Assignment 1

August 22, 2023

Question 1:- In the below elements which of them are values or an expression? eg:- values can be integer or string and expressions will be mathematical operators. * 'hello'; -87.8 - / + 6

Answer 1 :-

* it is a mathematical operator and used to multiply and two integer values

'hello' it is a string value.

-87.8 it is a float.

- it is an mathematical operator used to subtract two integers vale .

/ it is an mathematical operator used to do the Division of two integers value .

+ it is an mathematical operator used to Add two integers value

6 it is an Integer Value.

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2. What is the difference between string and variable?

Answer 2:-

Variables:- These are the symbols or a type of characters where we store the values or data in the memory so that we can use them in the code further . It is basically a stored information in memmory. example :- a = 23(here a is the variable and 23 is the data stored in it)

String:- There are the type of a data that is stored in a declated variable. It can be any alphabate or group of alphabate . We can declare it by typing the data inside the " " or ' '. Any thing Typed inside " " or ' ' is treated as string . Example:- 'apple', "apple", '12'.

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3. Describe three different data types.

Answer 3:- Integers: - whole number without a fractional file that can be positive and negative. example x=3, a=-4

Floats: - it represents ral numbers and are written with decimal point. example x= 3.4

String :- character data . x="archit", x='archit'.

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4. What is an expression made up of? What do all expressions do?

Answer:- The expressions are the combination of the operators and the valuse(Operand on which the operation is to be done) that are interpreated together to provide some desired result. example := x= 2+3, this is an expression .

Constant Expressions:- Constant expressions in Python are expressions that include solely constant values. The operator(s) in a constant expression in Python is a constant. A constant is a value that cannot be changed after its initialization. x=2+3

Arithmetic:- An arithmetic expression is a Python expression that comprises a mix of operators, operands, and occasionally parentheses. x+y,x-y etc

Integral Expressions In Python, an integral expression is used for calculations and type conversion (for example, integer to float, text to integer).

Floating Expression:- In Python, a floating expression is used for calculations and type conversion (for example, integer to float, text to integer).

Relational Expressions In Python, a relational expression is a combination of two or more arithmetic expressions connected by relational operators.

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5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

Answer :- Statment in python is only used to declare or assign some value to a variable but if we talk about expression it actually produce some results after being interprated .

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6. After running the following code, what does the variable bacon contain? bacon = 22 bacon + 1

Answer:- It is containing value as 22 as it is not storing the value of bacon again in the variable after performing operation of bacon+1. If it stores the value as bacon = bacon +1 and we print(bacon) it will show result as 23 .

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7. What should the values of the following two terms be? "spam" + "spamspam" "spam" * 3

Answer:- The value will be 'spam' + 'spamspam' is 'spamspamspam' the vale for 'spam' * 3 is 'spamspamspam'

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8. Why is eggs a valid variable name while 100 is invalid?

Answer:- Because we cannot declare a variable name with a number , special character. thats why it is voilating the variable decleration rule .

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9. What three functions can be used to get the integer, floating-point number, or string version of a value?

Answer:- So the three different functions are

int() for interger value. str() for string value. float() for decimal or float value.

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10. Why does this expression cause an error? How can you fix it? 'I have eaten' + 99 + 'burritos'

Answer:- This is because we cannot concatinate string and integer value. so first we need to convert the integer vale in to string using str() function so that it can concatinated .

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