



FRAMGåNG

Inventory Management System Enterprise



Inhalt

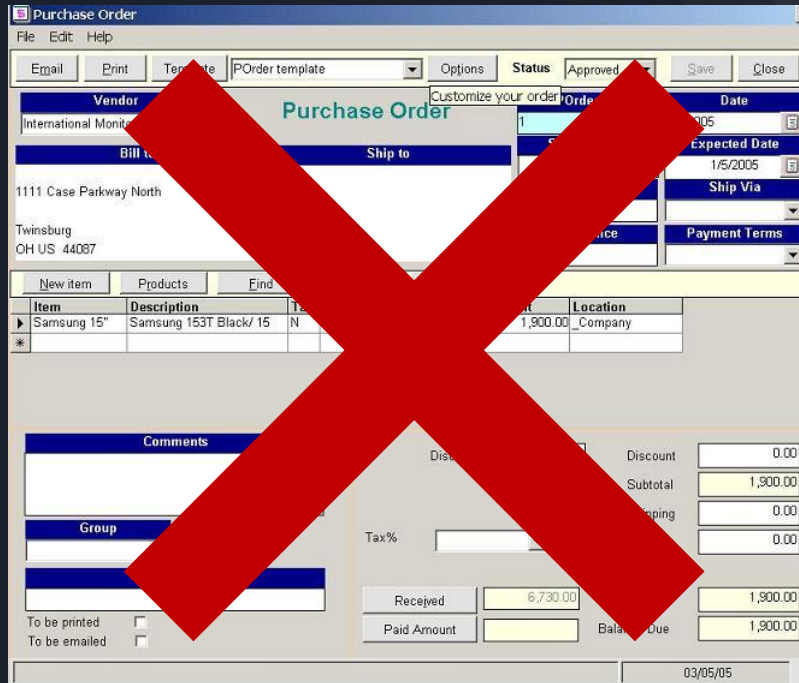
- Vision
- Entscheidungen zur Architektur
- Entwicklungsplattformen
- Bibliotheken
- Sicherung der Qualität
- CI/CD-Einrichtung
- Live-Demo
- Projektmanagement & Lessons Learned



Vision



Vision



Purchase Order

File Edit Help

Email Print Template POOrder template Options Status Approved Save Close

Vendor International Monitor
Bill to 1111 Case Parkway North
Twinsburg
OH US 44087

Ship to

Date 1/5/2005
Expected Date 1/5/2005
Ship Via
Payment Terms

Customize your order

New item Products Find

Item	Description	Quantity	Unit Price	Location
Samsung 15"	Samsung 153T Black/ 15"	1	1,900.00	Company

Comments

Group

Discount 0.00
Subtotal 1,900.00
Shipping 0.00
Tax% 0.00

Received 6,730.00
Paid Amount
Balance Due 1,900.00

To be printed ☐
To be emailed ☐

03/05/05

Vision

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DashboardProductsManagement

admin

Purchase

Sale

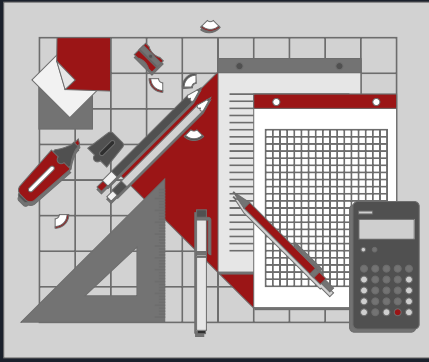
Article Overview

Article

Export CSVAdd Product +

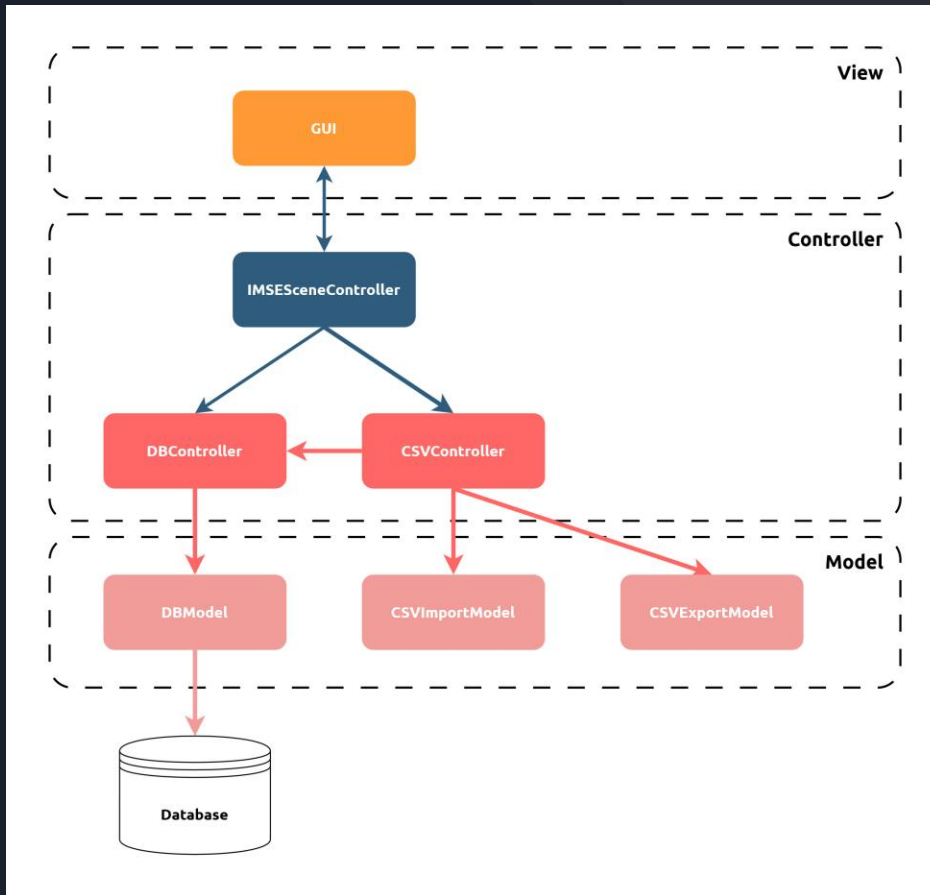
Search Product:

