



INVENTORY MANAGEMENT PROJECT

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OUTLINE

- Introduction
- Consultant Journey
- Project management board
- Coding
- Testing
- Sprint review

INTRODUCTION

Objective

To develop inventory management
java application



Inventory Management List				Actions(CRUD)			
Customer Table	Item Table	Order Table	Order Line Table	Read	Create	Update	Delete

CONSULTANT JOURNEY

- Project Management tool (Jira)
- Version Controlling (Git)
- Database (MySQL)
- Programing (JAVA)
- Testing (Junit and Mockito)
- Project automating and build tool(MAVEN, jar)

PROJECT MANAGEMENT BOARD

EPIC

Develop Inventory Management Software

Stories

- CRUD Operations on Customers Table

Tasks

1. create a table for customer table
 2. design and develop the code to connect with the data base
- CRUD Operations on Items Table
 - CRUD Operations on orders Table
 - CRUD Operations on orderline Table
 - Calculate a total cost for an order
 - Conduct testing
 - Run Code From CLI

P11

[illegible]

CONT...

Jira Software

Your work

Projects

Filters

Dashboards

People

Apps

Create

Search

Inventory Management ...
Software project

IMP board
Board

Roadmap

Backlog

Active sprints

Reports

Issues

Components

Code

Releases

Project pages

Add item

Project settings

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Projects / Inventory Management Project / IMP board

Backlog

ET

Only My Issues

Recently Updated

EPICS

Create epic

All issues

Inventory Management Software

IMP-6 Develop Inventory Management Software

Issues

Completed

Unestimated

Estimate

Create issue in epic

Issues without epics

IMP Sprint 1

6 issues

28/May/21 4:52 PM • 04/Jun/21 4:52 PM

ET

...

CRUD Operations in Customer Table	ET	IMP-7	↑	4
CRUD Operations in Items Table	ET	IMP-8	↑	-
CRUD Operations in Orders Table	ET	IMP-9	↑	-
Calculate a cost for an order	ET	IMP-10	↑	-
Perform Testing	ET	IMP-4	↑	-
Run Code From CLI	ET	IMP-5	↑	-

Backlog

0 issues

Create sprint

...

Your backlog is empty.

+ Create issue

IMP-18

1

Description

Add a description...

Subtasks

IMP-19 create a method to handle cost c... DONE

YOUR PINNED FIELDS

Click on the ✨ next to a field label to start pinning.

Assignee

ET Ermas Tsege

Reporter

ET Ermas Tsege

Releases

+ Add feature flag

Labels

None

Inventory Management ...
Software project

IMP board
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Projects / Inventory Management Project / IMP board

