Code Academy

Data Science and AI Stream

Homework 1 - Week1: Introduction to Python Basics Due

Date: April 16th. 2025 @11:59 pm

Problem 1: Hello, Variables!

Problem Statement:

Write a Python program to declare three variables:

1. `name` (a string),
2. `age` (an integer),
3. `Height` (a float).

Print their values in the following format:

Hello, my name is [name]. I am [age] years old and my height is [height] meters.

Sample Output:

```
Hello, my name is Ali. I am 25 years old and my height is
1.68 meters.
```

Solution:

assinment.py

```
name='majeed'
age= 20
height= 1.50
print(f"Hello, my name is {name}. I am {20} years old and my height is {1.50} meters")
```

assinment

```
C:\Users\User11\PycharmProjects\PythonProject\.venv\Scripts\python.exe C:\Users\User11\Pycha
Hello, my name is majeed. I am 20 years old and my height is 1.5 meters

Process finished with exit code 0
```

Problem 2: Basic Arithmetic Problem
Statement:

Write a Python program that takes two numbers as input from the user and performs the following operations:

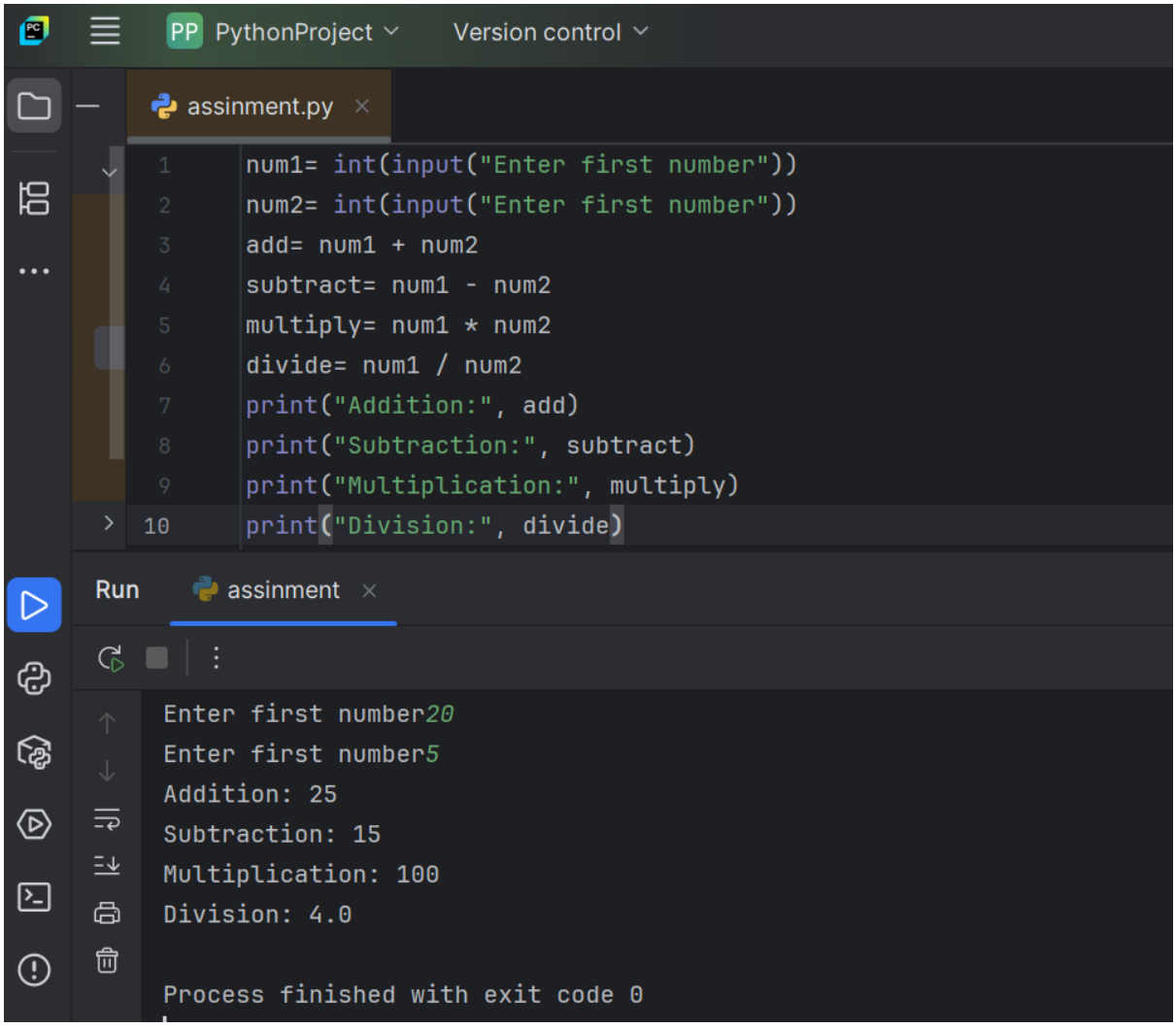
1. Adds them.
2. Subtracts the second number from the first.
3. Multiplies them.
4. Divides the first number by the second.

