



IMS SOFTWARE

BAE project one

Katie Diggory

26.11.21






INTRODUCTION

- Who am I?
 - Katie, recently 34, I have 2 small people who like to hit laptops and say they are working.
 - Was a stay at home mum before this and worked in academia before that.
- How did I approach the specification?
 - From the view that in the command line you would want it to be as simple as possible for ease of use.
 - That you wouldn't have an order without any items in – caused considerable problems with testing!






CONSULTANT JOURNEY

- What technologies have I learnt for this project??
 - SQL – really improved my SQL skills, have used:
`SELECT EXISTS(SELECT * FROM order_items WHERE orderId=?`
Used to get 0 or 1 and then set as a Boolean in java.
 - Java
 - To write the entire project.
 - JUNIT + Mockito for testing
 - Maven – used as a build tool for the project
 - Git – Version control, combination of in eclipse, git bash and github online.
 - Jira – Planning the 1 week sprint, used user stories to determine what needed doing and what needed to be done (MoSCow).

JIRA

Projects /  ProjectOne /  As a shop owner, I n... /  PROJ-5

As a shop owner, I need to add/delete/update customers in my database, so I can keep the information needed

 Attach  Add a child issue  Link issue  















Description


Add a description...

Child issues

Order by   


0% Done

 PROJ-26	Customer - create			TO DO 
 PROJ-27	Customer - delete			TO DO 
 PROJ-28	Customer Read			TO DO 
 PROJ-29	Customer - update			TO DO 





