Problem Set 02

Handed out: Saturday, May 06, 2023.

Due: 11:59 PM, Tuesday, May 16, 2023.

This problem set will introduce you to programming in Python, as well as to our general problem set structure. In this problem set, you will confirm your installation of Python, write a simple Python program, and hand it in. ***Be sure to read this problem set thoroughly, especially the Collaboration and Hand-in Procedure sections.***

Collaboration

You may work with other students. However, each student should write up and hand in his or her assignment separately. *Be sure to indicate with whom you have worked in the comments of your submission.*

→ This class uses Python version 3.5 or higher.

You can contact to course professor and TAs using the links below:
Hassan Bashiri - Yones Sohrabi, Reza Mahmoudian, Farhad Uneci.

Edited by Farhad Uneci on May 04, 2023.

A Very Simple Program:
Raising a number to a power and taking a logarithm

The goal of this programming exercise is to make sure your python installation is correct, to get you more comfortable with the language and to begin using simple elements of Python. Standard elements of a program include the ability to print out results (using the print operation), the ability to read input from a user at the console (for example using the input function), and the ability to store values in a variable, so that the program can access that value as needed.

Assignment:

Write a program that does the following in order:

1. Asks the user to enter a number "x"
2. Asks the user to enter a number "y"
3. Prints out number "x", raised to the power "y".
4. Prints out the log (base 2) of "x".

Save your code in a file named `ps02.py` and add your logic inside a function called `power_and_log`.

An example of an interaction with your program is shown below. The words printed in blue are ones the computer should print, based on your commands, while the words in black are an example of a user's input. The colors are simply here to help you distinguish the two components.

```
Enter number x: 2
Enter number y: 3
X**y =  8
log(x) = 1
```

Hints:

- To see how to use the print command, you may find it convenient to look at the input and output of the Python Wikibook. This will show you how to use print statements to print out values of variables.
- To see how to read input from a user's console into the Python environment, you may find it convenient to look at the same section (see for example the input() function)
- Reference the basic math section of the Python Wikibook to read more about using basic mathematical operators in Python.