Display the results with appropriate labels.

Sample Output:

```
Enter first number: 10
Enter second number: 5
Addition: 15
Subtraction: 5
Multiplication: 50
Division: 2.0
```

Solution:



Problem 3: Data Type Check

Problem Statement:

Write a Python program that assigns the following values to variables:

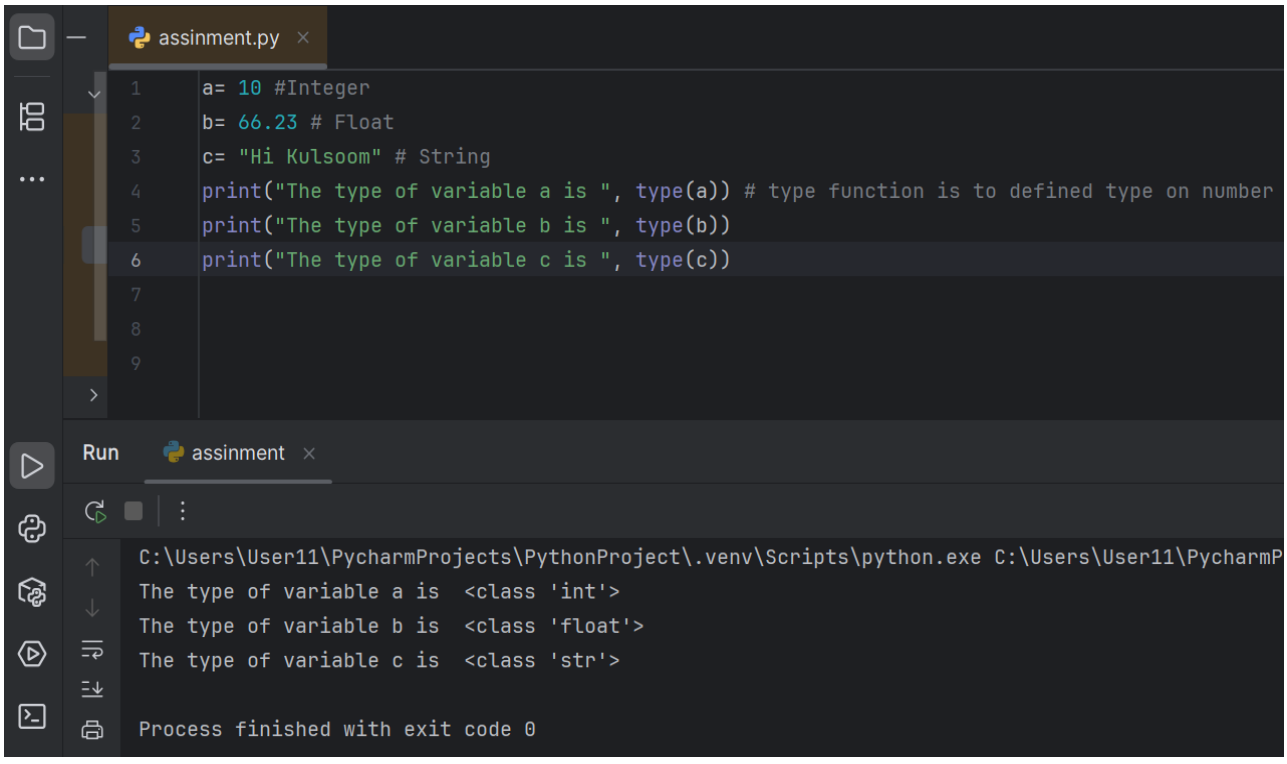
- An integer value to `a`,
- A floating-point value to `b`,
- A string value to `c`.

