GURU NANAK COLLEGE (Autonomous)

Guru Nanak Salai, Velachery, Chennai - 600 042

<u>REPORT</u>

1.	**Event Title**	:	**ONLINE CERTIFICATE COURSE ON "PYTHON PROGRAMMING FOR LIFE SCIENCES"**
2.	**Category**	:	**UG/PG STUDENTS, RESEARCH SCHOLARS AND FACULTY OF LIFE SCIENCES**
3.	**Department**	:	**GURU NANAK CENTRE FOR RESEARCH (GNCR)**
4.	**Date**	:	**1st – 7th JULY, 2020**
5.	**No. of Participants**	:	**100 Nos.**
6.	**No. of Resource Persons**	:	**2 Nos.**

Report Description:

The Online Certificate Course on "PYTHON PROGRAMMING FOR LIFE SCIENCES" was conducted by the Guru Nanak Centre for Research (GNCR) of Guru Nanak College (Autonomous) for One Week from 1st July to 7th July, 2020. The objective of this online certificate course was to provide basic knowledge of Python Programming to Life Sciences Scholars. This Course was designed to help learners take their first step towards enriching their knowledge using the fundamentals of Python programming. Out of total 168 Registrations received, 100 applicants were selected for the Online Course.

The first day of the online course was inaugurated by Dr. M. G. Ragunathan, Principal with this energetic Welcome Address. He welcomed the Resource Persons and the Participants from different Institutions across the State of Tamil Nadu who joined virtually. Dr. J. Jayanthi, Dean Research of Guru Nanak Centre for Research greeted the participants and introduced the Resource Persons Dr. J. Vanathi and Dr. Mahendrakumar. M. The Online Course was conducted through Google Meet with Attendance and Final Assessments were done by Google Forms.

The Online Course was conducted as per the below mentioned schedule.

DAY 1: INTRODUCTION, HISTORY, INSTALLATION OF PYTHON
DAY 2: PYTHON IDENTIFIERS
DAY 3: PYTHON OPERATORS
DAY 4: DECISION MAKING
DAY 5: STRINGS IN PYTHON
DAY 6: PYTHON COLLECTIONS
DAY 7: THE ROLE OF PYTHON IN LIFE SCIENCES

The last day of the Course was concluded with valedictory function where our Principal, Dr. M. G. Ragunathan delivered the Welcome Address and Dean Research of GNCR, Dr. J. Jayanthi spoke the concluding remarks about the course. The participants were happy about getting an opportunity to learn a new programming language and also expressed their satisfaction about the way the online course was conducted. All the participants thanked Guru Nanak Centre for Research for this initiative. Finally the Dean Research, Guru Nanak Centre for Research, Dr. J. Jayanthi rendered the Vote of Thanks.

The Learning Course material of the seven day Programme was compiled and sent to all the participants. The Participants were tested with an Online Assessment and all those who secured 40 % and above were issued the Certificate of Completion of the Online Certificate Course.

INVITATION

GURU NANAK COLLEGE (Autonomous)
Re-accredited at 'A' Grade by NAAC
Guru Nanak Salai, Velachery, Chennai – 600 042.

GURU NANAK CENTRE FOR RESEARCH (GNCR)

ONLINE CERTIFICATE COURSE
ON
PYTHON PROGRAMMING FOR LIFE SCIENCES

HARDWARE REQUIREMENTS:
System: **Laptop / Desktop**
Operating System: **Windows 7, 8, 10**
RAM: **1GB or more memory**
Hard-Disk Drive: **250 GB**

DATES
1st - 7th July, 2020

TIME
2.30 p.m. – 3.30 p.m.

Resource Persons

Dr. J. VANATHI
Assistant Professor & Head,
Department of B.Sc., (I.T.)

