



JB INSTITUTE OF ENGINEERING & TECHNOLOGY

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Department of Computer Science and Engineering

DETAILED REPORT ON

NATIONAL LEVEL ONE-WEEK FACULTY DEVELOPMENT PROGRAM

ON

“PYTHON PROGRAMMING”

(08th to 13th AUGUST 2022)

JB Institute of Engineering & Technology (A) has organised a one-week Faculty Development Programme on "**Python Programming**" from **August 8th to August 13th, 2022**. This FDP programme received an overwhelming response with 50 participants from various institutes/colleges approved by AICTE and affiliated to various universities across the arena of India.

Date: 08th August 2022

Inauguration:

Dr. P.C. Krishnamachary, Principal, JBIET, along with Mr. Murthy, Director of JB Group of Educational Institutions, Dr. Niraj Upadhyaya, Dean-R&D; Dr. Salaludin, Dean of Academics; Dr. P. Srinivasa Rao, Head of the Department, CSE Department, and Convener of the Faculty Development Programme.

All the dignitaries and delegates are welcomed by Dr. P. Srinivasa Rao, Convener, FDP. In his welcome speech, he highlighted the importance and objectives of organising this faculty development programme. In his speech, he added that Python is a widely used programming language used by several big companies like Google, Pinterest, Instagram, Disney, Yahoo!, Nokia, IBM, and many others. Also, he highlighted a few statistics pertaining to the job opportunities available for Python developers.

In his inaugural speech, worthy **Dr. P.C. Krishnamachary, Principal, JBIET**, thanked the management and secretary for conducting the Faculty Development Programme on "**Python Programming**". He highlighted the importance of learning general-purpose programming languages such as Python, Java, and Ruby. He emphasised that technical skills among teachers can be built only through faculty development programs.

And, **Dr. Md. Salauddin** appreciated **Dr. P. Srinivasa Rao, Professor &HOD-CSE and Convener**, for conducting a programme on the latest trends in computer science and engineering. At the end of the inaugural, the session was concluded with a vote of thanks given by **Mrs. Beulah J. Karthikeyan, Assistant Professor, JBIET (A)**.



Session	Resource Person	Topic
Day 1 – FN 08.08.2022	Mr.Sathish Kumar, Asst. Prof. CSE, JBIET	Introduction to Python Programming



The resource person of this session, Mr. S. Sathish Kumar, started his lecture on Introduction to Python Programming with its history. He elaborated on the types of programming languages and has given examples of use cases for each programming language. He further added why Python is ideal for beginners who want to learn a programming language. He briefed the discussion about the importance of using the Python programming language in Deep Learning and Artificial Intelligence-based applications.

Session	Resource Person	Topic
Day 1 – AN 08.08.2022	Dr.P.Srinivasa Rao, HOD CSE, JBIET	Python – Classes, Objects



In his lecture, Dr. P. Srinivasa Rao, Professor & Head – CSE, stated that "Python has been an object-oriented language since it existed. Because of this, creating and using classes and objects is "downright easy". Then he moved on to elaborate on how to write code in Python to create a class and objects. Also, he highlighted the importance of learning an object-oriented programming language due to its simplicity and reusable nature.

Session	Resource Person	Topic
Day 2 – FN 10.08.2022	Dr.Trupthi, CSE Department, CBIT	Python – Lists, Tuples



In her lecture, Dr. Trupthi demonstrated the need for different data types to handle various real-world problems. She explained the two important datatypes known as List and Tuple with suitable use cases. Code snippets were executed by her in Google Collab to show the usefulness of the above-mentioned data types. Methods relevant to lists and tuples were briefly discussed.

Session	Resource Person	Topic
Day 2 – AN 10.08.2022	Dr.P.SrinivasaRao, HOD CSE, JBIET	Python – Functions



In his lecture, Dr. P. Srinivasa Rao, Professor & Head – CSE, stated that " Modular programming (also referred to as modular architecture) is a general programming concept. It involves separating a program's functions into independent pieces or building blocks, each containing all the parts needed to execute a single aspect of the functionality. Together, the modules make up the executable application program. " He has shown the participants how to create functions in Python in the simplest way possible. At the end of the session, all participants were able to understand the reusable nature of functions and write effective code for solving the problem.

