Exercise #22

- **Friends of a specific user**
  - **Input:**
    - A textual file containing pairs of users (one pair per line)
    - Each line has the format
    - Username1,Username2
    - Each pair represents the fact that Username1 is friend of Username2 (and vice versa)
    - One username specified as parameter by means of the command line
  - **Output:**
    - The friends of the specified username stored in a textual file
    - One single line with the list of friends

Exercise #23

- **Potential friends of a specific user**
  - **Input:**
    - A textual file containing pairs of users (one pair per line)
    - Each line has the format
    - Username1,Username2
    - Each pair represents the fact that Username1 is friend of Username2 (and vice versa)
    - One username specified as parameter by means of the command line
  - **Output:**
    - The potential friends of the specified username stored in a textual file
    - One single line with the list of potential friends
    - User is a potential friend of User2 if they have at least one friend in common

MapReduce - Exercises
Exercise #23 Bis

- Potential friends of a specific user
  - Solve problem #23 by removing the friends of the specified user from the list of its potential friends

Exercise #23 Bis - Example

- Input file
  - Users, User2, User3, User4, User5, User6

- Username parameter: User2

- Output file
  - User6

Exercise #24

- Compute the list of friends for each user
  - Input:
    - A textual file containing pairs of users (one pair per line)
      - Each line has the format
        - Username1, Username2
        - Each pair represents the fact that Username1 is friend of Username2 (and vice versa)
  - Output:
    - A textual file containing one line for each user. Each line contains a user and the list of its friends

Exercise #24 - Example

- Input file
  - Users, User2, User3, User4, User5

- Output file
  - Users: User2, User3, User4, User5

Exercise #25

- Compute the list of potential friends for each user
  - Input:
    - A textual file containing pairs of users (one pair per line)
      - Each line has the format
        - Username1, Username2
      - Each pair represents the fact that Username1 is friend of Username2 (and vice versa)
  - Output:
    - A textual file containing one line for each user with at least one potential friend. Each line contains a user and the list of its potential friends
      - Users is a potential friend of User2 if they have at least one friend in common

Exercise #25 - Example

- Input file
  - Users, User2, User3, User4, User5

- Output file
  - Users: User2, User3, User4, User5, User6
Exercise #26

- Word (string) to integer conversion
  - Input:
    - A large textual file containing a list of words per line
    - The small file dictionary.txt containing the mapping of each possible word appearing in the first file with an integer. Each line contains the mapping of a word with an integer and it has the following format
      - Word|Integer
  - Output:
    - A textual file containing the content of the large file where the appearing words are substituted by the corresponding integers

Exercise #26 - Example

- Input files
  - Large textual file
    - Test conversion word to integer
    - Second line test word to integer
  - Small dictionary file
    1. CONVERSION
    2. INTEGER
    3. LINE
    4. SECOND
    5. TEST
    6. TO
    7. WORD

- Output file
  5 17 6 2
  4 3 5 7 6 2