Dr. MAHENDRAKUMAR. M
Assistant Professor,
Department of Biotechnology

WHO CAN ATTEND ?
UG & PG Students, Research Scholars and Faculty of Life Sciences

NO REGISTRATION FEE

Register @
https://forms.gle/dgPYSrcUM91sZBWD6

Participants must clear the online Exam to qualify for the Certificate

FOR FURTHER ENQUIRIES CONTACT
Dr. J. JAYANTHI (DEAN RESEARCH)
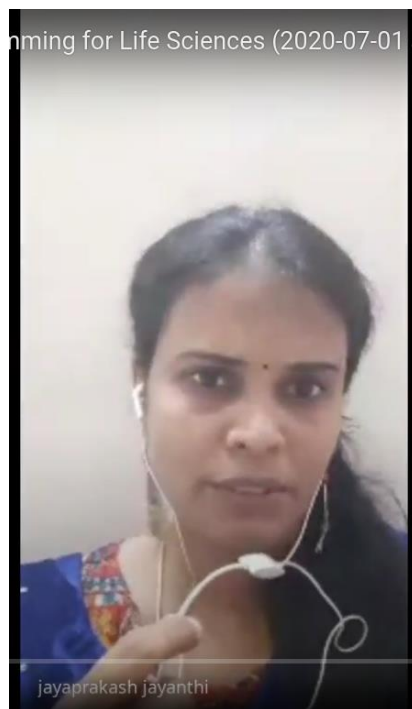Email: researchdean@gurunanakcollege.edu.in
Mobile : 9003053668

Dr. M. G. RAGUNATHAN
PRINCIPAL

SARDAR MANJIT SINGH NAYAR
GENERAL SECRETARY & CORRESPONDENT

PHOTOS

INAUGURATION FUNCTION:
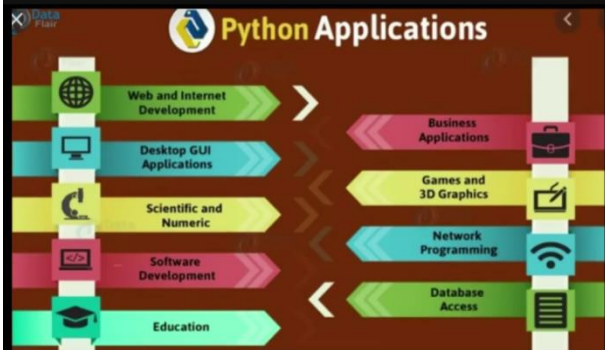
Python Identifiers

A Python identifier is a name used to identify a variable, function, class, module or other object.

Rules for Python Identifiers

Identifiers can be a combination of letters in lowercase (a to z) or uppercase (A to Z) or digits (0 to 9) or an underscore _.

Example - Valid

Names like myClass, var_1 and print_this_to_screen, all are valid example.

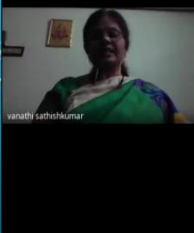An identifier cannot start with a digit.

Example - Invalid

1variable is invalid.

But variable1 is a valid name.

Keywords cannot be used as identifiers

Python is a case-sensitive language. This means, Variable and variable are not the same.

PYTHON VARIABLES

Variables are nothing but reserved memory locations to store values.

When you create a variable you reserve some space in memory.

In Python , a variable is seen as a tag that is tied to some value.

Example : num = 1
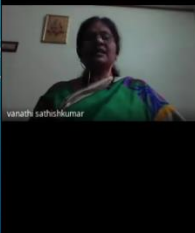
Python consider the value as objects.

Based on the data type of a variable, the interpreter allocates memory and decides what can be stored in the reserved memory.

By assigning different data types to variables, you can store integers, decimals or characters in these variables.

Variables do not need to be declared with any particular type and can even change type after they have been set.

Example

X = 10

X = "ABC"

THE ROLE OF
PYTHON IN
LIFE SCIENCES

Dr. MAHENDRAKUMAR. M

Assistant Professor, Department of Biotechnology
Guru Nanak College (Autonomous),
Guru Nanak Salai, Velachery, Chennai – 600042

BIOPYTHON

biopython

Python for Collaborative Drug Discovery

❖ Finding a new drug often takes over a decade and more than $800 million. A big problem early in the process is identifying those candidates more likely to be good drugs from the vast universe of possible molecules.

❖ To save time and money on laboratory work, experimental chemists use computational models to narrow the field of good drug candidates, while also verifying that the candidates to be tested are not simple variations of each other's basic chemical structure.

