• I hope everybody install Anconda software which i share to you guys right • Just wanted to know how many of know any programming language • If you dont know any programming language then you are the best person to learn PYTHON python is very easy language • what is python? Ans - python is highly recommanded programming language & object oriented language • Father of python - Guido van Rosam Python came from fun tv show called "complete monty python's flying circus" - broadcasted in BBC channel • Python borrowed all concept from c,c++,java,unix (so python is everything) thats why python very very powerfull tool • Python developed in NRI - (Netherland) & lot of people say that python is new language • Java released on 1995. python was released on 1989 officially released on (feb 20th 1991) • It has a large and comprehensive standard library. In []: a = 5.7 type(a) Now python is very popular based on software industry requirment because everybody wants to write very less code/concile code Current market trend is - Machine learing, Artificial intelligence, data science & lot(Internet of things) which companies are used python - google,nasa,uber,netfliz,reddit,facebook, everywhere python used everywhere • python code can understand everybody & python is dynamic programming language • In python everything done by PVM (python virtual machine) you can access python in any platform independent- windows, linux, mac one code can run in all the 4 platform & no need to write separate programe for every platform. Once you write code you can run in platform Python is dynamically programming language (not required to declared data types) • Python is freeware and open source. Moving from one platform to other platform without changeing any code • Python contains rich libray - numpy,pandas so python is the best application for datascience • which scenario python can't be used - (python can not perform in mobile application like android) • Flavours of python - cpython(C programming),jpython(java programming),Iron python(c#.net),Ruby python(Ruby based application programme), Anaconda python(Bigdata, datascience) Python 1.0 introduce in jan 1994 -- Noorganization is working now • Python 2.0 introduce in oct 2000 -- Noorganization is working now • Python 3.0 introduce in Dec 2008, 2016, 2017,---- latest version - 3.6, 3.6, 3.7, 3.8, 3.9, 3.10 sys version 2- Getting started with Python Language Python 3.x Version Release Date ---> 3.10 2021-10-04 3.9 2020-10-05 3.8 2020-04-29 3.7 2018-06-27 3.6 2016-12-23 3.5 2015-09-13 3.4 2014-03-17 3.3 2012-09-29 3.2 2011-02-20 3.1 2009-06-26 3.0 2008-12-03 Python 2.x Version Release Date 2.7 2010-07-03 2.6 2008-10-02 2.5 2006-09-19 2.4 2004-11-30 2.3 2003-07-29 2.2 2001-12-21 2.1 2001-04-15 2.0 2000-10-16 • Two major versions of Python are currently in active use: • Python 3.x is the current version and is under active development. • Python 2.x is the legacy version and will receive only security updates until 2020. No new features will be implemented. Note that many projects still use Python 2, although migrating to Python 3 is getting easier. • If you want to learn python only then better you can use software called - python.org (below is url) https://www.python.org/downloads/ • For data science the best application for datascience models using python is called ANACONDA sys version 3-Creating variables and assigning values To create a variable in Python, all you need to do is specify the variable name, and then assign a value to it. = Python uses = to assign values to variables There's no need to declare a variable in advance (or to assign a data type to it) Assigning a value to a variable itself declares and initializes the variable with that value. There's no way to declare a variable without assigning it an initial value. a = 2type(a) b = 9223372036print(b) pi = 3.14print(pi) c = 'A'print(c) name = 'John Doe' print(name) q = True print(q) print(x) = xx = 0Χ 4-PYTHON (IDENTIFIER / VARIBALE / OBJECT) --• There is a person whose name - Multiple names are to identify person.so finally the Name which can be used for identification purpose. • Name in the python programme is called IDENTIFIER (x = 10) (X - identifier)• Nameing ceremoney we have some rules to naming a child . e.g - Gods name, Ancestor Name, have to do some R & D. you cannot keep the child name as - Cat or dog right.. so parent have to follow some rule and keep their child naming ceremony. *Rules to define Python Identifier & we will check those rules == <1 Alphabet (uppercae & lowercase) <2> Digits (0-9) # should not stat with digit <3> underscore(_) cash123 = 10cash123 In []: 123cash = 10 123cash cash = 10 # Identifier ruls alphabet cash ca\$h = 20 ca\$h CASH = 20CASH CASH1 = 30CASH1 sum123 = 20 # Digit rules identifier sum123 Abcde = 20new = 30 NEW Total5 = 30 **TOTAL** In []:| IF = 780 ΙF DEF = 5.6DEF In []: FOR = 58 _abc_def_gef = 20 _abc_def_gef • Q & A for valid / Invalid identifier - 1>123AMX 2>Amx123 3>ml2ai 4> abc def gef 5>def 6>else 7>ELSE • ----- RULES OF PYTHON IDENTIFIER ----- 1> A to Z, a to z, 0 - 9 2> Doesnot starts with digit 3> Case sensitive 4> Reserved words or keywords cannot be a identifier 5> Identifier cannot have a lenght limit 6> _ only allowed 7> NO special character is allowed **PYTHON RESERVED WORDS -**• if a kid going to school what he/she will learn A,B,C - - - - Z then she will learn A - APPLE, B -BALL, C - CAT. (APPLE,BALL,CAT - Reserved word in english) • Apple is reserved for the fruit, Ball ==> play, Cat ==> Animal // (Dictionary uncountable reserved words is there).. This type of words are called Reserved word • In any programming language there is a reserved word are there we gonna learn only python Reserved • python reserved are => (35 RESERVED WORDS) If you learn 35 reserved words then python is complete • all reserved words have some meaning & functionality Learning python is nothing but learing all this functionality **35 RESERVED WORDS---• True, False, None ==> Represent Boolean data types • and, or, not, is ==> Represent the operators • if, else, elif ==> Represent the statement (# python switch,do..while statament is not available) • while, for, break, continue, return, in, yield ==> Represent the loop concept • try, except, finally, raise, assert ==> Represent for functionallity • import,from,as,class,def,pass,global,nonlocal,lambda,del,with==>Represent the class,method,function *NOTES -- 35 RESERVED WORDS ARE (ALPHABET) // *EXCEPT (True, False, None) a = Truea In []: | True = a b = noneb c = false # KEYWORD is the module run from IMPORT class keyword kwlist df = pd DataFrame(keyword kwlist) df PYTHON DATA TYPES // (14) - INBUILD DATA TYPES -1>int 2>float 3>complex 4>bool 5>str 6>bytes 7>bytearray DATA STRUCTURE ---> 8>range 9>list 10>tuple 11>set 12>frozenset 13>dict 14>None • python provides some inbuild function like -- <1> print() <2> type() <3> id() • int,float,complex,boolen is not represent object # Tricky question • except these 4 everythig object # Tricky question

NOTE - [**In python all 14 data types are object only] Thats why we called as python is object oriented program

'hello world'

a = 10
print(a)

d(a)

(d(b)

id(c)

b = 10 id(a)

id(a)

In []: | b = 10

In []: c = 20

In []: a = 10

In []: a = 10 a

1- PYTHON INTRODUCTION - (TASK - 1)