Topics Outline

1. Python Case Study

Introduction to python
Getting to know python
Why companies refer python
Advantages of python
Demerits of python
Noteable scope and application
Python Vs PHP
Python Vs Java
Python Vs C#
Python Vs Ruby
Ranking by performance

Objective : The candidate or intern who is willing to write programs on python will know the power of python.

Expected Outcome:

- The intern should be able to know how python is different from other programming language
- The intern should be able to choose the programming on their own with their own choices with logical reason
- The intern should take a dream to work on their project using their own preferred language.

Assignment:

- Research on topics listed above and prepare a research presentation on python case study

Due Date : 27th December

2. Introduction To Python

Installation and working with python
Understanding python variables
Python basic operators
Understanding python blocks

3. Python Data Types

Declaring and using numeric data types: int, float, complex
Using string data types and string operations
Defining list and list slicing
Use of tuple data type

4. Python Program Flow Control

Conditional blocks (if, else and else if)
Simple loops in python
For loops using ranges, string, list, dictionaries
Uses of while loops in python
Loop manipulation using the pass, continue, break and else

Objective : The candidate or intern should be able to setup python environment and know the basic syntax and flow .

Expected Outcome:

- The intern should be able to install python environment on their local machine .
- The intern should know about python variables, operators and blocks, data types and program flow control.

Assignment :

- Develop a small python app just for fun.
- Example :
    - First n prime numbers
    - Find maximum of list of numbers
    - Linear Search and Binary Search
    - Selection sort and insertion sort
    - Merge sort etc.
    - Exponential (Power of numbers)

Resources:

Python Overview;
https://drive.google.com/open?id=0ByWO0aO1eI_MbUM1OWhFcnVPT2M

Python Installation
https://drive.google.com/open?id=0ByWO0aO1eI_MSHEydFVhQkF4clU

Python Basics:
https://drive.google.com/drive/folders/0ByWO0aO1eI_MaTc0cEZ0VjZMajQ?usp=sharing

https://drive.google.com/drive/folders/0ByWO0aO1eI_MeVFmUENpMGIzTjg?usp=sharing

https://drive.google.com/drive/folders/0ByWO0aO1eI_MTC15WVRUVkNGTFU?usp=sharing

https://drive.google.com/drive/folders/0ByWO0aO1eI_MOWZGa0tyenB1R1U?usp=sharing