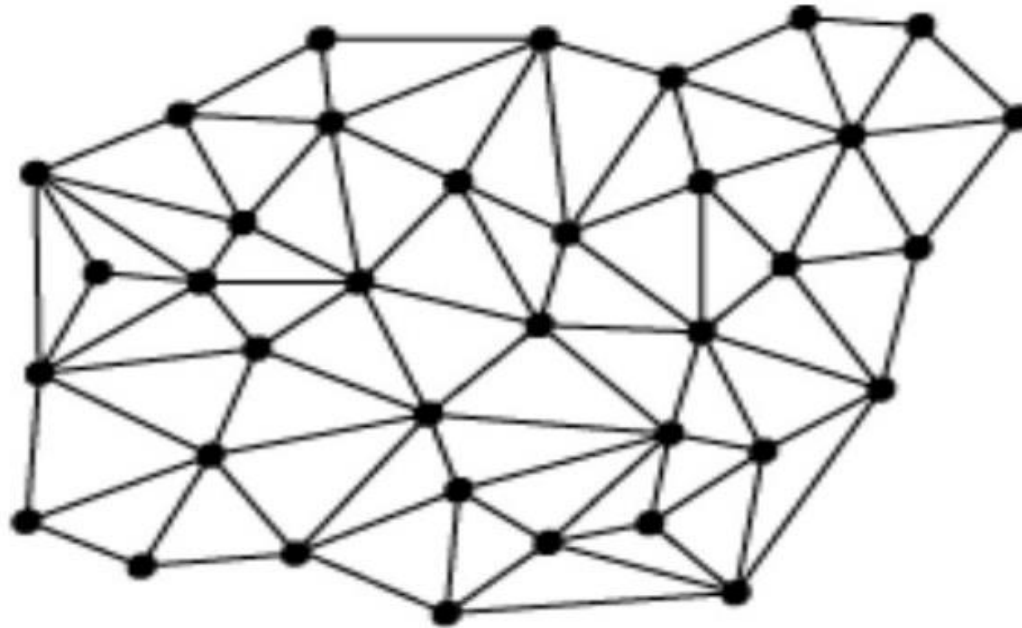


Distributed System Course

2021-22-GICI41SSD-Distributed System



Academic Year: 2021-2022 Lecturer: SOK Kimheng

Lecturer

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Communication	Telegram Group, MS-Team



Information

Course	Distributed System	48h, 12 Weeks, 4h/week (3 Groups = 96h)
General Distributed System	Week 1	Information, Self-Study Skill, Introduction
	Week 2	Distributed Communication (TCP/IP, Socket, RPC, REST, gRPC, OMQ)
	Week 3	Clock, Timestamp
	Week 4	Fault Tolerance (Two general problem, Byzantine General Problem)
	Week 5	Consensus Algorithm (Paxos, ZooKeeper, Raft)
	Week 6	Quiz
Blockchain	Week 7	Basic Cryptography
	Week 8	Blockchain and Bitcoin (Proof of Work)
	Week 9	Ethereum and Smart Contract (Proof of Stake)
	Week 10	Hyperledger and Self-Sovereign Identity
	Week 11	Security
	Week 12	Final Exam

Technologies and Tools

- Virtual Machine
- Ubuntu OS
 - gcc, libtool, autoconf, automake, uuid-dev, build-essential, wget, curl, openssl
- Docker
- VS code
- Git
- Postman
- NodeJS
 - node, npm, express, cors, axios, mongoose, jsonwebtoken, passport, express-session, express-http-proxy, crypto, bcrypt
- MongoDB
- OPA, Rego

