CS1101 Worksheet07

Login to the system. Open a terminal. Create a directory called **Worksheet07** under your home directory. Change to that directory and do all your work there. Each problem in this worksheet will require you to write a program. Use gedit to type your programs. The name of the programs should be prob-n.py for n_{th} problem You should keep all your files in Worksheet07 folder.
At the end of the class, archive the directory **Worksheet07** and upload to welearn.

Warning: Please strictly adhere to the instructions above – not doing so may affect your grades!

1. Download the program funfun.py from WeLearn. Copy the program as prob-1.py and modify the program such that the program prints the sum of the m_{th} power of list elements where m is asked from the user.

2. In a program, define a function which takes two arguments and returns the larger of the two arguments. The program should ask the user to enter two numbers and should print the larger number.

3. (optional) Define a function which sorts a given list in ascending order (smallest number becomes the first element). Use the lists from the previous worksheet to show the usage.

4. Define a function which takes n as an argument and evaluates

$$g(n) = \sum_{i=1}^{n} \frac{i}{i+1}$$

Print the values of g(n) for n = 1 to 20.

5. Define a function which yields the n_{th} the item of the Fibonacci series (Fibonacci series: 1, 1, 2, 3, 5, : : : , where every number starting from third is sum of the two previous numbers).

6. Define a function which calculates the factorial of a given number. Show the usage of the function by calculating the factorials from n=1 to 8.