IMP Sprint 1

⚡ ☆ ⌚ 1 day remaining Complete sprint 🔗 ⋮

Q



Only My Issues

Recently Updated

TO DO

IN PROGRESS

DONE

IMP-7 DONE 2 sub-tasks: CRUD Operations in Customer Table

Design and develop database/table for Customer



IMP-10

Create the inventory management main code and connect to customer table



IMP-11

IMP-8 DONE 2 sub-tasks: CRUD Operations in Items Table

Create a table for Items



IMP-12

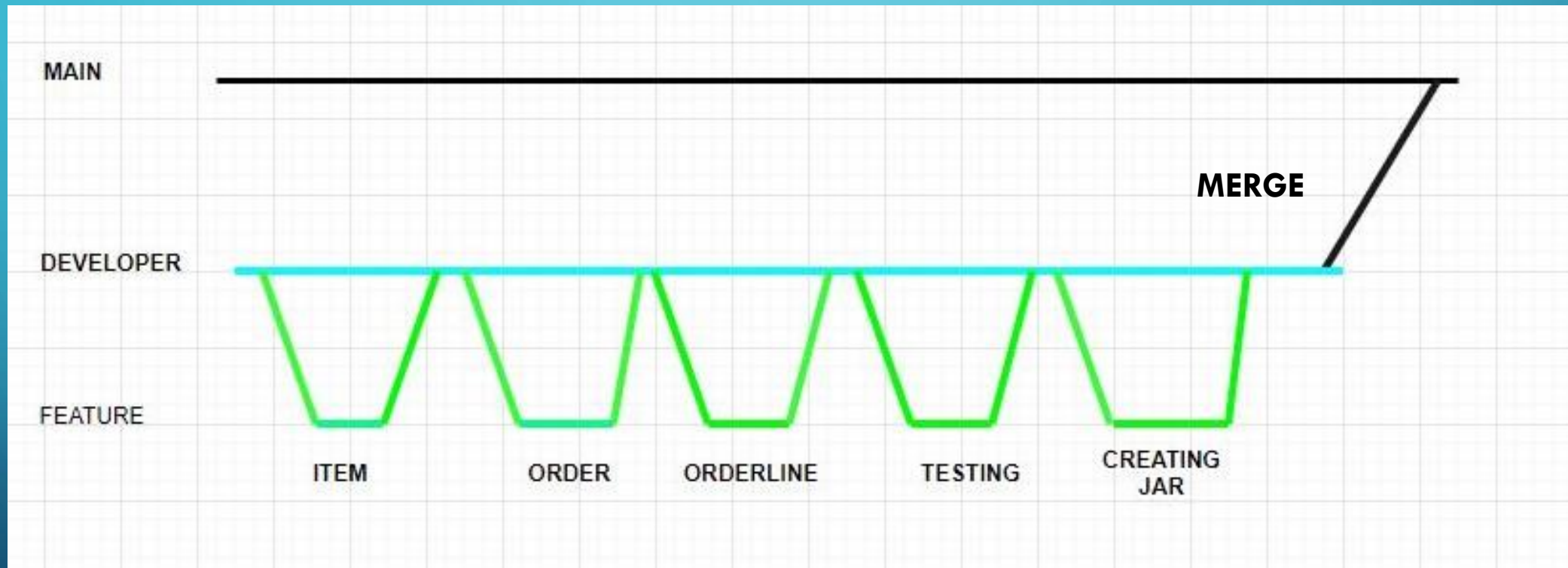
Create the code for Items and connect the table