ID	Description	Price	Quantity
646491a05e90c07fd80b5758	ergonomic drill	43.43	50
646491a05e90c07fd80b575b	portable wrench	91.75	42
646491a05e90c07fd80b575a	powerful nails	16.44	74
646491a05e90c07fd80b5760	powerful level	75.38	53
646491a05e90c07fd80b5780	innovative pliers	97.73	74
646491a05e90c07fd80b5754	multi-functional power tool	53.46	87
646491a05e90c07fd80b5753	heavy-weight sander	27.34	16
646491a05e90c07fd80b5759	innovative sander	8.33	52
646491a05e90c07fd80b5752	precision nails	18.42	98
646491a05e90c07fd80b5755	versatile pliers	85.99	79
646491a05e90c07fd80b5772	innovative sander	46.89	47
646491a05e90c07fd80b5757	heavy-duty glue	14.36	78
646491a05e90c07fd80b5756	innovative level	70.07	26
646491a05e90c07fd80b576e	ergonomic paint	47.69	40
646491a05e90c07fd80b5787	ergonomic hammer	31.21	93
646491a05e90c07fd80b578f	powerful ear protection	34.63	89
646491a05e90c07fd80b5791	heavy-duty drill	13.3	10
646491a05e90c07fd80b5794	portable tape measure	50.69	96
646491a05e90c07fd80b57af	powerful ladder	17.83	69
646491a05e90c07fd80b57d0	portable drill	42.13	90
646491a05e90c07fd80b57e2	reliable tape measure	66.74	50
646491a05e90c07fd80b57f6	precision glue	21.86	12



Architecture decisions

MVC





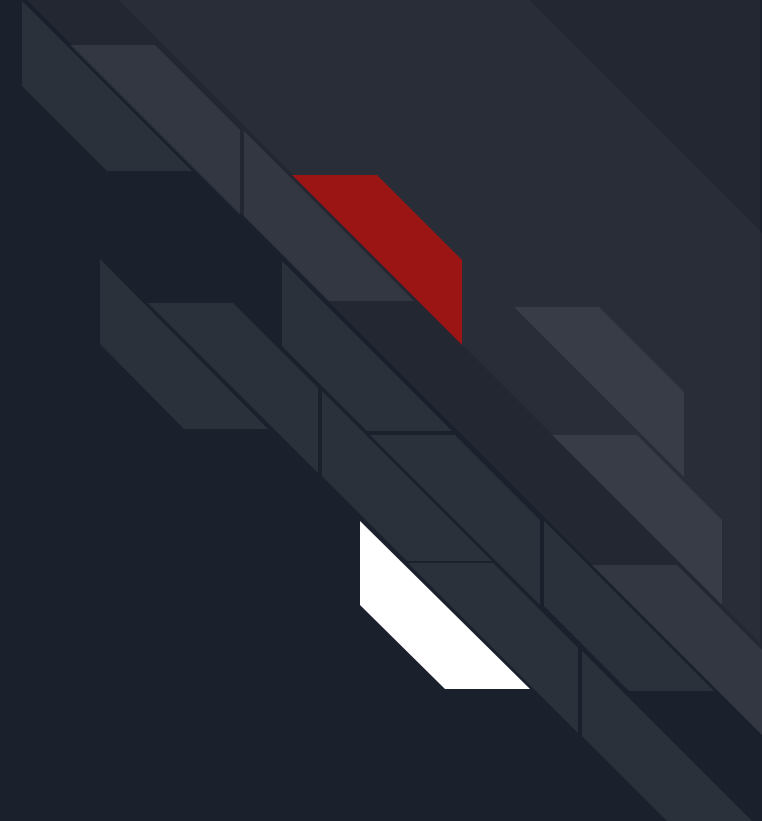
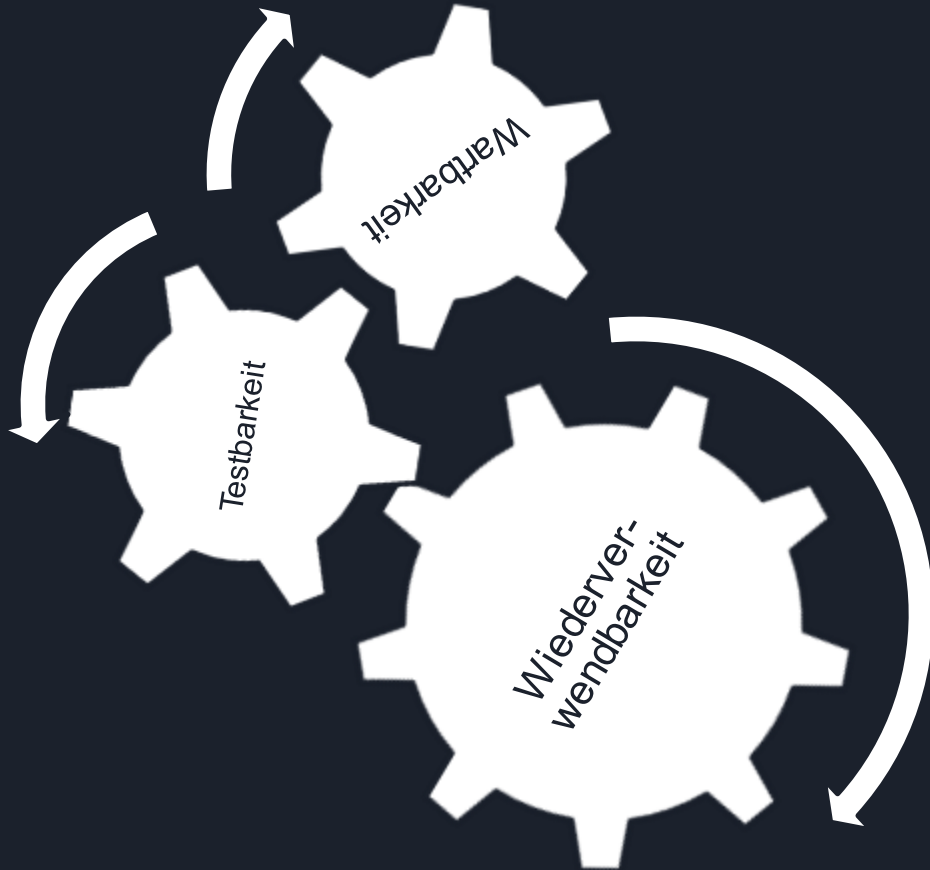


