ILP / 8
Database programming

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CW1 review

- Marks are out for the "soft" part -> coding, commenting, structure
- Marks for the auto-marker to come
  - Explanation of the format and the content

- Show a small runtime demo of the auto-marker
- Major takeaway points of CW1
  - Read the §$!% instructions properly
  - Submit a working image -> check the image by loading it once more

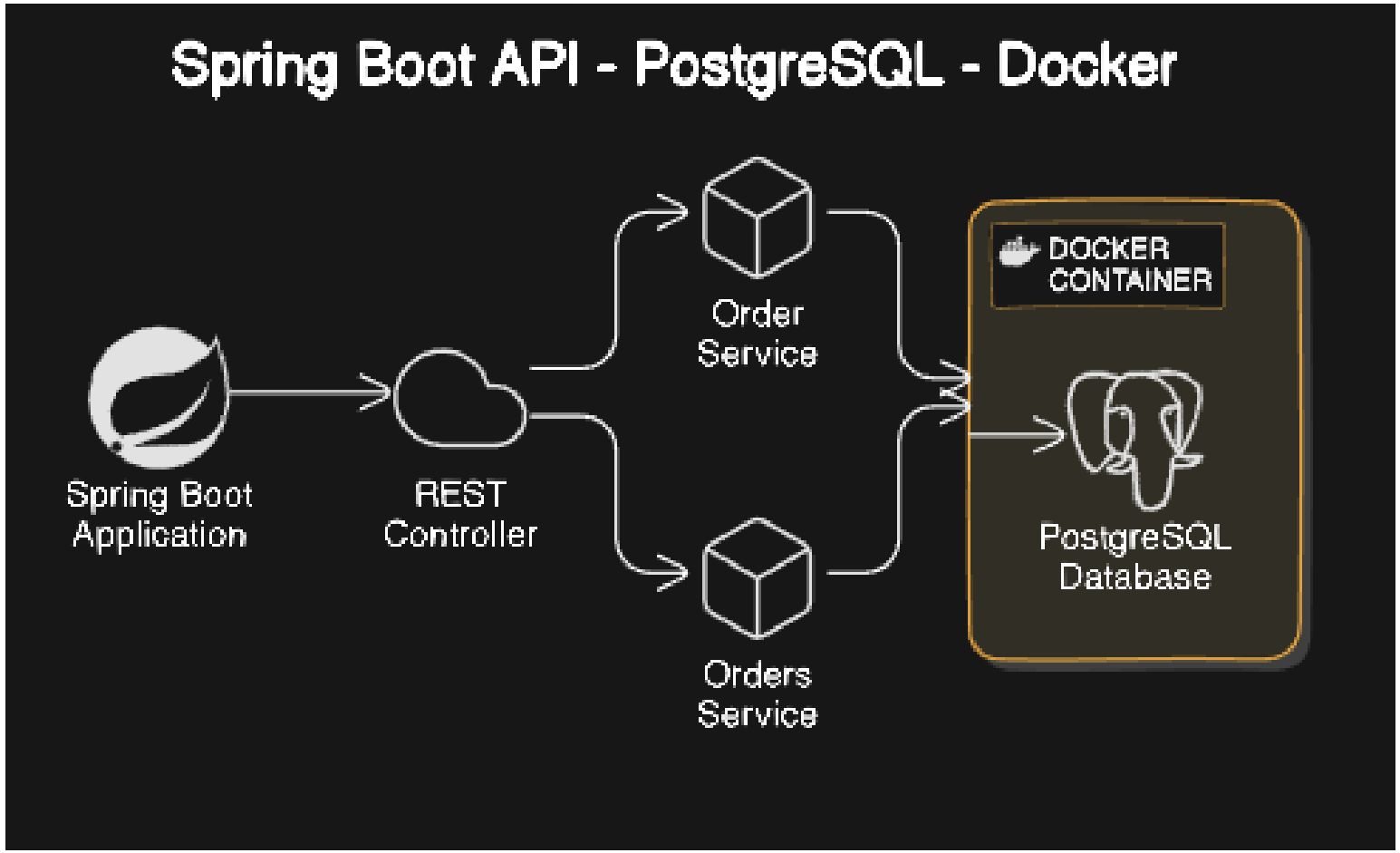
Outlook CW2 / 3 / 4

- Some words

Databases

- Either on-site or in the cloud. Usually no difference (as IP address)
- Most commonly used is Oracle, SQL Server, PostgreSQL, Mongo-DB, etc.
- Access either via native drivers (OS- / Hardware-specific) a "network only" protocol which has no native part
  - pgJDBC is a pure network driver written in Java

Our landscape with e.g. PostgreSQL



How to program databases in Java?

