Python for Data Science and Artificial Intelligence

* Introduction to Programming.
* Installing Anaconda and using Jupyter notebook.
* Python Programming fundamentals using Python.
  + - * Variables and Simple Data Types
      * Operators
        + Simple mathematical operators
        + Assignment operators
        + Comparison operators
        + Logical operators
        + Identity operators
        + Membership operators
        + Bitwise operators
      * Collections
        + List
        + Tuple
        + Dictionary
        + Set
      * Working with collections.
      * Control flow
        + If statement
        + If else statement
        + If elif else statements
        + Nested if statements
        + Multiple if statements
      * Loops
        + For in loop
        + While Loop
      * User inputs and type casting
      * Functions
        + Functions definition
        + Functions parameters and arguments
        + Returning values from a function
        + Passing list to a function
        + Passing dictionary to a function
        + Passing arbitrary number of arguments to a function
        + Key-word arguments
        + Default values
      * Lambda functions
      * List comprehensions
      * Dictionary comprehension
      * Modules
        + Working with math module
        + Working with date module
        + Working with JSON
        + Creating our own modules
        + Storing functions in a modules
        + Creating python packages
        + Importing modules
      * Exception Handling
        + Raising user defined exceptions
        + Defining our own exception class
      * File Handling
        + Reading Writing text files
* Object Oriented Programming
  + - * Classes and Objects
        + Creating and using a class
        + Attributes and behaviors of a class
        + Making objects of class
      * Working with objects and classes
        + Modifying class attributes
        + Public private and protected attributes in classes
        + Static attributes of a class
        + Class methods
        + Instance methods
        + Private and protected methods
        + Objects as attributes
      * Inheritance
        + Simple inheritance
        + Multiple inheritance
        + Multilevel Inheritance
      * Encapsulation
        + Getters and setters
      * Polymorphism and duck-typing
      * Abstraction using abstract classes.
      * Decorators
      * Closures
      * Iterators
      * Generators
* Web Scrapping
* Django
* Connecting data base with python