

Exercises

Combining strings using concatenation

Create two string variables, 'greeting' and 'name', and concatenate them to print a personalized greeting.

► Code

Declare two more string variables, 'first_name' and 'last_name', and concatenate them to print the full name.

► Code

Arithmetic expressions in Python

Calculate and print the result of the expression: $x = 10 + 5 * 2$

► Code

Create a new variable 'y' and assign the result of the expression: $y = 3 ** 2$

► Code

Exponentiation in Python

Calculate and print the result of 2 raised to the power of 4 using the exponentiation operator.

► Code

Modulo operator in Python

Calculate and print the remainder when 15 is divided by 4 using the modulo operator.

► Code

Augmented assignment in Python

Initialize variables x and y with some values.

► Code

Use augmented assignment to add y to x and print the result.

► Code

Comments in Python

Add comments to the following code explaining the purpose of each line.

► Code

Print the result

► Code

Understanding data types - int vs float

Declare an integer variable 'integer_var' and a float variable 'float_var'.

► Code

Print the data type of each variable.

► Code

Multi-line string in Python

Create a multi-line string containing your address.

► Code

Print the multi-line string.

► Code

Booleans in Python

Declare boolean variables indicating weather conditions.

► Code

Print the values of the boolean variables.

► Code

Type error in Python

Fix the type error in the following statement and print the corrected string.

```
f1 = 0.25
f2 = 40.0
p = f1 * f2
bs = "The price is " + p
print(bs)
```

► Code

For loop with countries

Create a list of countries: Spain, France and Germany.

► Code

Use a for loop to print a message for each country.

► Code

For loop with numbers

Create a list of numbers: [1, 2, 3].

► Code

Use a for loop to calculate the product of all numbers and print the result.

► Code

```
print("Product of numbers:", total)
```

```
</details>
```

```
## Return statements in Python
```

Define a function 'calculate_sum' that takes two parameters and returns their sum.

```
<details><summary>Code</summary>
```

```
``` py
```

```
def calculate_sum(a, b):
 return a + b
```

Use the function to calculate and print the sum of 7 and 3.

► Code

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Create a function 'is\_positive' that takes a number as a parameter and returns True if it's positive, False otherwise.

► Code

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Test the 'is\_positive' function with both positive and negative numbers and print the results.

► Code

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## Defining a square function and calling it

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Define a function 'square' that takes a number as a parameter and returns its square.

► Code

---

Use the 'square' function to calculate and print the square of 8.

► Code

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Create a function 'calculate\_area' that calculates the area of a square given its side length. Use the 'square' function to find the area of a square with side length 5.

► Code

```
area = calculate_area(5) print("The area of the square is:", area)
```

```
</details>
```

```

```

```
Using a for loop
```

Write a program that uses a for loop to print the numbers from 1 to 5.

```
<details><summary>Code</summary>
```

```
``` py
for i in range(1, 6):
    print(i)
```

```
## Comparison operators in Python
```

Create a function 'compare_numbers' that takes two numbers as parameters and prints a message indicating which number is greater or if they are equal.

► Code

Test the 'compare_numbers' function with different pairs of numbers.

► Code
