Features of python  
    does python is scripting or programing language.  
    source code, compiled code  
    how python command will executes the file.  
    opensource  
    automatic memorymanagement  
    python memory management:  
        how python alocates memory for int,list,strings  
        object assignment  
        reference assignment  
    scalability  
    dynamictype.  
Installation.  
    Anaconda installation in windows and linux  
    Conda  
    python  
    ipython  
    ipython notebook  
    jupyter notebook  
    how to create virtual environments to work with multiple versions of python in same machine.(install multiple python apps in same machine.)  
Git introduction.  
Variables expressions and statements:  
    variable  
    variable rules

Pydantic..   
    how to initialize all datatypes in python  
        int,float,complex,strings,lists,tuples,dictionaries,boolean, None,arrays, dataframes.  
    operations(aruthmatic operations,boolean operations,bitwise operations) with in the datatypes and among the datatypes  
    expression evaluation  
        operator precedency  
    input  
    print.

Format specifiers

Format

Template strings  
conditional statments  
    if  
    if else  
    if else if  
    pass  
    indentation  
    with examples  
    short cut for if else statments  
looping statments  
    for  
    while  
    break  
    continue  
    for else  
    while else  
    with some examples  
functions  
    how to define function  
    how to call function  
    function memory management(function name is reference, function is an object)  
    different kinds of arguments(positional, keyword)  
    different kinds of parameters(mandatory, optional(Default, \*args, \*\*kwargs))  
    local, global variables  
    return  
    yield(generator, iterator)

Call by value and call by reference.  
strings:  
    string indexing  
    string slicing(which will applicable for list, tuple, array, dataframe)  
    string functions  
lists:  
    intializations  
    list frunction  
    kinds of list assignment  
tuple  
    intializations  
    frunction  
    kinds of  assignment  
dictionary:  
    intializations  
    frunction  
    kinds of  assignment  
set:  
    intializations  
    frunction  
    kinds of  assignment

collections  
will see how to solve some issues by using all the above datatypes  
Moduels:  
    file as a module  
    folder as a module  
    module path finding  
    memory management of modules  
    rules it will follow to search file  
    rules it will follow to create a .pyc file  
    how to import a file which is not there in system path.  
    sys module  
files: .txt, .csv. .jpg .json. yml  
    programing language working with secondary media  
    how to read data from file  
    how to write data into file  
    how to append data in to file  
    pickle  
    json  
    yml  
    working with big files  
database:  
    how work with sqlite3 DBMS(create database, create table, insert, update, delete)  
    how work with postgres DBMS(create database, create table, insert, update, delete)

how to work with non relational database management systems.. MongoDB  
Sample project(console app)  
Exceptions  
    differenct kinds of errors  
    try,except, finally,else  
Regularexpressions:  
    how to fetch usefull information from unstrutured string.  
    RE  
oops:  
    difference between functions and class  
    class memory management(class object, data object, instance)  
    databinding  
    inheritace  
    polymorphism(operator overloading, method overloading, method overriding)  
    abstraction  
    encapsulation  
    class method  
    instance method  
    static method

property decorator

Sample project functional based to oops based.  
seminars on data analysis--> numpy, pandas, matplotlib  
seminar on threading-->threading  
device interactions  
    what are the scenarios need to think to interact with the device  
        using python module(pygithub)  
        using API(github API)(requests)  
        using the internall services(ssh-->paramiko)  
        what if you dont have any service to interact.(socket)  
django introduction(django)  
debugging(pdb)  
Adv concepts:  
    list comprehension  
    tuple comprehension  
    dictionary comprehension  
    closure  
    decorator  
    lambda  
    filter  
    map  
    reduce  
    singleton  
unittest  
logging  
Async await  
monkeypatching