Introduction to the Course

Fall 2020
Outline

• Android Development
  • UI & UX
  • Kotlin
  • State & Data management
  • Testing
  • External APIs and libraries (Google Maps, REST APIs, ...)

• Sensors and Internet of Things
  • Smartphone sensors
  • Overview of embedded systems, Arduino
  • IoT
    • Applications
    • Communication protocols
    • platforms

• Multiplatform Mobile Development
  • Flutter

• Team Projects

• Research directions for IoT, Fog Computing
Who is this course for?

- Programming skills are necessary
  - Object Oriented Programming (OOP)
  - Previous Java experience will be very handy

- Comfortable trying out different languages
  - Kotlin, Dart, Arduino C

- Capable of finding additional material
  - Lectures, labs will provide some links and references to get you going
How will the course take place?

- Weekly lectures
  - Lectures start 7th September
- Weekly labs
  - Work on your own laptops
- Weekly homeworks
- Some mid-term tests, Final project
- No exam
Grading

• 8 Homeworks 5 pts each 40%
• 2 Home assignments 15 pts each 30%
• Team Project 20 pts 20%
• 2 Tests 5 pts each 10%

To pass the course, you must score at least 50% in each subsection!
Grading policy

• Finish homeworks by 23:59 of the next week
  • Ideally, before your next lab session
• Home assignment deadlines are longer (2-3 weeks)
• Penalties for late submissions:
  • Up to 2 days after deadline- Your submission will be graded for 80%
  • 3 - 7 days after deadline: submission graded for 50%
  • 8+ days after deadline: Your submission will not be graded, you get 0 pts.
Coronavirus disease (COVID-19)

• Lectures and labs take place in Delta
  • Students need to register every session they attend in person at https://cs.ut.ee/reg

• Sessions will be recorded and uploaded to Panopto
• If necessary, the sessions will be replaced with online ones
  • Panopto recordings
  • Zoom / Teams meetings for labs
Getting information

• Course webpage
  • https://courses.cs.ut.ee/2020/MCIoT
  • Links to videos, task descriptions & submission

• Google Group
  • https://groups.google.com/g/mobile-computing-and-iot-2020
  • Request to join

• Search online
  • To complete assignments, independent searching for material is assumed
  • https://developer.android.com/ -- you will use this a lot during the first weeks of the course
Dealing with problems & getting help

• Ask your lecturer / lab instructor
  • Jakob Mass - jakob.mass (at) ut .ee
  • Kélian Kaio - kelian.kaio (at) eesti.ee

• Post on the Google group, if you think your co-students can help / if you’ve found something which you think can help others.
This week

• Labs start on the 1\textsuperscript{st} week of the semester!
• Bring your laptop!
• Download & Install Android Studio before the lab!
  • Follow the guide here: https://tinyurl.com/mciot2020setup