

# Software Engineering Course



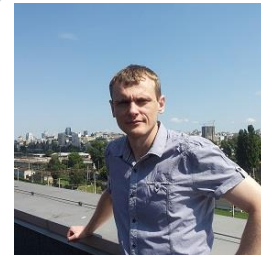
# Hello!

My name is **Vladyslav Kurmaz**

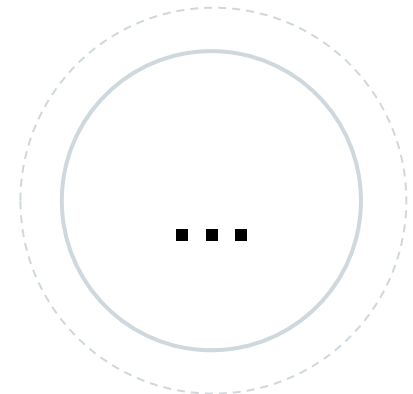
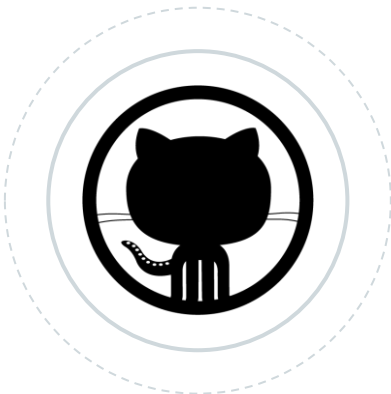
You can find me at:

[vladislav.kurmaz@gmail.com](mailto:vladislav.kurmaz@gmail.com)

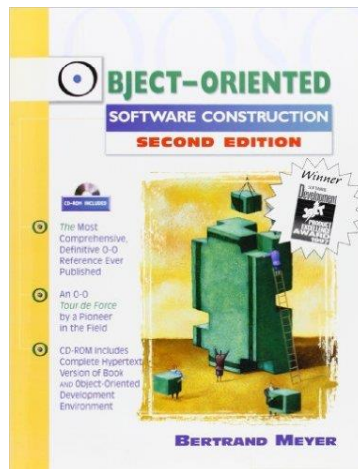
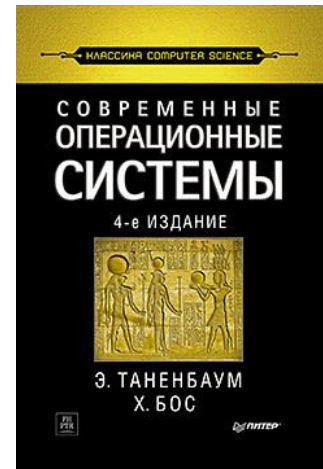
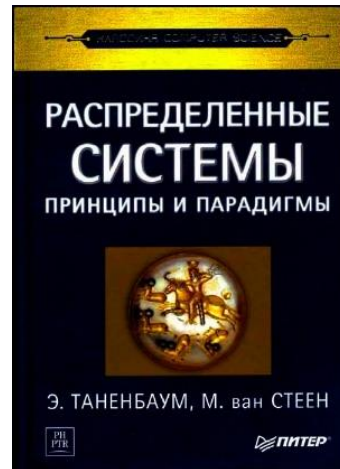
*Linkein, Github, Facebook, G+, ...*



