**1. How do you assign a value to a variable in Python? Provide an example.**

In Python, you assign a value to a variable using the assignment operator (=).

Python

Assigning an integer value to a variable  
x = 10  
  
 Assigning a string value to a variable  
name = "Alice"  
  
 Assigning a floating-point value to a variable  
pi = 3.14159

**2. How do you assign values to multiple variables in one line in Python?**

You can assign values to multiple variables in one line by separating the variables and values with commas.

Python

Assigning values to three variables in one line  
a, b, c = 1, 2, 3

**3. How do you assign the same value to multiple variables at once?**

You can assign the same value to multiple variables by simply repeating the value after the assignment operator.

Python

Assigning the value 5 to three variables  
x = y = z = 5

**4. Write a Python code to swap the values of two variables.**

Here's a simple way to swap the values of two variables in Python using a temporary variable:

Python

Swapping the values of x and y  
x = 10  
y = 20  
  
temp = x  
x = y  
y = temp  
  
print("x =", x)  
print("y =", y)

**5. How can you assign a variable with a string value and print it?**

Python

Assigning a string value to a variable  
message = "Hello, world!"  
  
 Printing the value of the variable  
print(message)

**6. Assign an integer and a float value to two variables, then print their sum.**

Python

Assigning values to variables  
integer\_number = 15  
float\_number = 2.5  
  
 Calculating the sum  
sum = integer\_number + float\_number  
  
 Printing the sum  
print("The sum is:", sum)

**7. How can you use f-string to print a message that includes a variable's value?**

Python

Using f-string to print a message with a variable's value  
name = "Alice"  
age = 30  
  
print(f"My name is {name} and I am {age} years old.")

**8. What is the difference between printing the value of a variable and using a return statement?**

* **Printing:** Displays the value on the console.
* **Returning:** Sends the value back to the caller of the function.

Python

Function that prints the value  
def print\_value(x):  
    print(x)  
  
Function that returns the value  
def return\_value(x):  
    return x  
  
 Calling the functions  
print\_value(10)  # Prints 10 to the console  
result = return\_value(10)  # Assigns 10 to the result variable

**9. How do you use the input() function to assign a user-input value to a variable and then print it?**

Python

Getting user input  
user\_input = input("Enter your name: ")  
  
 Printing the user input  
print("Hello,", user\_input)

**10. Write a Python code that assigns two numbers to variables and prints the result of their multiplication.**

Python

Assigning values to variables  
num1 = 5  
num2 = 3  
  
Multiplying the numbers  
product = num1 \* num2  
  
 Printing the product  
print("The product is:", product)

**11. Assign a string and a number to two variables and print them using a single print() statement.**

Python

Assigning values to variables  
name = "Alice"  
age = 30  
  
 Printing the values  
print("Name:", name, "Age:", age)

**12. How can you assign a list of numbers to a variable and print the third element in the list?**

Python

Assigning a list to a variable  
numbers = [10, 20, 30, 40, 50]  
  
 Printing the third element  
print("The third element is:", numbers[2])

**13. How do you use the type() function to check the data type of a variable and print it?**

Python

Assigning values to variables  
x = 10  
y = "Hello"  
z = 3.14  
  
 Checking and printing data types  
print("Type of x:", type(x))  
print("Type of y:", type(y))  
print("Type of z:", type(z))

**14. Write a Python program to assign a boolean value to a variable and print its value.**

Python

Assigning a boolean value  
is\_true = True  
  
 Printing the value  
print("The value of is\_true:", is\_true)

**15. Create a program that assigns your first name and last name to two variables, then prints them as a full name.**

Python

Assigning values to variables  
first\_name = "Alice"  
last\_name = "Smith"  
  
 Printing the full name  
print("Full name:", first\_name, last\_name)