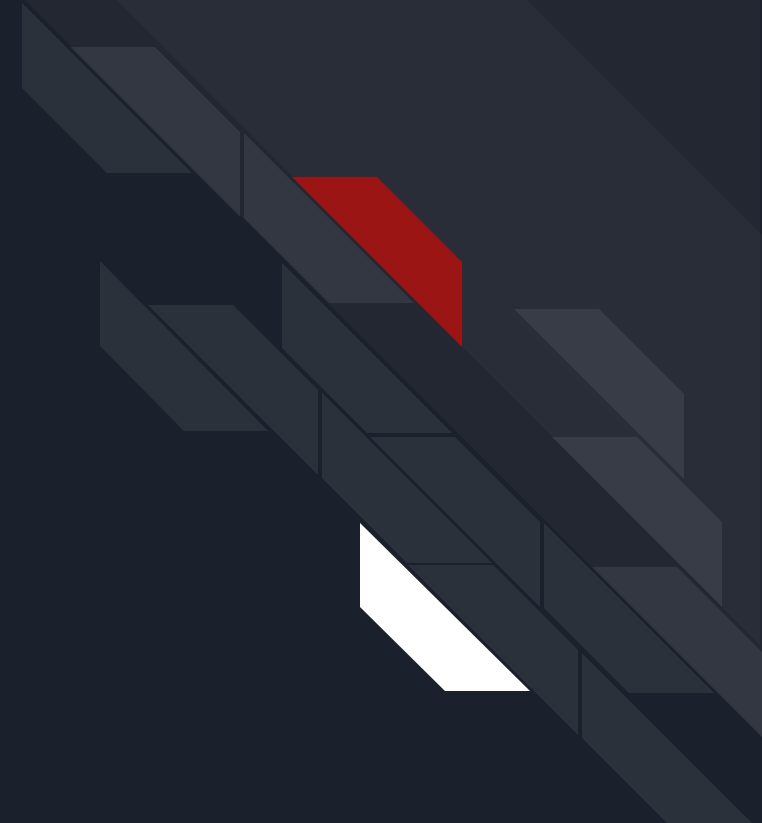
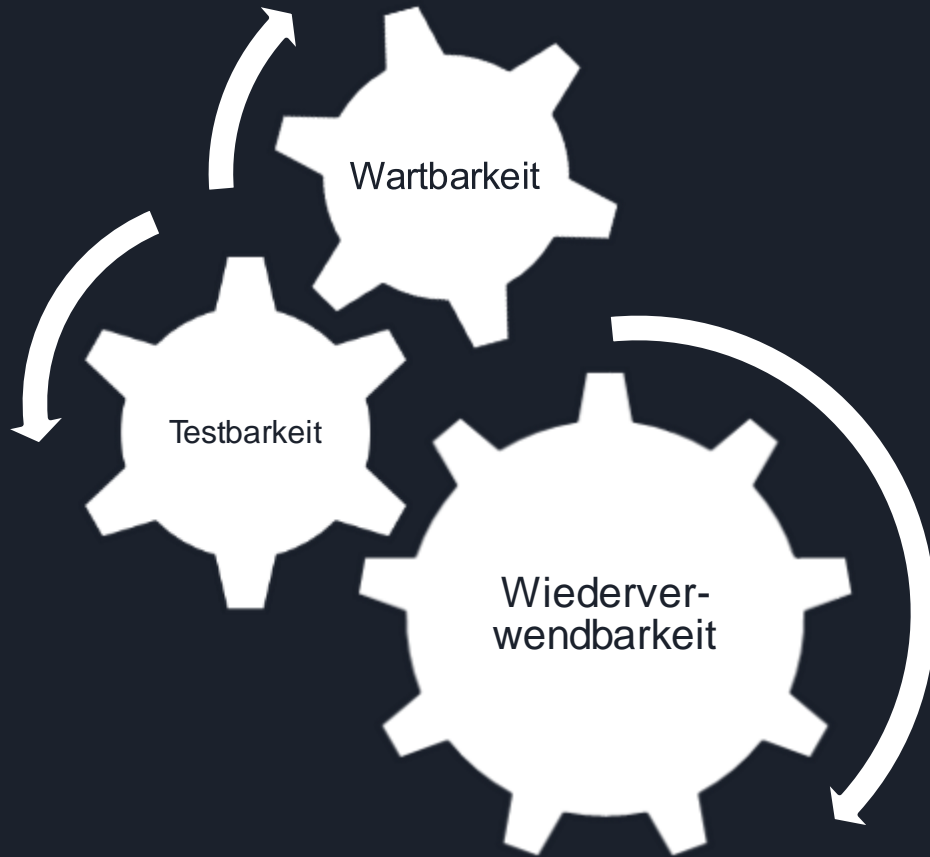
FRONT END



