

22MayEnable2

IMS Fundamental Project

Introduction

The week5 Project involved creating an Inventory Management System with CRUD (Create, Read , Update and Delete) functionality embed within the following variables:

- Customers
- Items
- Orders

In order to do so, I had to build an application that have Command-Line Interface (CLI) for users to interact with and to ensure the objectives in the project are met; I created another table – Order Items.

Minimum set of requirements:

- Code fully integrated into a Version Control System using the feature-branch model: main/dev/feature.
- A relational database (SQL) used to persist data for the project, containing the customers, items, orders, and orders items tables.
- A functional application "back-end", following best practices and design principles, in Java, meeting the requirements set on your project management board.
- A build of your application, including any dependencies it might need, produced using an integrated build tool.
- Unit (JUnit) tests and integration tests for validation of the application - strive to reach an industry standard coverage of 80%
- Have full documentation including:
 - A risk assessment that outlines risks and issues faced during the project.
 - ERDs and UMLs to show the architecture of the application.
 - Jira board with Epics, Tasks and User Stories.

Consultant Journey

- Version Control System - Git
- Source Code Management - GitHub
- Kanban Board - Jira
- Database - MySQL Server 5.7+ (local or cloud hosted)
- Back-end Programming Language - Java
- Build Tool – Maven
- Unit Testing - JUnit & Mockito
- versioning - GitHub

IMS Project Risk Assessment

Risk	Risk Statement	Response Strategy	Objectives	Likelihood	Impact	Risk Level
Illness	The rate of completing the project will be negatively impacted due to illness	Rest and create a project plan that can account for the time loss due to illness	To protect your health and recover as well as reduce the impact of time lost	Medium	High	8
Internet Failure	The rate of completing the project will be negatively impacted due to illness	Contact network provider and/or use your phone to connect to the internet for short-term internet access.	To ensure the completion of the project objectives on time by reducing the impact of losing internet connectivity.	Low	Medium	4
Technical Difficulties	mistakenly erasing your entire project, or sections of my project from your computer.	Ensure all files are routinely pushed on GitHub so that data may be cloned from the repository in the event of a loss.	To ensure access to the website throughout development and post deployment.	Low	High	7
Loss/Broken of laptop	A broken laptop would result in not being able to complete the project	Have another device that is accessible to you, that allows the download all of the necessary software for this project and use GitHub to clone your recent progress	To ensure access to your work regardless of which device.	Low	High	7
GitHub Failure	GitHub servers going down leads to temporarily not having access to your repository or to losing data and development progress	Make a regular hard backup on a non-cloud service	To ensure you don't lose your work	Low	High	7
Failure to Meet Project Deadline	Poor time management leading to the product not being deployed by the deadline	Ensure project is planned thoroughly and managed throughout.	Finish project on time and to a good standard.	Low	High	7
Hardware Failure	Renewals aren't carried out for web server and domain names leading to website outages until contracts are renewed.	Ensure that all contracts are available to be viewed by relevant parties, and calendar entries are set up with reminders, while also setting up email notifications for when renewals are due	Prevent the domain name from being lost and having outages due to the web server being removed as it is no longer in service.	Low	High	7
Joint Pains	Constantly sitting could lead to a negative impact on the physical body	It is important to stand and stretch every hour to prevent joint pains	To protect your health and ensure you're not damaging your physical body	High	Medium	6