## Key actors



## 2 read

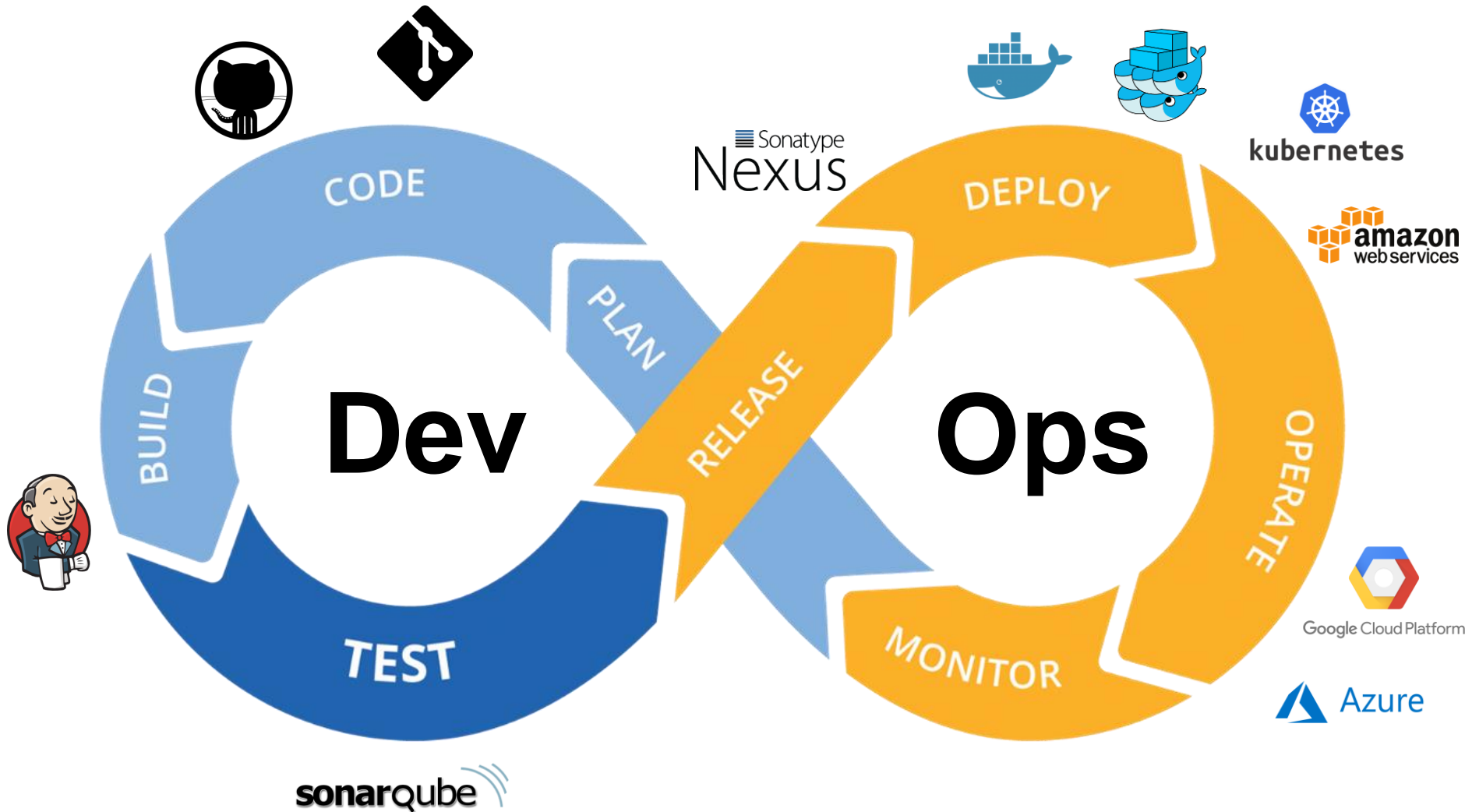


## 2 read

<https://martinfowler.com/articles/serverless.html>

<https://martinfowler.com/bliki/PolyglotPersistence.html>

# Development pipeline



## Roles

- ◎ Software developer
- ◎ Database developer
- ◎ Tester
- ◎ Business analyst
- ◎ Release manager
- ◎ DevOps
- ◎ Administrator
- ◎ Solution Architect

## Technology Stacks

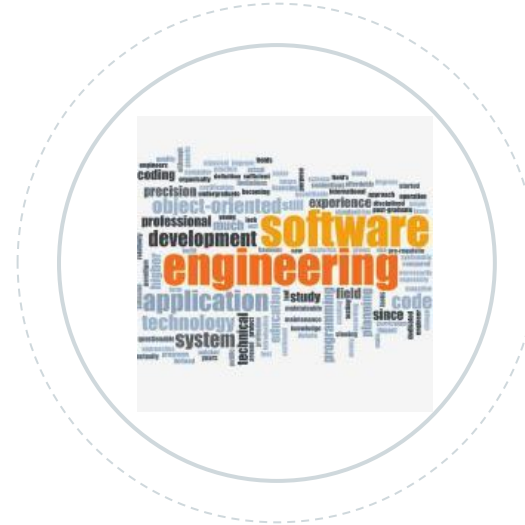
- ◎ Cloud provides, On-Premise, On-Demand
- ◎ OS – Windows, Linux, Hybrid
- ◎ Programming languages (Compilers & Interpreters,  
C/C++/Java/C#/PHP/Python/Go/D/Erlang)
- ◎ Data storages – RDBMS, GraphDB, NoSQL
- ◎ Frameworks, Ecosystems (Boost/Spring/Laravel,  
Java/.Net)
- ◎ Tools, libraries





