

# Thinking about your project

Homework | Agent-based modelling, Konstanz, 2024

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It's time to start thinking about your programming project! You don't need to start coding yet, but I want you to think carefully about all the following questions. Even better if you write down your answers (for your own benefit). :)

1. Who am I going to work with? Or do I prefer to work on my own? **Your team can be either 1 person (you work on your own) or 2 persons (you work with 1 friend), not larger.**
2. What phenomenon am I / are we interested in? What would I **like** to model? What sorts of things about language excite me that could potentially be approached using an ABM?
3. Once you have a broad answer to the previous question, try to narrow it down. Think about the following:
  - a. Can I make use of code already written during the course (such as variational learning) to answer my question? Can I possibly **extend** that code, to make it better suited to what I'm interested in modelling?
  - b. If not, then can I still figure out how to implement what I need to implement in Julia code?
  - c. Can I think of **specific** research questions or predictions? (Example: "Does the rate of language change depend on population size?")

If you are working as part of a team, get together for a brainstorming!

4. Finally, move on to thinking about the following specific implementation-level questions:
  - a. What will be the **agents** in my model?
  - b. What is the **environment** which the agents will occupy?
  - c. How will the agents **interact** with each other (e.g. randomly, or in some other way)?
  - d. How will I **summarize** the results of a simulation?

- e. **How many** simulations will I need to run?
- f. How will I **communicate** my results to my audience (numbers, plots, perhaps animations)?

For inspiration, read (at least) one paper from the *readings/projects* folder on ILIAS.