BACK END



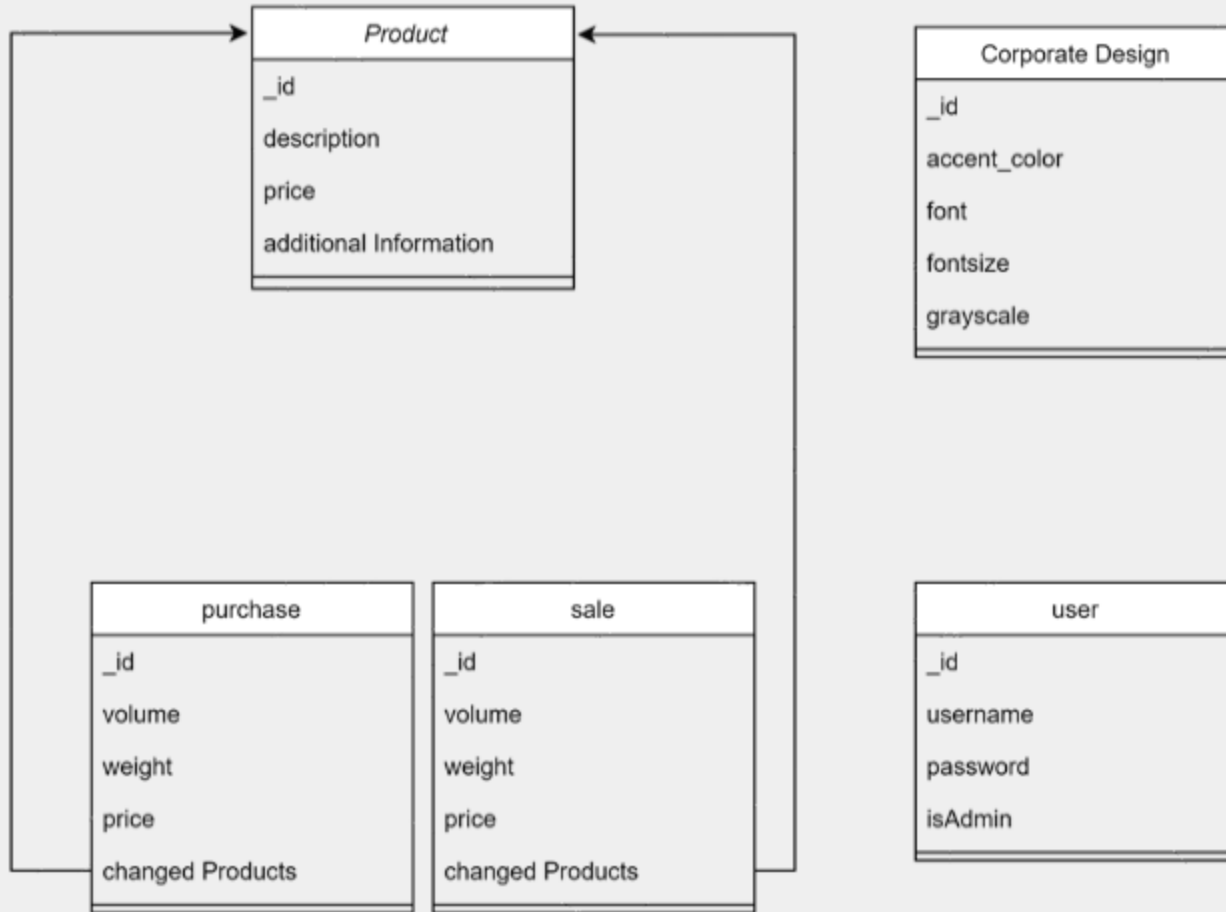




Datenbank

- Flexibilität: Dynamisches Schema, das Änderungen in Datenmodellen berücksichtigt
- Skalierbarkeit: Horizontale Skalierung durch Sharding
 - Native Sharding: Aufteilung einer Datenbank in mehrere Shards
 - Jeder Shard enthält einen Teil der Daten und kann unabhängig arbeiten
 - Shards können auf separaten Servern oder Datenbankinstanzen gehostet werden
- Dokumentorientierte Speicherung: JSON-ähnliche Dokumente für effiziente Datenverarbeitung
- Hohe Verfügbarkeit: automatische Ausfallsicherung
- Einfache Integration und Entwicklung: Nahtlose Integration mit gängigen Sprachen und Frameworks





purchase

`_id``volume``weight``price``changed Products`

```
_id: ObjectId('648621103cd0e24a49d40307')
weight: 10.5
volume: 20.5
price: 100
changedProducts: Array
  0: Object
    _id: ObjectId('643664d4c6ea680fff29e0d4')
    Description: "ergonomic workbench"
    Quantity: 1
    Price: 98.48
    additionalInformation: Object
      Test: "test"
```

Bibliotheken und Frameworks

Frameworks

- MongoDB
- JavaFX
- Junit und TestFX
- SonarQube zur Sicherstellung von Codequalität und -sicherheit



mongoDB

Bibliotheken

- Lombok
- JaCoCo zur Messung der Code-Coverage
- MongoDB Bibliotheken
- OWASP Dependency-Check



mongoDB

JACOCO
Java Code Coverage



DEPENDENCY-CHECK

Entwicklungsplattformen

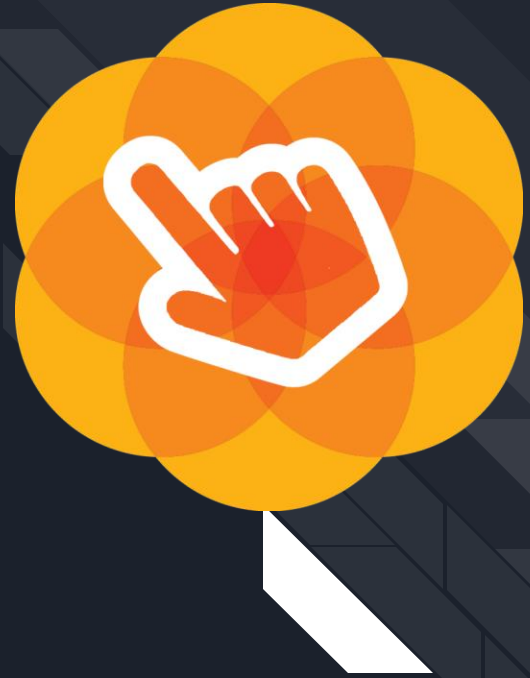
Eclipse

- Kostenfrei
- Open Source
- vertraut mit Eclipse
- umfangreiche Palette an Tools und Funktionen
- Beste Option für JavaFX



