

Preparing your summer internship

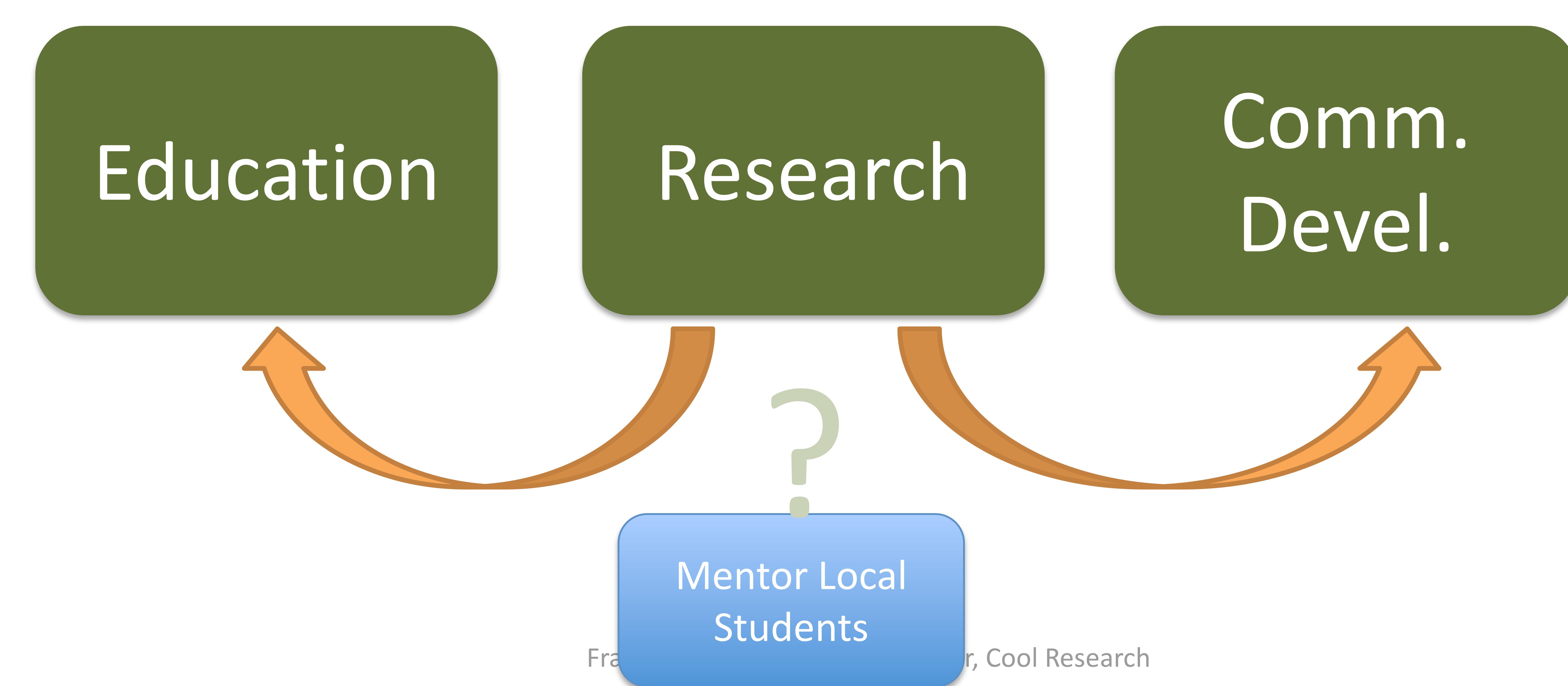
Hot Summer/Cool Research Program
V2.0
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Our Mandate



