>abs</del>	<del>Axavind</del>
<del>Axjun</del>	<del>Axjun</del>	<del>Axjun</del>	<del>Axjun</del>	<del>Axjun</del>	<del>Axjun</del>
<del>Axun</del>	<del>Axun</del>	<del>Axun</del>	<del>Axun</del>	<del>Axun</del>	<del>Axun</del>
<del>Aswany</del>	<del>Aswany</del>	<del>Aswany</del>	<del>Aswany</del>	<del>Aswany</del>	<del>Aswany</del>
<del>Arbul</del>	<del>Arbul</del>	<del>Arbul</del>	<del>Arbul</del>	<del>Arbul</del>	<del>Arbul</del>
<del>Augustine</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>	<del>abs</del>
<del>Ayalin</del>	<del>Ayalin</del>	<del>abs</del>	<del>Ayalin</del>	<del>Ayalin</del>	<del>Ayalin</del>
<del>Badhin</del>	<del>Badhin</del>	<del>Badhin</del>	<del>Badhin</del>	<del>Badhin</del>	<del>Badhin</del>
<del>Bioil</del>	<del>Bioil</del>	<del>Bioil</del>	<del>Bioil</del>	<del>abs</del>	<del>Bioil</del>
<del>Charly</del>	<del>Charly</del>	<del>Charly</del>	<del>Charly</del>	<del>Charly</del>	<del>Charly</del>



Principal  
SANTHOSH COLLEGE OF COMPUTER SCIENCES  
PUTHUPUZZHA P.O., THODUPUZZHA  
KERALA, PIN-686 589

Thomas Augustine  
Toma







Sl No	Name of student	Class	17/10/23	19/10/23	25/10/23
37	Nevin Mathew	SS BCA B	<del>NM</del>	abs	<del>NM</del>
38	Nevia Saji	SS BCA B	<del>NM</del>	<del>NM</del>	<del>NM</del>
39	Nicholas Charles	SS BCA B	Nicholas	Nicholas	Nicholas
40	Nikhil K S	SS BCA B	Nikhil	Nikhil	abs
41	Nikshitha V	SS BCA B	Nikhil	Nikhil	Nikhil
42	Nousia Nazim	SS BCA B	Nousia	Nousia	Nousia
43	Pocunamsi Raju	SS BCA B	Pocunamsi	Pocunamsi	Pocunamsi
44	Rahul PA	SS BCA B	Rahul	Rahul	Rahul
45	Sachin S	SS BCA B	Sachin	abs	Sachin
46	Sachin TR	SS BCA B	Sachin	Sachin	Sachin
47	Sahar Khan	SS BCA B	Sahar	abs	abs
48	Salu K Biju	SS BCA B	Salu	Salu	Salu
49	Sayanth Joth	SS BCA B	Sayanth	Sayanth	Sayanth
50	Shalima George	SS BCA B	Shalima	Shalima	Shalima
51	Sibin Saji	SS BCA B	Sibin	abs	Sibin
52	Sidharth Venugopal	SS BCA B	Sidharth	abs	Sidharth
53	Privadarani V Arak	SS BCA B	Privadarani	abs	Privadarani
54	Sona Saji	SS BCA B	abs	Sonajay	Sonajay
55	Souparnika V	SS BCA B	Souparnika	Souparnika	Souparnika
56	Sreelakshmi Manoj	SS BCA B	Sreelakshmi	Sreelakshmi	Sreelakshmi
57	Stebin Benny	SS BCA B	Stebin	Stebin	Stebin
58	Tessa Maria Chiju	SS BCA B	Tessa	Tessa	Tessa
59	Tharun K S	SS BCA B	Tharun	Tharun	Tharun
60	Tom T Thomas	SS BCA B	Tom	abs	Tom
61	Tony H Anil	SS BCA B	Tony	Tony	Tony
62	Vishnu Biju	SS BCA B	Vishnu	Vishnu	abs
63	Vishnu Saji	SS BCA B	Vishnu	Vishnu	abs
64	Vishnu dathan KH	SS BCA B	Vishnu	Vishnu	abs

