

Database refactoring

Evolutionäres Datenbank-Design
für Continuous Delivery



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Database refactoring

Evolutionary Database Design

Continuous Delivery

Disclaimer

Any similarities with real companies, situations or persons is purely unintentional and coincidental

Dependency

Message dependency

External dependency

Data dependency

Control dependency

Stamp dependency

Temporal dependency

Content dependency

Risk

Focus

Technology

Improvement

Innovation

New regulations

Organisation

Adaptation

Opportunities

Change management

Strategy

Performance

Growth

Process

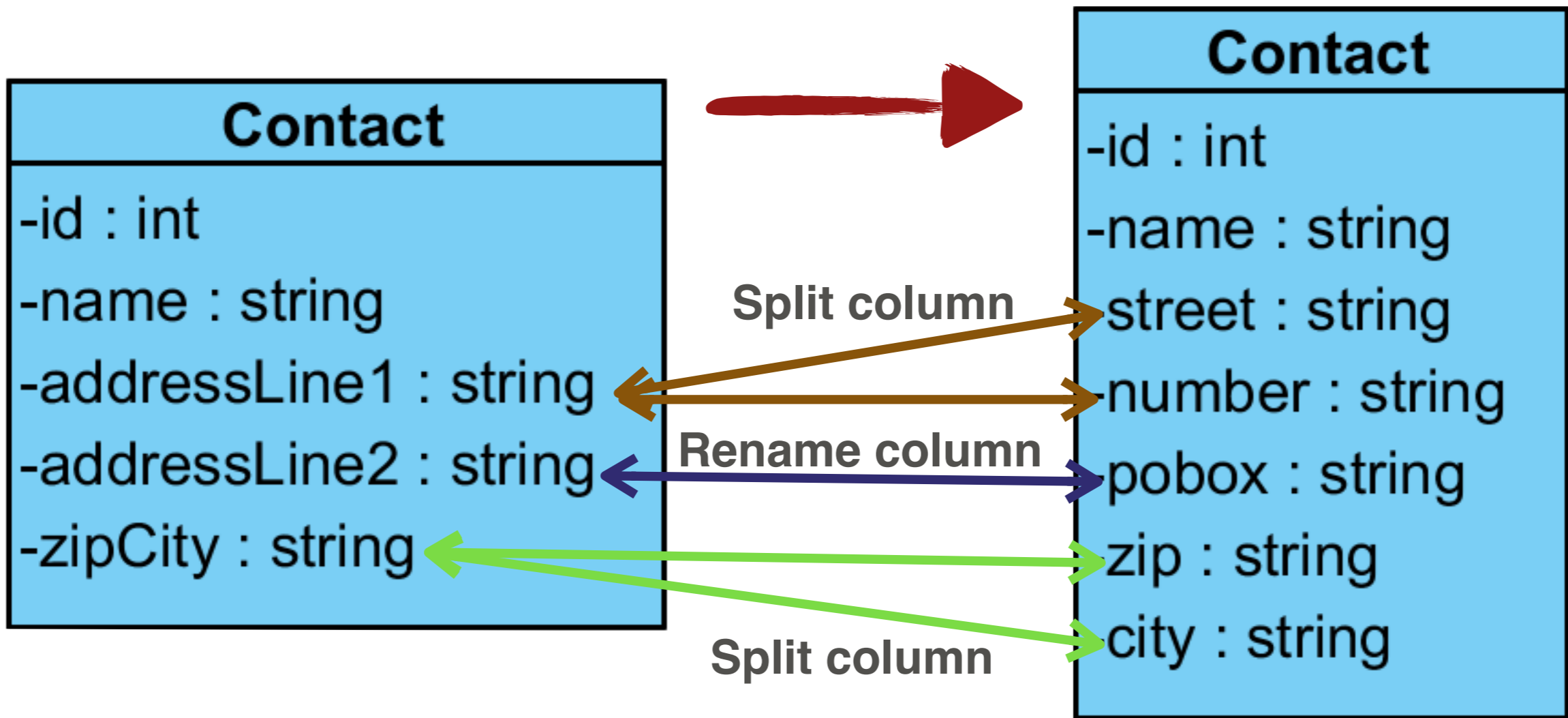
informational semantics

**Internally alter the
database without
changing its
external behavior
and informational
semantics**

Live Coding...