Done 

 Done

Pinned fields

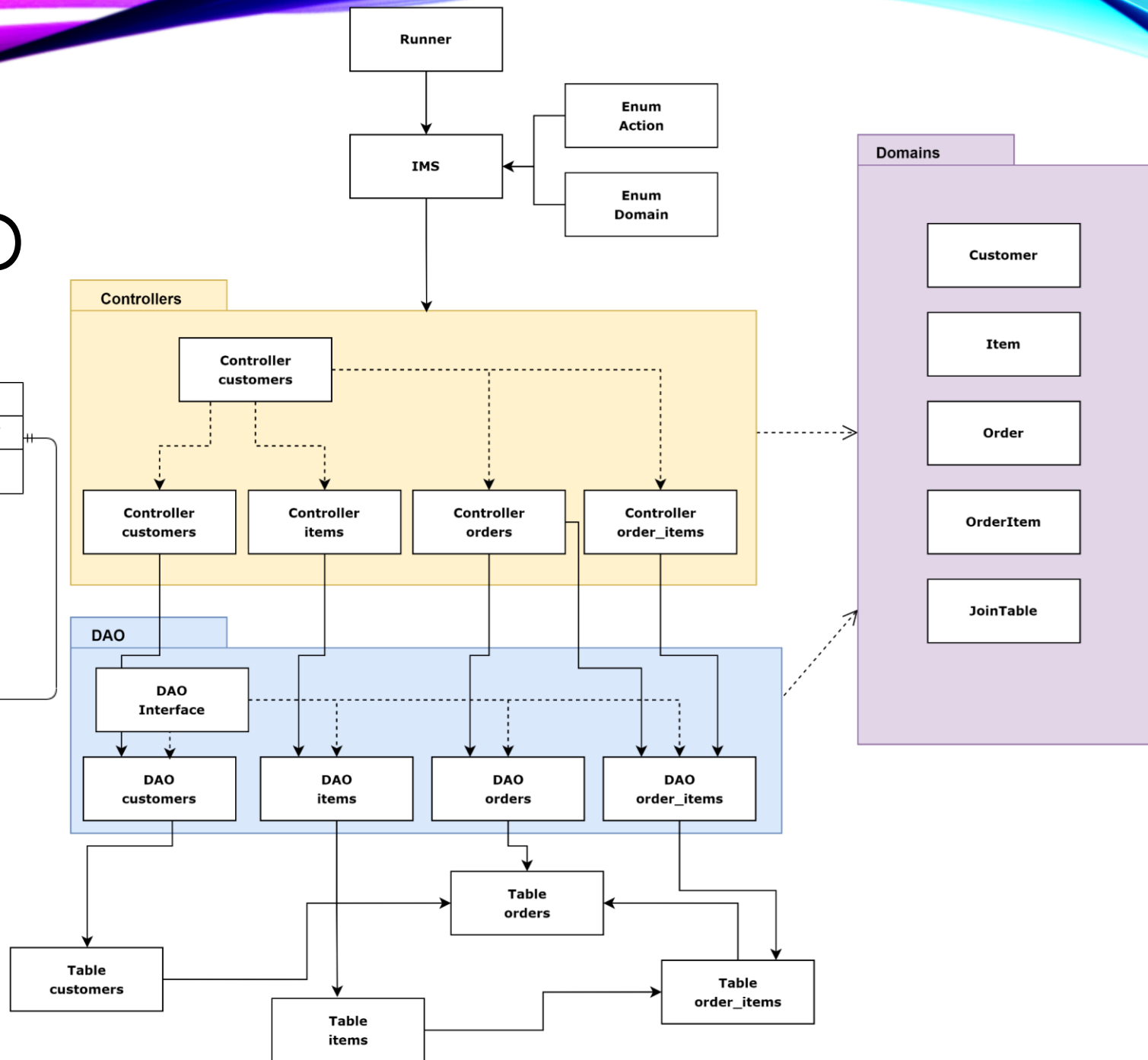
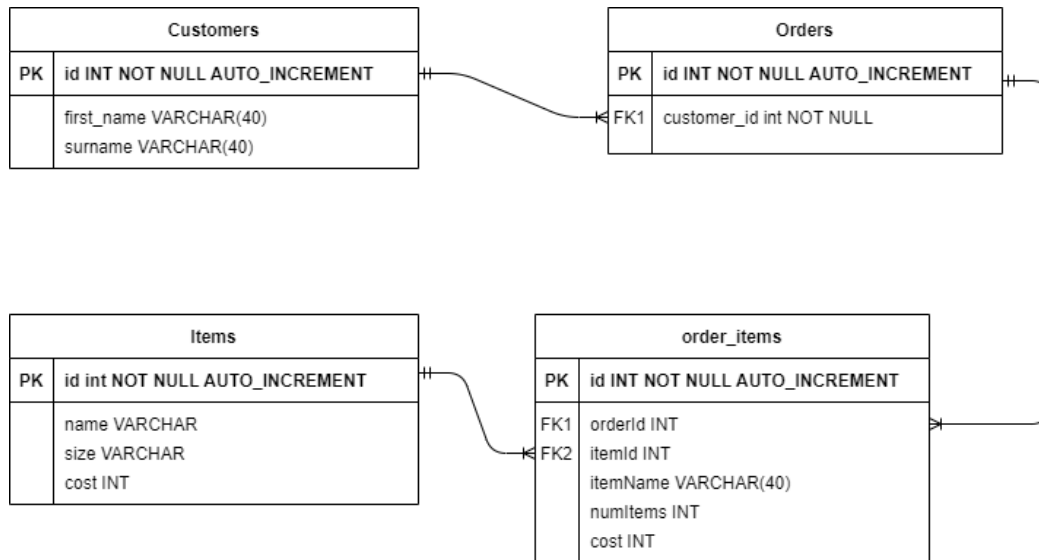
Click on the  next to a field label to start pinning.