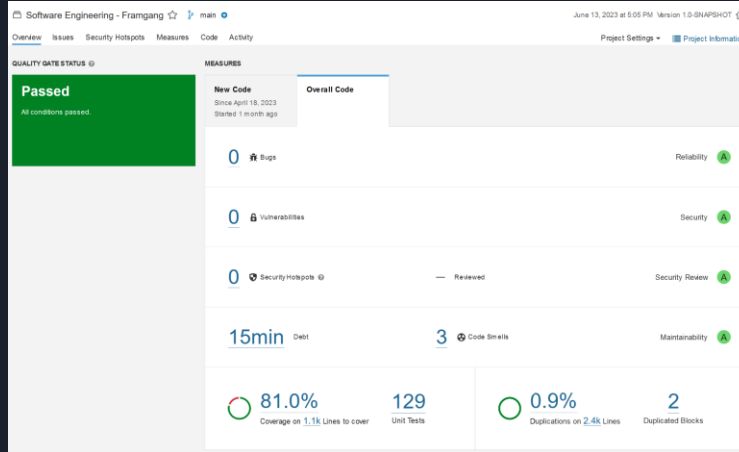
Scene Builder

- Kostenfrei
- Open Source
- Eclipse Add-On
- Einfaches Bauen von Szenen per Drag and Drop



Quality Assurance (QA)

- Anforderungsanalyse, klare eindeutige Anforderungen an die Software
- Testen



- Fehlermanagement, z.B. durch Logger
- Code-Reviews

Continuous Integration/ Continuous Delivery

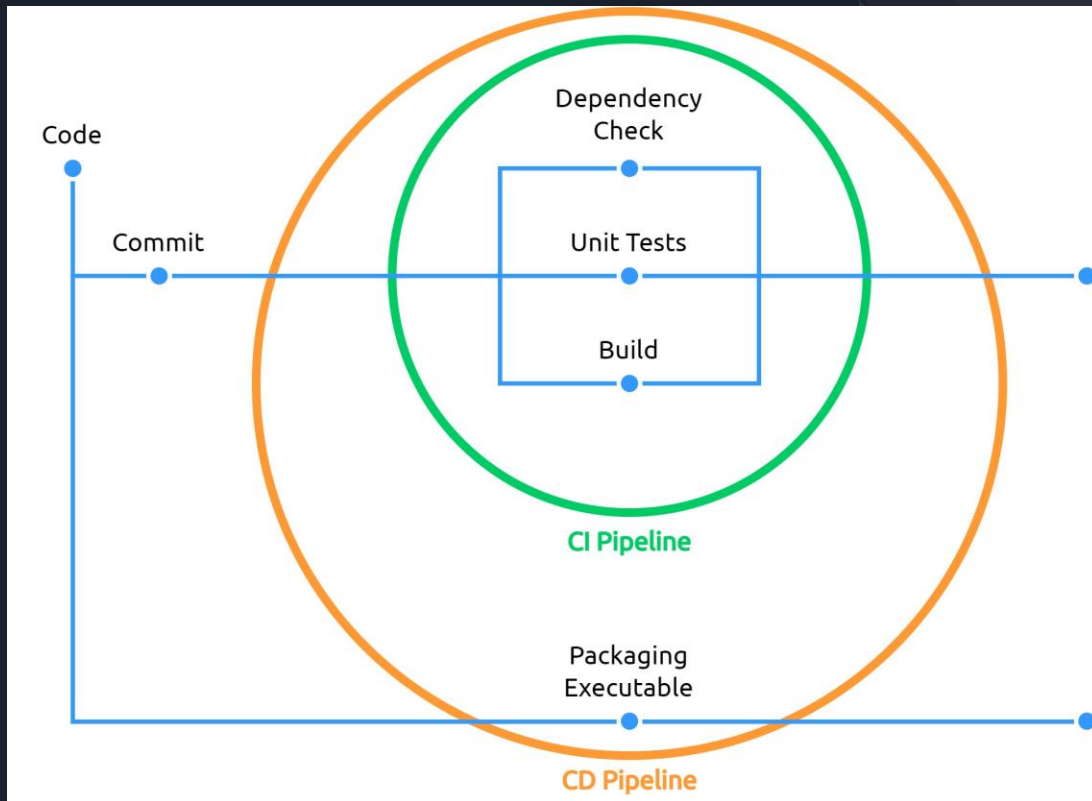
Continuous Integration/ Continuous Delivery

- gemeinsame Codebasis mit Versionsverwaltung
- statische Code-Analyse
- Unit-Tests
- regelmäßige Integration in den Main-Branch



Continuous Integration/ Continuous Delivery

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Continuous Integration/ Continuous Delivery

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```
name: Maven Dependency Check
```