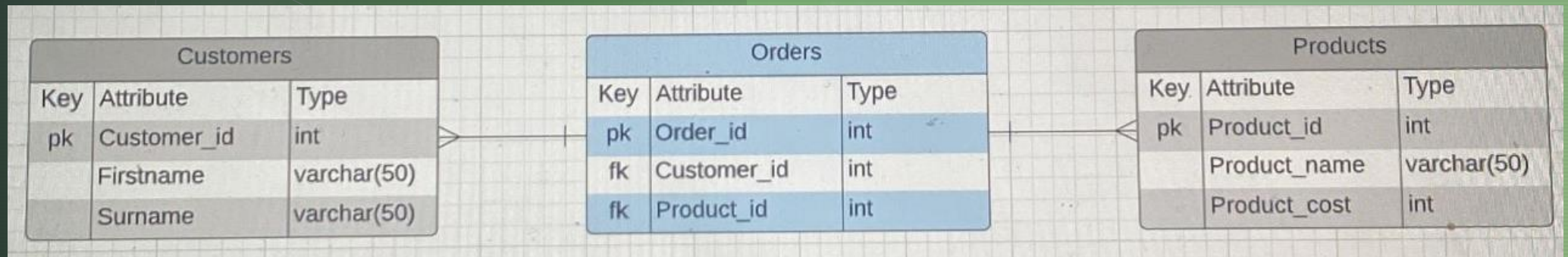
		Impact		
		Low	Medium	High
Likelihood	Low	1	4	7
	Medium	2	5	8
	High	3	6	9

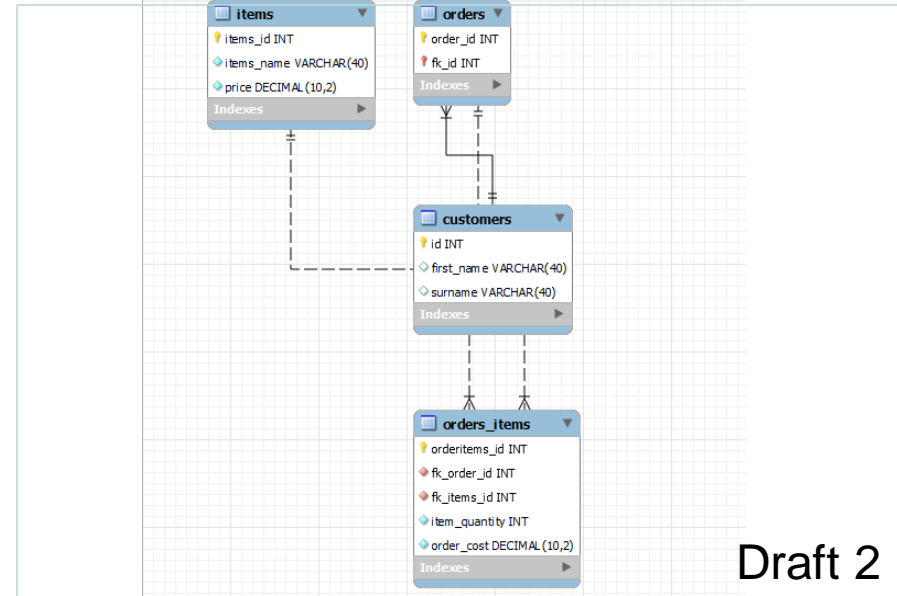
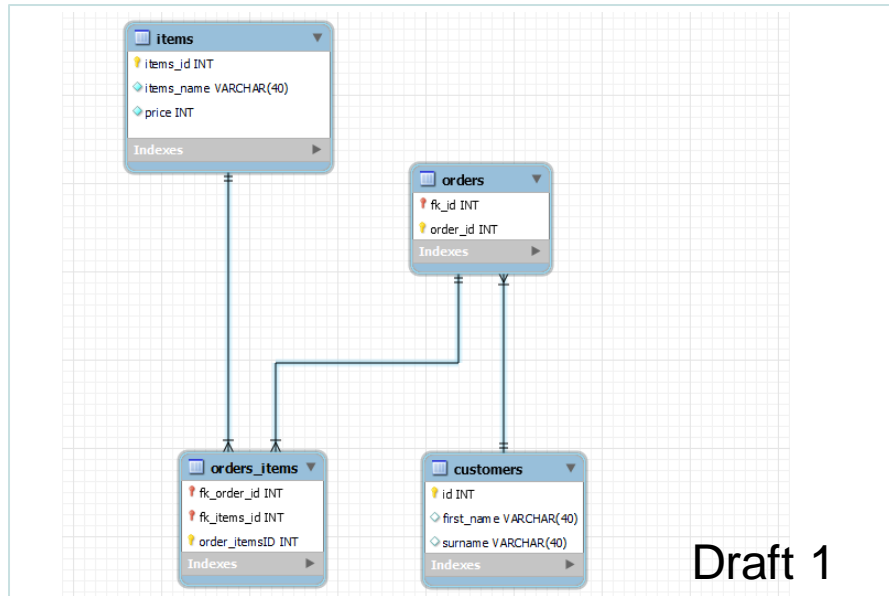
MoSCoW

