(m)

Assignment No: 1

Title: Write python abde for Wood court and find occurance

Problem statement:

of word from file

Pre-lab: a basic understanding of computer programming languages will help in understanding the python programming any datascience concept

Theory: -

50

What is python?

language it bears some similarities to fortrain , one of the earliest programming languages but it is much more powerful than fortan

python allows you to use variables Without

declaring them (i.e. it determines types implicity)

- python was developed by ando von Rossum,

and it is a free software.

- python is a Good choice for mathematical calculations. Since we can write code quickly test it easily and it's syntax is similar to the May mathematical ideas are expressed in the mathematical literature.

Python commands:
- comments in a python command anything after a

symbol is a comment.

For eg.

GIB



	- OLIVE - STATE
_	Print "Hellow Wood" # this is siny
-	- comments are not not
	intended as documentation for a
_	intended as documentation for anyone reading the node
_	
	by triple double-quote symbol
	Comments:
	is a segment for command anything after a'th' symbol
	example.
	- multiple on World" # this is sily
	are also passible and an
	2 comple ducte suppol.
	this is an example of a long comment
	that goes on and on and on " " "
	Number and other data type:
	- Python occognize several different types of class
	For instance, 23 and -75 are integers, while 5.0 and
	- 23-0g are floats or Floating point numbers
	- The type float is (amolded) the
	- The type float is (soughly) the same as a real number in mathematics.
	- The type float is (roughly) the same us a real
	Dumber in mathematics
	The number 12345678401 is a long integer
1	
	The type function:
-	To see the type of same data use pythone
	built In type function
	>>> type (-75)
38	< type 'int'>



>>>type (5.0) < type 'float'> >>> type (1, 2, 3, 4, 5, 6, 7, 8, 9, c, 1) < +ype 'long'> - Another useful date type is complete Used for complex numbers - Other Useful data types are strings (short for " character strings") For example, "Hellow Woodd" strings are sequence of characters enclosed in single or double quotes. >>> "This is a storing" This is a stoing >>> type ("This a string") < type 'sto'> - String are an example of sequence type * List & tuples:-- other important sequence types used in python include lists and tuples - A sequence type is formed by putting together Some other types in a sequence - here is how we from list of tuples example of list: >>> L11314116] [1.3,4,1,6] type ([11914, 116]) < type 'list'> B) p



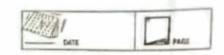
	example of tuples:
	>>> (1,8,8)
	(1,3,2)
	>>>type ((1,3,2))
	Ltype 'tuple'>
	Jr - Tapic
	- Notice that list are enclosed in square bracket
	While tuples are enclosed in parenthesis
	- list and tuples do not need to be homogen-
	- ous that is the component can be of diff types
	ex.
	>>> [7, 2," Hello", (1,2)]
	[1,2, "Hello", (1,2)]
	- Here We created a list containing for components
	can be diff types.
	eg.
	>>>[1,2," Hello" (1,2)]
	[1,2," Hello", [1,2)]
	- Here we created a list containing for component
	of list may be other lists and so on
	or may be criter has and so on
	- sequence types such as a list tuples and a
	strings are always ordered, as opposed to a
	Set in mathematics which is always an ordered
	repeatation is allowed
	In a sequence, but not in sequence
*	The range function:
6)3	The range function is often used to create list



of integers. It has three forms range (n) produce a list of all number on, 2. n-1 starting with a and ending with n-1 for instance >>> ranger (7) It has three forms, 011,2,3- -17] you can also specify un optional, starting point and an increment, Which may be negative. >>> range (1,10) [1,213, 4,5,6,7,8,9] >>> range (1,1012) L113151710] >>> Jange (101012) L 10181614, 2J - the use of a negative increment in the last ex *Boolean values: -This is a value value to is either true or false eg morace True >>> Type (True) <Type 'bool'> >>> False false >>> type <false) <type 1 bool'> * Expressions: - python expressions are not commands but rather



For	m part of command.
_	An expression is ongthing which produces a value
e.g	
_	2+2
	2×× 100
	f(x-1) x+1))
	Expressions are formed from variables, constants
+(unction evaluation and operators parenthesis are
	used to indicate order of operations and groupi-
-1	ng as used
-	The common binary operator for a arithmeter refe
	t for addition
	- For substraction
	* for multiplication
	I for division As already mentioned, python uses
	** for expontiation
4	*
	>>> 2519
11	8
-	>>> 512
	2
	Float type
-	>>> 25 613
	8.9333333339
1	>>> 512·0
	25
	- if just one of the operands is of type flocat
	then the result will be of type float here is
5	The leading with the state of t



>>> 2 * * (1/2)

of a set the exponent produce a list of result of a becomes of integer division is:

to this computation.