Sl No	Name of student	Class	25/10/23	27/10/23	30/10/23	3/11/23	11/11/23	21/11/23	28/11/23
37	Nevin Mathew	SS BCA B	<del>NM</del>	<del>NM</del>	<del>NM</del>	<del>NM</del>	<del>NM</del>	<del>NM</del>	<del>NM</del>
38	Nevia Saji	SS BCA B	<del>NM</del>	<del>NM</del>	<del>NM</del>	<del>NM</del>	<del>NM</del>	<del>NM</del>	<del>NM</del>
39	Nicholas Charles	SS BCA B	Nicholas	Nicholas	Nicholas	Nicholas	Nicholas	Nicholas	Nicholas
40	Nikhil K S	SS BCA B	abs	Nikhil	Nikhil	Nikhil	Nikhil	Nikhil	Nikhil
41	Nikshitha V	SS BCA B	Nikhil	Nikhil	abs	abs	abs	Nikhil	Nikhil
42	Nousia Nazim	SS BCA B	Nousia	Nousia	Nousia	Nousia	Nousia	Nousia	Nousia
43	Pocunamsi Raju	SS BCA B	Pocunamsi	Pocunamsi	Pocunamsi	Pocunamsi	Pocunamsi	Pocunamsi	Pocunamsi
44	Rahul PA	SS BCA B	Rahul	abs	abs	abs	abs	Rahul	abs
45	Sachin S	SS BCA B	Sachin	abs	abs	abs	abs	Sachin	Sachin
46	Sachin TR	SS BCA B	Sachin	abs	abs	abs	abs	Sachin	Sachin
47	Sahar Khan	SS BCA B	Sahar	abs	abs	Sahar	Sahar	Sahar	Sahar
48	Salu K Biju	SS BCA B	Salu	Salu	Salu	Salu	Salu	Salu	Salu
49	Sayanth Joth	SS BCA B	Sayanth	Sayanth	abs	Sayanth	Sayanth	Sayanth	Sayanth
50	Shalima George	SS BCA B	Shalima	Shalima	Shalima	Shalima	Shalima	Shalima	Shalima
51	Sibin Saji	SS BCA B	Sibin	Sibin	Sibin	Sibin	Sibin	Sibin	Sibin
52	Sidharth Venugopal	SS BCA B	Sidharth	abs	Sidharth	Sidharth	Sidharth	Sidharth	Sidharth
53	Privadarani V Arak	SS BCA B	Privadarani	abs	Privadarani	Privadarani	Privadarani	Privadarani	Privadarani
54	Sona Saji	SS BCA B	Sonajay	Sonajay	Sonajay	Sonajay	Sonajay	Sonajay	Sonajay
55	Souparnika V	SS BCA B	Souparnika	Souparnika	Souparnika	abs	Souparnika	Souparnika	Souparnika
56	Sreelakshmi Manoj	SS BCA B	Sreelakshmi	Sreelakshmi	Sreelakshmi	Sreelakshmi	Sreelakshmi	Sreelakshmi	Sreelakshmi
57	Stebin Benny	SS BCA B	Stebin	abs	abs	abs	Stebin	Stebin	Stebin
58	Tessa Maria Chiju	SS BCA B	Tessa	Tessa	Tessa	Tessa	Tessa	Tessa	Tessa
59	Tharun K S	SS BCA B	Tharun	abs	abs	Tharun	Tharun	Tharun	Tharun
60	Tom T Thomas	SS BCA B	Tom	Tom	Tom	Tom	abs	Tom	Tom
61	Tony H Anil	SS BCA B	Tony	Tony	Tony	Tony	Tony	Tony	Tony
62	Vishnu Biju	SS BCA B	Vishnu	abs	Vishnu	Vishnu	abs	Vishnu	Vishnu
63	Vishnu Saji	SS BCA B	Vishnu	Vishnu	Vishnu	abs	abs	Vishnu	Vishnu
64	Vishnu dathan KH	SS BCA B	Vishnu	Vishnu	Vishnu	Vishnu	Vishnu	abs	Vishnu



PRINCIPAL  
SANTHOSH COLLEGE OF COMPUTER SCIENCES  
VADUTHAL, PIN 685 503

Thomas Augustin  
John





# SANTHIGIRI

## COLLEGE OF COMPUTER SCIENCES

Affiliated to MG University and Approved by AICTE

### CERTIFICATE

This is to certify that Mr/Ms.....*Anand P S*.....  
student of **BCA** Programme has successfully completed **30** hours  
Add-on course on ***"DATA VISUALIZATION USING PYTHON"*** from  
17<sup>th</sup> October 2023 to 24<sup>th</sup> October 2023 for the academic year 2023 - 2024  
with....*A+*.....grade.

Date : *10/10/2023*



*[Signature]*  
Principal  
*10/10/2023*





# **SANTHIGIRI**

## **COLLEGE OF COMPUTER SCIENCES**

Affiliated to MG University and Approved by AICTE

### **CERTIFICATE**

This is to certify that Mr/Ms.....*Adhithyan Sasidharan*.....  
student of **BCA** Programme has successfully completed **30** hours  
Add-on course on “***DATA VISUALIZATION USING PYTHON***” from  
17<sup>th</sup> October 2023 to 24<sup>th</sup> October 2023 for the academic year 2023 - 2024  
with.....*A*.....grade.

Date : 10/11/2023



*[Signature]*  
Principal