```
on:
```

```
  push:
```

```
    branches: [ "main" ]
```

```
  pull_request:
```

```
    branches: [ "main" ]
```

```
jobs:
```

```
  build:
```

```
    runs-on: ubuntu-latest
```

```
  steps:
```

```
    - uses: actions/checkout@v3
```

```
    - name: Set up JDK 17
```

```
      uses: actions/setup-java@v3
```

```
      with:
```

```
        java-version: '17'
```

```
        distribution: 'temurin'
```

```
        cache: maven
```

```
    - name: Dependency Check with Maven
```

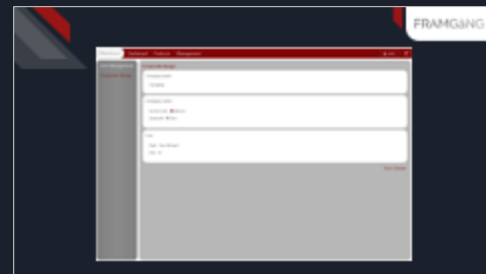
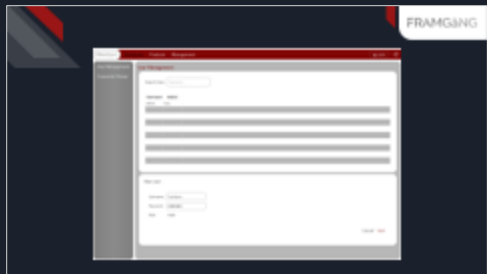
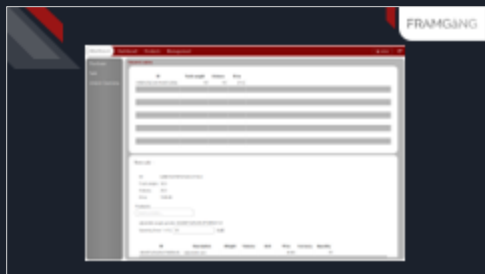
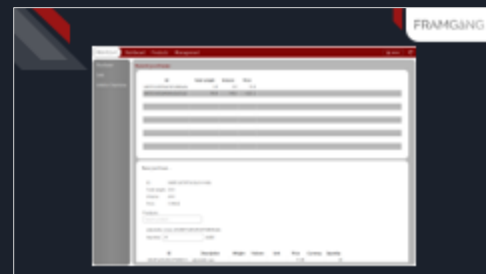
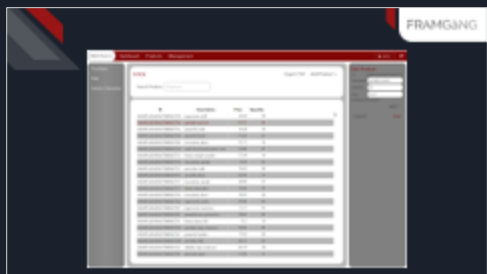
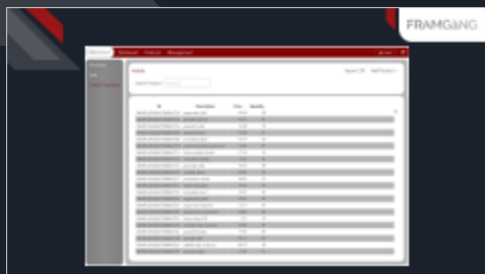
```
      run: mvn clean verify -Pcve --file pom.xml
```

Live demo

Live demo



Screenshots



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DashboardProductsManagement

admin

Purchase

Sale

Article Overview

Article

Export CSVAdd Product +

Search Product:

ID	Description	Price	Quantity
646491a05e90c07fd80b5758	ergonomic drill	43.43	50
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646491a05e90c07fd80b57e2	reliable tape measure	66.74	50
646491a05e90c07fd80b57f6	precision glue	21.86	12

Edit Product

ID: 646491a05e90c07fd80b575b

Description:

Quantity:

Price:

Additional Information:

Add +

CancelSave

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DashboardProductsManagement

admin

Purchase

Sale

Article Overview

Recent purchases

ID	Total weight	Volume	Price
