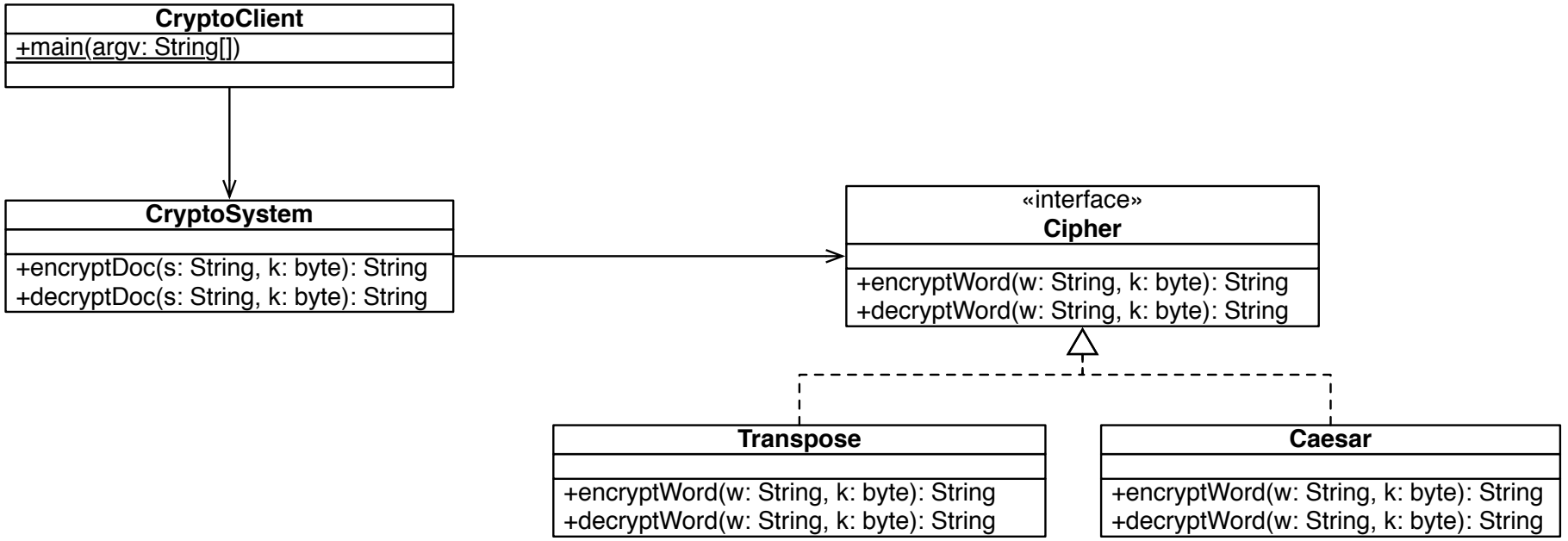
Task #2: Text Encryption (In-Class Exercise)

- Problem Statement
  - You are developing an application that encrypts documents
  - Two encryption algorithms are already implemented: Caesar, Transpose
  - These algorithms only encrypt single words (no spaces allowed)



  - You want to reengineer the system to make use of patterns and offer two versions of the application, one for personal use and one for use in enterprises
  - The personal version should use Transpose, the enterprise version Caesar
  - Both versions should be able to handle strings of text (including spaces).

Task #2 Hints

- Introduce a new class Encryption that allows you to add encryption algorithms independently of the application domain
- On the solution domain side, introduce two subclasses of Encryption for PersonalEncryption which use the Transpose Encryption and for EnterpriseEncryption, which use the Caesar encryption
- Source code for the exercise is offered on **Moodle**

  PSE (W13/14) ➔

  Design Patterns I (Nov 4)➔

  Task 2 - Handout
- Upload your solution to **Moodle**

  PSE (W13/14) ➔

  Design Patterns I (Nov 4) ➔

  Task 2 - Student Solution Upload

Task #2 (15 min)

- Introduce a new class Encryption that allows you to add encryption algorithms independently of the application domain
- On the solution domain side, introduce two subclasses of Encryption for PersonalEncryption and for EnterpriseEncryption
  - Both Encryption subclasses should handle strings containing spaces by breaking them up into single words, encrypting these and putting the output back together again
  - For additional security, let EnterpriseEncryption exit if the key is less than 10
  - PersonalEncryption uses Transpose, EnterpriseEncryption uses Caesar.