

## Lecture 3: Tools and technologies 2

### Purpose and motivation

The purpose of this lecture is to discuss the influence programming languages have on the architecture of software systems. We will start by introducing different programming paradigms and how they have effectes and effects how we understand and build software architectures and how they support different architectures. We will also discuss databases and some of their characteristics.

Furthermore we will follow up un last lectures exercises and how you have chosen to address the exercises. For the upcoming lecture we will discuss peer review and pitching.

### Before Class

- Read the literature
- Review the exercises from last lecture and prepare to ask any questions you may have

### Reading

Read the following before class:

- Survey on nosql databases[1]
- Programming-in-the-large: Past, present, and future[2]
- Software tools: past, present, and future[3]

*(Find the material at the [library](#), on itslearning, or in online databases.*

### In class

#### Lecture

1. Follow-up on exercises
2. Programming language and software architecture
3. Databases and software architecture
4. Peer review and pitching

#### Exercises

1. The exercises will be introduced in the lecture

## References

- [1] Jing Han et al. “Survey on NoSQL database”. English. In: IEEE, 2011, pp. 363–366. ISBN: 9781457702099;1457702096;1457702088;9781457702082;
- [2] Walter F. Tichy. “Programming-in-the-Large: Past, Present, and Future”. In: *Proceedings of the 14th International Conference on Software Engineering*. ICSE '92. Melbourne, Australia: Association for Computing Machinery, 1992, pp. 362–367. ISBN: 0897915046. DOI: [10.1145/143062.143153](https://doi-org.proxy1-bib.sdu.dk/10.1145/143062.143153). URL: <https://doi-org.proxy1-bib.sdu.dk/10.1145/143062.143153>.
- [3] A.I. Wasserman. “Software tools: past, present, and future”. In: *Proceedings International Conference on Software Methods and Tools. SMT 2000*. 2000, pp. 3–6. DOI: [10.1109/SWMT.2000.890413](https://doi.org/10.1109/SWMT.2000.890413).