Distributed Systems

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Distributed Systems

- A distributed system is a collection of entities, each of which is autonomous, programable, asynchronous and failure prone, and which communicate through an unreliable communication medium

Tendencies in distributed systems

- Microservices connected architectures
- Distributed computing architectures

Questions

Which are the building blocks of a distributed system?

Microservices architectures
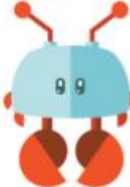
- DevOps
- Infrastructure as Code
- Version control system (Git)
- CI/CD (Continous Integration, Delivery & Deployment)
- Service Discovery
- Intercommunication (Publish-Subscribe, Message queues)
- Monitoring

Activity

- Each person or group will be assigned one item from the previous slide. You have to explain why your assigned item might be considered as a building block of a distributed system
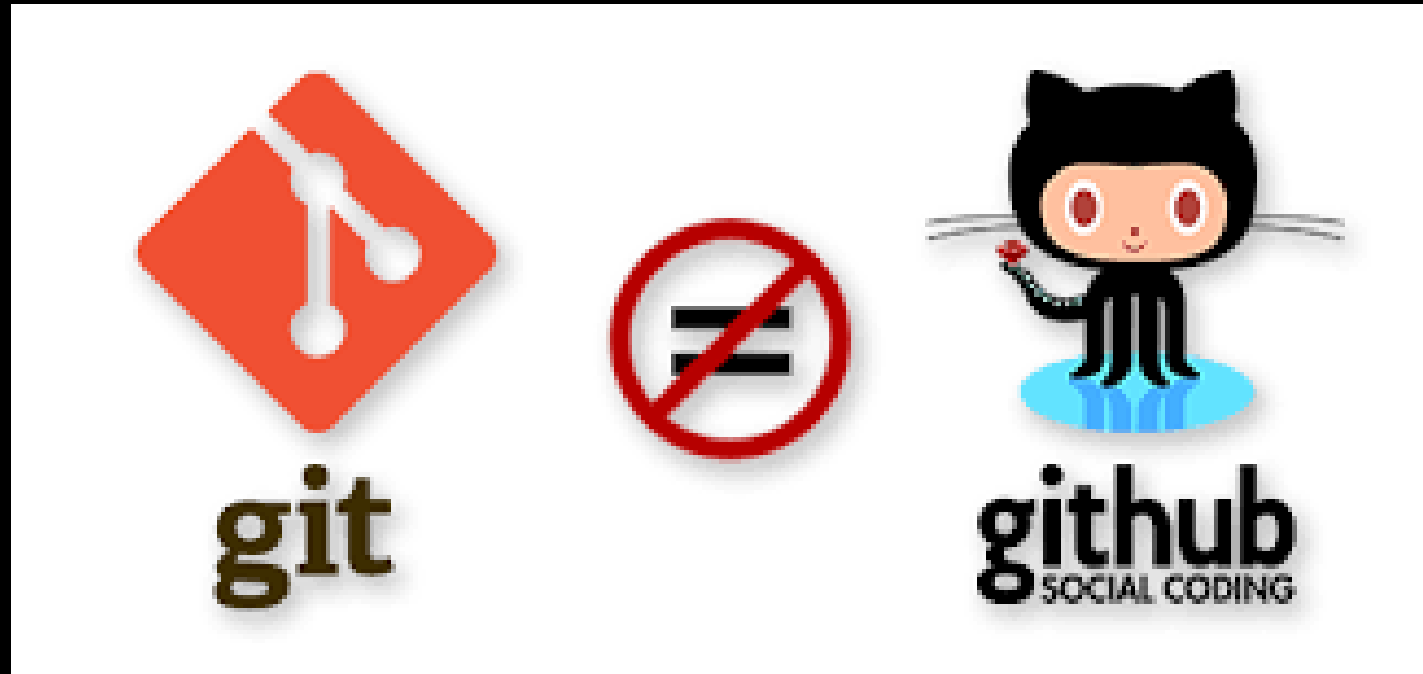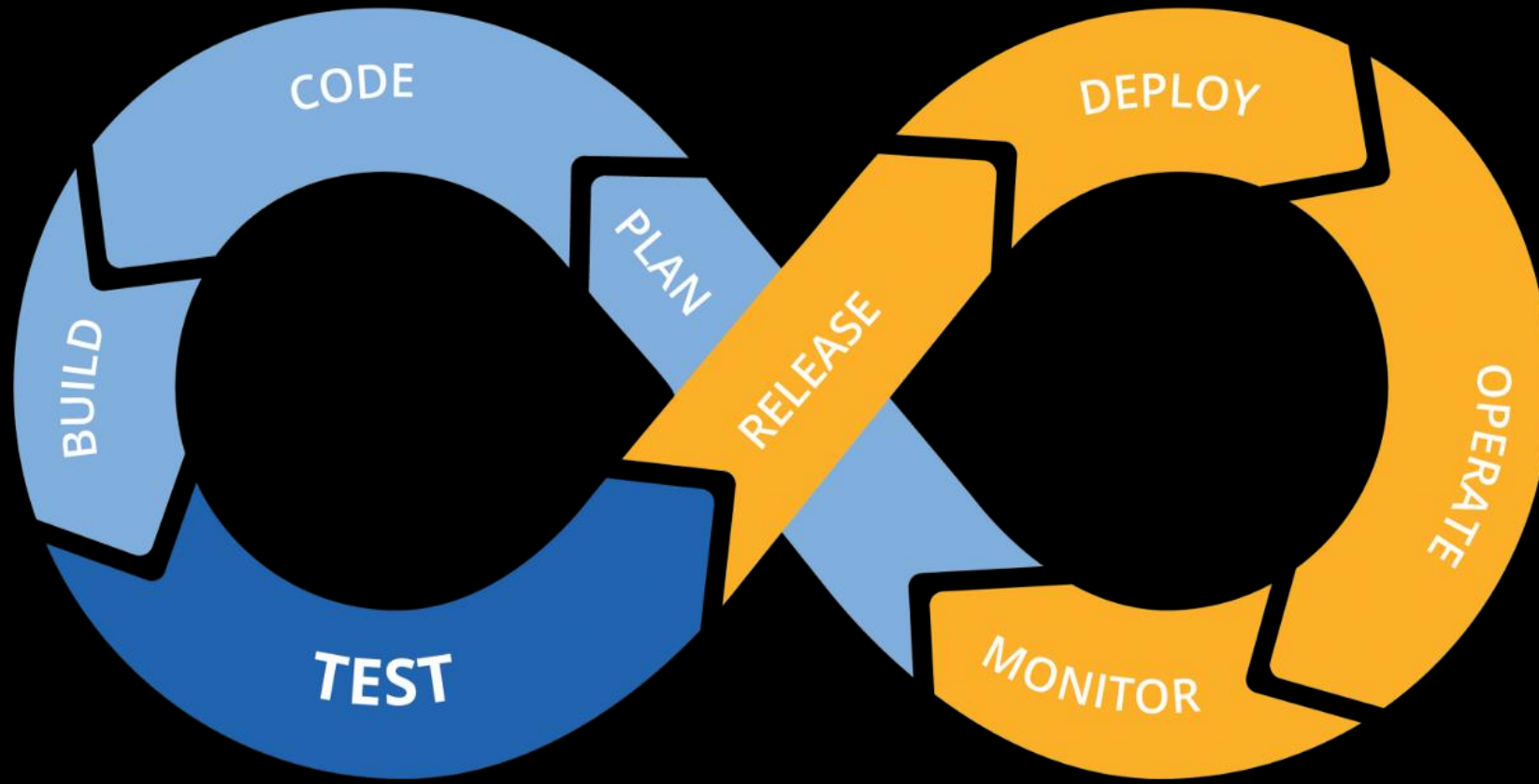
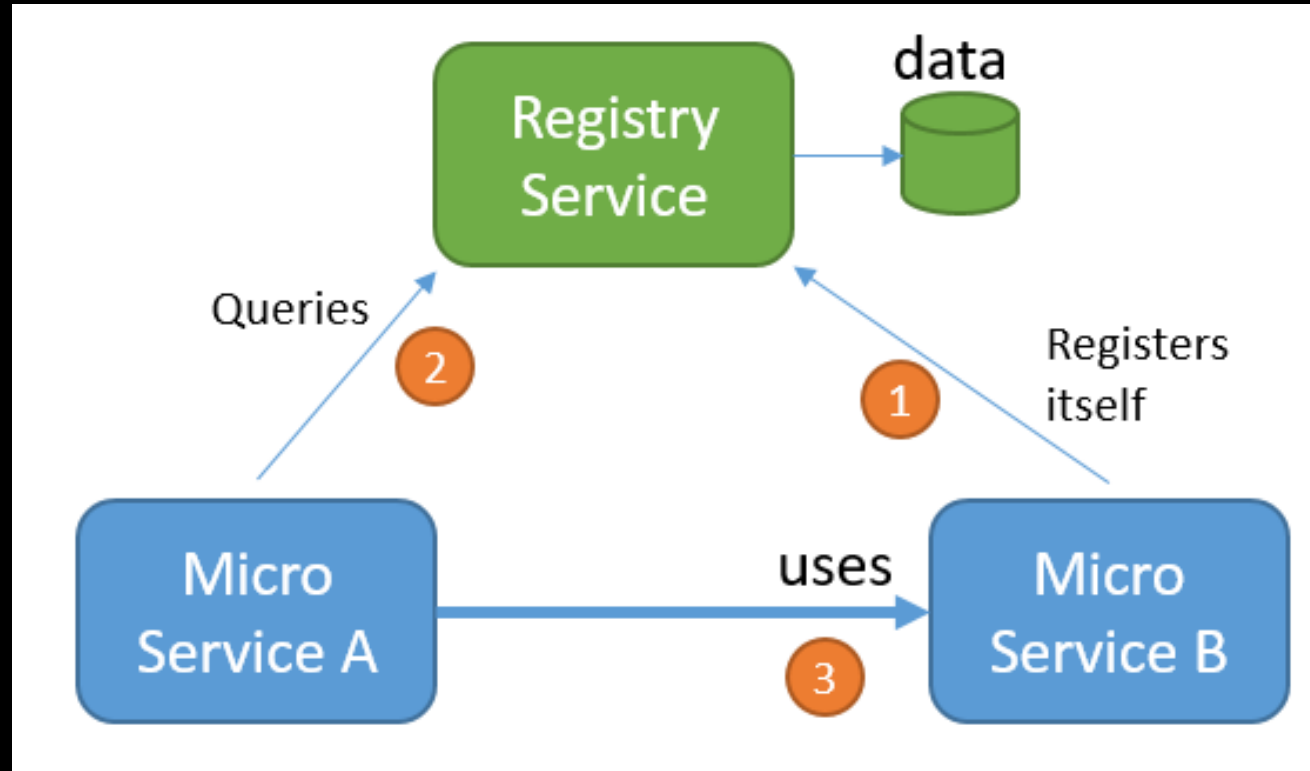# DevOps

