

The deadline for this exercise sheet is **Monday, 14.05.2018, 08:00**.

## 1 Warm-Up: Debug Like There's No Tomorrow

This week is going to be all about fixing errors in the code instead of building your own programs from scratch.

Attached to this sheet there is a folder `debug_me` full of small Python scripts. All of them throw some sort of exception.

Fix the Python files to get rid of the exceptions and to make them do what they were supposed to do. Run your version of the code to make sure it actually works. **Then put a small comment in each file explaining what was the problem.**

## 2 Tic-tac-toe

Tic-tac-toe is a classic game easily played on paper with a pencil, in which both players, *X* and *O*, try to win by getting three of their symbols in one row, column or diagonal of the 3x3 grid.

Figure 1: Example Tic-tac-toe game

Taken from [https://commons.wikimedia.org/wiki/File:Tic\\_tac\\_toe.svg](https://commons.wikimedia.org/wiki/File:Tic_tac_toe.svg)

Attached you will find a file named `tictactoe.py`.

This file contains the game, adaptable even to grids of other sizes. Unfortunately, it's not working, but keeps throwing exceptions.

Fix the exceptions in the code by running the program and getting familiar with the code. Similar to the first exercise, put a comment into the file and **explain what you changed**.

*Hint:* All of the errors can be fixed by either modifying the same line or adding one other. Before you hand in the homework, play the game for a little to actually make sure it is not crashing.

**Bonus:** As soon as the game does not crash anymore, you might notice that even though it's now technically working, it is not working *properly* and therefore not completely doing what is supposed to do. There's two reasons for that - find and fix them as well.