Python Course

This is a course spread across 5 days, giving extra focus and importance on lab and hands on examples
By the end of this course the attendees will be able to write non trivial python programs.

Prerequisite: None

Duration: 5 days

Trainer: Aditya S P

COURSE CONTENTS

Day - 1
Introduction
Introduction to Python
Installation and the Python Interpreter
Running python from a source file
Lexical Structure
Lab Examples
Variable and Datatypes
Identifiers and Keywords
Input Processing
Lab Examples
Data Structures
Lists
Tuples
Sets
Dictionary
Lab Examples
Expressions and Operations
Relations, Logical Operators
Shorthand Operator
Expressions
Type Conversion
Integer arithmetic

Lab Examples

Conditionals and Control Statements

Truth Value
if, if-else
Nested conditions
While loop
For loop
Lab Examples

Day - 2

Functions

Defining a Function
Local and global variables
Default argument
Keyword arguments
Closures
Higher order functions
map functions
Lab Examples

Modules

Introduction to Module
Importing Modules
Submodules
Lab Examples

Strings

Methods of string objects
String module
String formatting
The pprint module
the repr module
unicode
Lab Examples

Day - 3

Regular Expressions	
	Match
	Search
	Replace
	Patterns
	Greedy and Non-greedy repetition
	Lab Examples
File Handling	
	File Operations - Open, close, read, write
	Lab Examples
Exceptions	
	Try statement
	NameError, TypeError
	Handing Exceptions
	Raising Exceptions
	Finally
	Custom Exception Objects
	Lab Examples
Day - 4	
OOP	
	Classes and Instances
	__init__ method
	Inheritance
	Multiple Inheritance
	Special Methods
	Iterators
	Decorators
	Metaclasses
	Getters, Setters and Properties
Day - 5	
Parallel processing	
	Multi Threading
	Multi Processing
PyUnit	
	Test Driven Development
	Creation of Test cases

Creation of Test Suites
Different ways of running test cases