IMP-13

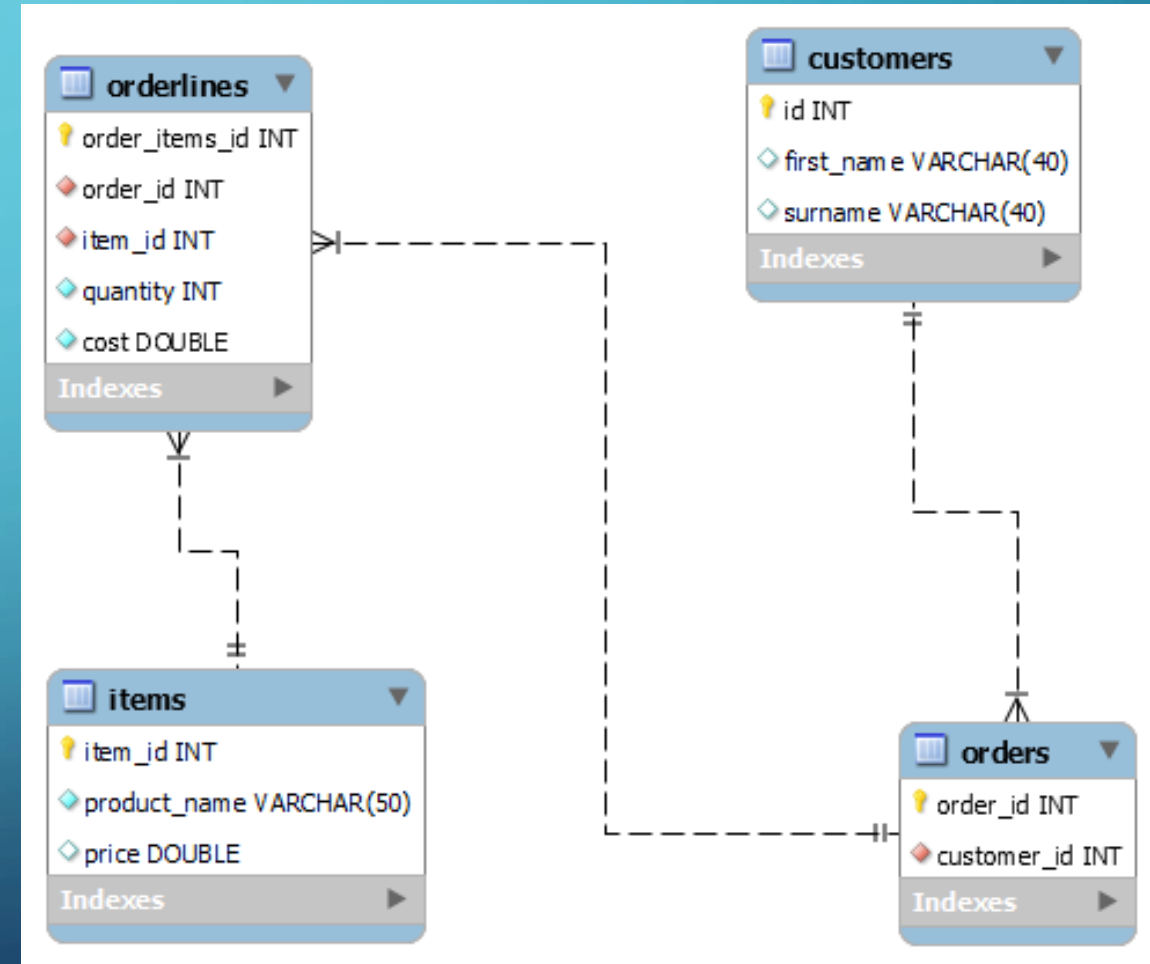
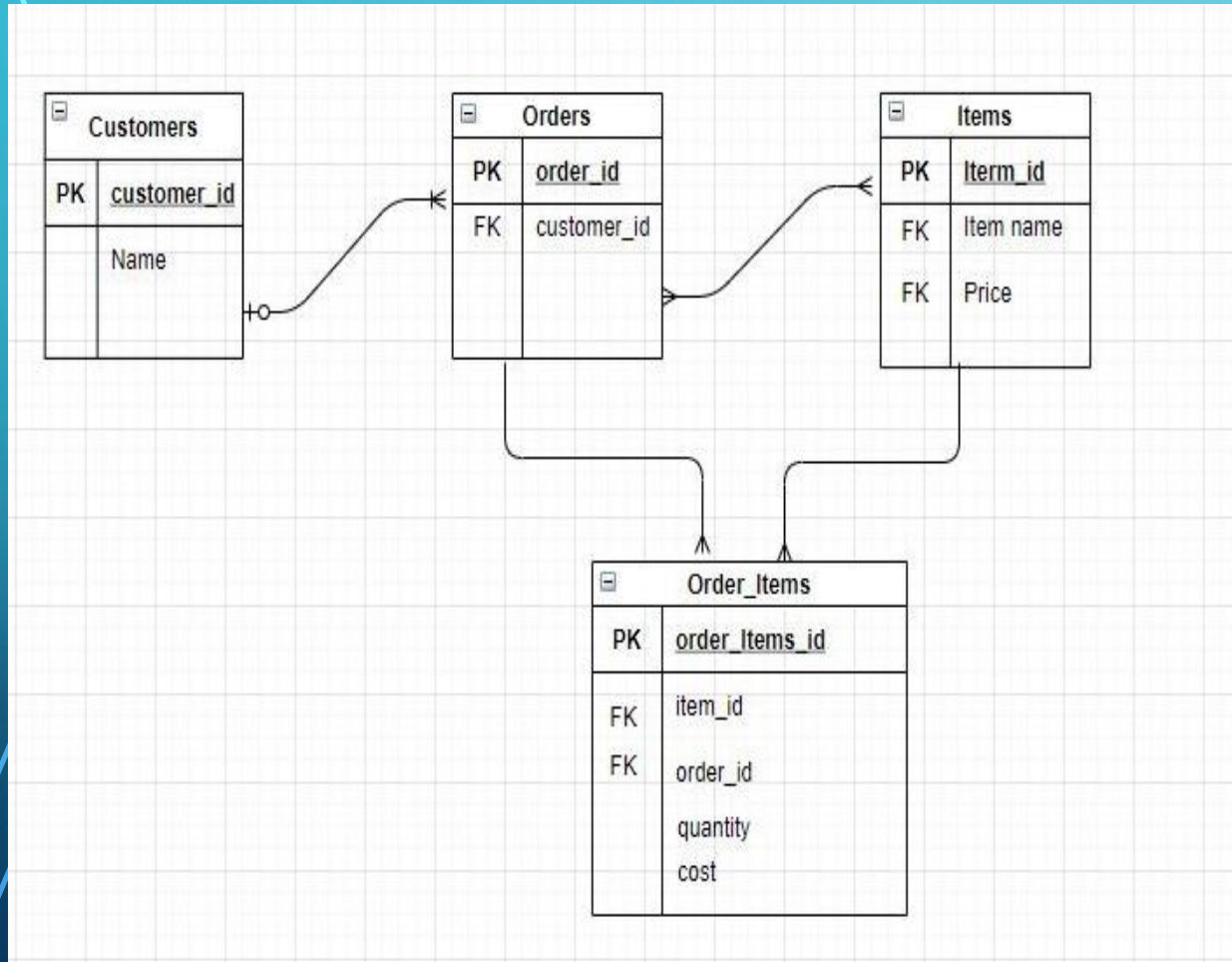
IMP-9 DONE 2 sub-tasks: CRUD Operations in Orders Table

