QUALITY THOUGHT
Real Time Software Training

PYTHON COURSE CONTENT

python

We are ready to serve Latest Testing Trends, Are you ready to learn.??

New Batches Info

START DATE :

TIMINGS :

DURATION :

TYPE OF BATCH :

FEE :

FACULTY NAME :

LAB TIMINGS :

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PYTHON COURSE CONTENT

Introduction

- Understanding the Open source
- Installation of python in Linux/windows.
- Understanding Interpreters
  - ipython
  - bpython
- Getting started with Python.
- Getting to understand Help.
  - Exploring the objects.
- Setting up the IDE and various IDEs(Integrated development environment).
- Setting up using the PEP-8 .
  - Indentation.
  - Tabs or spaces.
  - Maximum line length.
  - Blank lines.
  - Source file Encoding.
- creating the first python program.
  - understanding sha-bang.
  - understanding the .py extension.
- How to run the python programs

TYPES AND OPERATORS

- Introduction to data types.
- Type casting in python.
- Various ways of printing.
- Boolean operators.
- Playing with numbers.
- Playing with strings.
  - String quotes.
  - Raw strings.
- Docstring & comments.
- Accepting inputs.

CONTROL STATEMENTS

- Conditional statements
  - Introduction
  - Boolean expressions
  - Logical Operators
  - Using If condition
  - Pass
  - Applying PEP-8 standards.
- Looping statements
  - for
  - while
  - range
  - break
  - continue

LISTS

- What are lists?
  - Mutable lists.
  - In operator.
  - Traversing a list.
  - List operations.
  - Indexing.
  - Slicing.
  - converting a list to string.
  - converting a string to list.
  - Aliasing in lists.
  - Functions in lists.

TUPLES

- What is tuples.
  - Indexing in tuples.
  - slicing in tuples.
  - Immutable tuples.
  - Packing and unpacking.
  - Lists and tuples.
  - Functions in tuples.

DICTIONARIES

- What are dictionaries?
  - Keys and values.
  - In operator.
  - Looping in dictionaries.
  - Lookups in dictionaries.
  - Dictionaries and tuples.
  - Functions in dictionaries.
  - Dictionaries vs sets.

FUNCTIONS

- Function basics
- Scope rules in functions
  - Global scope.
  - Local scope.
  - Locals.

- Globals.
- Global.

- Understanding the return keyword.
- Argument passing
  - Default argument list.
  - Keyword arguments.
- Understanding the docstrings.
- List comprehensions.
- Lambda, map, filters.
- Understanding the closures.
- Decorators.

MODULES

- What are modules?
- Understanding the namespaces
- Various ways of importing.
- "reload" operation.
- understanding about sys.path
- dir () function.
- understand the __main__ and __name__
- operation.
- Installation of a module.
- Understanding the virtualenv.
- Packaging a module.
- Packages.

FILES

- Fancier Output Formatting
- Reading and writing files
- Methods of File Objects
  - Reading
  - Writing
  - Modify
- Buffering in files.
- Parsing a xml files.
- Parsing a xls files.
- Pickles
- Output using Pickle
- Introduction to subprocess, os

EXCEPTIONS

- What are exceptions?
- Simulating errors.
- Various types of exceptions.
- Exception handling - try, except, else, finally
- trapping errors.
- raising exceptions.
- Customized exceptions.

REGULAR EXPRESSIONS

- Understanding the regular expressions.
- Getting started.
- Compiling a pattern.
- Flags - ignorecase, dotall
- Working with multiple flags.
- Search vs match.
- Raw string notations.
- Special characters
  - Globbling characters
  - Anchors
  - character sets
- Grouping

DEBUGGING

- Introduction to debugging.
- Debugging using IDE.
- Various modes to get to pdb.
  - Script mode, Enhanced script mode.
  - Post mortem mode.
  - run mode.
  - Trace mode.
- Playing with the trace mode.
  - listing
  - step, next
  - continue, break
  - printing variables
  - assigning values
  - Restart and return.
  - Where, stacks, breakpoints
  - repeat.

LOGGING

- nderstanding logging.
- When to use logging.
- Understanding the log levels
- Understanding stream handling using Basic
- Config

PYTHON COURSE CONTENT

- Understanding logger.
- Understanding handlers.
- Understanding Formatters.
- Understanding filters.
- Demo: Playing with the syslog handlers.
- Demo: Playing with the Stream handlers.
- Demo: Playing with the File handlers

CLASSES

- OOP: what is object oriented programming.
- Understanding the classes in python.
- Lets create a bank account.
- Using the class statement
- Methods in classes.
  - Constructor.
  - Magic methods.
- Understanding Inheritance.
- Understanding Polymorphism.
- Understanding Encapsulation.
- Operator overloading.

SOCKET PROGRAMMING

- Introduction.
- Understanding basics
  - routing.
  - Protocols - udp & tcp.
- Working with sockets

* How to connect to server.
* Connect on port.
* sending data.
* receiving data.
* How to close the socket.

- Programming a socket server

* Bind a socket.
* Listen to incoming connections.
* Accept connections.
* Live server
* Handing connections.
* Thread class
* Thread library
* Thread pool
* Task thread
* Multiprocessing

- Demo: common chat application.
- Demo: FAQ chat application.
- Demo - Port scanning software

DATABASE CONNECTIVITY

- Introduction
- Working with mysql databases.
  - How to install mysql-server
  - How to know what modules to install
  - Creating a database
  - Creation of the user and giving grants
  - Granting access to the users
  - Connecting mysql and python
- Python and Mysql:
  - Creating and populating a table
  - Retrieving data
  - Dictionary cursors
  - Column headers
- Integration with various databases.
- (Mariadb, oracle)
- Introduction to ORM and sqlalchemy

CGI PROGRAMMING

- Introduction
- Getting started with CGI
- Configuring apache
- Configuring CGI

MULTITHREADING

- DATA ANALYSIS BASICS
- Pandas
- Nampy
- Matplotlib

INTRODUCTION TO PYTHON FRAMEWORKS

- DJANGO
- FLASK

By
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