>>> 2** 05

1.4142135623730951

" mod"

- it gives the reminder of an integer division

>>> 25.1.3

= 1

- Which shows that 5 mod a = 1 3 25 mod 8 = 2 this operator is useful in number theory and cuyphotography

Variable 4 Assignment: -

- Form variable = expression
- First the expression on the night hand side is equivalent then the result is assigned to the variable after the assignment the variable become a name for the result
- it's purpose it to make the association beto the variable & its value



>>> x 2212

>>> Printa

4

the value of x, his must point it if we execute another assignment to se then the precious value is lost.

EQ.

>>> x = 380 5

Print x

3805

Print x

3805

>>> y = 2 x x

Printy y

761 0

a single is used for assignment and the double o

- in computer science the statement * att is

Useful it's purpose to add I to x

€ 9

>>2 x = 10

>>> x:x+1

>>> boint x

1)

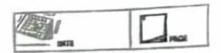
of letters, numbers, and the (_underscore) character

the first character must not be a number and

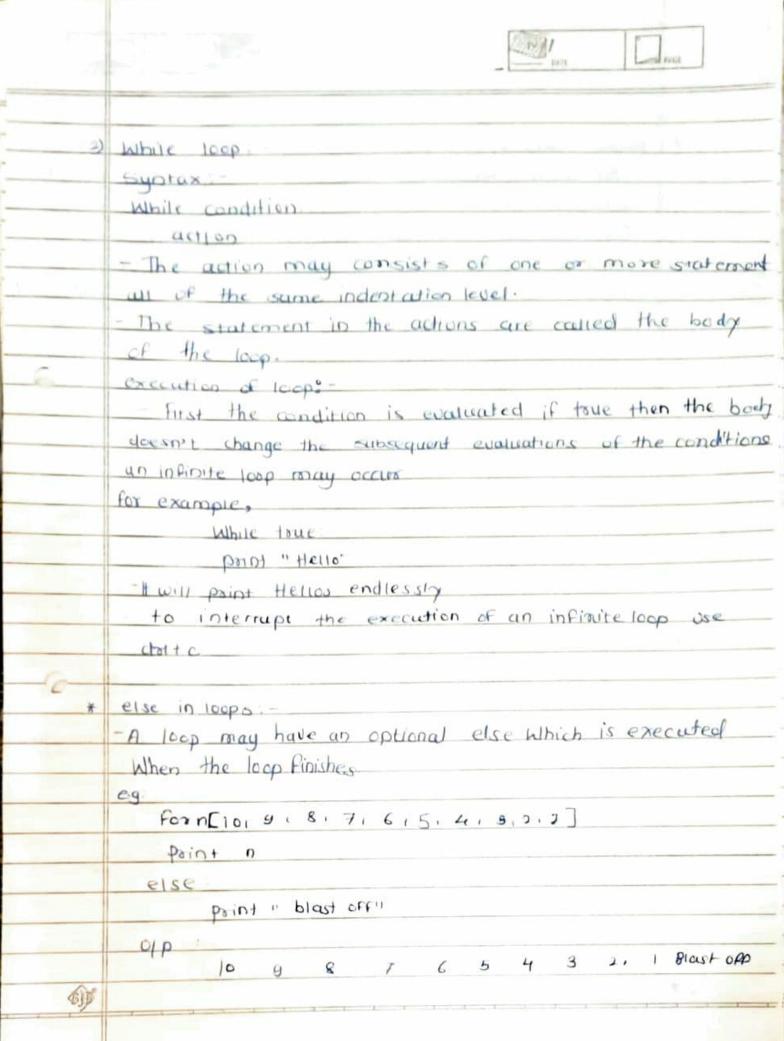
you may not used a seserved keyword as a

Lana Lana

	Vaniable parne
	eg .
	4, VI, VI-1. abc , Bucket, monthly total etc.
	Decisions -
	The if- else is used to make choice in python code
	This is compound statement
	Stotan:
_	if condition:
-	adiun 1
	eis c
	action o
	The indentation is required else and its actions are
	opn ona
	- The actions action I and action 2 is executed In
	either case execution continues with the deliment
	the it else.
	ex
	32 = 1
	if 2>0;
	Print " friday is volonderful"
	dse
	Point: "Monday sucks"
	Point " Have a good weekend"
	results in the output -
	Friday is Wonderful
	Have a Good Weekend
	- If Welhange the City
	the output mould be
	Monday sucks
6)\$	Have a good weerend



	if 2> = 0 and 2<10,
	digits =1 exif >= 10 and x<100:
	elif x>= 100 and x <1000:
	eif 2>=1000 und 2<1000
	else
	digit = 0 # more than 4
*	Loops -
	- Python provides two looping commands
	i) for
	2) While
	these are compound command
	0 for 100p
	Syntage - for item in list
	- the cities consists of annual consists of
	the action consists of one or more statement
	all all some indentation level.
	the statements use known as the body of the luop
	- The item is a variable name of list is a list -
	for i in [2,4,6,0]
	print output - 246c
	- TOC
6]6	

