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.

ANSWERS

* is an **expression**

'hello'; is a **value**

-87.8 is a **value**

- is a **expression**

/ is a **expression**

+ is a **expression**

6 is a **value**

2. What is the difference between string and variable?

ANSWER

String - It is a sequence of character data.

It is declared inside " "(double quotes).

Example:"hello".

Variable- It is a named location used to store data in memory

Syntax: *variable name =value*

Example: a=10

3. Describe three different data types.

ANSWER

- **string**-It is a sequence of character data .

Example- "hello", "spam" .

- **int-** It is a whole number.It may be positive or negative.

Example- 2, 5, 40, 50, -3, -90, -56.

- **float -**It is a real number with a decimal point.

Example- 2.5, 5.4, 8.9, 9.0.

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

ANSWER

An expression is made of variables,values,operators.

Expressions evaluate to a single value

Example : 5+3 will be evaluated to 8

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

ANSWER

Expression- An expression is a combination of values, variables, operators, and function calls that evaluates to a single value.

Statement-A statement is a complete instruction or action that performs a specific task. Statements are executed one after another, and they can affect program flow or modify program state.

6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

ANSWER

Bacon contains 23

7. What should the values of the following two terms be?

'spam' + 'spamspam'

'spam' * 3

ANSWER

'spam' + 'spamspam' = 'spamspamspam'

'spam' * 3 = 'spamspamspam'

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

ANSWER

Variable names should not start with numbers and any special character.

100 is a number , so it is invalid.

9. What three functions can be used to get the integer, floating-point number, or string

version of a value?

ANSWER

int**()**

The int() function is used to convert a value to an integer. It can take a floating-point number or a string representing an integer and return the corresponding integer value

float()

The float() function is used to convert a value to a floating-point number. It can take an integer or a string representing a number and return the corresponding floating-point value.

str()

The str() function is used to convert a value to a string. It can take any object and return its string representation. If the value is already a string, it will be returned as is.

10. Why does this expression cause an error? How can you fix it?

'I have eaten ' + 99 + ' burritos'

ANSWER

The expression 'I have eaten ' + 99 + ' burritos' causes an error because you are trying to concatenate a string ('I have eaten ') with an integer (99). In Python, the + operator is used for concatenating two strings together, but it cannot be directly used to concatenate a string with an integer.

To fix the error, you need to convert the integer **99** to a string before concatenating it with the other strings. Here's the corrected version of the expression:

'I have eaten ' + str(99)+ ' burritos'