غضوقي Member of Qatar Foundation الحاق تسينة od و Member of Qatar Foundation



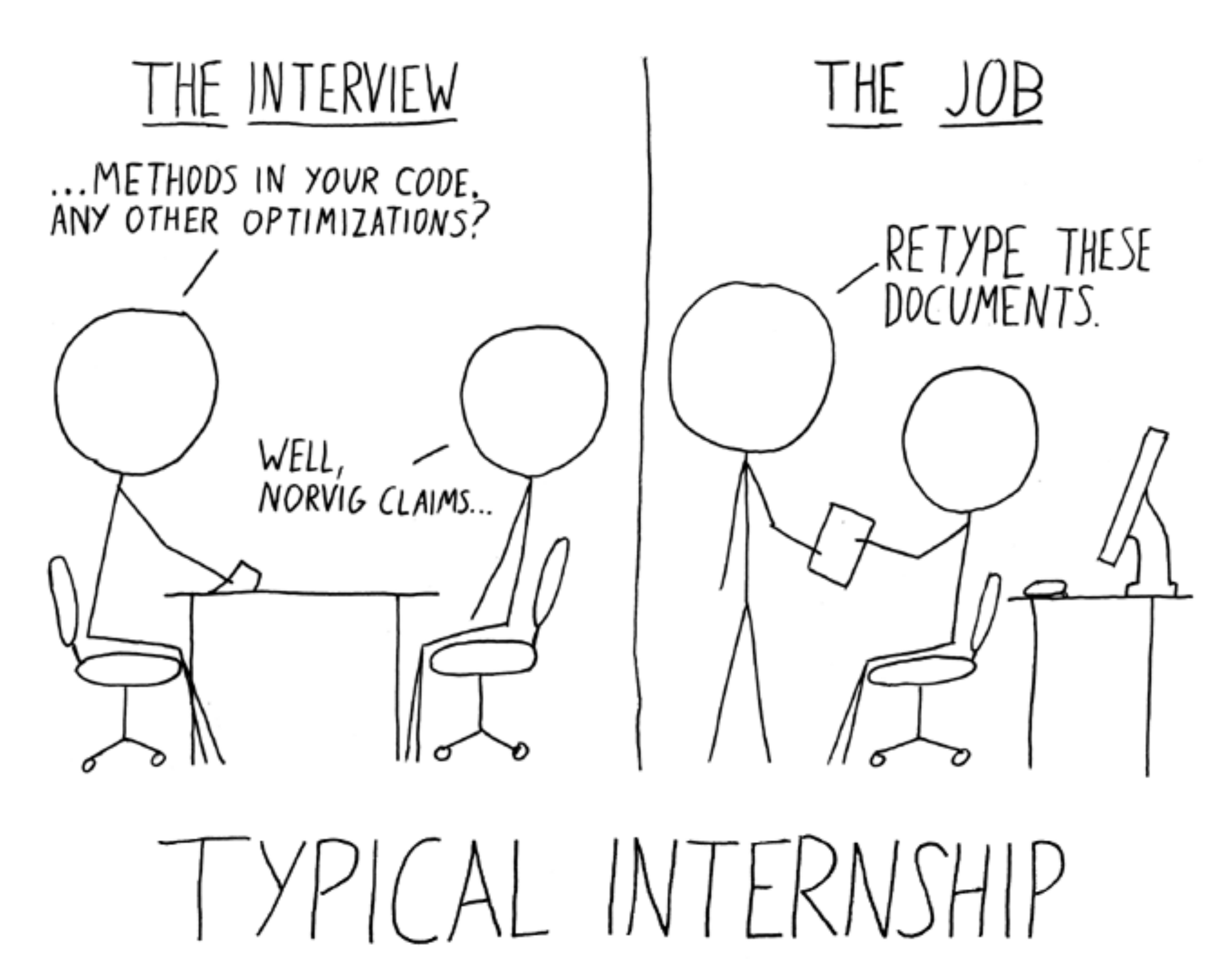




Hot Summer -Cool Research!

ALT Started it in 2012

So, you're getting an intern...



The Hot Summer/Cool Research program

Intern

- Gives
 - Time
 - Labor
- What they get:
 - Learn a new skill
 - Practice previous skills
 - Learn about research

Scientist

- Gives
 - Time
 - Planning
 - Coaching
- What you get:
 - Learn coaching skills
 - Get some work done
 - Spread the research spirit

Different levels of development

Them

- 1- Lack of experience, low competence, insecure
- 2- Some competence, ready to be developed, willing or motivated
 - 3-Increasing competence, potentially able, not fully confident
 - 4- High competence, high commitment, able, willing and motivated

You'll be:

Directing

Coaching

PhD Students

Supporting

Delegating

Post-Docs

The typical student

- May/May not have coding experience
 - CMU-CS students start coding in yr1 (Python)
 - Coding restricted to few class projects
 - Tip: Look for hackathon participation
- May/May not have design experience
 - CMU-IS come stronger in this field (Web)
- May/May not have research experience
 - Only few have read a scientific paper
 - Even fewer have technical writing skills

Adjust your expectations

Design your plan accordingly

Being HSCR a coach involves...

- Planning
 - Breaking the the goals into bite-sized tasks

- Monitoring/Mentoring
 - Looking out for roadblocks
 - Helping them to figure out solutions

Planning

What is the goal of the project?

Which questions are going to be solved?

What needs to be done?

Who is going to do it?

When does this need to happen?

How do we know we reached the goal?

8-week program

Week	Sample task	
Week 1	Read and understand Current code . Investigate how it works. Propose architecture for multiplex.	
Week 2	Implement lightweight clients. Design proxy/handshaker	
Week 3	Multi plex client. Multiplex server	
Week 4	Integration with Session management.	
Week 5	Connect multiple clients + stress test. Run language classifier	
Week 6	Implement language classifier on test.	
Week 7	Implement training for language classifier on the fly	
Week 8	Finish Report. Peer Review colleagues reports. Prepare documentation. Prepare final presentation/poster.	

Preparation/Warm up

Most of the work

Wrap up

Tip: Ask the students to write a small report each Francisco Guzma week. This makes it easier to write a final report

FOCUS

- Things work best if you have a final goal in mind
 - A final report
 - A poster for ARC is a good goal
 - A workshop paper
 - A small demo app
- But be realistic!
 - You only have 8 weeks
 - Students won't stick around after the internship
 - Once school starts, it's game over!

Monitoring/Mentoring

Daily/Every-other-day quick round of advances

-any complication/problem?

Every week reality check

-are we in track?

Midterm evaluation

-report about the intern performance.

