Software Design minute paper

★ You can choose language you use as you like. 記入は日本語でも英語でも良いです。
Date：2024-06-19
Student ID：Z123332
Name：CHEN HE MIN

Today's topics：Object-Oriented Design (OOD)

(Describe your summary in each blank below. You can adjust (increase or decrease) spaces as you like. 以下のそれぞれの項目の下に要点を記載。スペースは自由に増減して良い。)

[What you learned (学んだこと)]

I learned about the principles and practices of Object-Oriented Design (OOD). This approach to software design focuses on creating systems organized around "objects," which can represent real-world entities or abstract concepts. Key concepts of OOD include classes, objects, inheritance, encapsulation, polymorphism, and abstraction.

We discussed how to model real-world problems using objects and how these objects interact with each other through methods and properties. The lesson also covered the importance of designing reusable and modular components to improve code maintainability and scalability.

Additionally, we explored design principles like the SOLID principles, which guide the creation of robust and flexible software architectures. These principles help in reducing dependencies, increasing code reuse, and making systems easier to understand and extend.

[What you need to learn more (更に学びが必要だと思うこと)]

I need to practice applying OOD principles to different types of projects to better understand how to model complex systems effectively. Gaining more experience with design patterns and understanding when to use them will also be beneficial. Additionally, learning more about advanced OOD concepts and how to implement them in various programming languages will help deepen my understanding.

[Misc. Comments and/or questions (その他 所感・質問等)]

Understanding how to balance the use of inheritance and composition to achieve flexible and maintainable designs would be useful. Additionally, learning best practices for documenting object-oriented designs and maintaining consistency throughout the development process is important.