64870162f418a0161dd69eda	4.0	4.0	53.6
648787ef05df4069e5b925d2	140.0	140.0	6221.2

New purchase -

ID: 64887a3676f70c5dc3411e8b

Total weight: 20.0

Volume: 20.0

Price: 1549.60

Products:

Search product...

adjustable screws id:646491a05e90c07fd80b5a8e

Quantity: 23 Add

ID	Description	Weight	Volume	Unit	Price	Currency	Quantity
646491a05e90c07fd80b57...	adjustable saw				77.48		20

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DashboardProductsManagement

admin

Purchase

Sale

Article Overview

Recent sales

ID	Total weight	Volume	Price
6486fcf5b3c6014e891d386c	4.0	4.0	216.2

New sale -

ID: 648879c076f70c5dc34112c4

Total weight: 30.0

Volume: 30.0

Price: 1939.80

Products:

adjustable angle grinder id:646491a05e90c07fd80b57a3

Quantity (from 1- 41): Add

ID	Description	Weight	Volume	Unit	Price	Currency	Quantity
646491a05e90c07fd80b58...	adjustable saw				64.66		30

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DashboardProductsManagement

admin

User Management

Corporate Design

User Management

Search User:

Username	Admin	
admin	true	

New user -

Username:

Password:

Role:

Cancel Save

FRAMGång

DashboardProductsManagement

admin

User Management

Corporate Design

Corporate design

Company name

Framgång

Company colors

Accent color: ■ Maroon

Grayscale: ■ Grau

Font

Style: Poor Richard

Size: 22

Save changes

Projektmanagement

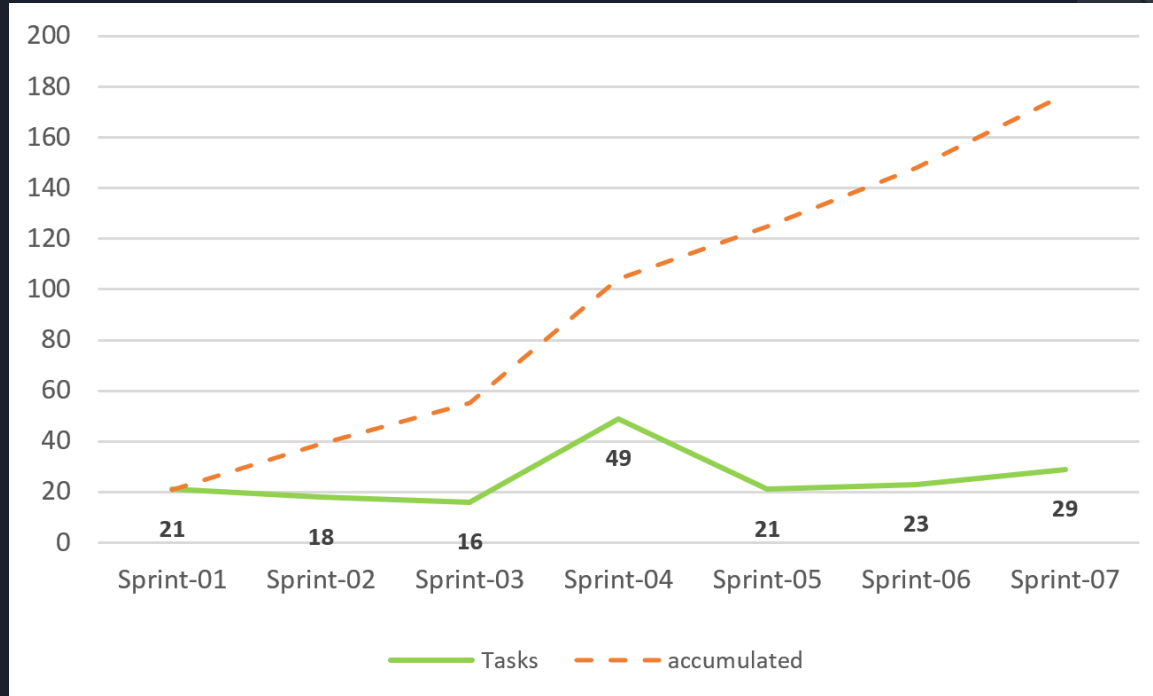
Projektmanagement

- Gesamte Arbeitszeit:
568h 45m



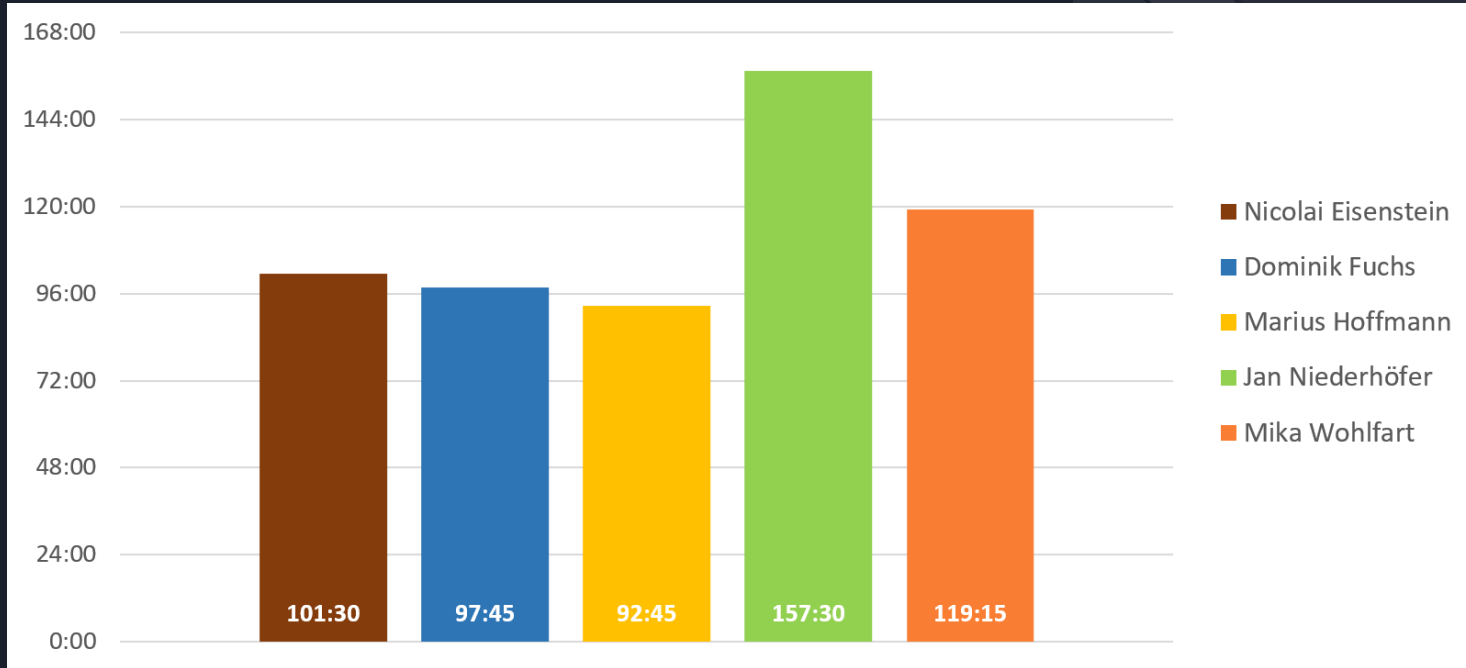
Projektmanagement

Tickets pro Sprint