Contact

-id : int
-name : string
-addressLine1 : string
-addressLine2 : string
-zipCity : string

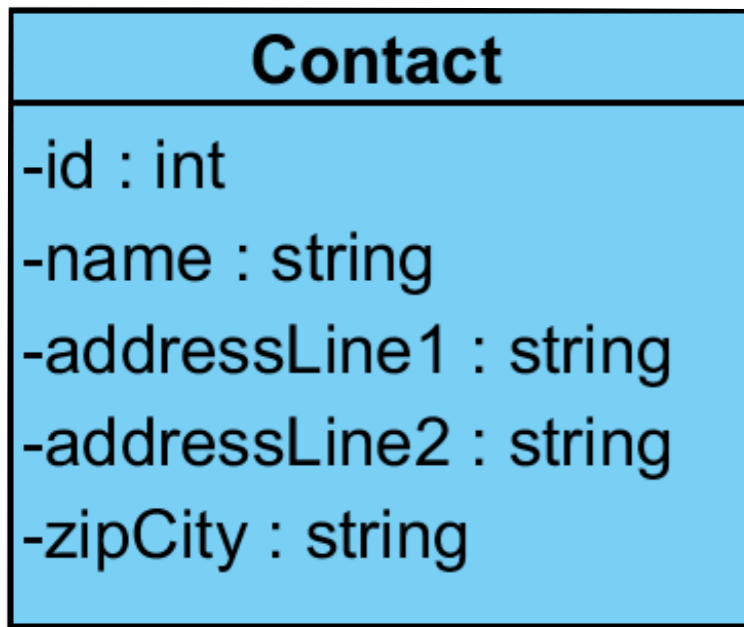


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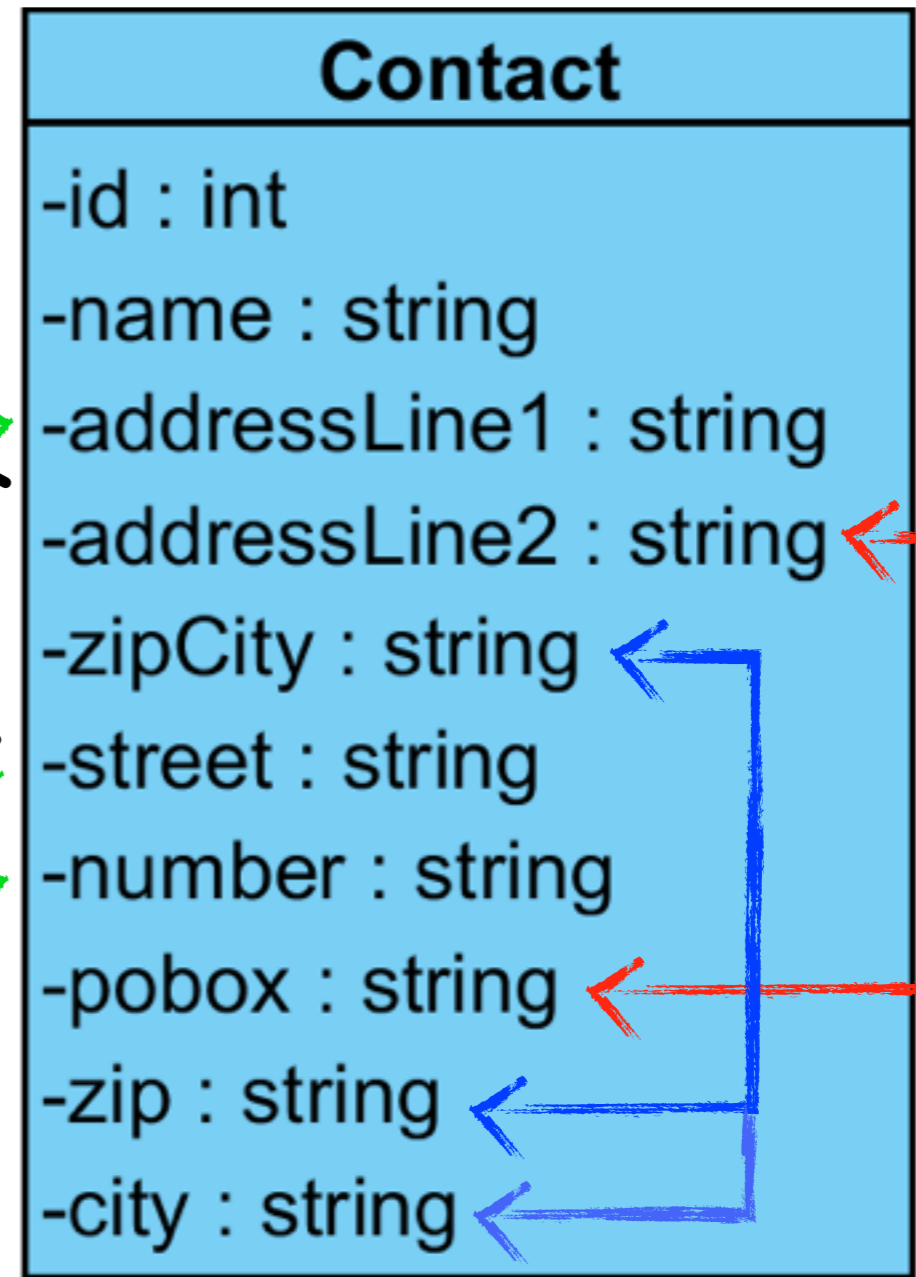
API A

