Programming Parallel Computers

Jukka Suomela · Aalto University · ppc.cs.aalto.fi

Part 1B: Course practicalities
Course workload and activities

• Intensive course, 6 weeks
• 5 credits / 6 weeks ≈ 22 hours of work per week
• Lectures: Monday
• Exercise sessions: Tuesday & Friday
• Discussions: every day in Zulip
• Deadline for exercises: Sunday at midnight
Passing the course

• Only one required part: *solve weekly exercises*
  • solutions that are **correct and fast** give points

• Course material at *ppc.cs.aalto.fi*

• Exercises at *ppc-exercises.cs.aalto.fi*
Workflow

ppc-exercises.cs.aalto.fi

Instructions, code templates
Workflow

ppc-exercises.cs.aalto.fi

Instructions, code templates

Develop a solution locally on your own computer, or use e.g. some Aalto Linux computer that you can access remotely
Workflow

ppc-exercises.cs.aalto.fi

Instructions, code templates

Upload

You only need to upload one C++ source file
Workflow

Instruction, code templates

Upload

Dedicated computers that automatically test your solution (a few minutes)

Hardware & software: ppc-exercises.cs.aalto.fi/help/computers
Workflow

ppc-exercises.cs.aalto.fi

Instructions, code templates

Upload

Results

Did it compile correctly?
Did it pass all tests?
How fast was it?
Measurements, assembly code ...

How many points you will get — assuming you have followed instructions and there are no bugs
Workflow

ppc-exercises.cs.aalto.fi

- Instructions, code templates
- Upload
- Results

Did it compile correctly?
Did it pass all tests?
How fast was it?
Measurements, assembly code ...

How many points you will get — assuming you have followed instructions and there are no bugs
Workflow

ppc-exercises.cs.aalto.fi

Instructions, code templates

Upload

Results

Did it compile correctly?
Did it pass all tests?
How fast was it?
Measurements, assembly code ...

How many points you will get — assuming you have followed instructions and there are no bugs

Repeat until happy
Workflow

ppc-exercises.cs.aalto.fi

Instructions, code templates
Upload
Results
Submit
Workflow

ppc-exercises.cs.aalto.fi

**Instructions, code templates**

**Upload**

**Results**

**Submit**

Our course staff checks your solution and gives feedback (≈ 1 week)
Workflow

Instructions, code templates
Upload
Results
Submit
Feedback, points

ppc-exercises.cs.aalto.fi
Workflow

ppc-exercises.cs.aalto.fi

- Instructions, code templates
- Upload
- Results
- Submit
- Feedback, points

Repeat until happy
Workflow

ppc-exercises.cs.aalto.fi

Instructions, code templates
Upload
Results
Submit
Feedback, points

Enjoy!
Workflow

ppc-exercises.cs.aalto.fi

Instructions, code templates → Upload → Results → Submit → Feedback, points

All deadlines refer to this point: full points available if and only if you uploaded your solution before the deadline.
Exercises

- You can solve whichever exercises you want, in any order
  - what matters is the number of points that you get
  - 64 points: grade 5/5
  - 38 points: grade 1/5

- **Recommended path**
  - follow it and you will get up to 79 points

- **Additional exercises**

- **Contest**
  - extra points if your solution is among the fastest solutions this year!
Prerequisite test

• Gives you a good idea of the minimum level of programming skills you are expected to have

• If you haven’t solved it yet, do it now!
  • task Pre0 at ppc-exercises.cs.aalto.fi

• 1 point available, deadline: Friday
Resubmissions

• Resubmissions during the course are always safe

• *Resubmissions are graded exactly like any other submission*, based on when it was uploaded
  • if you upload it **before the task deadline**, you can still get full points
  • if you upload it **after the task deadline**, you can get partial points
  • if you upload **after the course closes**, you will get no points

• For each task, what counts is the submission that gave the highest number of points
Help is available

• One-to-one help is available during the *exercise sessions*
  • help available both through *Zulip* and *Zoom*
  • you can take part in 0, 1, or 2 exercise sessions per week

• Additional help available in our *public Zulip streams*
  all the time during the course
  • our course staff is very happy to help there
  • feel free to discuss solution ideas there with other students
  • you are free to use a nickname if you prefer that
Collaboration rules

• You are encouraged to discuss solution ideas with other students and the course staff, but code that you submit must be written by yourself.

• You can use ideas that you find online, but you are not allowed to copy source code.

• Exception: copying code from our course material is fine.

Ask if unsure!
Checklist for this week

• *Registration* in Oodi

• Join our *Zulip* workspace, follow it

• Create a user account at *ppc-exercises.cs.aalto.fi*

• *Upload* solutions to this week’s tasks:
  • *Pre0* by Friday
  • *CP1* and *MF1* by Sunday

• Remember to check the results of automatic grading, fix bugs if needed, and *submit* for feedback when ready