

# **COMP 10280 Programming I (Conversion)**

**Practical Sheet 7**

**Thursday, 26 September 2019**

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.**