Name & Rishi Ram Roll no: 20230201032 PAGE No. 1

DATE 24/01/2024 Assignment 1 - Python Programming Concepts Q.1 A simple program that displays "Hello World!". It's often used to illustrate the syntax of the language. # To print in python we use simple print statement print ("Hello, World!") O.2 Give the example of interactive mode and script 1. Interactive mode [S.] =+ 21 (-+1) It allows you to enter python commands and see the immediate results. (shotmand) reported. You can simply open gython interactive shall by Simply typing python son typthonis in your terminal or command prompt. \$ python Back - olderson took Hello, Interactive mode Hello, Interactive mode

>>> 2+3

(allot of a share of mexit (eldoing prints) thing 2. Script mode (sldet and slquit " escript mode involves creating a python script file containing a series of python command and then executing the script. You can create a file using a text editor and some it with ey extension.

Non : Dist. Du DATE / 122 2010 print ("Hello world") >> Hello World Runde program that Sisplays " 1100 sland num2 = 20 of 4: 34 stants all of 120 as to add = rum 2 + rum 2

print (add) = 2 print ("Heile world!") (2) Give the example of interestine mode and tempt Q.3 write a program on types of variable and also which type of variable is immutable or mutable Ans

1. Integer (Imputable) print Cinteger variable) 2. Float (Immutable) float-variable = 32.69 print (float variable) of a wall that 3. String (Immutable) string-variable = "Hello Python" print (string-variable) 4. Tuple (Immutable) print (tuple - variable)

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	5. List (Mutable)
	1 $ 1 $
	print (list-variable)
	to Arith a face Ciperation
Ą	modify: list variable
	1 l'ala conviable dispositif 4 /
	print (list-variable)
	(set (mutable) enotated to
	c set (mutable) set variable = 21,2,33 = +
į	print (set_variable)
	(t) assisting the
	modify set-variable
	est variable append (4) interest lesion to
	set-variable append (4) interest land to
	prim caer = variable)
	- Till (Mutalla)
	7. Dictionary (Mutable) dict variable = ? 'key 1': 'value 1' 'key 2': 'value 2'}
	dict variable = 1 key 1. vacue
_	print (dict-variable) mon and tempion
-	modify dict-variable
	dict variable ['key 3'] = value 3'
	print (dict-variable)
	bento, repl 1. X
	26020 02200 , 20210 37,000
	Last poly poly to a li
	Florest 12 set & 15 set

1.)

	PAGE No. 4
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	write a program on operators with priority and associativity
n u	orile a program on operation
<u>y.</u> 9	and associativity
no	## Arithmetic Operators result = 10+3 \$5/2 ## and I have higher priority result = 10+3 \$5/2 ## Than +
	result = 10+3 5/2 # than +
	print (result)
	print (result)
	# Comparison Operators Comparison result = 5 < 10 < = 15 # Chained comparison ## left to Right
	# Comparison Operators
	Comparison-results # Left to Right
-	print (comparison-result)
	9140360
	# logical Operators () de sado o sido voi to de la logical - result = True and False or + True + # and has
	logical result = True and False or True # and has
	AT WARRY DY DY DY TU
	print (logical-result) and the will be writted to
<u> </u>	all spot " Leader of theat is solvered they
	# Assignment Operators (aldriver dit) tring
	x+=2×3 # += has lower priority than arithmetic
	print(x) : where the part of aldernow tick
	(side variet) book
	#Bitwise Operators
	bituise result = 06101 2 06110 / 06011
	print (bitwise - result)
	print (bitwise - result)

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	DATE / / /
\	# Membership Operators
	1'st example = [1,2,3,4,5]
	membership-result = 3 in list-example
	print (membership result)
1 3	when board into a sale scored names
	# Identity Operators
	a = [1,2,3]
	b= a
	identity-result = a is but # is checks for object # identify The second of the secon
	# lidentifyets
	print (identity - result)
>	# Conditional (Terrary) Operator
	Condition = Ince too: Deagh. off by to of-
	ternany-result = "True Value" if condition else False-
	print (ternary-result)
0 5	(P) tros than
Ans	Write a simple program for using comment
- 2	# This is a single-line comment
	# Input
	num = int (input ("Enter a number " ")) # User Toget
1	# Process of the said was a said to the other
	print C
	print (num, " User Entered "). # To print output
	Enter 1
	Enter a number o 32