# **Software Architecture**

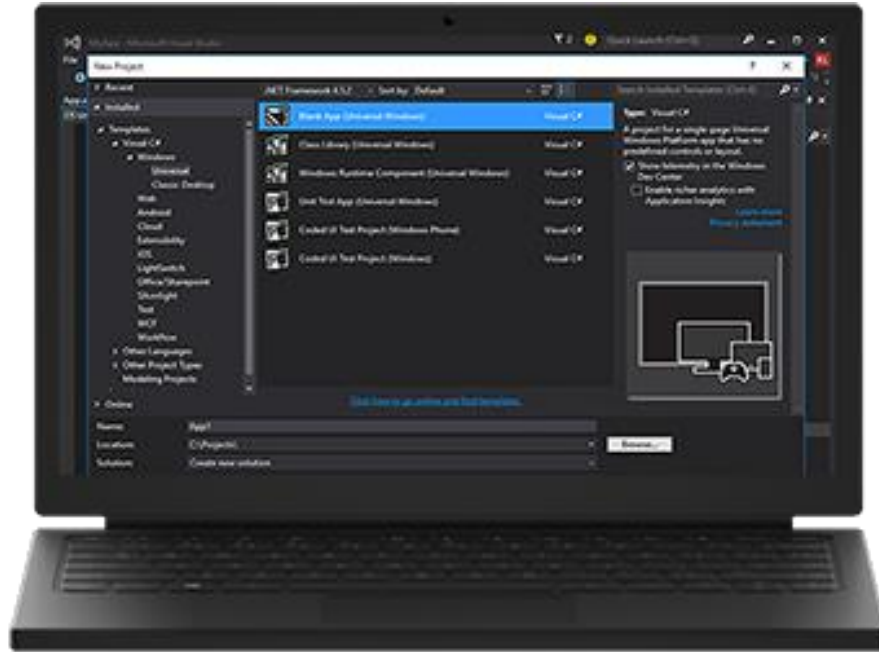
# Topics



- High-level design
- Programming paradigms
- External software quality factors
- Design patterns & UML & Best practices
- Legacy systems & Technical debt & Refactoring
- Compilers & Interpreters & Metaprogramming
- Errors Handling
- Multi threading
- Orthogonal API

# Standalone

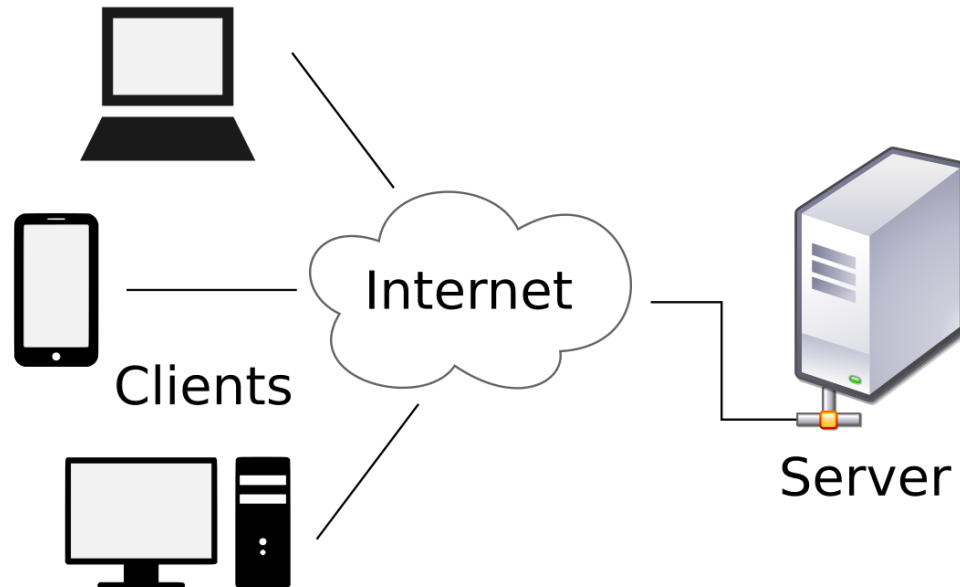




- ◎ All components are accessible all the time
- ◎ Communication environment is stable
- ◎ Can communicate without any external services

