

# First Year Computing/JMC

An Introduction to Year 1 & Computing Practical 1

October 2023

# Contents

- Who is this person?
- What is “COMP40009”?
- How does everything work?
- Why is it important?

# Introduction

- Welcome to DoC!
- You will (*hopefully*) study here for the next 3 or 4 years
- May as well make the best out of it!

# Year Coordinator

- Konstantinos
- **kgk@ic.ac.uk**
- All issues affecting the First Year of your studies; e.g.:
  - *"My git repository is missing"*
  - *"I cannot access Scientia/LabTS"*
  - *"Who can I contact about XYZ?"*

# Year Coordinator (cont'd)

- However, not:
  - *"My dog ate my USB stick"*
    - This is why we put everything on git
  - *"I missed the bus/train/alarm clock, and also the deadline"*
    - The submissions are at 19:00
  - *"I have some personal reasons"*
    - Please contact the Senior Tutor *before* the deadline

# Year Coordinator (cont'd)

- Used many computer languages:
- C, C++, Java, C#, Visual Basic & VBA, Perl, Python, PowerShell, JavaScript, jQuery, ActionScript, T-SQL, PL/SQL, HTML5/4, CSS3/2, PHP5/4, ASP/X, JSP, SOAP, X3D, XML, XSLT, XSD, DTD, OWL, RDF, Sparql, Lua [...]
- Also, a bit of: Basic, Pascal, Eiffel, Delphi, Haskell, Kotlin [...]

# Small Group Tutorials

- GTAs == (Post)Graduate Teaching Assistants
  - *(your MMT Tutors and Lab Helpers)*
- UTAs == Undergraduate Teaching Assistants
  - *(your PPT/PMT Tutors and Lab Helpers)*
- PPTs == Personalised Programming (small group) Tutorials
- PMTs == Personalised ~~Mathematics~~ (small group) Tutorials
- MMTs == Maths Methods Tutorials (*the previous name of COMP40016/17*)

# Small Group Tutorials (cont'd)

- PPTs => COMP40009 (Terms 1 & 2)
- PMTs (Computing) => COMP40018 (Terms 1 & 2)
  - and COMP40008 (Term 2)
- PMTs (JMC) => COMP40018  $\equiv$  COMP40012 (*but you start on Week 6*)
  - and COMP40008 (Term 2)
- MMTs => COMP40016 (Term 1) & COMP40017 (Term 2)



# How to succeed in your First Year

- Attend/Watch all lectures and read any lecture notes every week
- Attend all PPT/PMT/(MMT) sessions and submit their exercises
  - *n.b., MMT exercises are assessed as coursework*
- Revise before any tests and exams
- **Make friends!** You can join Social Clubs to make this easier.
- Inform the Senior Tutor of any absence/illness ***before*** deadlines
- Inform your PPT/PMT/MMT tutors ***before*** any missed tutorials
- Ask for help if you need it; **we are here for all of you!**

# How to fail in your First Year

- Join so many clubs and societies that you have no time to study or sleep..!
- Party every night, oversleep, miss the 9am lecture.. and then the 10am... and then it's lunchtime..!
- Study ALL the time, ignore your health, and become too tired and bored and unfit
- Miss tutorials, and don't submit their exercises (*a very RELIABLE way to fail*)
- Submit another student's work as your own, more than once (*this can be a REALLY quick way to fail*)
- Bully or cyberbully your classmates, thinking that it is just good fun (*it is not*)
- Assume that, because you have the notes (*or that you can watch Panopto*), the material is already in your head (*it isn't!*)
- Miss a chunk of term time for (e.g.) skiing or hackathons; no allowance can be made for anything missed
  - (*except with mitigating circumstances*)
- Believe a Second/Third/Fourth Year student who says “*you don't need to study – just revise at the end*” (*lies, all lies!*)
- Believe and act on the myth (*from some schools*) that A Levels is the hardest thing you ever have to do (lol!)

