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Lab report :1

Task no 1:

Differentiate between assignment operator and equality operator

ANSWER:

The assignment operator (=) and the equality operator (==) serve distinct purposes in programming. The assignment operator is used to assign a value to a variable, while the equality operator is used to compare two values for equality.

Assignment Operator (=):

The assignment operator is denoted by a single equal sign (=).

It assigns the value on the right side to the variable on the left side.

Example: x = 5 assigns the value 5 to the variable x.

It is used for setting or resetting values stored in variables.

In programming, = is used for assignment, not for comparison.

Equality Operator (==):

The equality operator is denoted by two consecutive equal signs (==).

It checks whether two given operands are equal or not.

If the operands are equal, it returns true; otherwise, it returns false.

Example: a == b tests if the value stored in variable a is equal to b.

It is a relational or comparison operator used for comparing two values.

TASK 2:

```
10 20.4 30
5 5 5
sum of integer and float  40.34
sum of 2 integer  17
Sub of 2 integer  3
divide of 2 integer  1.4285714285714286
```

Task 3:

Explain the rules for variables name and use different variables name including special characters , numbers etc.

Answer:

RULES:

Variable names must begin with a letter, dollar sign ($), or underscore (_).

They can only contain alphanumeric characters (a-z, A-Z, 0-9) and underscores.

Variable names are case-sensitive.

No spaces are allowed in variable names.

Variable names cannot be any programming language keywords.

TASK 4:

Declare and initialize multiple variables in a single line . Single variable with multiple values , multiple variables with single values. Each having at least two examples

```
Sub of 2 integer  3
divide of 2 integer  1.4285714285714286
Add of 2 float 6.08
sub of 2 float  0.17999999999999972
wajid riaz
wajid riaz
```

Task 5:

Perform arithmetic operations on integers and floating-point numbers

Adding, Subtracting, Multiplication and dividing two integer variables

Adding, Subtracting, Multiplication and dividing floating-point variables.

```
10 20.4 30
5 5 5
sum of integer and float  40.34
sum of 2 integer  17
Sub of 2 integer  3
divide of 2 integer  1.4285714285714286
Add of 2 float 6.08
sub of 2 float  0.17999999999999972
wajid riaz
wajid riaz
1 2 3
The sum of 10 and 5 is 15.
```

Task 6:

A string literal is a sequence of characters enclosed in quotes. In Python, we can use either single quotes ('…') or double quotes ("…") to create a string.

Using single quotes

Using double quotes

Using double quotes when the string contains a single quote

Using single quotes when the string contains double quotes

Task 7:

The print() function is a built-in function in Python that allows you to output variables and other data to the console.

Example of using the print() function to output a variable

Example of outputting multiple variables with print()

Example of using f-strings to format output

Example of using f-strings to manipulate variables in output

```
My name is  wajid , I am 21 years old, and my height is 6 centimeters."
wajid riaz
wajid riaz
1 2 3
3
The sum of 10 and 5 is 15.
```