

IMPERIAL COLLEGE LONDON

INSTRUCTIONS FOR LAB TEST

MSc in Artificial Intelligence
MRes in Artificial Intelligence and Machine Learning
for Internal Students of the Imperial College of Science, Technology and Medicine

PAPER COMP70053

PYTHON PROGRAMMING

Friday 29th November 2024, 16:15
Duration: 75 minutes

Instructions

- There will be 4 questions in the lab test.
- You may answer the questions in any order. The difficulty increases with each question.
- You may use only the Python Standard Library for this lab test. External libraries such as `numpy`, `matplotlib`, `scikit-learn` and `pandas` are not allowed.
- The examiner will manually mark your code, guided by the results of some automated internal tests. Partial marks may be awarded for any attempts that are not correctly implemented or that do not pass the internal tests.

Logging In and Logging Out

- Use your username as both the username AND password to log in.
- Log out at the end of the lab test. **DO NOT SHUT DOWN THE MACHINE.** CSG will remotely collect your answers directly from the machines.

Provided files

- All the files you will need for the lab test are provided in your special home directory (`~`).
- Launch a terminal in your home directory (`~`). Then run `bash docs.sh`. This will launch Firefox with (i) the official Python Standard Library documentation and (ii) the course materials. **Please leave this terminal open throughout your lab test** as it is needed to serve the course materials.
- Launch a new terminal in your home directory (`~`). You will use this terminal for running your code. Also launch any text editors that you might need.
- When the lab test officially starts, the specification PDF will appear as `~/exam.pdf`. A shortcut to this file will also appear on the desktop.
- The skeleton files will also appear in `~/code/` at this time.
- The skeleton files for each question are provided under its own subdirectory `~/code/qN/`.
- You can assume that the scripts will be executed from inside each subdirectory `qN/`.
- Please keep the directory structure as given.
- You are provided with files to aid you with testing (these are named `test_qN.py`). You may freely edit these for your own testing purposes. These will not be assessed.
- You may create as many new files as you wish in each subdirectory `qN/`.

Tips

- Please read all questions before you start and plan your time accordingly.
- Try attempting all questions, rather than trying to get one question perfect at the expense of not answering other questions.
- Please make sure that your scripts run without any syntax errors. The examiner may penalise you otherwise.
- Think before you code!

All the best! 🍀🍀🍀