Contact
-id : int
-name : string
-street : string
-number : string
-pobox : string
-zip : string
-city : string

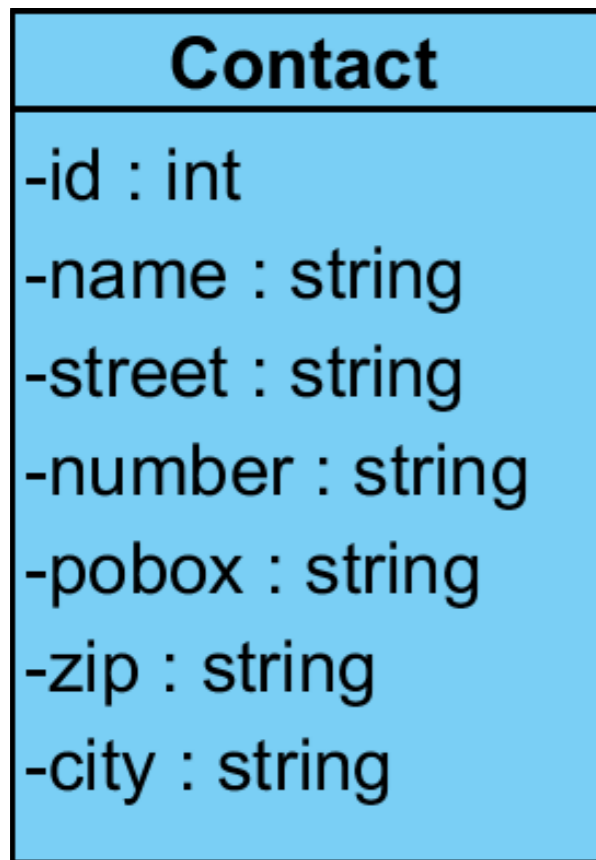
API B



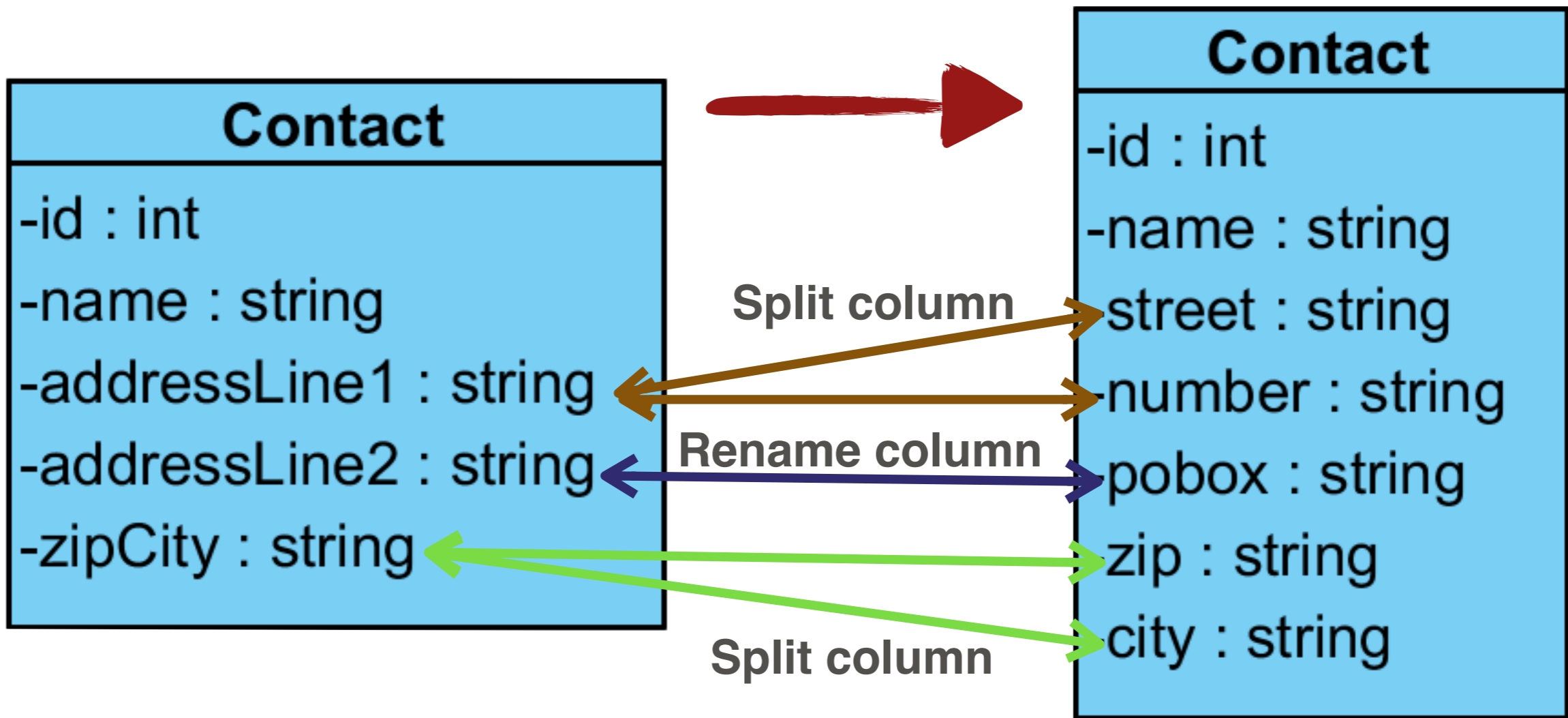
API A



Implementation



API B



Tool	Flavour	DB-Evolution	Integration	Place-holders	Rollback
liquibase	15	SQL, XML, YAML, JSON	CLI, Java, mvn, Ant, Gradle	Yes	Yes
flyway	10	SQL	CLI, Java, mvn, Spring, Ant, Servlets	No	No
c5-db-migration	5	SQL	mvn, Java	No	No
dbdeploy	7	SQL	CLI, mvn, Ant, Java, .NET, PHP	No	Yes
mybatis	jdbc	SQL,XML	CLI, mvn, Ant, Java, Spring, .NET, Ruby,JS, Scala	(Yes)	No
MIGRATEdb	jdbc	SQL,XML	CLI, Ant	Yes	No
migrate4j	jdbc	SQL,Java	CLI, Ant, Java	No	Yes
dbmaintain	8	SQL	CLI, mvn, Ant, Java	Yes	No

No need to get it right up front

Evolutionary design

Complete recoverability

Reduced risk

Less effort

Better Quality

Initial effort

Refactoring Databases - Evolutionary Database Design



- [Home](#)
- [Pramod Sadalage](#)
- [Praise](#)
- [Book Reviews](#)
- [Amazon Reviews](#)
- [Code Examples](#)
- [Erratum](#)

• Architecture Refactoring

- [Add CRUD Methods](#)
- [Add Mirror Table](#)
- [Add Read Method](#)
- [Encapsulate Table With View](#)
- [Introduce Calculation Method](#)
- [Introduce Index](#)
- [Introduce Read Only Table](#)
- [Migrate Method From Database](#)
- [Migrate Method To Database](#)
- [Replace Method\(s\) With View](#)
- [Replace View With Method\(s\)](#)
- [Use Official Data Source](#)

• Structural Refactoring

- [Drop Column](#)
- [Drop Table](#)
- [Drop View](#)
- [Introduce Calculated](#)



Refactoring Databases : Evolutionary Database Design
[Chinese](#) | [Russian](#) | [Japanese](#) | [Korean](#) | [Indian Edition](#)



Recipes for Continuous Database Integration