Infrastructure as code
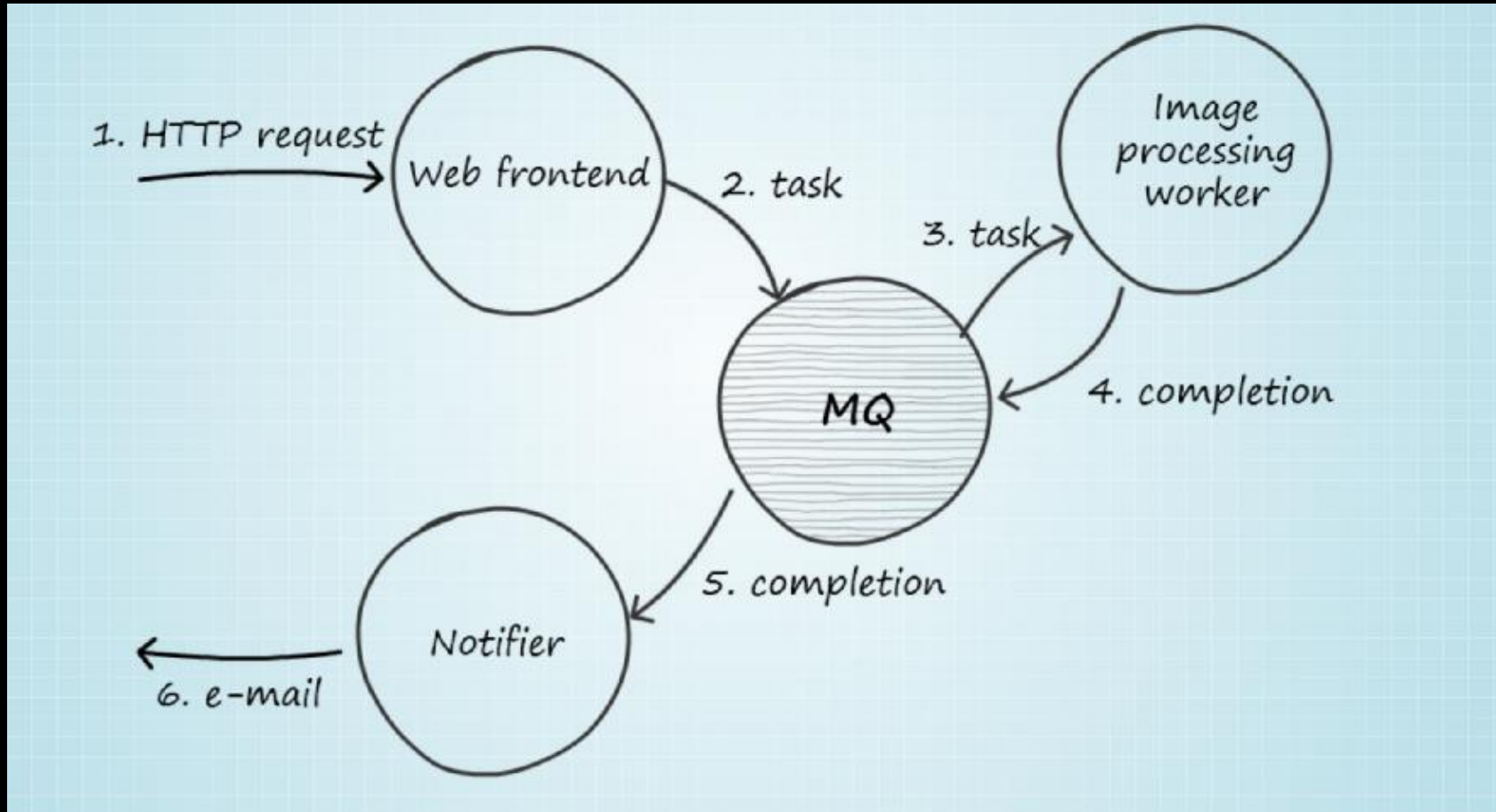
Version control system

CI/CD

Service Discovery

Intercommunication

Monitoring

Questions

Where is security?

Distributed computing architectures

- Same technologies are needed plus …
- Paradigms for parallel processing:
  - Special directives
  - Map-Reduce
  - Frameworks for GPU programming

Questions?

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