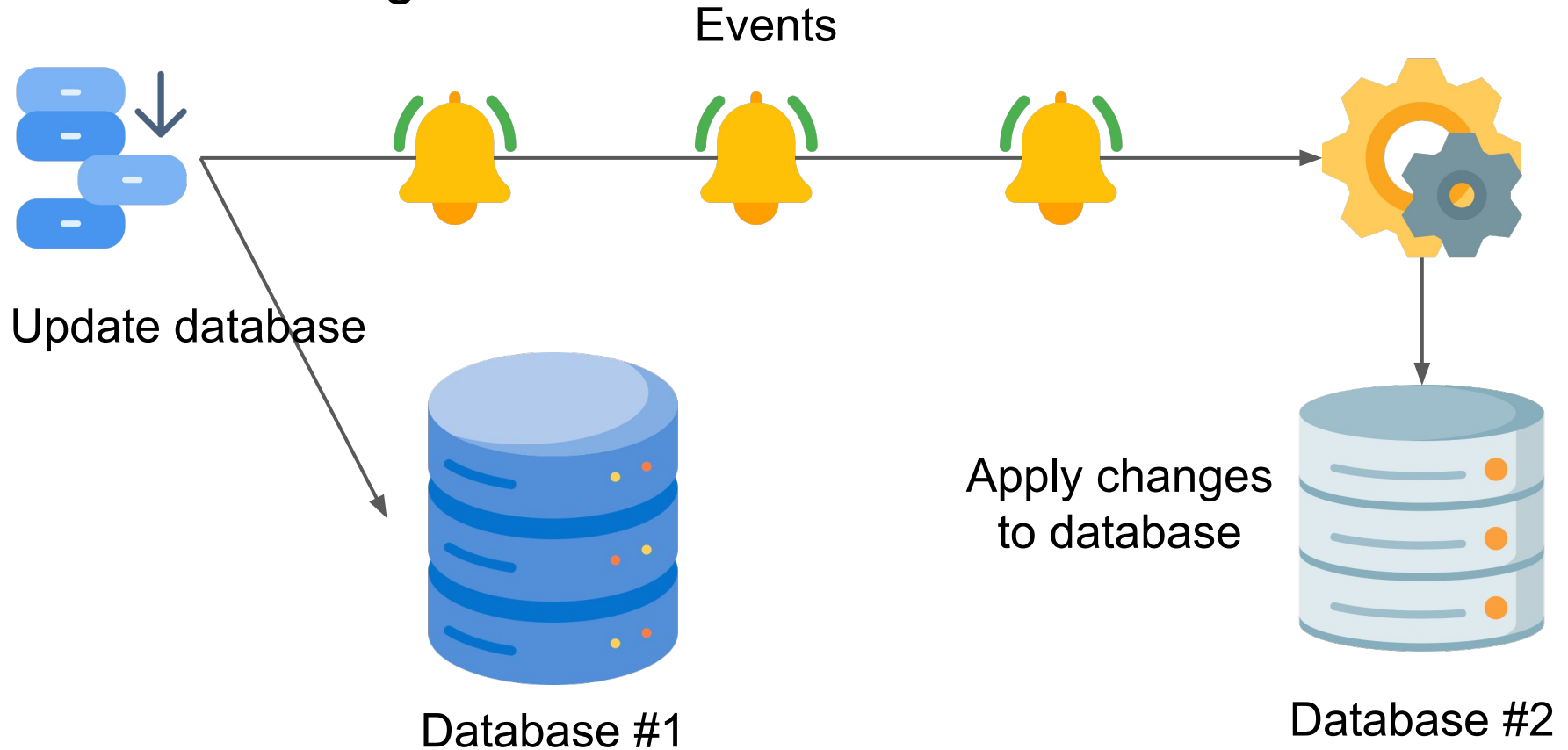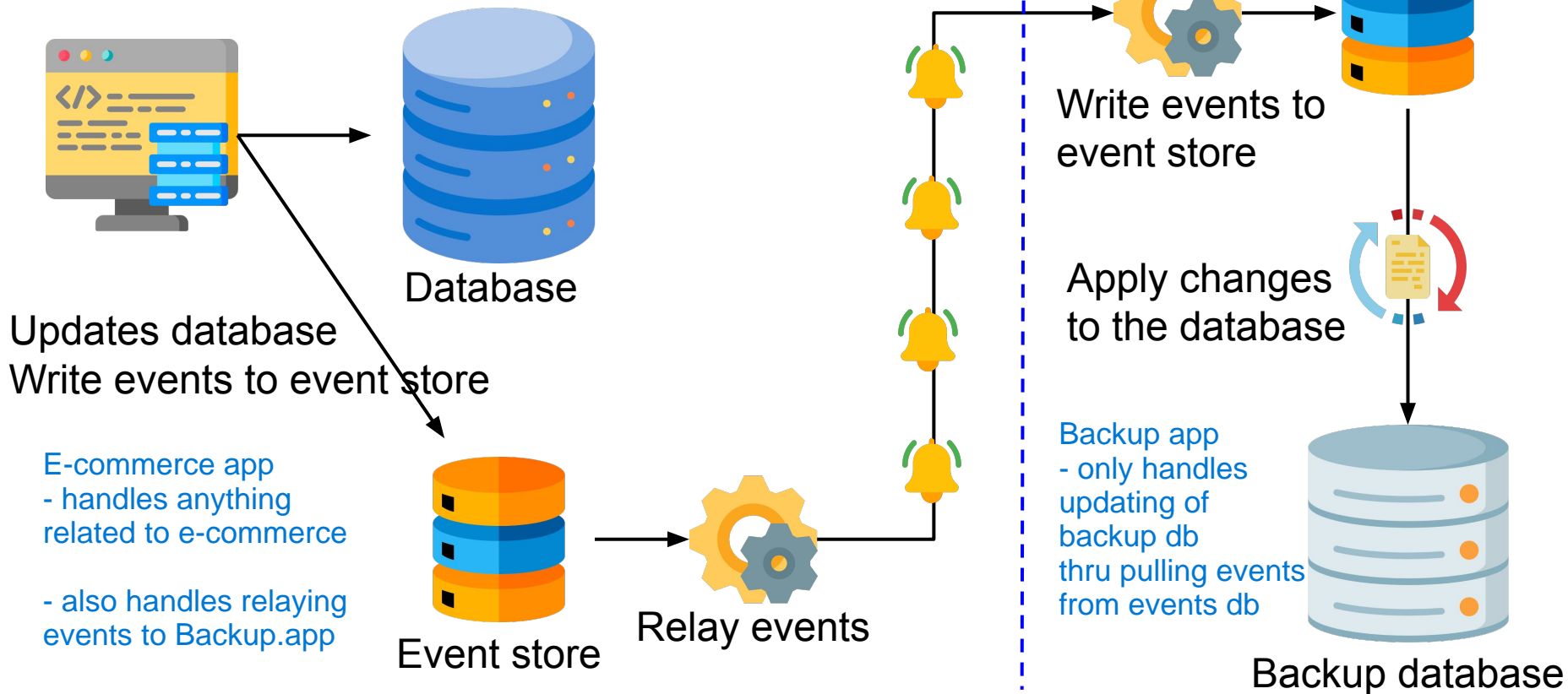# Event Sourcing

What is it?

- A software architecture
- The state of a system is determined by a sequence of events.
- Storing just the current state of the data, event sourcing involves storing all the events that lead to the current state.

Event Sourcing

Events

Update database

Apply changes
to database

Database #1

Database #2

Architecture

Different locations

Event store

Database

Updates database
Write events to event store

E-commerce app
- handles anything
related to e-commerce

- also handles relaying
events to Backup.app

Event store

Relay events

Write events to
event store

Apply changes
to the database

Backup app
- only handles
updating of
backup db
thru pulling events
from events db

Backup database

Events

 `insert into customer(name) values ("fred")`


```
event_id: abc123
timestamp: <timestamp>
ops: ADD
fields:
-  name = fred
table: customer
```

Task

Set up 2 databases for the e-commerce application
 -   Main database and backup

Complete the e-commerce application

Use eventual consistency strategy to keep the backup database in sync with the main database

You may create any additional Spring Boot application