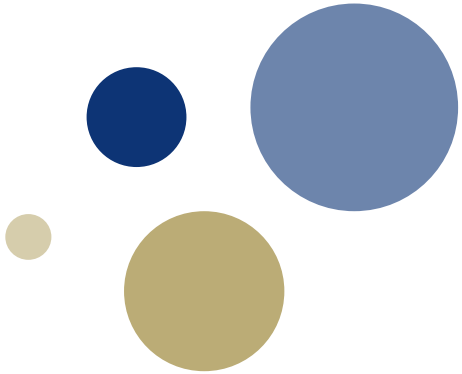

Workshop

Week 36

Exercise 1

Write a program that prompts the user to enter two integer values and that prints the result of the first number divided by the second with two decimal places displayed.

1. Write an algorithm for the solution.

2. Implement the solution using Python.

3. Modify the code:

    1. Ask the user for two floats and display the result with six decimal places.

    2. Display the result using scientific notation with four decimal places.

Exercise 1

Solution proposal for the algorithm:

Input: int1, int2
Output: result

result ← int1 / int2
Round result to two decimals
Print result

Exercise 2

Write a program that prompts the user to enter two integer values and that displays the results when each of the arithmetic operators are applied: +, -, ∗, /, //, %, and **.

All floating-point results should be displayed with two decimal places.

Exercise 3

Write a program that calculates the restaurant tab for a person with a gift certificate.

The program should:

- prompt the user for the amount spent on appetizer, entrée, dessert and drinks, and for the amount on the gift certificate.
- display both the final tab to the customer, as well as the amount paid in sales tax (assume a sales tax of 25 %).

1. Write an algorithm for the solution.
2. Implement the solution using Python.

Exercise 3

Solution proposal for algorithm:

Input: certificate, appetizer, entrée, dessert, drinks
Output: tab, tax

SALES_TAX ← 0.25
tab ← appetizer + entrée + dessert + drinks – certificate
tax ← tab – (tab / (1 + SALES_TAX))
Print tab and tax

Exercise 4

Modify this week's class exercise so that the temperature conversion program instead converts temperatures from celsius to fahrenheit.

The program should:

- prompt the user for a temperature in celsius
- display the converted temperature in fahrenheit

1. Write an algorithm for the solution.
2. Implement the solution using Python.

Exercise 4

Solution proposal for the algorithm:

Input: celsius
Output: fahrenheit

fahrenheit ← (9 / 5 * celsius) + 32
Print fahrenheit