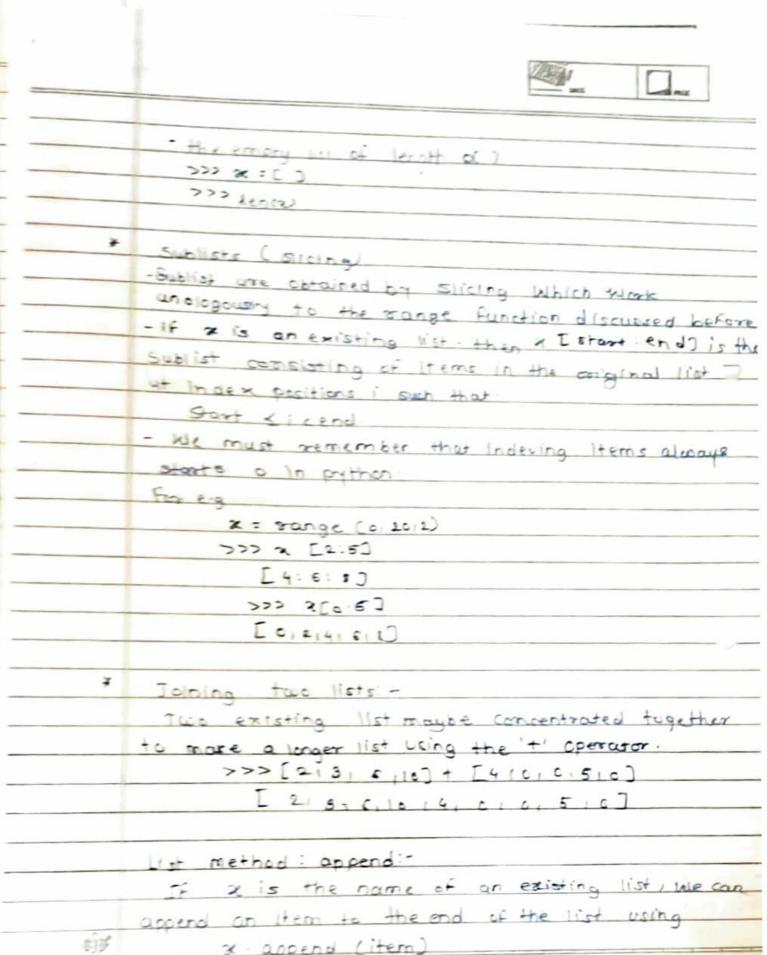


VAR 8	
DATE:	mos mos

*	treak continue and pass -
	- The break statement like in c breaks out of the
	Smallest enclosing for or While loop
	The continue statement also borrowed from a
	contines with the next iteration of the loop.
	- here is an example of the use of break statement
	and an else dause in a loop
	For n in range (2, 10)
	For x in range (2,n)
	If n:1 x : = 0
	Point niequals ac, 'x', n/x
	break
	els e
	# 100p Fell through Without Finding a factor
	Print o is a prime number
*	Lists -
	- A list is a Pinite sequence or Items: and
	one could use the range function to create list of
	integer in python, lists are not required to be homogeness
	le the iteras could be of diff type
	en
	4-[2, "Jack", 45,123 Went Worth one"]
	- it's a perfectly valid list consistly of two integers &
	two strings.
	- one can refer to the entire list using the identifies
	a or the it item in hist usingall
6)9	

- ' ' - '

	DI HACE
	eg.
	>>> 4 - [2, "Jack", 45, "23 Ment Mosthfare"]
	7>>> 4
	[2," Jack", 45, "23 Niert North Ave "]
	>>> a[a]
	2
	>>> a[1]
-	"Jack"
The state of	>>>a[2]
	45
	>>>4[3]
	"23 WERTHORTHEVE"
	- numbering of list Hems in Python alway begins of 0'sa
	the 4 items in the above list are indexed by the number
	011,2,3
	and a pail value
*	List item may be as gred a new value?
	e.g
-	
	>>> 1
	[2, "Jack" 145/" 23 Nier+Worth Ave"]
X	Length of a list:
	- every list has a length; the number of item in
	the Pst.
	- its obtain using len function
	>>> 2-194,9001 +-3
	>>> len(>)
6)3	4



x append (item)





To delete the item at Index position I use & pop[i] =>> & Pop(a)

I'c', Junk', '19', 'd', '7']

- by default a pop co pops the last item >>> 2.pop()

>>>%

['c', 'Junk' ig', 'd']

Stoing -

string in python is a sequence of chare - cters. strings are similar to lists, python strings are immutable. Meaning that we are not allowed to change individual post of them as we could for a list.

Condusion: -

Thus hie studied the basic syntax, · data type | variables | aprentos | vectors | lists , taking sutaible data from bocumples and count no of word from file.

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