Print the type of each variable using the `type()` function.

Sample Output:

```
The type of variable a is <class 'int'>
The type of variable b is <class 'float'>
The type of variable c is <class 'str'>
```

Solution:



Problem 4: Area of a Rectangle

Problem Statement:

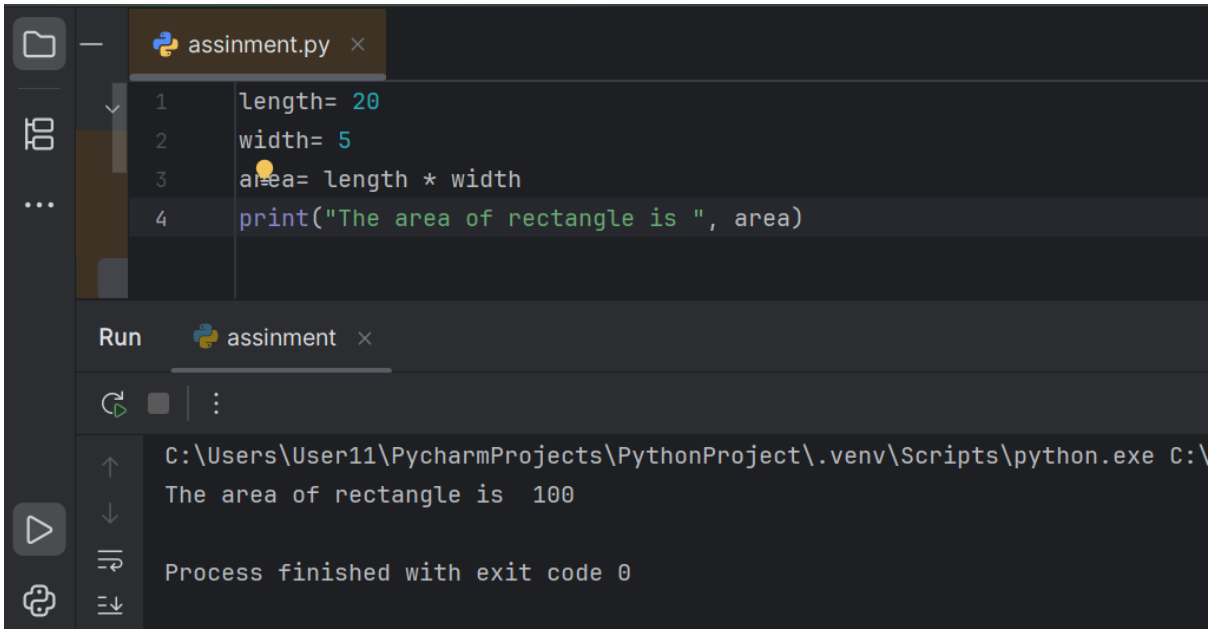
Write a Python program to calculate the area of a rectangle.

- Assign values to `length` and `width` variables.
- Calculate the area using the formula: `area = length * width`.
- Print the result.

Sample Output:

```
Length: 10
Width: 5
The area of the rectangle is 50.
```

Solution:



Problem 5: Simple Interest Calculation

Problem Statement:

Write a Python program to calculate the simple interest using the formula:
Simple Interest = (P * R * T) / 100 Where:

- `P` is the principal amount.
- `R` is the rate of interest.
- `T` is the time in years.

Take values for `P`, `R`, and `T` as input from the user and print the calculated simple interest.

Sample Output:

```
Enter Principal amount: 1000
Enter Rate of Interest: 5
Enter Time (in years): 2
The Simple Interest is 100.0
```

Solution: