

# PROGRAMMING CHALLENGES

## COMP321

### ASSIGNMENT 1

#### Setup

Kattis (<https://open.kattis.com>) is a website that allows students to submit solutions to programming problems, and have them evaluated automatically by running a series of test cases on the submitted solutions.

Before you can submit code through Kattis, you need to complete the following steps:

1. Go to the Open Kattis registration page and create an account **with your McGill e-mail**.
2. Go to the help session and read the documentation for your preferred language program. In this class, we will code using C, C++ Java and/or Python.
  1. <https://open.kattis.com/help/java>
  2. <https://open.kattis.com/help/cpp>
  3. <https://open.kattis.com/help/c>
  4. <https://open.kattis.com/help/python2>
  5. <https://open.kattis.com/help/python3>
3. Try to solve the Hello World problem (<https://open.kattis.com/problems/hello>). This problem has a very simple solution: you just need to write a C/C++/Java/Python program that prints out “Hello World!”. The way you submit a problem is by clicking on the green icon that appear to the left of the problem name (when you hover over the icon, it should say “Submit”). This will take you to a page where you can either upload a file, or switch to an editor where you can write the code directly on your browser. Make sure that you correctly selected the right language before you submit your solution.

After you’ve submitted the code, Kattis will “judge” it, and will send you an e-mail notification with the result. If you solved the problem correctly, you will get an “Accepted” judgment. You can also check the status of all your submissions by clicking on the user icon on the top-right corner of the Kattis page, and then clicking on your name. This will show a list of all your submissions. Take into account that this list does not update automatically; if a submission shows up as pending (either “Compiling” or “Running”), you need to reload the page to see its latest status.

Before submitting a solution to Kattis, you may want to run your solution on your own machine to make sure there are no major issues with your code, such as syntax errors or small mistakes that will makes your code return a Wrong Answer even with the sample input. The problems include some sample data that you can use to test your solution (you can download this data from the problem webpage). However, Kattis will run your solution with additional test cases, typically designed to check corner cases.

# Solving the problems I give you.

The list of the problems that we will solve for this assignment is as follows.

1. The Easiest Problem Is This One (<https://open.kattis.com/problems/easiest>).
2. Oddities (<https://open.kattis.com/problems/oddities>)
3. I Can Guess the Data Structure (<https://open.kattis.com/problems/guessthedatastructure>).

Please remember that the assignment must be solved individually. What I expect from you is the following.

1. A .pdf file uploaded in mycourses (please upload it in the 'Assignment1' folder). This .pdf must be named Assignment1\_ID1.pdf, where IDi is your McGill id number. Inside the pdf file you must copy/paste the acceptance notifications that you received from Kattis.
2. You must submit the code that you used in your submission. The files must be named Problem\_ID1.extension, where 'Problem' is the name of the problem (easiest and ) ID is your McGill id and 'extension' is the program extension (.py, .java, .c or .cpp). Please add comments to your code.

The due date for this assignment is Tuesday January 30th before 10 am.