- I created a MoSCoW to outline what to focus on while creating my software.
- This helped with the creation of my Jira board as my user stories ensure that my minimum set of requirements were met

Must Have	Should Have	Could Have	Won't Have
<ol style="list-style-type: none">1. A functioning application with a Command-Line Interface that the end user can interact with to view and edit the data.2. A "customers", "orders", and "items" class.3. A detailed and updated Kanban board.4. A Risk assessment that highlights potential risks faced during the project.5. An ERD diagram to show the relationships in the database6. The ability to add/view/update/delete customers and items in the system.7. The ability to create/view/delete orders in the system.8. The ability to add/delete an item to an order.	<ol style="list-style-type: none">1. Created a customer table with an ID, first and last name attributes.2. Created an order table with an order ID and customer ID attributes.3. Created an items table with an items ID, items name and price attributes.4. Created an order item table with order items ID, order ID and items ID.5. At a minimum 80% test coverage.	<ol style="list-style-type: none">1. Created a user system with a user and password that can link changes to a specific user.2. Created a UML diagram.3. Created Orders to have a date placed and status attributes.4. Created Customers to have an email and home address attributes.	<ol style="list-style-type: none">1. A graphic user interface.2. A system that calculates the item's inventory.3. An automatic email of the order receipt to the customer.