My talks about agile database development and database refactoring

[Practices for Agile Database Development at Agile India 2012](#)

[Evolutionary Database Design at QCon SF 2011](#)

[Database Refactoring at QCon SF 2009](#)

Recipes for Continuous Database Integration released

[Recipes for Continuous Database Integration: Evolutionary Database Development](#) a eBook, that specifically tackles the technical aspects of integrating the database with the continuous integration engine. The ebook gives recipes of how to do continuous database integration and it provides detailed steps on the concepts written in the Refactoring Databases book.

Jolt Productivity Award Winner

"Refactoring Databases : Evolutionary Database Design" won the 2007 Software Development Jolt Productivity Award in the Technical Books category.

Jolt Award Finalist

I was pleased to find out that our book "Refactoring Databases : Evolutionary Database Design" made it as finalist to the Annual Jolt Productivity Award in the Technical Books category. All the finalist books are available for free download.

The Addison-Wesley Signature Series



REFACTORING DATABASES

EVOLUTIONARY
DATABASE DESIGN

SCOTT W. AMBLER

PRAMOD J. SADALAGE



*Forewords by Martin Fowler, John Graham,
Sachin Rekhi, and Dr. Paul Dorsey*

A MARTIN FOWLER SIGNATURE
BOOK
Martin




Recipes for Continuous Database Integration

Evolutionary Database Development

This Short Cut is a companion to the 2007 Jolt Productivity Award Winner, *Refactoring Databases: Evolutionary Database Design* by Scott W. Ambler and Pramod J. Sadalage, 0321293533, Addison-Wesley.

Pramod Sadalage



 Addison-Wesley
Pearson Education

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**Thank you for
your attention**