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*Software Architectures*  
Exercises  
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## Exercise sheet 6

### Exercise 6.1

- a) Model a template for creating and storing directed graphs using data abstraction and potentially general usability.
- b) Choose a concrete data type for storing the graphs and implement it in a language of your choice.

### Exercise 6.2

In Chapter 9 code generation in software engineering was mentioned.

- a) What are the main goals of code generation?
- b) Give an example scenario where it is clear that generating code would be profitable.

### Exercise 6.3

In Chapter 7 was mentioned that one way to specify the interaction between elements of a system was through sequence diagrams.

- a) Model a scenario of ATM cash-withdrawal as a sequence diagram.
- b) What are the differences between automata (state machines) and sequence diagrams?
- c) Where do class diagrams differ from both of them?