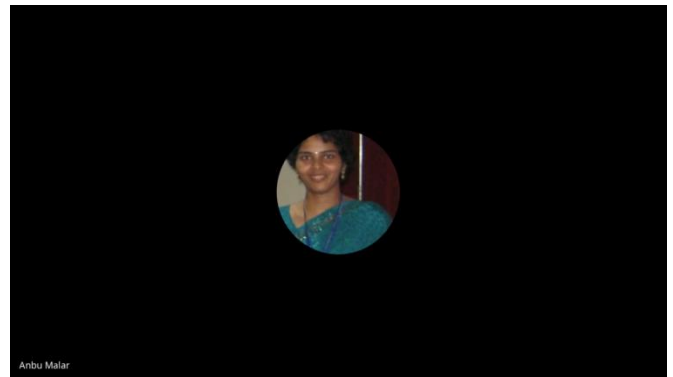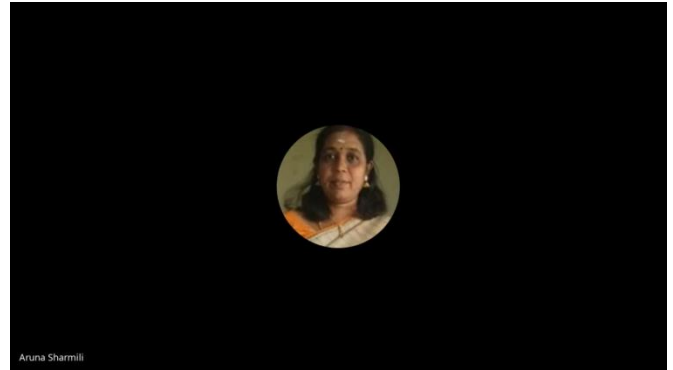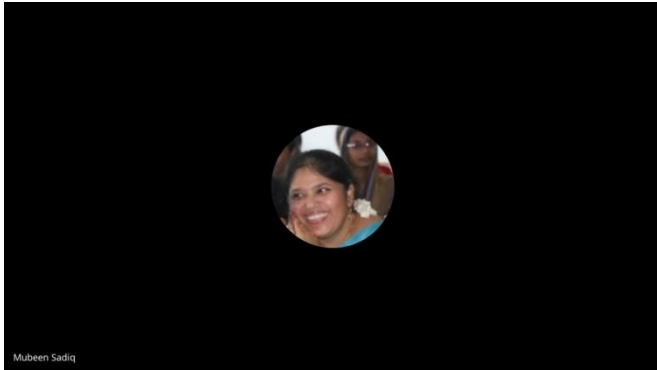

PyMOL

PyMOL is a powerful Python-Based Software for Computational Drug Design tool that displays the 3D structures of biological targets and offers up to 12 different stereo visualization modes.
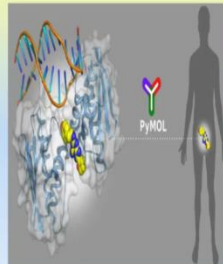
PARTICIPANTS FEEDBACK:

VALEDICTORY FUNCTION:

CERTIFICATE COPY

GURU NANAK CENTRE FOR RESEARCH
GNCR

GURU NANAK COLLEGE (Autonomous)
(Re-accredited at 'A' Grade by NAAC)
Affiliated to University of Madras
Guru Nanak Salai, Velachery, Chennai – 600 042

ONLINE CERTIFICATE COURSE ON
"PYTHON PROGRAMMING FOR LIFE SCIENCES"

This is to certify that

HIMANSHU GUPTA. U

Guru Nanak College (Autonomous), Velachery, Chennai – 600 042

has successfully completed the One Week **ONLINE CERTIFICATE COURSE ON "PYTHON PROGRAMMING FOR LIFE SCIENCES"** from **01.07.2020 to 07.07.2020** and an exam conducted by the Guru Nanak Centre for Research (GNCR), Guru Nanak College (Autonomous), Guru Nanak Salai, Velachery, Chennai - 600 042.

Dr. J. JAYANTHI
DEAN RESEARCH
CONVENER

Dr. M. G. RAGUNATHAN
PRINCIPAL

SARDAR MANJIT SINGH NAYAR
GENERAL SECRETARY & CORRESPONDENT