COMP 10280
Programming I (Conversion)

Practical Sheet 7
Thursday, 8 October 2020

For each of the following questions, write an algorithm in pseudocode first before writing a Python program. Submit your algorithms in psuedocode as well as your Python programs.

1. Write a program that prompts the user for a year and checks whether the year is a leap year. Use my algorithm from Lecture 8.

   Save this program as `p7p1.py`.

2. Write a program that prompts the user for a year and checks whether the year is a leap year. Use the algorithm on the Wikipedia page (also mentioned in Lecture 8).

   Save this program as `p7p2.py`.

3. Write a program that uses a `while` loop to go through the first 50 integers and prints out each number and the square of the number.

   Save this program as `p7p3.py`.

4. Write a program that uses a `while` loop to sum the first 5000 integers and prints out the total.

   Save this program as `p7p4.py`.

5. Write a program that sums the integers in the range 1–10 000 that are divisble by 3 or by 5 and prints out the total.

   Save this program as `p7p5.py`.

Please upload your work to the Brightspace site before Sunday evening.

You should keep a copy of your programs for your portfolio.