To The Principal, Akbar Peerbhoy College, M. S. Ali Road, Two Tank, Grant Road(E), Mumbai - 08.

(Through: Dr. M. H. Lakdawla, Assist. Director, Professional Courses)

Sub: Permission to organize workshop for B. Sc. IT

Respected Sir,

this is to request you to kindly allow us to conduct workshop on "Python Data Structure" on 18th Aug 2018 at 2:30 pm at Computer Lab B 4th Floor.

The workshop will be conducted by one of our alumni, Mr. Tanki Mohammed Sibtain, currently working as Manager with Morgan Stanley on Cloud Platform using Python.

Since the workshop is conducted in the afternoon and no honorarium is to be paid to the speaker, I request you to kindly allow to arrange lunch for the speaker.

The details of the workshop is attached for your kind reference.

Kindly approve.

Thank You.

Prof. Ahtesham Shaikh

Co-ordinator

B. Sc. IT

Approved Jamy



Anjuman-I-Islam's

## Akbar Peerbhoy College of Commerce and Economics M. S. Ali Road, Mumbai – 400008

Date: 13 /08/2018

## B. Sc. (Information Technology)

# Workshop on "Python Data Structure"

A workshop on Python Data structure will be conducted at Computer Lab - B, 4th Floors at

2:30 pm on Saturday, 18th August 2018.

### Speakers Profile:

Mr. Tanki Mohammed Sibtain is working as a Manager at Morgan Stanley, having 4+ years of experience with expertise in Python programming language. He is responsible for implementing firm's cloud strategy, building cloud tooling and enabling environments on demand. He also conducts corporate training for Python. He has done MCA form *Veer Maata Jijabai Technology Institute* (Gold Medalist, 1st in University Merit) and B.Sc. IT from *Akbar Peerbhoy College* (Bronze Medalist, 3rd in University Merit) from University of Mumbai.

All the students of T. Y. B. Sc. IT therefore must remain present on time.

Course Title: Python Data Structures

Duration: 3 Hours 45 Mins.

Absentees will be viewed seriously by the authority.

Prof. Ahtesham Shaikh Coordinator

B. Sc. IT

(Dr. M. H. Lakdawala)

Assist. Director,

**Professional Courses** 

(Prof. Mohammed Tahir)

Principal

Course Title: Python Data Structures

Duration: 3 hours 45 mins

#### Prerequisite(s):

Understanding of Python Basics – Variables, Control Structures (if..else, Loops)

#### Logistics:

- A system with Python 3 installed
- Projector
- Whiteboard and Markers

### Course Introduction and key takeaways:

Python is a general-purpose, high-level programming language. It comes with its own batteries. It has wide range of applications all the way from automation to data science. Choice of data structures play critical role in application design and performance. This course intends to introduce you to Python in-built data structures and provide a deep dive into their applications.

Post course you will build comprehensive understanding of Python data structures enabling you to make write choices in your programs when it comes to picking one data structure over another. This will also help you write idiomatic/pythonic code.

#### Lecture Plan:

Sr. No.	Title	Duration
1.	Introduction to Data Structures	15 mins
1.1	What is data structure and its importance?	10 mins
1.2	Python In-built Data Structures	5 mins
2.	String	30 mins
2.1	Introduction - Creating String objects	5 mins
2.2	String operations, * operator	5 mins
2.3	Strings are immutable	5 mins
2.4	String Slicing	5 mins
	Lab	10 mins
3.	List	1 hour
3.1	Introduction – Creating List and Use cases	5 mins
3.2	List operations	10 mins
3.3	Append vs. Extend	5 mins
3.4	Lists are mutable	5 mins
3.5	Shallow vs. Deep Copy	5 mins
3.6	Iterating a list	10 mins



3.7	List Comprehension	5 mins
,	Lab	15 mins
37731.	Lab	
4.	Tuple	30 mins
4.1	Introduction – Creating Tuple and it's use	5 mins
4.2	Tuple Operations	5 mins
4.3	List vs. Tuple	5 mins
4.4	Tuple unpacking	5 mins
	Lab	10 mins
5.	Set	15 mins
5.1	Introduction	5 mins
5.2	Set operations	5 mins
	Lab	5 mins
6.	Dictionary	30 mins
6.1	Introduction	5 mins
6.2	Dictionary Manipulation	10 mins
6.3	Iterating dictionary	10 mins
6.4	Dictionary Comprehension	5 mins
7.	Practical Lab	45 mins
7.	Students will be provided with a list of problem statements. They need to solve applying	
	data structures learned in the course.	
	Lab Review and Final QnA	15 mins

#### **About Course Guide:**

**Sibtain** is Manager at Morgan Stanley. He is having 4+ years of experience with expertise in Python programming language. He is responsible for implementing firm's cloud strategy, building cloud tooling and enabling environments on demand. He also conducts corporate training for Python. He has done MCA (Gold Medalist) and B.Sc. IT (3rd in University Merit) from University of Mumbai.





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## Akbar Peerbhoy College of Commerce and Economics M. S. Ali Road, Mumbai – 400008

Date: 13 /08/2018

## B. Sc. (Information Technology)

Report on Workshop on "Python Data Structure"

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2:30 pm on Saturday, 18th August 2018.

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Total Students Attended: 22

Course Title: Python Data Structures

**Duration:** 3 Hours 45 Mins.

The program was ended by vote of thanks by Prof. Ahtesham Shaikh

Coordinator

B. Sc. IT