Final evaluation

-report about performance, final presentation

Ideally students should be:

- Involved in creative/discovery process.
- Encouraged them to solve their own problems
 - What is the problem?
 - What are alternatives?
 - What are pro's and con's?
 - What do they think is the right path?
- Own the task/project
- Leave legacy, make something useful

Weekly Digest

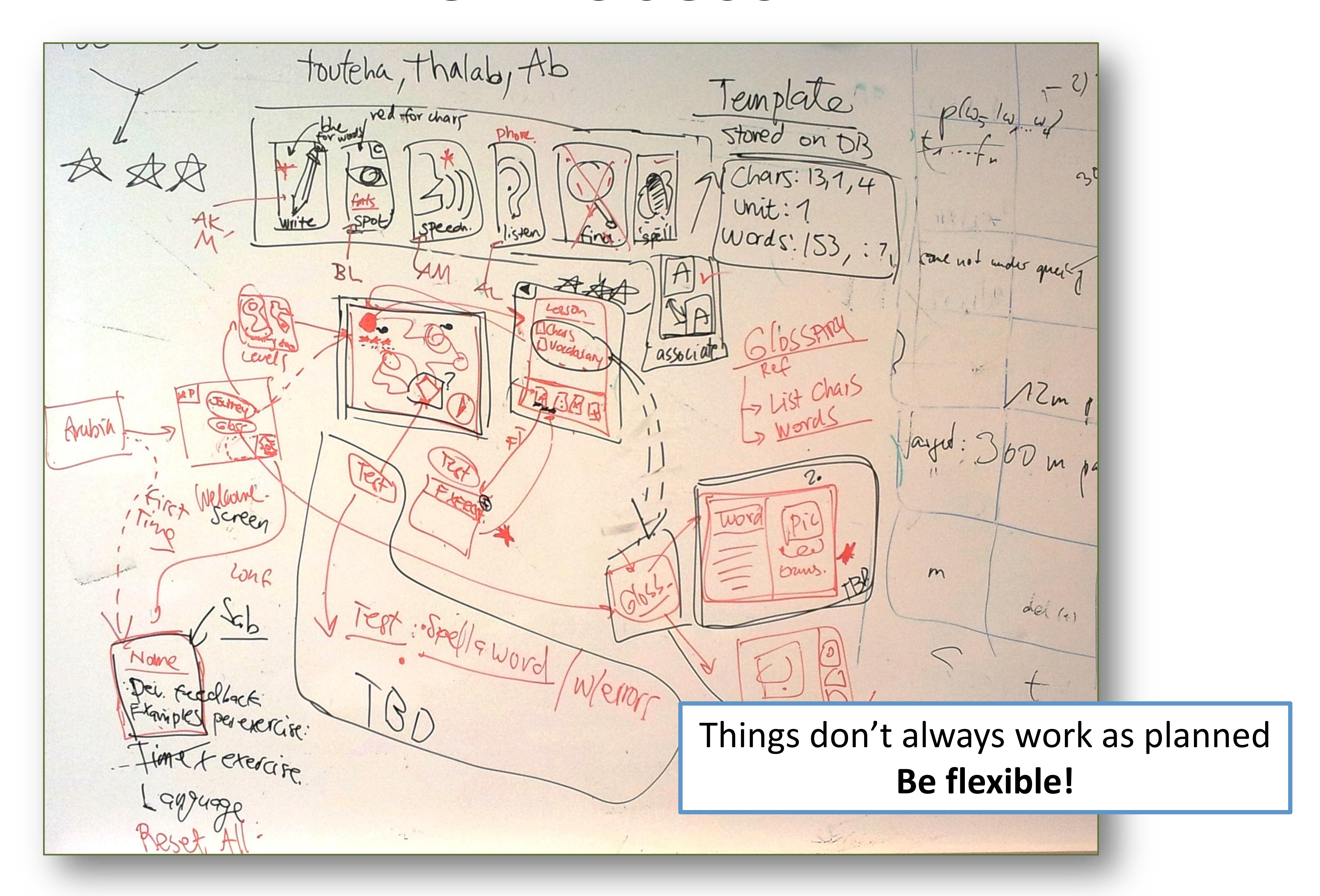
I recommend to ask the students to produce:

A small report (one page)

A small presentation (one slide)

This makes it easier to detect roadblocks/adjust planning

The Process



Dos and Don'ts

- Be selective
 - We want to have the **best** students
- Plan ahead
 - Set goals for every week
 - Be flexible
- Encourage team spirit
 - Set up your project for a group of two or more students
 - Have interns sit together
- Meet regularly with students

- Allow students to part-time
 - Students should be 100%
 committed to HSCR internship
- Allow students to work from home
 - Hinders team spirit
- Micromanage/Be a control freak
 - Let them come up with their own solutions
- Leave students unattended for more than thee days
 - They get lost easily
 - If you need to leave, someone needs to cover

Tools – What we use

- Skype for communication
- Dropbox for sharing documents
- Github for archiving files and revision control
- Trello for lightweight task management

However

 There is no substitute for face-to-face time, and a good 'ol whiteboard

Good luck in you internship projects

THANKS