

- 1) Download the Python file Homework1-Exercises.py
- 2) Please write your name, ID, and initial to the Honor Code statement.
- 3) For code answers write your lines of code under each instructional comment.
- 4) Save the python file as yourname_cs110_hw1.py and submit it to Canvas.
- 5) Submit a singular PDF file that contains a screenshot of the output for each exercise and its tasks along with the written answers in chronological order named yourname_cs110_hw1.pdf
- 6) Any late submission will be penalized 25% of the earned points per 24 hours.
- 7) Submissions must follow the instructions. Any incorrect format of submission (e.g., file, errors, etc.) is subject to be penalized.

Exercises

[10 pts] Question 1.

[4 pts] Write a program to print 10, 10.0, "10.0".

[6 pts] Find the type of each and explain the differences between 10, 10.0, and "10.0".

[15 pts] Question 2.

[5 pts] Print the expression that adds two integers, 5 and 10.

[5 pts] Concatenate two strings, '5' and '10', and print the result.

[5 pts] What is the difference between adding integers and concatenating strings?

(Continue on next page.)

[20 pts] Question 3.

[7 pts] Verify if Python will accept the code below. Explain why or why not.

```
'100' + 50
```

Make changes if needed and print the result.

[8 pts] Let x be '2' and y be 100. Find the product of x and y and let the product have a variable name z. Concatenate it with ' is the same as 2x100.'. Make changes if needed and print the result.

[5 pts] What happens if you try to convert the string 'hello' to an integer?

[10 pts] Question 4.

[5 pts] Assign the value 25 to a variable called age. Print the value of age. Reassign age to a new value of 'twenty-five' (a string). Print the new value and check its type.

[5 pts] How does Python handle changes in variable types?

[15 pts] Question 5.

[5 pts] Assign values to three variables a, b, and c in a single line using tuple assignment. Print them in a single line, separated by commas.

[5 pts] Print them with custom formatting using the format() method, where a is left-aligned in 10 spaces and b and c are right-aligned in 10 spaces.

[5 pts] How does tuple assignment work?

(Continue on next page.)

[15 pts] Question 6.

[5 pts] Prompt the user to enter their name. Use `\n` to print a greeting on two lines.

[5 pts] Additionally, use `\t` to print their name indented with a tab.

[5 pts] How do control codes like `\n` and `\t` change the output formatting?

[15 pts] Question 7.

[5 pts] Write a program that asks the user to input two floating-point numbers.

[5 pts] Apply addition, subtraction, multiplication, and division between two numbers.

[2 pts] Print the result of each operation after rounding it up to the thousandth place.

[3 pts] What happens if the user enters integers instead of decimal numbers?