

## Aspektovo-orientovaný vývoj softvéru 2017/18

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Test – October 30, 2017

A business rule that banking transactions with a value over 10 000 euros require additional approval by the bank's management has to be introduced into the banking system. It should be ensured that the management would get these transactions for sequential approval which need not be realized right after the transaction has been introduced.

A transaction is realized by calling the `makeTransaction()` method:

```
public class BankingSystem {
    ...
    public void makeTransaction(BankEntity source, BankEntity target,
        int amount, Currency currency) {
        ...
    }
}
```

Indicate the parts of the system (in terms of classes and interfaces and their methods and attributes) necessary to express the solution. The approval process itself is not a part of the task.

- 1. (2 b)** Provide the corresponding analytic model in the Theme/Doc notation in the view of themes and relationships (the basic view). Transform this view into the crosscutting theme view.
- 2. (3 b)** Provide the corresponding design model in the Theme/UML notation. You may use the indirect relationships known from the JPDD notation.
- 3. (5 b)** Provide the code of the corresponding aspect in the AspectJ programming language. If appropriate, apply the Worker Object Creation, Wormhole, or Cuckoo's Egg design pattern. Explain your decision.