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Report - Guest Lecture on "Importance of Python in Software Development" Conducted on 10 October 2014



Resource Person: Dr. Jayanth Kirtane, MSEE (CS), Ph.D (CS) from Pennsylvania State University, He worked at University of Pune in different capacities like Assistant Professor, Professor, Dean, Head and Chairman Board of Studies. He was Chief Scientist at CDAC. Professor Jayanth worked with M.M. Zloof (father of QBE) and Prof Niklus Wirth (Architect of Programming languages).

[Submitted by Dr. M. Suresh Babu, Professor & Head, Dept. of Computer Applications.](#)

The speaker spoke in detail about the Python and the importance of Python programming. The key points stressed by the speaker in his speech:

Python gets a lot of different things right, right in a combination that no other language has done so far.

It is still common to start students with a procedural (subset of a) statically typed language such as Pascal, C, or a subset of C++ or Java. Students may be better served by learning Python as their first language. Python has a very simple and consistent syntax and a large standard library and, most importantly, using Python in a beginning programming course permits students to concentrate on important programming skills such as problem decomposition and data type design. With Python, students can be quickly introduced to basic concepts such as loops and procedures. They can even probably work with user-defined objects in their very first course.

For a student who has never programmed before, using a statically typed language seems unnatural. It presents additional complexity that the student must master and slows the pace of the course. The students are trying to learn to think like a computer, decompose problems, design consistent interfaces, and encapsulate data. While learning to use a statically typed language is important in the long term, it is not necessarily the best topic to address in the students' first programming course.

Importance of Python Programming:

Python is a high-level, interpreted, interactive and object-oriented scripting language. Python was designed to be highly readable which uses English keywords frequently whereas other languages use punctuation and it has fewer syntactical constructions than other languages.

Python provides a better structure and support for large programs than shell scripting. Apart from the above-mentioned features, Python has a big list of good features, few of them are-

- Support for functional and structured programming methods as well as OOP.
- It can be used as a scripting language or can be compiled to byte-code for building large applications.
- Very high-level dynamic data types and supports dynamic type checking.
- Supports automatic garbage collection.
- It can be easily integrated with C, C++, COM, ActiveX, CORBA and Java.