Details

Assignee	 Katie Diggory
Labels	 MustHave
Sprint	PROJ Sprint 1
Story point estimate	 5
Development	 Branch
Reporter	 Katie Diggory

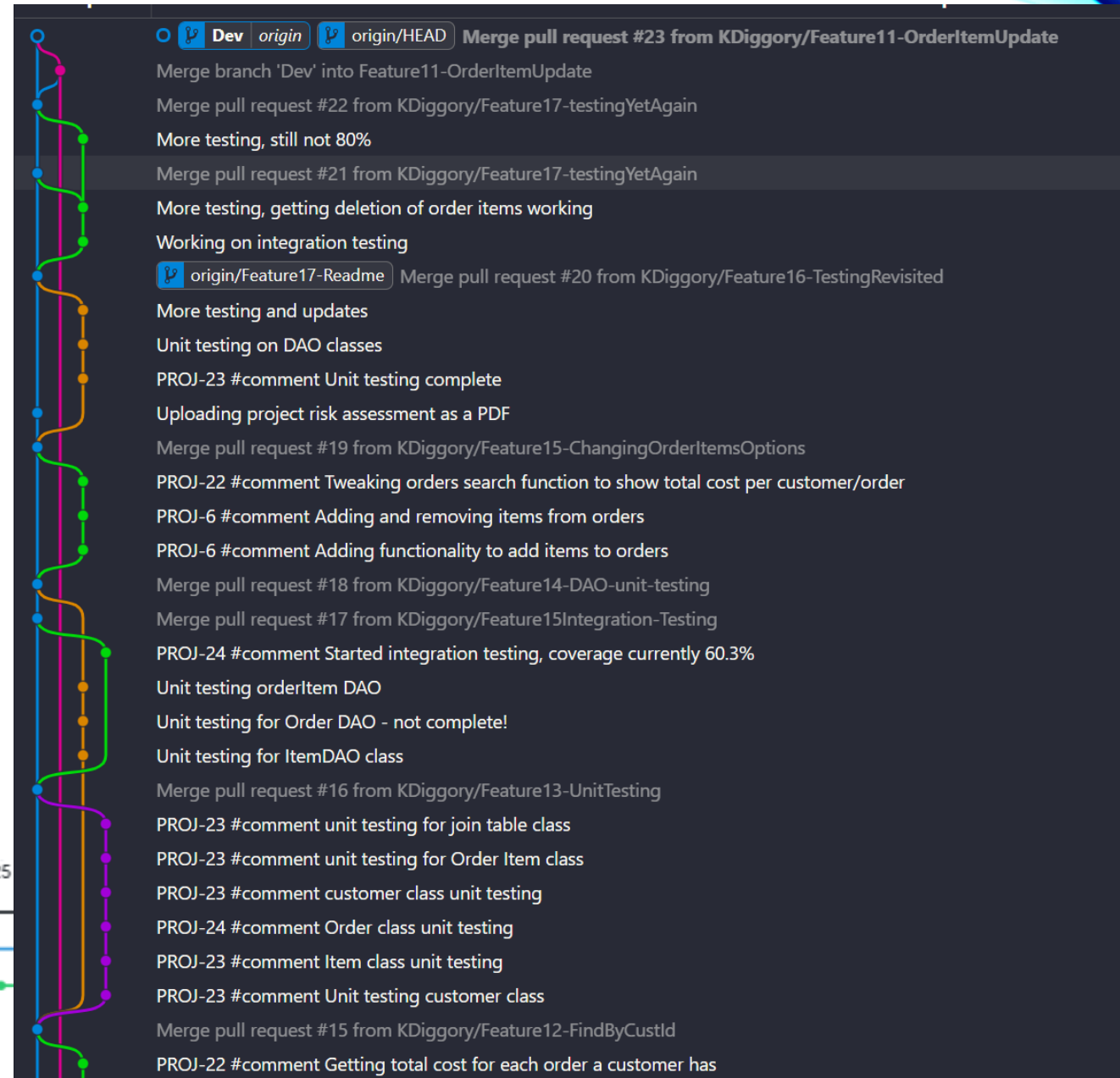
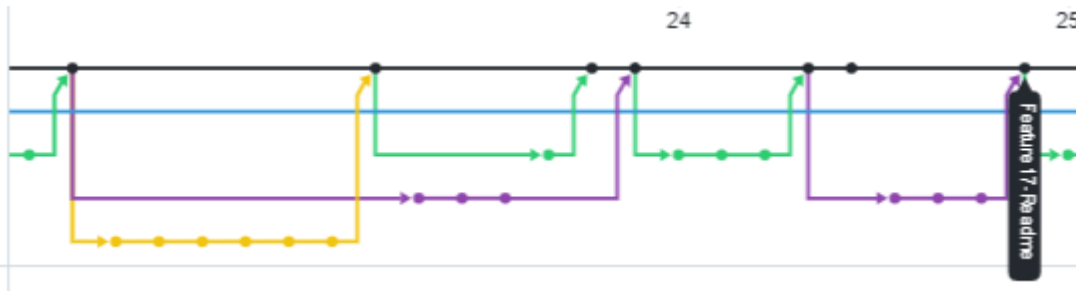
Created 3 days ago