# Health & Safety

- Proper posture (*comfortable but supported*)
- Frequent breaks (*5-10 minutes every 60-90 minutes*)
- More information on:
  - The Imperial College website:
    - <http://www.imperial.ac.uk/occupational-health/health-protection-at-work/computer-health/>
  - The NHS website:
    - <https://www.nhs.uk/live-well/exercise/strength-and-flexibility-exercises/common-posture-mistakes-and-fixes/>

# CSG

- Computing Support Group
- [doc-help@doc.ic.ac.uk](mailto:doc-help@doc.ic.ac.uk)
- <https://www.doc.ic.ac.uk/csg>

# Year 1

- Computing:
  - 8 core modules (coursework + exams)
  - 1 special module (coursework only) = Computing Practical 1
  
- JMC:
  - 2 core modules from Computing (coursework + exams)
  - 1 special module (coursework only) = Computing Practical 1
  - + Department of Mathematics modules

# One usual week in Year 1

- Attend lectures
- Attend PPT / PMT / (MMT) tutorials
- Submit core module coursework
- Submit PPT exercise
- Submit PMT exercise
- (Submit MMT exercise)
- Study
- Socialise
- Sleep
- Repeat

# Courseworks, Tests & Exams

- Coursework for each module (*usually 1 or 2*)
- Programming tests (6 in total)
  - Haskell = 2
  - Kotlin = 2
  - C = 1 (+ Group Project)
- Exams
  - All your exams will be at the beginning of the Summer Term

# COMP40009

- Term 1: **Haskell** (W1 – W6) + **Kotlin** (W7 – W10) + PI/Ethics
- Term 2: **Kotlin** (+ *short intro to Java*)
- Term 3: **C** (*however, without any PPT sessions*)
- Haskell => 30%, Kotlin => 40%, C => 20%



# COMP40009 (cont'd)

- To pass COMP40009:
  - Achieve 40%+ overall in COMP40009
  - Achieve 40%+ specifically in the Term 3 Group Project
  - Achieve 50%+ in all Lexis Tests combined
    - as per the [weights mentioned on the website](#)
- Completing the weekly PPT exercises is essential
  - because it prepares you for the Lexis Tests of Haskell & Kotlin

# COMP40009 (cont'd)

- PI == Professional Issues
- Research skills & Ethics in Computing
- **It counts 10% of COMP40009**

# COMP40009 (cont'd)

- You need to log into ~~CATe (cate.doc.ic.ac.uk)~~ Scientia (scientia.doc.ic.ac.uk) in order to access the spec of each lab
- The first spec contains step-by-step instructions on how to submit your code
- Make sure you submit before the deadline
  - **Avoid submitting at the last possible minute to prevent disappointment**

# COMP40009 (cont'd)

- Labs are released each Monday morning at 08:00
- Deadline for submission is Friday at 19:00
- The PPT UTAs will mark your work and discuss it with you in your next PPT session
- All labs last one week
  - *except... the first one!*

# COMP40009 (cont'd)

- Lab #1 – “Sequences”, will:
  - introduce you to The Lab
  - teach you how to submit your work
- It will be released after this lecture
- Deadline: Friday (*tomorrow*) at 19:00
- **Tip:** Do not miss The Lab session tomorrow, Fri 14:00-16:00

# COMP40009 (cont'd)

- Scientia
- GitLab
- LabTS
- EdStem
- Panopto
- (Teams / Zoom)
- ~~CATe~~
- ~~Emarking~~

# Scientia

- scientia.doc.ic.ac.uk
- You can find the notes of your modules here
- As well as other resources (*gradually, everything*)
- Documentation:
  - <https://edtech.pages.doc.ic.ac.uk/docs>

# GitLab

- `gitlab.doc.ic.ac.uk`
- A repository will be created for you each time
- It has been pre-populated with the files you will need
- Imagine this space as a folder on the “cloud”
  - i.e. you can access it from anywhere, if you have Internet access



## GitLab (2)

- Every time you change something, you should “commit / push” your changes to your git repo
- This way, you will not lose your work
  - *(even if your computer crashes)*
- You can also find previous versions of your files on there
  - in case you realise you just deleted something useful

# LabTS

- [teaching.doc.ic.ac.uk/labts](https://teaching.doc.ic.ac.uk/labts)
- After every commit/push, LabTS allows you to test the functionality of your code
- We have created a series of standard tests for this purpose
- If some fail, it means you still have work to do

## LabTS (2)

- We provide you with tests as part of the default (*skeleton*) files
- You can run the tests locally, before asking LabTS to confirm
- You can (*should*) even create your own tests!