Session	Resource Person	Topic
Day 3 – FN 11.08.2022	Dr. L.Sridhara Rao, HoD- AI&DS, JBIET	Python – Database Programming



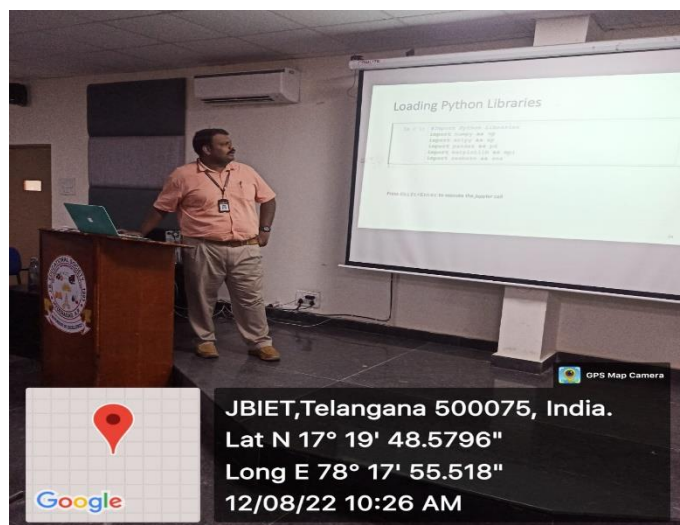
In his lecture, Dr. L. Sridhara Rao, Assoc. Professor & Head – AI&DS, highlighted the powerful features for database programming offered by Python. The various types of databases supported by Python, such as SQLite, MySQL, Oracle, Sybase, PostgreSQL, etc., were briefly discussed. Then he moved on to talk about different types of database statements, namely Data Definition Language (DDL), Data Manipulation Language (DML), and Data Query Statements. Finally, he demonstrated to the participants how to use Python DB-API to create an interface between Python and a database.

Session	Resource Person	Topic
Day 3 – AN 11.08.2022	Prof.Dr.Vijayakumar, CSE Dept. VJIT	OOPS Concepts



In his lecture, Prof. Dr. Vijayakumar, CSE Dept, VJIT, discussed the different paradigms that exist in the world of programming languages. Also, he added that "Python is a multi-paradigm programming language. It supports different programming approaches. He compared object and procedural-oriented programming with suitable scenarios. He gave a brief introduction to the building blocks of OOPS in Python like polymorphism, encapsulation, inheritance, and data abstraction with examples of real-world problems.

Session	Resource Person	Topic
Day 4 – FN 12.08.2022	Dr.G.Arun Sampaul Thomas, Assoc. Prof. CSE, JBIET	Python File & Exception Handling, Python for Data Analysis



In his lecture, Dr.G.Arun Sampaul Thomas, Assoc. Prof. CSE, JBIET, gave insights to the participants about the usefulness of handling files and exceptions. He has shown the participants how to create a text file and write and read the contents thereof. He also demonstrated two very important features, namely exception handling and assertions, to handle any unexpected error in the Python program and to add debugging capabilities to them. Finally, he has given a brief introduction to the most used Python libraries for data analysis, namely Tensorflow, Numpy, Pandas, and Scipy.

Session	Resource Person	Topic
Day 4 – AN 12.08.2022	Mr.Sathish Kumar, Asst. Prof. CSE, JBIET	Python - Dictionaries



Mr. S. Sathish Kumar, Assistant Professor - CSE, provided significant use cases for the Python data type called dictionary in his lecture. He also gave hints to the participants about the correct usage of the dictionary methods. He has given a list of scenarios to help participants understand when to use Python dictionaries.

