1. From the seminar, I gained a basic understanding of blockchain and realized why it matters. Take Bitcoin for instance, Bitcoin uses blockchain to record transactions in a distributed ledger that is secure and transparent. In particular, I learned that blockchain consists of a chain of blocks, each containing a hash of the previous block, a timestamp, and a set of transactions. However, challenges occur due to the scalability and the energy consumption of the network. What's more, the seminar mentioned how to use Solidity to create smart contracts from scratch using Solidity code. Solidity provides a comprehensive environment for building decentralized applications on the Ethereum platform, which allows us to work with blockchain in an interactive manner.

2. I am deeply fascinated by the potential of blockchain technology to record transactions and its ability to ensure security and transparency by cryptography. The technology has a bright future in various domains such as finance, supply chain, and governance. Blockchain indeed opens up new possibilities for creating trust and efficiency in complex systems. For instance, blockchain can enable peer-to-peer transactions without intermediaries, reduce fraud and corruption, and improve accountability and traceability. Moreover, blockchain can also empower social and environmental causes, such as digital identity, voting, and carbon credits. Therefore, I am eager to learn more about blockchain and its applications in the real world.

3. Decentralized finance, or DeFi, is especially important in industries such as finance, supply chain, and governance. DeFi transactions are not absolutely secure, so it is of great significance to know that the records stored on blockchain are trustworthy. And DeFi plays a crucial role in creating trust and efficiency in complex systems. In the finance industry, DeFi can enable peer-to-peer transactions without intermediaries, reduce fraud and corruption, and improve accountability and traceability. By analyzing large volumes of financial data, DeFi can help identify patterns and provide insights that can aid in risk assessment and investment suggestions. DeFi could be used to create smart contracts that execute automatically based on predefined conditions. This saves time and cost of the financial workers. In addition to finance, DeFi has applications in supply chain and governance. DeFi could help in tracking the origin and quality of products, ensuring the sustainability and safety of the supply chain. DeFi could also help in digital identity, voting, and carbon credits, enhancing the transparency and democracy in governance.
I believe the potential challenges for DeFi development might lie in two aspects: the scalability and the energy consumption. DeFi systems require large amounts of computing power, regardless of the demand of the network, so the performance and speed of the DeFi transactions perhaps need to be improved. What's more, DeFi raises ethical concerns related to privacy and information security. Addressing these issues requires careful consideration of the social impact of the DeFi systems.

4. I learned a lot about DeFi, or decentralized finance, from the article by Schär (2021)1. DeFi is a new financial system that uses blockchain and smart contracts to create more open, transparent, and efficient financial services. DeFi has many applications in finance, supply chain, and governance, such as peer-to-peer transactions, tracking products, and digital identity. However, DeFi also faces many challenges and risks, such as scalability, security, regulation, and education. Therefore, I am interested in learning more about DeFi and its potential impact on the society.