

## EF234302 Object-Oriented Programming (IUP)

# Final Exam

- Starting date: 14 December 2023
- Deadline: 22 December 2023, 23:59 WIB. **Penalty: 0.15% of grade/minute of tardiness.**
- Exam type: Open, Teamwork/Group (up to three students, it can be from class IUP only, class D only, or the combination of class IUP & D)
- Send to: MM Irfan Subakti <yifana@gmail.com>  
CC to Mashita Dewi <mashitaad@gmail.com>, Adam Haidar Azizi <adamhadaizi2002@gmail.com> & Michael Ariel Manihuruk <michaelariel8@gmail.com> with the subject:  
**EF234302\_OOP(IUP)\_FIN\_StudentID1\_Name1\_StudentID2\_Name2**
- File type & format: A **zip file** containing the *source codes* (the *project files*), *Report.PDF* & *Declaration(s).PDF*. One *declaration* file per student. So, if a group has 3 members, then there will be 3 *declaration* files.
- Filename format: EF234302\_OOP(IUP)\_FIN\_StudentID1\_Name1\_StudentID2\_Name2.ZIP

### Team Project

In this exam, based on everything that we have learned, you have to build your GUI-socket-based client-server application.

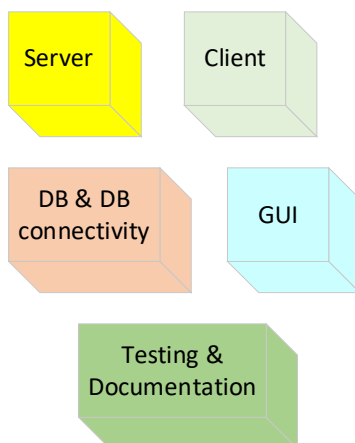
Examples of this application are:

- Game + chat
- "Social media"
- Collaboration app
- Interactive portal
- Any "startup" app
- Whatever you think it's cool! 😊

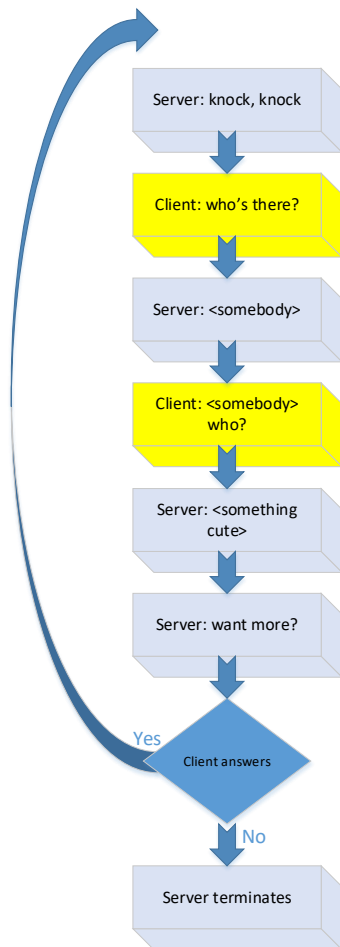
### Feature

Pay attention to the following features

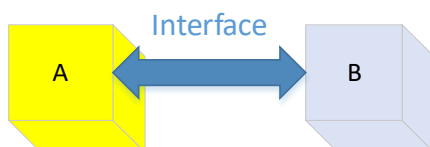
- Immediately decided what's the topic/title of your project
- Distribution of work. In this case, your team members should come up with her/his specification as well as her/his job description



- Need to clearly describe the specification and document interface: generic term, it's not necessarily using Java interface
- All protocols and flow charts need to be clearly described. E.g., Knock-knock server-client communication protocol



- Think about test cases



- A design test case for B, since A uses B's functions
- B design test case for A, since B uses A's functions
- Clearly describe:
  - Design: Specification → Design → Implementation
  - Product's documentation
    - User-level
    - Performance criteria
    - How to install the system (installation)
    - Troubleshooting
  - Develop & use test plans
    - E.g., stubs

- Multithreaded
- Distributed testing
- Need to take care carefully:
  - Server down → the client should know this
  - Client down → the server should know this
  - Exception handling
    - Connection *error* when a server *down*
    - Connection *error* when a client *down*

## Grading

The grading of your works is based on the following.

- Design [ 20 points]
- Implementation [ 50 points]
- Analysis/evaluation [ 25 points]
- Conclusion [ 5 points]

Total: [100 points]

## Declaration

To avoid plagiarism/cheating, every student needs to pledge and declare, and then she/he must submit her/his **signed pledge and declaration** as in the following. Failing to do so will result in getting a 0 (zero) grade. Attach the **scanned/photo** of your *declaration* to your report.

“By the name of Allah (God) Almighty, herewith I pledge and truly declare that I have solved the final exam by myself, didn’t do any cheating by any means, didn’t do any plagiarism, and didn’t accept anybody’s help by any means. I am going to accept all of the consequences by any means if it has proven that I have been done any cheating and/or plagiarism.”

[Place, e.g., Surabaya], [date, e.g., 22 December 2023]

<Signed>

[Full name, e.g., Kinanti Wedariningsih]

[StudentID, e.g., 05112240000xxx]

## Final task

Make a report of this project, namely `Report.PDF`, about what you have done, the output, pseudocode, everything that has been described above, and whatever you think it’s important.

To maintain fairness for your awarded grade, state clearly in your report, the job descriptions and the percentage (distribution) of work, along with the contribution(s) for each member in your group. E.g., Kinanti Wedariningsih 55% [*state Kinanti’s contribution(s) here*], and Sudiyanto Boiman 45% [*state Sudiyanto’s contribution(s) here*]. Include this distribution and contribution section in your `Report.PDF`.

Then `Report.PDF` needed to be compressed (zipped). Rename the ZIP file to `EF234302_OOP(IUP)_FIN_StudentID1_Name1_StudentID2_Name2.ZIP`. All of the involved files in your project (the *source codes* and everything), as well as all of your *declaration* files needed to be added to the ZIP file.

Have a nice day! Good luck, guys! 😊