# LabTS (3)

- Once you are happy with the results
  - *(or if you realise you are running out of time)*
- It is time to submit!
- There is a button entitled “Submit this Commit”
- Push it, and that's it!
  - (it turns **green**)

# LabTS (4)

- You can keep submitting newer versions of your code
  - all the way up to the deadline
- The system will block you if you try to resubmit after the deadline
- Your first submission after the deadline is capped at pass mark
  - during the first 24 hours
    - *(it get zeroed after)*
- Do not leave this for the last minute
  - **Even 1 second late is “Late”**

# EdStem

- [edstem.org](https://edstem.org)
- A collection of forum boards to discuss your modules or other topics
- There is one board for each module, plus others

# Panopto

- [imperial.cloud.panopto.eu](https://imperial.cloud.panopto.eu)
- Uploads of recorded live, or pre-recorded, lectures
  - as well as many other useful videos
- This is not a replacement for attending (*when you can*)
  - but a tool for when you cannot
    - (*or for revision*)

# Teams

- A collaboration platform that enables video conferencing as well as text-based communication
- You all have full access with your Imperial logins
- Some Lecturers may choose to use Zoom instead
  - you also have full access there with your Imperial account/SSO



# CATe

- ~~cate.doc.ic.ac.uk~~

- .

- ~~See coursework deadlines & retrieve exercise specs~~

- .

- ~~This has now been embedded into Scientia~~

- ~~by selecting “View **Timeline**”~~

# eMarking

- ~~emarking.doc.ic.ac.uk~~

—.

- ~~Find your marked coursework/tests and feedback~~

—.

- ~~This has now been embedded into the Scientia Timeline~~

# ...and so much more!

- You will definitely get to use many more platforms
- So please do ask when you have a question
- And also help each other, when you can

# FAQ

- “I want to work with Linux but I only have Windows”
  - You can download VirtualBox or VMware Player (=virtual machines) for free, and install Linux (e.g. Ubuntu) inside your Windows OS
  
- “I have a Mac”
  - MacOSX is based on UNIX, like Linux, but you may find that certain aspects differ
  
- “I have this thing I cannot miss on deadline day”
  - Either submit before that, or speak with the Senior Tutor

## FAQ (2)

- “I prefer to work alone – why should I attend the lab sessions?”
  - Interacting with others, exchanging ideas (*not code*), discussing with the UTA lab helpers, and practicing your coding skills is what The Lab is all about

## FAQ (3)

- “But I *hate* working with others”
  - This world would not have achieved all these advancements, had it not been for teamwork
    - Companies will ask you to be part of a team
      - Even if you start your own company
- And guess what...
  - We will ask you to be part of a team too
  - Many times..!

# Special Mention: COMPM0701

- COMPM0701 is a special “module”
  - a series of 5 x 2h sessions (*usually on Wednesday afternoon*)
    - to prepare students for Competitive Programming contests
      - [UKIEPC](#): 21/10/2023
      - [NWERC](#): 25-26/11/2023
- Use the [Internal Students Enrollment](#) tool
  - to sign up for the EdStem announcements

# Question Time!

If you have an Internet-enabled device, go to:

**menti.com**

and type the code:

**2279 3322**





# Conclusions

- The Lab of COMP40009 is where you will find anything related to Haskell, Kotlin, C, as well as PI/Ethics
- Scientia is where you download the specs (*and submit your work*)
- Your code should be pushed to GitLab, tested via LabTS and then submitted to Scientia via the provided LabTS button
- Whatever you do:
  - Submit **before** the deadline
  - Always produce **original** work

# Any Questions?

**Coming up tomorrow (Fri 06/10):**

**The Lab – 14:00-16:00**

- Contact me with any issues or questions (**kgk**)
- Enjoy your time here at Imperial!