VERSION CONTROLLING USING GIT

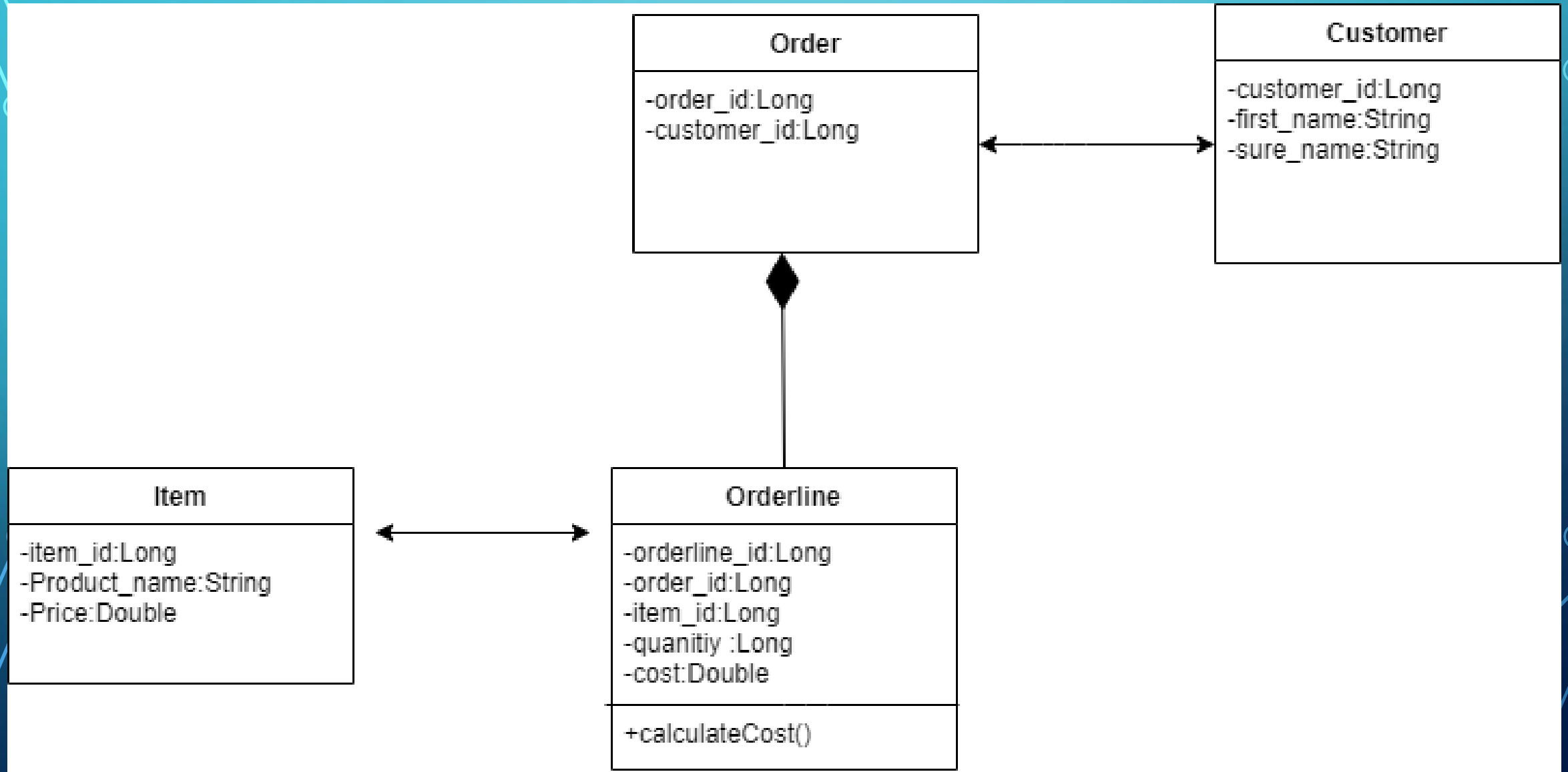


DATABASE

Entity Relationship Diagram (ERD) Diagram

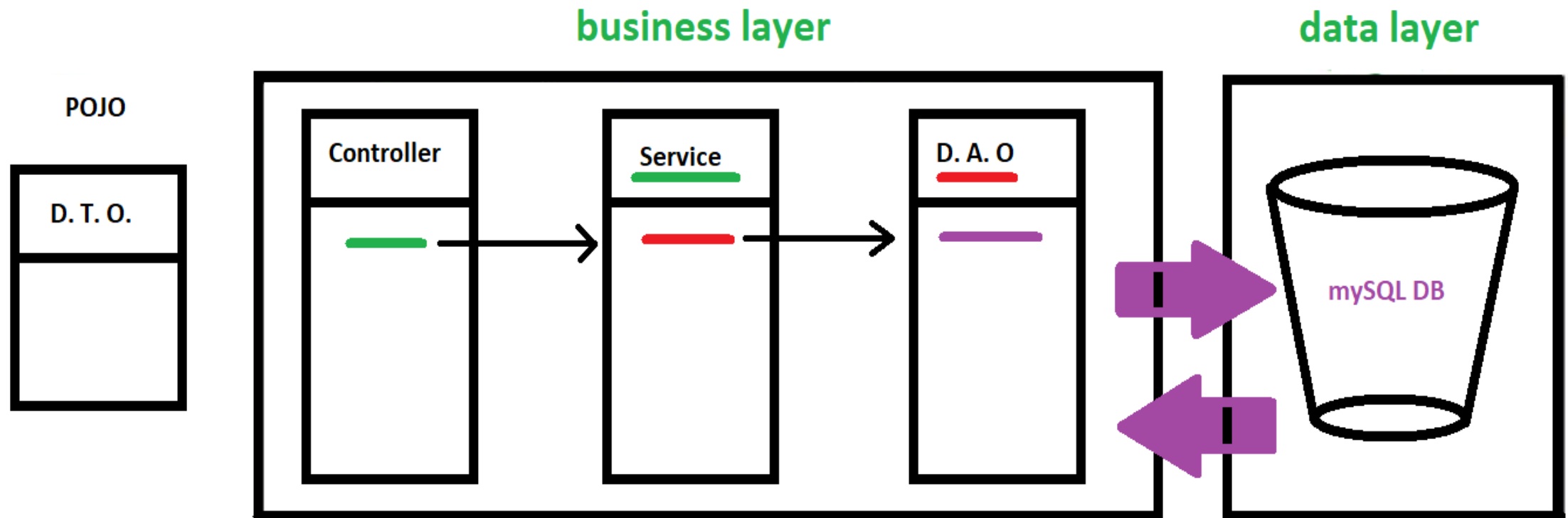


Unified Model Language (UML) Diagram



JAVA Coding

multi-tiered architecture



CRUD Operation on ims Database Using JAVA

```
Console
Runner (16) [Java Application] C:\Users\localadmin\.p2\pool\plugins\org.eclipse
customer
What would you like to do with customer:
CREATE: To save a new entity into the database
READ: To read an entity from the database
UPDATE: To change an entity already in the database
DELETE: To remove an entity from the database
RETURN: To return to domain selection
read
id:1 first name:Ermas surname:Tsege
id:3 first name:Marta surname:Tsigie
id:4 first name:Dawit surname:Senbeta
id:5 first name:Marta surname:Senbeta
id:6 first name:Binyam surname:Senbeta
id:7 first name:debebe surname:zergaw
id:8 first name:chris surname:perrins
id:9 first name:jordan surname:harrison
```

```
Console
Runner (16) [Java Application] C:\Users\localadmin\.p2\pool\plugins\org.eclipse
CREATE: To change an entity already in the database
DELETE: To remove an entity from the database
RETURN: To return to domain selection
read
Item [item_id=3, product_name=computer, price=33.0]
Item [item_id=4, product_name=book, price=44.0]
Item [item_id=5, product_name=tv, price=10.0]
Item [item_id=6, product_name=table, price=90.0]
Item [item_id=7, product_name=airphone, price=44.0]
Item [item_id=8, product_name=Desktop, price=500.0]
Item [item_id=9, product_name=computer, price=33.0]
Item [item_id=10, product_name=eyeglass, price=20.0]
What would you like to do with item:
CREATE: To save a new entity into the database
READ: To read an entity from the database
UPDATE: To change an entity already in the database
Coverage
Runner (16) (Jun 3, 2021 5:24:15 PM)
```

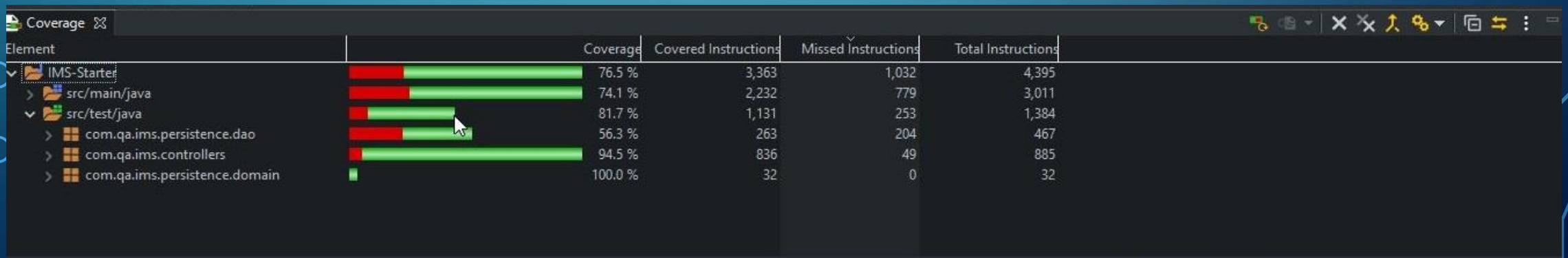
```
Console
Runner (16) [Java Application] C:\Users\localadmin\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.f
CREATE: To save a new entity into the database
READ: To read an entity from the database
UPDATE: To change an entity already in the database
DELETE: To remove an entity from the database
RETURN: To return to domain selection
read
Orderline [order_items_id=1, order_id=1, item_id=3, quantity=10, cost=330.0]
Orderline [order_items_id=3, order_id=4, item_id=5, quantity=13, cost=130.0]
Orderline [order_items_id=4, order_id=5, item_id=7, quantity=10, cost=440.0]
What would you like to do with orderline:
CREATE: To save a new entity into the database
READ: To read an entity from the database
UPDATE: To change an entity already in the database
DELETE: To remove an entity from the database
RETURN: To return to domain selection
```

```
Console
Runner (16) [Java Application] C:\Users\localadmin\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.f
CREATE: To save a new entity into the database
READ: To read an entity from the database
UPDATE: To change an entity already in the database
DELETE: To remove an entity from the database
RETURN: To return to domain selection
read
Order [order_id=1, customer_id=1]
Order [order_id=5, customer_id=4]
Order [order_id=4, customer_id=7]
What would you like to do with order:
CREATE: To save a new entity into the database
READ: To read an entity from the database
UPDATE: To change an entity already in the database
DELETE: To remove an entity from the database
RETURN: To return to domain selection
Coverage
Runner (16) (Jun 3, 2021 5:24:15 PM)
```

UNIT TESTING

- 1) Junit testing applied to test the controller class in the business logic part "assertEqual" method from unit testing was applied to test the validity of each method in the control classes.
- 2) Mockito testing framework was applied to test the DAO part of the business logic code.

This testing method was used to test all the methods inside the DAO using the dummy object concept provided by Mockito unit testing Framework.



Element	Coverage	Covered Instructions	Missed Instructions	Total Instructions
IMS-Start	76.5 %	3,363	1,032	4,395
src/main/java	74.1 %	2,232	779	3,011
src/test/java	81.7 %	1,131	253	1,384
com.qa.ims.persistence.dao	56.3 %	263	204	467
com.qa.ims.controllers	94.5 %	836	49	885
com.qa.ims.persistence.domain	100.0 %	32	0	32

SPRINT REVIEW

- CRUD Operations in customers, Items, orders and orderline tables was successfully performed.
- The code has a 77% testing pass.
- Packaging ims Applications (.jar)

```
Order [order_id=127, customer_id=2], Order [order_id=128, customer_id=2], Order [order_id=129, customer_id=2], Order [order_id=130, customer_id=2], Order [order_id=131, customer_id=2], Order [order_id=132, customer_id=2], Order [order_id=133, customer_id=2], Order [order_id=134, customer_id=2], Order [order_id=135, customer_id=2], Order [order_id=136, customer_id=2], Order [order_id=137, customer_id=2], Order [order_id=138, customer_id=2], Order [order_id=139, customer_id=2], Order [order_id=140, customer_id=2], Order [order_id=141, customer_id=2], Order [order_id=142, customer_id=2], Order [order_id=143, customer_id=2], Order [order_id=144, customer_id=2], Order [order_id=145, customer_id=2], Order [order_id=146, customer_id=2], Order [order_id=147, customer_id=2], Order [order_id=148, customer_id=2], Order [order_id=149, customer_id=2], Order [order_id=150, customer_id=2]]>
testCreate(com.qa.ims.persistence.dao.OrderDAOTest): expected:<Order [order_id=5, customer_id=2]> but was:<Order [order_id=151, customer_id=2]>
testDelete(com.qa.ims.persistence.dao.OrderDAOTest): expected:<137> but was:<0>
testReadLatest(com.qa.ims.persistence.dao.OrderlineDAOTest): expected:<Orderline [order_items_id=null, order_id=1, item_id=1, quantity=5, cost=90.0]> but was:<Orderline [order_items_id=null, order_id=1, item_id=1, quantity=5, cost=90.0]>
testReadAll(com.qa.ims.persistence.dao.OrderlineDAOTest): expected:<Orderline [order_items_id=null, order_id=1, item_id=1, quantity=5, cost=90.0]> but was:<Orderline [order_items_id=null, order_id=1, item_id=1, quantity=5, cost=90.0]>
testCreate(com.qa.ims.persistence.dao.OrderlineDAOTest): expected:<Orderline [order_items_id=null, order_id=1, item_id=2, quantity=10, cost=30.0]> but was:<Orderline [order_items_id=null, order_id=1, item_id=2, quantity=10, cost=30.0]>
testUpdate(com.qa.ims.persistence.dao.OrderlineDAOTest): expected:<Orderline [order_items_id=1, order_id=1, item_id=1, quantity=5, cost=90.0]> but was:<Orderline [order_items_id=1, order_id=1, item_id=1, quantity=5, cost=90.0]>

Tests run: 44, Failures: 23, Errors: 0, Skipped: 0

[INFO] -----
[INFO] BUILD FAILURE
[INFO] -----
[INFO] Total time: 01:01 min
[INFO] Finished at: 2021-06-04T09:51:59-04:00
[INFO] -----
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-surefire-plugin:2.12.4:test (default-test) on project ims: There are test failures.
[ERROR] Please refer to C:\Users\localadmin\Desktop\QA_Infosys_Training\JAVA_2\IMS-Starter\target\surefire-reports for the individual test results.
[ERROR] -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException

localadmin@DESKTOP-AFOM2PV MINGW64 ~/Desktop/QA_Infosys_Training/JAVA_2/IMS-Starter (jar)
$
```

Packaging ims Applications (.jar)
Success!

```
localadmin@DESKTOP-AFOM2PV MINGW64 ~/Desktop/QA_Infosys_Training/JAVA_2/IMS-Starter/target (master)
$ java -jar ims-0.0.1-jar-with-dependencies.jar
Welcome to the Inventory Management System!
Which entity would you like to use?
CUSTOMER: Information about customers
ITEM: Individual Items
ORDER: Purchases of items
ORDERLINE: Order lines of items
STOP: To close the application
```

The background is a blue gradient with decorative white circuit-like lines in the corners. The lines consist of straight segments and small circles, resembling a stylized electronic circuit.

THANK YOU