UML & ERD



VERSION CONTROL?

- Git – combination of web version and git bash locally.
- Used feature branch method, making new branches each time I worked on a new feature, merging each back into Dev when done.



TESTING ☹️

- What was tested
 - Unit testing
 - Domain classes – customer, item, orderItem, order, joinTable
 - DAO classes – customer, Item, order, orderItem
 - Integration testing
 - Controller classes – customer, item, order, orderItem

	Progress	Tests	Failures	Errors
ims	<div><div></div></div>	78.9 %	6,120	1,637
src/main/java	<div><div></div></div>	66.1 %	2,960	1,519
com.qa.ims.controller	<div><div></div></div>	52.4 %	622	564
com.qa.ims.persistence.dao	<div><div></div></div>	76.3 %	1,339	416
com.qa.ims	<div><div></div></div>	0.0 %	0	289
com.qa.ims.persistence.domain	<div><div></div></div>	83.4 %	832	166
com.qa.ims.utils	<div><div></div></div>	67.3 %	167	81
com.qa.ims.exceptions	<div><div></div></div>	0.0 %	0	3
src/test/java	<div><div></div></div>	96.4 %	3,160	118

Creating a customer

CREATING A CUSTOMER

- As a shop owner,
 - I want to input customers to my software
 - So I can assign an order to a specific person
- Customers have 2 input variables, first name and surname.

```
~~~~~
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
~~~~~
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
~~~~~
create
Please enter a first name
```

```
~~~~~
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
~~~~~
create
Please enter a first name
Katie
Please enter a surname
Diggory
Customer created
~~~~~
```


Reading all customers

READING CUSTOMERS FROM THE DB

- There are two options to read customers.
- Read all – returns all the customers.
- Read by id – returns the specific customer
 - Currently these two don't have much different functionality but if there were more entries in customer such as email, address and age etc it would be more useful.

```
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
Would you like to read all or by id?
all
id:1 first name:Katie surname:Diggory
id:2 first name:Captain surname:Barnacles
id:3 first name:Quasi surname:Pirate
id:4 first name:Dashi surname:Dog
id:5 first name:Professor surname:Inkling
id:6 first name:Katie surname:Diggory
~~~~~
```

Reading customers by id

```
Which entity would you like to use?
~~~~~
CUSTOMER: Information about customers
ITEM: Individual Items
ORDER: Purchases of items
STOP: To close the application
~~~~~
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
Would you like to read all or by id?
id
Available customer ids:
[1, 2, 3, 4, 5, 6]
~~~~~
Please enter the id of the customer you would like to find
2
id:2 first name:Captain surname:Barnacles
~~~~~
```

CREATING AN ORDER

- As a shop owner,
 - I want to be able to create orders
 - So I can sell things and make money!
- I wanted orders to flow straight into order items as you wouldn't get an empty order.

Creating an 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
```

```
Available customers: [1, 2, 3, 4, 5, 6]  
~~~~~
```