	PAGE No. 6 DATE //
0.6	A simple program in python program to Add
(y. 6	Two Numbers : Accept number from user!
And	the server to the theory and the server and the ser
	num 1 = float (input ("Finter first number & "))
	num 2 = float (input (" Enter second number o")) add = num 1 + num 2
	print (add)
7.3.3	> Enten first inumber of 10
	Enter second number: 22
Q.7	Write A python program in python language
Ani	to find the square noot, our = astibute
	import math (1) was - marie to an
	math. sgrt(9)
7	>> 3.0
	The This is a single - line comment
0.8	Write a python program to calculate the
Ans	thea of margle
77700	height = float ("Enter height of the triangle ") base = float ("Finter base of the triangle ") Area = 1 (base of height)
	base = float (" Finter base of the triangle ")
digr	Area = 1 (base & height)
	print ("Area of the briangle is " Area)

9.9. write a python program to solve quadratic equation
import math a = float (input ("Enter the coefficient of a :"))
b = float (input ("Finter the coefficient of b :"))
c = float (input ("Finter the coefficient of (:")) disc = bas 2 - 4 a c # Calculate discriminant if discipors of more one with a street in & root 1 = (-b + math. sqrt (disc))/(2 a) root 2 = (-b-math. sqrt(disc))/(2 a). print (" The roots of quadratic equation are " root1, "and", root2) elif disc=20: root = -b/(2 xa) print (root) real_num=-b,/(2*a)... ing - num = math. sqrat (abs (disc))/(2 kg) root 2 = complex (real num, img-num) root 2 = complex (real num ing num) print ("The complex roots of the graduatic equation are " noot 1, " and ", root 2)

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0.10	is positive, regative or zero.
	is positive, regative or zero.
Ans	SA. F
	num = float (input ("Enter a number " "))
P 12 11	if num < 0:
	mint (num " regative number")
	elit num == 0: at not begin tool to
	elit num == 0: - elit num == 0: - print (num; "vis" zero number ")
	exec.
tres	printe Comm in positive number 1)
0.11	write a python program to check it a number
, £.	18 odd on even? Atom 1 d. 1 = 1 toor
	not 2 (-b-nath squet disc) / (-m
	if num (2==20 let oor 200
	it num 1. 2,520 f. 2000
	else: Print(num, "is even number")}
	else:
	print (num, " is odd number")
•	(took) bring
0.11	Write a python program to check leap year
And	
1 0	year = int (input ("Finter a year")) if (year % 4 == 0 and year % 200 1= 0) or (year % 400 == 0):
, h	it (year % 9==0) and year . % 200 (=0) or
	year 1,1400 F710) 1000 \$ 1000
	else: print (year, 4 is a leap year 1)
(-	A LA
	print (year, " is not a leap year ")
) V

SHEET W.	9	
CATE /	/ /	

among three numbers. num 1 = int (input ("Enter first number ""))

num 2 = int (input ("Enter second number ""))

num 3 = int (input ("Enter third number "")) if num 1 > num 2 and num 1 > num 3:

print (num 1, " is greater or largest ")

elif num 2 > num 1 and num 2 > num 3:

print (num 2 > " is greater or largest ")

else:

print (num 3, " is greater or largest ") Q.14 Write a python program to check prime number num = int(input ("Finter a number" "")).

if num > 1:

for i in range (2, int (num "" 0,5)+1):

if (num % i) == 0:

print (num, " is not a prine number")

break

else:

print("hum, " is a prime number")

else:

print(num, " is not a prime number") print(num, "is not a prime number")

	PAGE No. 10 DATE //
	and amplex I number it
Q. 15	writera program on complex number de
Ans	
	real 1 = float (input ("Finter real number & "))
/	ing 1 = float Cinput ("Enter timing many number:
	complex 1 = complex (real 1 , ing 1)
	Do = 01 LC: L(" Filer real number + a))
	real 2 = float (input (" Enter real number ("))
1.	ing 2 2 float (input ("Enter imaginary number : "))
	complex2 = complex (real 2 sing 2)
/ N	to the start of the formal to the
	Sum = complex 1 + complex 2000
· 12	difference = complex 1 - complex 2
3	product = complex 1 complex 2
	quotient = complex 1 /complex 2
3.47	print (sum)
	print (difference) vol 1") try il bui
	print (product)
	print (quotient)
a 1 E	1-(2) "man to see a language of the
	o company ti
1 36 1	and the stand of many is the same
	Acord.
	22)
7.03	The same of the same of the same
1	widows a rest of the state of t