

Chapel on Exercism

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- Software developer
- Scientific computing enthusiast, floating at the intersection of maths and computer science
- Experienced “close-to-graduation” PhD
- On my free time, I look for things on the internet that don't support Chapel and try to add support
- Stream beginner-friendly live-coding sessions about Chapel twitch.tv/codingmath.

- Most engineers / scientists learn basic sequential programming in their studies
- When working with big data / heavy simulations, the jump to parallel programming is painful
- **Chapel makes parallel programming easy and fun**

However...

- Do all people who need HPC actually know basics of programming?
 - the importance of computation and simulation has expanded to humanities, life science etc. etc.
- **HPC education challenge:** People need to learn programming before learning HPC
- **Can Chapel kill two birds in one stone?**

- I see no reason why Chapel could not be someone's first language
- Better integration of parallel programming concepts into basic curricula
- Need more resources to teach **basic programming** in Chapel

Exercism

- Platform to learn programming languages and programming from scratch
 - *<https://exercism.org>*
 - *<https://github.com/exercism>*
- Fully open-source and free
- Welcoming and nice community
- **Core value:** peer-feedback, everyone can mentor and help new users improve their skills.

- Exercism had 50+ language...
- ...but no Chapel...
- **...until now!**

Track sneak-peak and demo!

- `https://github.com/exercism/chapel`
- Each exercise is implemented as a mason application
- When student submits an exercise `mason test --show` is run
- Error messages are parsed and presented to the student (kind of)

Next steps

- Smooth last blockers and launch track (this summer)
- Currently the track is a **bag of exercises**
- Develop lessons to teach programming concepts with Chapel

- **Don't you know Chapel?**
 - Try the track! Feel free to ping me on gitter or open an issue if you have issues
- **Do you like to help others?**
 - Volunteer as mentor
- **Do you like pedagogy?**
 - Help me design lessons explaining concepts
- **Are you into compilers and parsers?**
 - Let's design a code analyzer for better more targeted feedback
- **Are you into docker / tooling and automation?**
 - Let's make the web experience smoother!

Thank you!
Questions?
