Practice 1

Deadline: 2 weeks from now. Should be checked onsite (during labs).

Task 1

In this practice, we'll design a mini employee management system. The system has 3 features:

- Add a new employee: an employee should have at least two attributes including name and age.
- Delete an employee.
- Print the info of all employees by the alphabetical order of their names.

This requirement is intentionally made vague, similar to most real-world software requirements 😃. You could fill in the unspecified details by yourself (e.g., how to delete employees) as long as it makes sense. Before implementation, you should first design the system. Think about the design principles we mentioned in the lecture, for example, which features should be exposed to users and which details should be abstract away.

For evaluation, execute the program and show us the console output, which should include the following steps:

1. Add 3 employees A, B and C.
2. Delete B.
3. Add 2 employees A, D.
4. Print all employees, which should be A, C, D.

Task 2

You should follow tutorial instructions and:

- Create a GitHub account
- Create a new repository
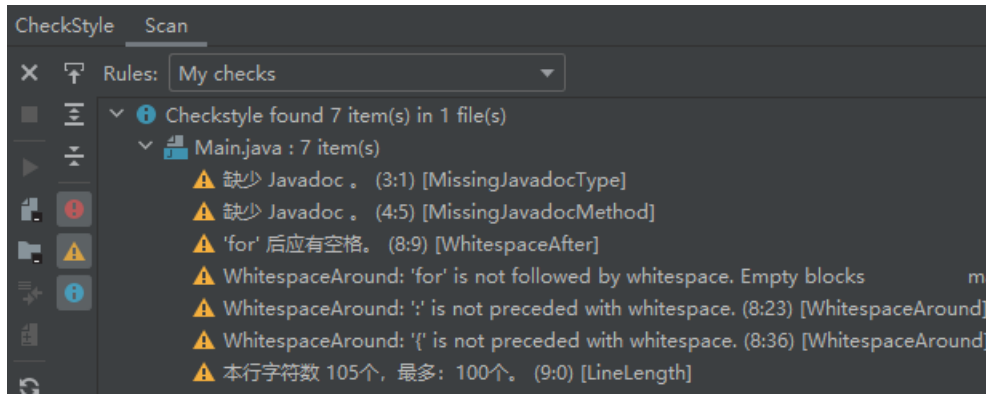- Commit and push the source code of the mini employment management system to the repository.

Please show us your repo and commit upon finishing the task.

Optional Task

Please follow the tutorial and accomplish the following steps:

- Install the CheckStyle plugin for IntelliJ IDEA.
- Download google_checks.xml and change its indentation value, then save it to my_checks.xml.
- Add the customized configuration file to the CheckStyle IntelliJ plugin.
- Use this configuration to check the above source code of the mini employment management system.

Sample output

CheckStyle   Scan

Rules: My checks

- ✓ ⓘ Checkstyle found 7 item(s) in 1 file(s)
  - ✓ Main.java : 7 item(s)
    - ⚠ 缺少 Javadoc 。 (3:1) [MissingJavadocType]
    - ⚠ 缺少 Javadoc 。 (4:5) [MissingJavadocMethod]
    - ⚠ 'for' 后应有空格。 (8:9) [WhitespaceAfter]
    - ⚠ WhitespaceAround: 'for' is not followed by whitespace. Empty blocks   ma
    - ⚠ WhitespaceAround: ':' is not preceded with whitespace. (8:23) [WhitespaceAround]
    - ⚠ WhitespaceAround: '{' is not preceded with whitespace. (8:36) [WhitespaceAround]
    - ⚠ 本行字符数 105个，最多：100个。 (9:0) [LineLength]

Evaluation

The practice will be checked by teachers or SAs. What will be tested:

1. That you understand every line of your own code, not just copy from somewhere
2. That your program compiles correctly (javac)
3. Correctness of the program logic
4. That the result is obtained in a reasonable time

Late submissions after the deadline will incur a 20% penalty, meaning that you can only get 80% of this practice's score.