- JPA (Java Persistance API) based on hibernate
  Has a lot of PROs, some CONs

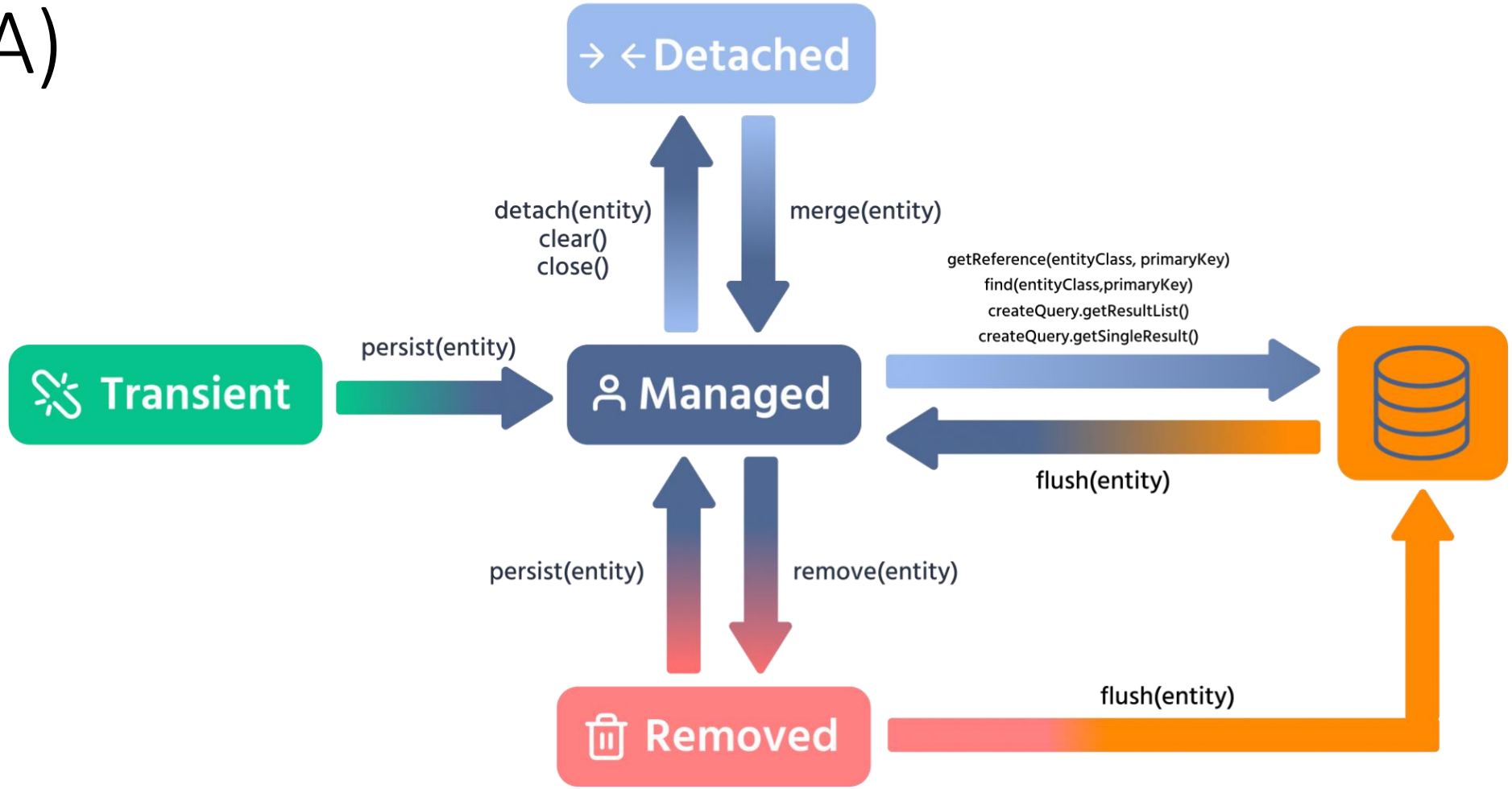
- JDBC
  Good old classic. JPA is easier to use, JDBC has more speed and power (batch management)

- Hibernate (not too often used anymore)
  https://docs.spring.io/spring-framework/reference/data-access/orm/hibernate.html
  https://www.geeksforgeeks.org/advance-java/basic-program-in-hibernate/

Tools

- Docker (to run the DB) or a native installation
- Intellij
- DBeaver
- …

Entity Manager (JPA)



https://codefinity.com/courses/v2/87dc501e-89a6-4a4b-afd4-8b38c46a80c7/92b41ff6-b6e8-4543-856a-6e1f5304f7ec/dec5397f-a4bd-4f18-b77f-21c49838a0b8?utm_source=google&utm_medium=cpc&utm_campaign=21193856569&utm_content=&utm_term=&dki=&gad_source=5&gad_campaignid=21183361821&gclid=EAIaIQobChMIw-TeqobZkAMVcpGDBx3oSCgREAAYASAAEgJOefD_BwE

What you need in Java with JPA…

- pom.xml
- @Configuration
- @Entity
- @Service
- @Transactional
- SQL-init scripts in your changelog

Let's get started

- Showing all necessary in the IlpRestServer...