BM20A8800 Discrete Models and Methods

Olli-Pekka Hämäläinen

Study goals

- Build a basic understanding of the world of discrete mathematics and its peculiarities
- Main themes:
  - Logic (proposition and predicate logic)
  - Induction and recursion
  - Group theory & combinatorics
  - Relations
  - Mathematical modelling and analysis of graphs
  - Decision trees
- Especially information technology students may be familiar with some of the topics already
  - Let’s try to find some fresh views

Course in practice

- 3. period, 7 weeks
- Each week contains 2 lectures and an exercise paper
  - Lectures published to Moodle in PDF & video format (usually on Friday the week before)
  - Lecture summary & question time on Monday 14-16 @7332 on Lappeenranta campus; also streamed via Zoom)
- Students can calculate the exercises either at home or during the exercise group
- Exercises are not mandatory, but a source of bonus points
- Exercise points will be converted to bonus exam points as follows:
  - 1 bonus point per 15% of exercises done (hence max. 6p)
  - Exam max 36p

Exercise groups

- Six exercise groups in which a student can
  - Show his/her solutions and gain exercise points
  - Receive help for problems
- Exercise group times, locations & capacities:

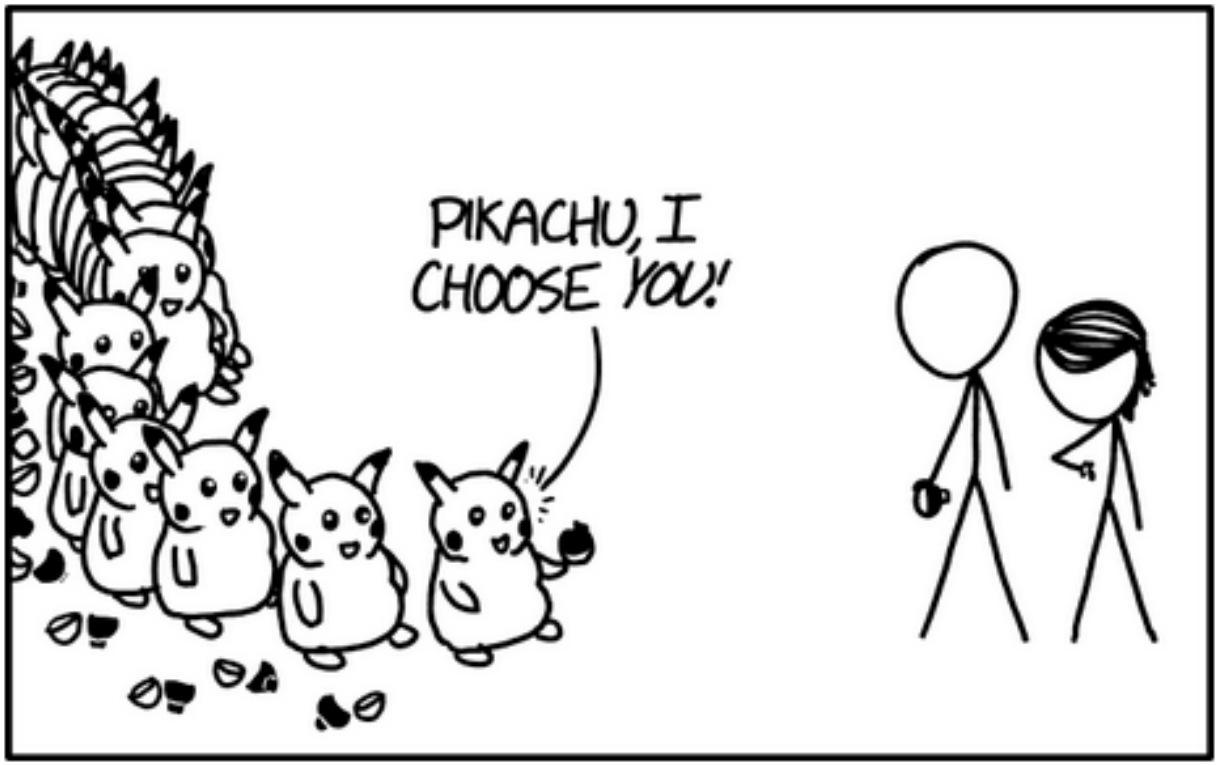
time	WEDNESDAY	THURSDAY	FRIDAY
8-9	Zoom	Zoom	6323
9-10	max 25	max 25	max 30
10-11	6323		
11-12	max 30		
12-13			
13-14			
14-15			
15-16	6323		
16-17	max 30	1247	
17-18		max 30	

Personnel in charge & communication

- Lectures and exercise problems: Olli-Pekka Hämäläinen
  - Please contact by email (no Moodle messages!)
  - olli-pekka.hamalainen@lut.fi
  - Office hours on Thursdays 14-16, room 2272

- Exercise assistants:
  - Ville-Petteri Manninen, Peppi Taina, Sara Heikkinen, Margeritta El-Khoury, Veera Vilkkilä, Santeri Röpelinen
  - Emails: firstname.lastname@student.lut.fi (remove umlauts)

That’s it, let’s begin!



(XKCD: Win by Induction. https://xkcd.com/1516/)