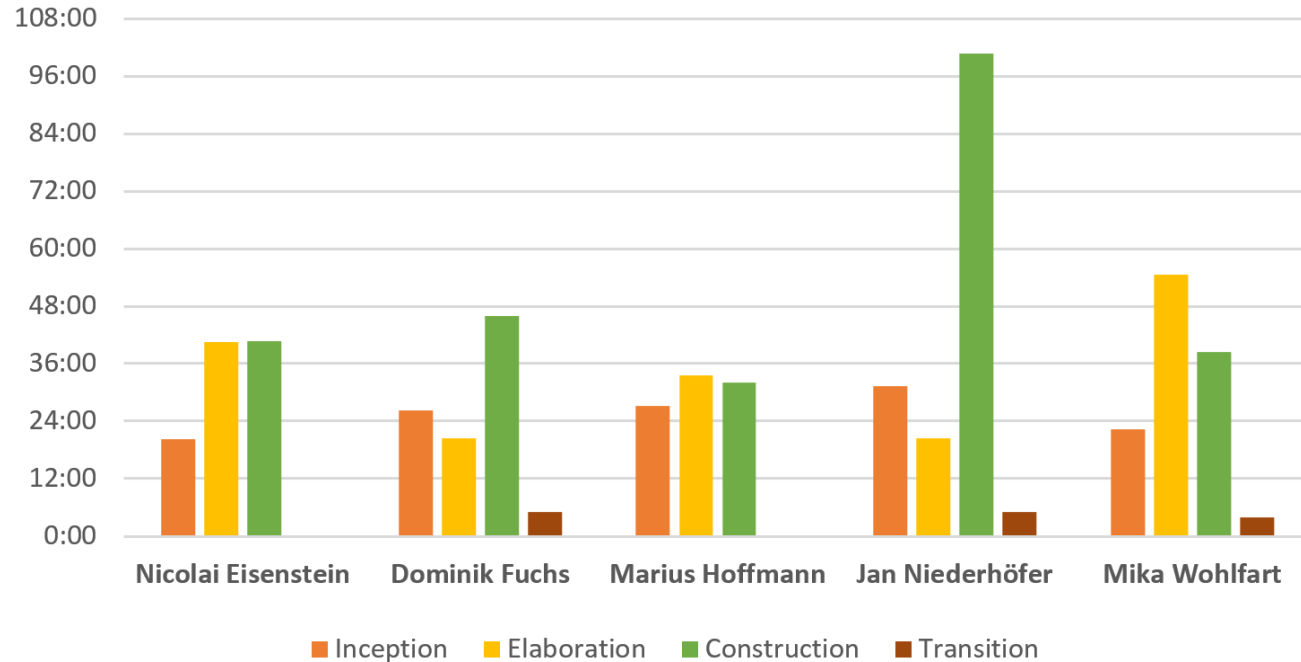
Projektmanagement

Stunden pro Person



Projektmanagement

Stunden pro Phase



Projektmanagement

Stunden pro Phase

Nicolai Eisenstein



Inception Elaboration Construction Transition

Dominik Fuchs



Inception Elaboration Construction Transition

Marius Hoffmann



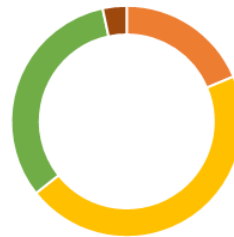
Inception Elaboration Construction Transition

Jan Niederhöfer



Inception Elaboration Construction Transition

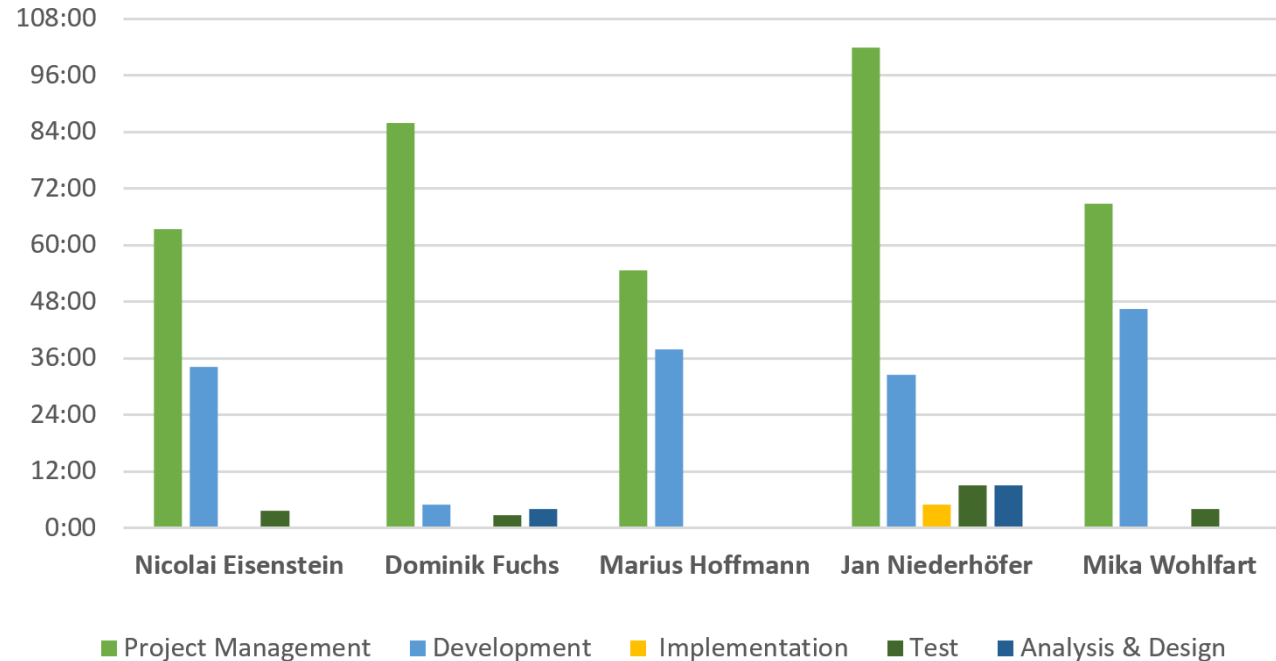
Mika Wohlfart



Inception Elaboration Construction Transition

Projektmanagement

Stunden pro Workflow



Projektmanagement

Stunden pro Workflow

Nicolai Eisenstein



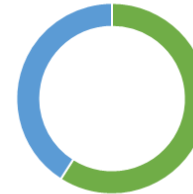
■ Project Management ■ Development ■ Implementation ■ Test ■ Analysis & Design

Dominik Fuchs



■ Project Management ■ Development ■ Implementation ■ Test ■ Analysis & Design

Marius Hoffmann



■ Project Management ■ Development ■ Implementation ■ Test ■ Analysis & Design

Jan Niederhöfer



■ Project Management ■ Development ■ Implementation ■ Test ■ Analysis & Design

Mika Wohlfart



■ Project Management ■ Development ■ Implementation ■ Test ■ Analysis & Design

Lessons Learned

- Projekt-Scope nicht zu groß wählen
- Plattform: Web-App hätte mehr Möglichkeiten eröffnet und manche Schwierigkeiten umgangen
- Dienstleister: werden Accounts deaktiviert?
- Schwierigkeiten mit Gestaltung der Dokumente, heute ansprechende Darstellung
- früh mit Zeiterfassung/Dokumentation anfangen



?

Fragen?

?

Vielen Dank!

