

CS 115 - Introduction to Programming in Python

Lab Guide 01B

Lab Objectives: Data, expressions, conditional statements

1. Write a program that inputs 3 decimal numbers, x, y and z from the user. Calculate and display the result of the following equation. The output should be formatted the same as the sample run below.

$$r = \frac{(x + yz)(xy + z)}{x + y}$$

Sample Run:

Enter x: 5.2

Enter y: 6.3

Enter z: 1.7

The result of the calculation is 47.67

2. Write a program that inputs an integer value from the user. Your program should give an appropriate message for the value greater than 100, between 50 and 100, inclusive or less than 50.

Sample Run 1:

Enter an integer number: 82

Value is between [50-100]

Sample Run 2:

Enter an integer number: 105

Value is greater than 100

Sample Run 3:

Enter an integer number: 23

Value is less than 50

3. Write a program that inputs an integer value from the user. The value may be in days, hours or minutes. Days should be converted to hours, hours should be converted to days and hours, and minutes should be converted to days, hours and minutes.

Note: Your program should validate the input.

Sample Runs:

Enter value to convert: 1852
Enter input unit(days/hours/minutes): minutes
There are 1 day and 6 hours and 52 minutes in 1852 minutes

Enter value to convert: 30
Enter input unit(days/hours/minutes): hours
There are 1 day and 6 hours in 30 hours

Enter value to convert: 3
Enter input unit(days/hours/minutes): days
There are 72 hours in 3 days

Enter value to convert: -5
Value must be positive

Enter value to convert: 24
Enter input unit(days/hours/minutes): day
Invalid input unit!