```
Please enter the customer id
```

```
6
```

```
Available Items:
```

```
{Gup-Z=2, Octopod=3, Cannonball=5, fish biscuit=1, Pirate stew=4}
```

```
Please enter the Item id
```

```
5
```

```
Please enter the number of this item you would like
```

```
5
```

```
Order Item created
```

```
Would you like to add another item to this order?
```

```
yes
```

```
Available Items:
```

```
{Gup-Z=2, Octopod=3, Cannonball=5, fish biscuit=1, Pirate stew=4}
```

```
Please enter the Item id
```

```
3
```

```
Please enter the number of this item you would like|
```

```
10
```

```
Order Item created
```

```
Would you like to add another item to this order?
```

```
no
```

READING ORDERS BY ID

- As a shop owner,
 - I want to see all the items in an order and the total cost
 - so that I can invoice the customer the right amount.
- Can read orders by id – so you can see those which have more than one item on.
 - It will also show the total cost for those items as well as for all the order items in that order.

```
read
Would you like to read all or by id?
id
Would you like to read by order id or customer id?
order
Available order numbers:
[1, 2, 3, 4, 5]
```

```
Please enter the order id you would like to find
```

```
5
```

```
Item number: 1
```

```
Order number:5
```

```
customerId:      3
customerSurname:  Pirate
itemId:          5
itemName:        Cannonball
itemCost:        5
numItems:        2
totalCost:       10
```

```
Item number: 2
```

```
Order number:5
```

```
customerId:      3
customerSurname:  Pirate
itemId:          1
itemName:        fish biscuit
itemCost:        1
numItems:        10
totalCost:       10
```

```
The total sum for order number 5,
For 2 orders: £20
```

Reading orders by customer id

READING ORDERS BY CUSTOMER ID

- As a customer,
 - I want to be able to see all of my orders,
 - So I know how much money I owe
- Can search for orders by customer id, this gives a total cost for that customer as well.

```
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
~~~~~
read
Would you like to read all or by id?
id
Would you like to read by order id or customer id?
customer
Available customers with orders:[1, 2, 3]
~~~~~
Please enter the customer id of the orders you would like to find
```

```
~~~~~
Item number: 1
~~~~~
Order number:1
~~~~~
customerId:      1
customerSurname: Diggory
itemId:          2
itemName:        Gup-Z
itemCost:        1000
numItems:        1
totalCost:       1000
~~~~~
Item number: 2
~~~~~
Order number:2
~~~~~
customerId:      1
customerSurname: Diggory
itemId:          5
itemName:        Cannonball
itemCost:        5
numItems:        5
totalCost:       25
~~~~~
The total sum for customer number 1,
For 2 orders: £1025
~~~~~
```


ADDING ORDER ITEMS TO AN ORDER

- As a shop owner,
 - I want add items to an existing order
 - so that I can sell more items to an existing customer
- Currently the functionality of update order
- Can add or remove order items to an order, these order items can't be changed though

Adding items to an order

```
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
~~~~~
update
```

```
When updating your order you can just add or remove items, would you
add                                     like to add or remove items from an order?
Available order numbers:
[1, 2, 3, 4, 5]
```

```
~~~~~
Please enter the order id you would like to add to
5
```

```
Available Items:
{Gup-Z=2, Octopod=3, Cannonball=5, fish biscuit=1, Pirate stew=4}
Please enter the Item id
```

```
4
Please enter the number of this item you would like
5
```

```
Order Item created
Would you like to add another item to this order?
no
```

```
You can come back and do this later if you change your mind
~~~~~
```





SPRINT RETROSPECTIVE

- What went well
 - Getting the initial code down quickly.
 - Trouble shooting some problems (not so much others!)
- What could be improved?
 - Faffing with version control to get as perfect network graph as possible.
 - Integration testing was very tricky because of the interaction between create order and create order item.
 - Made it more complicated than it needed to be – just did what I thought initially but should have spent more time planning.
 - Possibly repeated code and methods.



CONCLUSION

- Reflection on project
 - Initially I thought this would be quite easy but it was a lot harder than I thought it would be.
 - I am pretty pleased with the final code, and how my IMS worked.
 - Don't love the command line interface!
- Future steps
 - I would like to get the update order working with more functionality other than just adding or removing order items. Would be good to alter the number of items



THANKS FOR LISTENING!
ANY QUESTIONS?