# Client- Server

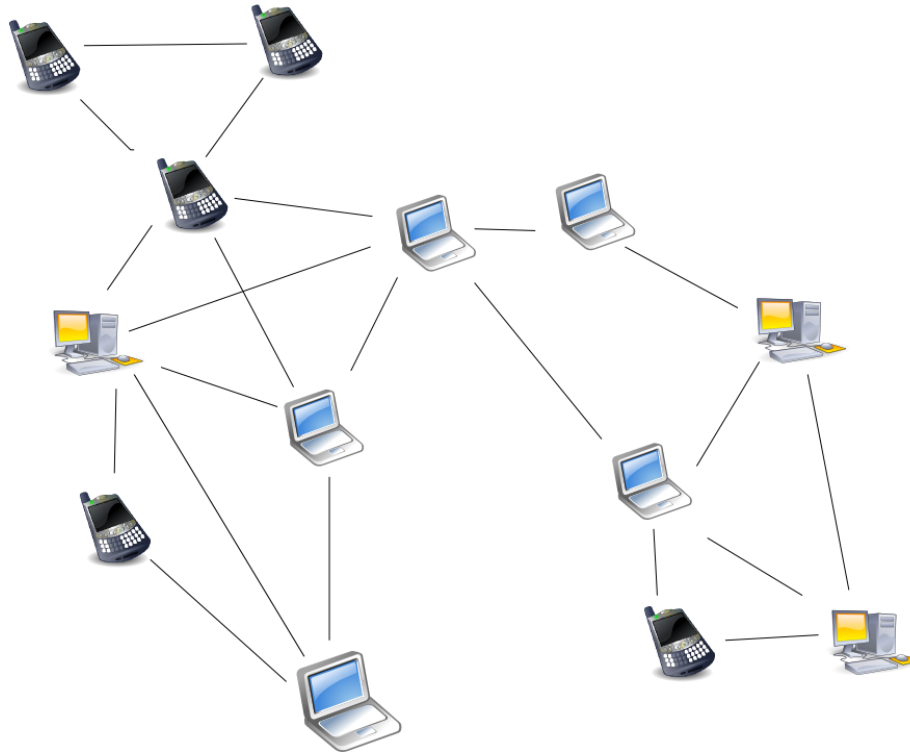




- ◎ Two types of component – client & server
- ◎ Client – communication
- ◎ Server – storage & logic
- ◎ One way communication

# Peer-2-Peer





- ◎ Everyone can talk to everyone
- ◎ No specific roles



# Micro-Services

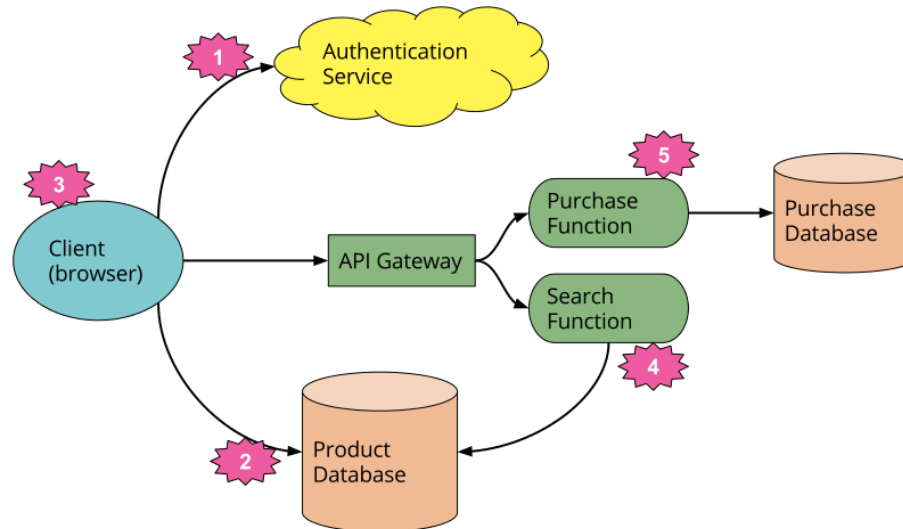




- ◎ Split functionality
- ◎ Simplify scaling
- ◎ Minimize coupling



# Serverless



- ◎ “Lease” execution environment
- ◎ “Outsource” functionality