Session	Resource Person	Topic
Day 5 – FN 13.08.2022	Prof. Dr. Niraj Upadhayaya, Dean-R&D, JBIET	Python for AI



Prof. Dr. Niraj Upadhayaya, Dean-R&D, JBIET, in his lecture stated that "Python has a rich library; it is also object-oriented and easy to program. It can also be used as a frontend language. That's why it is used in artificial intelligence. Rather than AI, it is also used in machine learning, soft computing, NLP programming, and web scripting or in ethical hacking. " Furthermore, he said that "Many people who are interested in machine learning aren't professional programmers. For example, there are mathematicians who work on differential equations and there are physicists who work on stochastic processes. These people aren't programmers. So using a language like C++, which is hard to learn, is only detrimental to their work. In addition, creating a model in Python is much easier than in C++ or Java." He concluded the session by adding the point, "Python has a standard library in development and a few for AI. It has an intuitive syntax, basic control flow, and data structures. It also supports an interpretive run-time without standard compiler languages. This makes Python especially useful for prototyping algorithms for AI."

Session	Resource Person	Topic
Day 5 – AN (1) 13.08.2022	Dr.D.Sasikala, Prof-CSE, JBIET	Python & its Applications



Dr. D. Sasikala, Professor-CSE, in her lecture stated that "Python has been at the forefront of machine learning, data science, and artificial intelligence innovation. Further, it provides ease in building a plethora of applications, web development processes, and a lot more". She elaborated on the usefulness of Python in areas such as web development, data science, machine learning and AI, game development, audio and visual applications, software development, CAD applications, etc.

Session	Resource Person	Topic
Day 5 – AN (2) 13.08.2022	Prof.Dr. Nagamani, CSE Dept, University of Hyderabad.	Python For Research & its Applications



In her lecture, Prof. Dr. Nagamani, CSE Dept, University of Hyderabad, asked the participants "Why Is Python Good for Research?" and brainstormed the ideas of the participants. She also added that "A variety of people use spreadsheet programmes like Microsoft Excel or Google Sheets to work with huge amounts of data. These are powerful tools, but they have serious limitations, like problems with analysing datasets above a certain size. limitations that are not a problem for Python—one of the most popular and fastest-growing major programming languages in the world." She also discussed Python in conjunction with the Jupyter Notebook, which is very useful for data science, machine learning, and research. She told the participants about how it allows people to write extremely expressive code.

Valedictory Session:

At the valedictory ceremony, Dr. P.C. Krishnamachary, Principal, JBIET, joined the session along with Dr. Niraj Upadhyaya, Dean-R&D; Dr. Salaludin, Dean of Academics; Dr. P. Srinivasa Rao, FDP Convener & HOD of the CSE Department; and Coordinators of the FDP.

In his valedictory address, Dr. P.C. Krishnamachary, Principal, JBIET(A), in his valedictory address, congratulated the Program Convener, Dr. P. Srinivasa Rao, for organising the FDP in a successful manner. Further, he appreciated the teaching and non-teaching staff members of the CSE Department for promoting this kind of development programme for the faculties. He also motivated the researchers and faculties about how to keep a continuous interest in the research.

At the end of the valedictory session, a vote of thanks was given to Mrs. Beulah J. Karthikeyan, Assistant Professor, JBIET (A), in which she expressed her gratitude towards all the dignitaries who had spared their valuable time and came from a faraway place to share their expertise with the participants. She also expressed gratitude to the print media for their consistent coverage of the entire program.

Feedback from the Participants:

The feedback of the participants was very positive and motivational for the organizers. The participants felt very happy about conducting the FDP on the latest trends in research as well as industry. They have learned a lot about Python programming in theoretical and practical ways. They said that this programme was very useful and helpful for them in their research work and in guiding the projects for the students. All the participants appreciated the transportation facilities and hospitality arrangements of the institute.

While speaking, Mr. J. Nagaraju, Assistant Professor, Bhaskar Engineering College, said that "I really enjoyed the FDP on Python Programming." I had the time and space to practise the techniques with support and compassion, and I can see this is something I want to use and explore more". I thank Dr. P. Srinivasa Rao, FDP Covener, and Dr. G. Arun Sampaul Thomas, FDP-Coordinator, so much for giving me this opportunity to participate in the FDP.



Feedback by Mr. J. Nagaraju, BEC, Hyderabad

Certificate Distribution to the Participants:





Certificate of Appreciation to the Resource Person:





