



IMS System – Aurimas Pilnikovas



I'm Aurimas

- ▶ A trainee at QA academy.
- ▶ I'm a computer science graduate with a hobby for programming/networking

IMS Project:

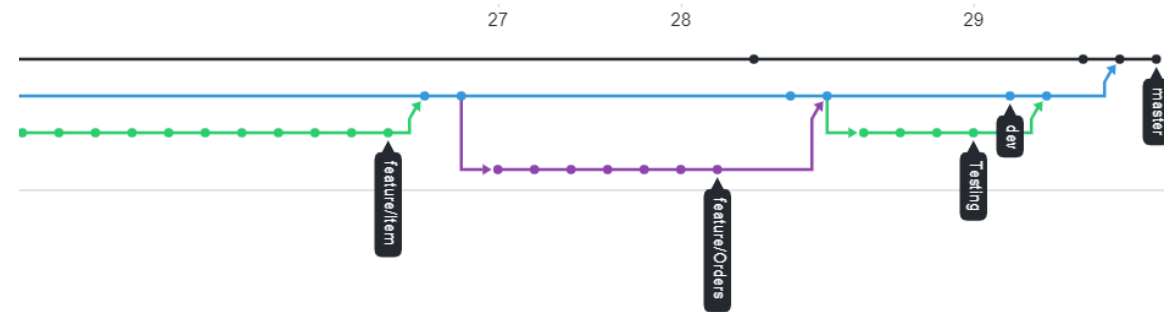
- ▶ In this project I was tasked to add functionality to an unfinished implementation of a CRUD program, dealing with customers, items and orders and to deliver a Minimum Value Product.
- ▶ I've approached this task by first gaining an understanding the user requirements of such a program by putting myself in the position of the user, since requirements are not very detailed I had to use my own intuition for certain functionality and what the program should be able to do.
- ▶ The second thing I did was looked at the given code and understanding the general structure that the rest of the program should follow.

What technologies have I learned?

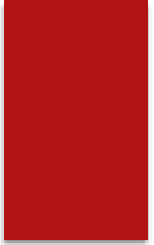
- ▶ The project contained technologies that I've not encountered before, namely:
- ▶ JUNIT, Mockito, JDBC and Maven.
- ▶ This project was an excellent opportunity for me to familiarize with these tools. JUNIT in particular was quite challenging.
- ▶ I've also gained a deeper understanding of SQL and how relational databases work.

Version Control

- ▶ For version control I've used Git and Github.
- ▶ I used a feature branch model to separate different functions and merge branches when that feature was completed.
- ▶ I've used Maven as a build tool.



Testing



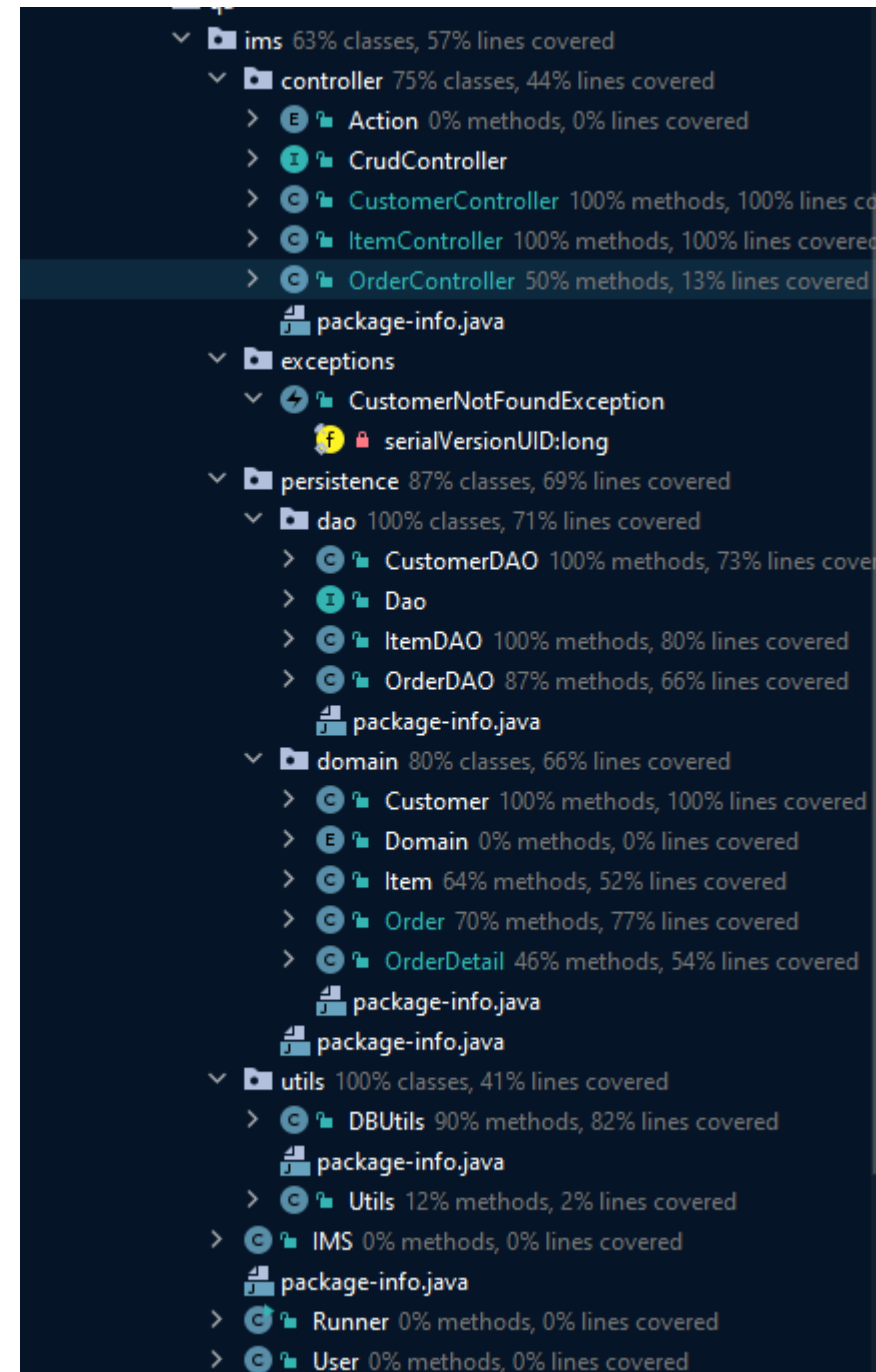
I've done most of the unit testing for Orders, Items and Customers, all integration testing for Customers and Items and about half of integration for orders.

I've not tested some methods in order that are utility methods that I ended up not using but chose to keep for future releases.

I've also not tested some methods related to updating/changing order items for the order as I've ran out of time.

Coverage

- ▶ Not tested some utility methods in Order and Item
- ▶ Not tested utility classes
- ▶ Missing half of order controller integration tests



User stories:

As a user I want to be able to create orders so that I am able to make purchases for customers

Attach Add a child issue Link issue ...

Description
Given: User navigates to order menu and enters order details
When: User clicks submit
Then: Order is added to the database with selected items

Passed

Child issues

Order by ... +

IMS-42 Create functionality that allows user to add items in the order during creation AP TO DO

Activity

Show: All Comments History

Newest first 17

AP Add a comment...

As a user I want to be able to update orders so that I can update order information

Attach Add a child issue Link issue ...

Description
Given: User navigates to order update menu and enters order ID
When: User enters new order details
Then: order is updated

Passed:

Additional:

Given: User chooses to add items to order

When: User selects items to be added

Then: items are added to order

Passed

Given: User chooses to delete items from order

As a user I want to be able to delete an order so that I can remove an order from the system

Attach Add a child issue Link issue ...

Description
Given: User navigates to order delete menu and enters order id to be deleted:
When: Users presses enter
Then: order is deleted

Passed

Activity

Show: All Comments History

Newest first 17

AP Add a comment...

Pro tip: press M to comment

Done Done

Details

MoScOW Must Have

Assignee AP Aurimas P

Labels None

Sprint IMS Sprint 1

Story point estimate 50

Development Create branch Create commit

Reporter AP Aurimas P

Created 3 days ago
Updated 12 hours ago
Resolved 12 hours ago

Configure

Done Done

Details

MoScOW Must Have

Assignee AP Aurimas P

Labels None

Sprint IMS Sprint 1

Story point estimate 50

Development Create branch Create commit

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Created 3 days ago
Updated 12 hours ago

Configure

Done Done

Details

MoScOW Must Have

Assignee AP Aurimas P

Labels None

Sprint IMS Sprint 1

Story point estimate 50

Development Create branch Create commit

Reporter AP Aurimas P

I've selected 3 user stories

Creating an order

- Firstly you would navigate to order menu by typing order.

```
Welcome to the Inventory Management System!  
Which entity would you like to use?  
CUSTOMER: Information about customers  
ITEM: Individual Items  
ORDER: Purchases of items  
STOP: To close the application  
order  
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  
|
```

Enter details

```
STOP: To close the application
order
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
create
Please enter order customer id
1
Please enter order due date
2022-08-01
Would you like to add items to order? (Yes/No)
```

RETURN: To return to domain selection

create

Please enter order customer id

1

Please enter order due date

2022-08-01

Would you like to add items to order? (Yes/No)

yes

id: 1 item name: Coca-Cola item stock date: 2022-07-29 item description: Cold drink item stock 1000 item price: 2.95

Please enter ID of item to add to the order

1

Please enter quantity

10

Would you like to add any more items? (Yes/No)

|

Adding items

DELETE: To remove an entity from the database

RETURN: To return to domain selection

read

id: 3 order date: 2022-07-29 order due date: 2022-08-01 customer name: Aurimas Pilnikovas customer ID: 1

[item id: 1 item name:Coca-Cola item price: 2.95 item quantity: 10 cost: 29.5]

total cost:29.5

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

Order is created

UPDATE: To change an entity already in the database
DELETE: To remove an entity from the database
RETURN: To return to domain selection
update
Please enter the id of the order you would like to update
3
Please enter customer id
1
Please enter order stock date
2022-07-25
Please enter order due date
2022-08-24
Order updated
Would you like to update items belonging to order? (Yes/No)

Updating order part 1:

Please enter order due date

2022-08-24

Order updated

Would you like to update items belonging to order? (Yes/No)

yes

Would you like to change existing item order or add more items? (Add/Change)

add

id: 1 item name: Coca-Cola item stock date: 2022-07-29 item description: Cold drink item stock 990 item price: 2.95

id: 2 item name: Pringles item stock date: 2022-07-29 item description: Crisps item stock 1000 item price: 1.94

Please enter ID of item to add to the order

2

Please enter quantity

5

Would you like to add any more items? (Yes/No)

Updating order part 2:

RETURN: To return to domain selection

read

id: 3 order date: 2022-07-25 order due date: 2022-08-24 customer name: Aurimas Pilnikovas customer ID: 1

[item id: 1 item name:Coca-Cola item price: 2.95 item quantity: 10 cost: 29.5]

[item id: 2 item name:Pringles item price: 1.94 item quantity: 5 cost: 9.7]

total cost:39.2

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

|

Updating order part 3:

Deleting an 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
delete
Please enter the id of the Order you would like to delete
3
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
```

Removing items from the order

Would you like to update items belonging to order? (Yes/No)

yes

Would you like to change existing item order or add more items? (Add/Change)

change

Here are all items belonging to this order:

[[item id: 1 item name:Coca-Cola item price: 2.95 item quantity: 10 cost: 29.5], [item id: 2 item name:Pringles item price: 1.94 item quantity: 10 cost: 19.4]]

Please enter item id

2

Would you like to delete item or change quantity? (Delete/Change)

delete

Do you want to keep changing order items? (Yes/No)

no

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

Item removed

DELETE: To remove an entity from the database

RETURN: To return to domain selection

read

id: 4 order date: 2022-07-25 order due date: 2022-08-04 customer name: Aurimas Pilnikovas customer ID: 1

[item id: 1 item name:Coca-Cola item price: 2.95 item quantity: 10 cost: 29.5]

total cost:29.5

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

Sprint review:

What's done?

- ▶ You can add, delete, change orders, items, customers and items belonging to specific order quite seamlessly.
- ▶ The main functionality is complete and what I want the program to do.
- ▶ Most of the testing is done.

What's left?

- ▶ Complete tests to get higher coverage.
- ▶ Unfortunately items do not get re-added in the database when order is updated. So if you remove an item from a specific order, the quantity does not get released back. This shouldn't be difficult to do.
- ▶ Data validation (making sure the user enters a valid name for example) which I marked as Won't Have is not done.

TO DO 2 ISSUES

Add data verification to make sure all the fields are correct

CUSTOMER

✓ IMS-35 60 AP

Integration testing for order controller

✓ IMS-47 AP

IN PROGRESS

DONE 21 ISSUES ✓

Update README.md with data diagrams and other information

DATA DESIGN/DOCUMENTATION

✓ IMS-6 ✓ 20

Integration testing for item class controller

TESTING

✓ IMS-41 ✓ 70 AP

Unit testing for item class controller and dao

TESTING

✓ IMS-40 ✓ 20 AP

Unit testing for order class, controller and dao

TESTING

✓ IMS-46 ✓ 50 AP

As a user I want to be able to delete an order so that I can remove an order from the system

ORDERS

✓ IMS-29 ✓ 50 AP

As a user I want to be able to update orders so that I can update order information

ORDERS

✓ IMS-28 ✓ 50 AP

As a user I want to be able to create orders so that I can create



Backlog

and learn from each other
community, you get access to
als and teams around the world.

What went well?

- ▶ The design “phase” went pretty well, I knew what I wanted to do and how it should be done.
- ▶ I like how the program functions, it keeps to the same design pattern.
- ▶ Updating orders work pretty well.

What went wrong?

- ▶ The program was confusing at first, if I was building the project from scratch I'd probably have done it differently. I think it added unnecessary complication.
- ▶ Testing was quite challenging, comparing object equality was not as straightforward as I thought.
- ▶ Did not have time to complete certain functionality such as items being released from order, users and testing.

Future steps:

- ▶ Finish all the functionality,
- ▶ Improve graphics, I was thinking of using a table plugin that'd display records in a cool text table but wasn't sure if it was allowed.
- ▶ Get more coverage.