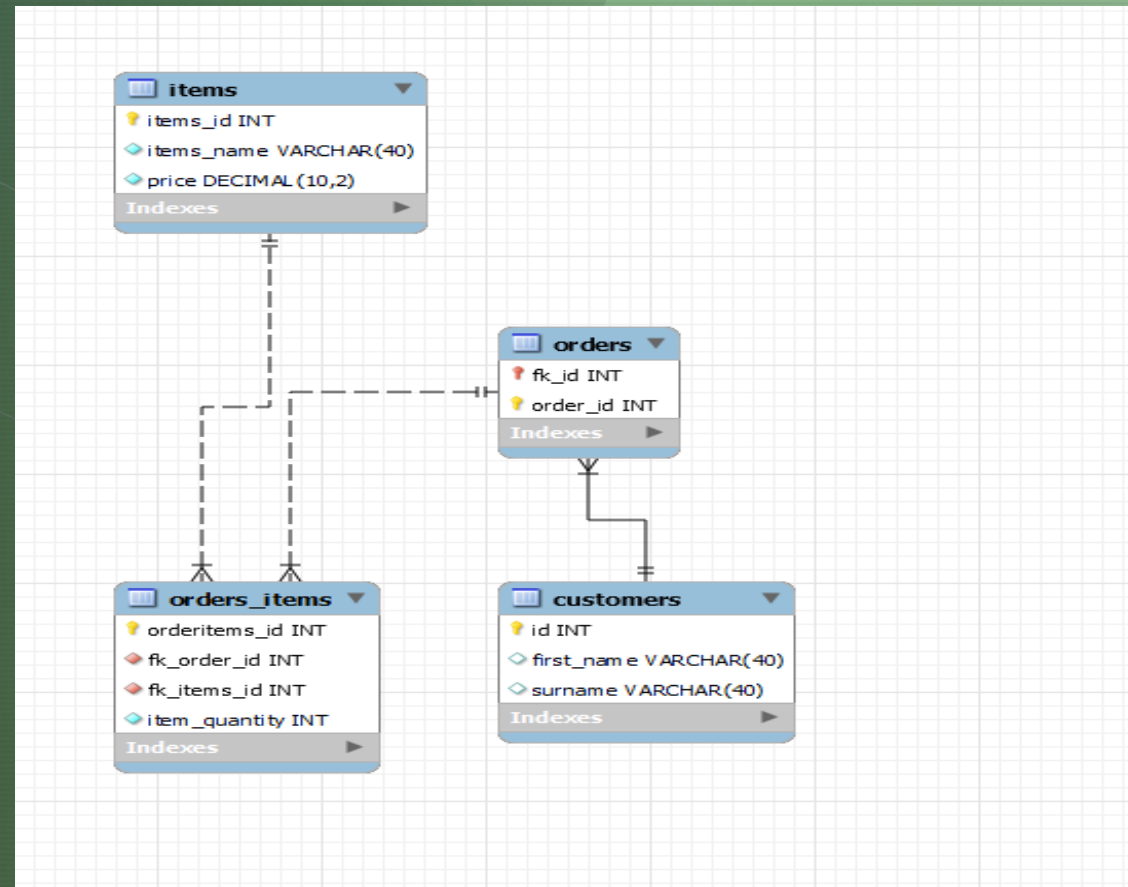
Initial ERD Model





ERD Model Drafts

Final ERD Model



GitHub

- For this project, I had to create multiple feature and work within them branches to then be merged with my develop branch.
- My main branch remained the same during the project until my software was functioning, passes testing to an industry standard and packages correctly.
- Feature: **HB-8 #comment Added Documentation and Created SQL schema**
- Feature1: Create Order, Items Domain/DAO/Controller with CRUD integrated
- Feature2: Create Order Items Domain/DAO/Controller and updated all created classes
- Feature3: Update all created classes and SQL schema, created ERD diagram
- Feature4: Testing tables/classes
- Feature5: Testing tables/classes

Testing

- I achieved 79.5% testing coverage on my code with 2 failures that could be found within OrderItemsControllerTest and OrderItemsDAOTest classes.
- For my Controller classes, the coverage was 97.2% indicating the classes function.
- For my DAO classes, the coverage was 98.5%, showing that the CRUD functionality is working.

Element	Coverage	Covered Instructi...	Missed Instructio...	Total Instructions
IMS-22EnableMay2	79.5 %	3,133	809	3,942
> src/main/java	70.2 %	1,835	779	2,614
▼ src/test/java	97.7 %	1,298	30	1,328
▼ com.qa.ims.controllers	97.2 %	813	23	836
> OrderItemController.java	89.6 %	198	23	221
> CustomerControllerTest.java	100.0 %	206	0	206
> ItemControllerTest.java	100.0 %	226	0	226
> OrderControllerTest.java	100.0 %	183	0	183
▼ com.qa.ims.persistence.dao	98.5 %	453	7	460
> OrderItemsDAOTest.java	94.6 %	123	7	130
> CustomerDAOTest.java	100.0 %	110	0	110
> ItemDAOTest.java	100.0 %	110	0	110
> OrderDAOTest.java	100.0 %	110	0	110
> com.qa.ims.persistence.domain	100.0 %	32	0	32

Demonstration

Documentation Sprint

Projects / Hodan-QA / HB-8

Documentaion

Attach

Add a child issue

Link issue

Description

Add a description...

Child issues

Order by

50% Done

HB-6

As a Developer, I need to create RISK assessment

3

DONE

HB-11

As a Developer, I need to create a MoSCoW

2

DONE

HB-12

As a developer, I need to create an ERD

3

DONE

HB-58

Create UML Diagram (before and after)

4

TO DO

HB-56

Create ERD after project completion

5

TO DO

HB-57

Create ReadMe.md file

4

TO DO

To Do

Details

Assignee

Unassigned

Labels

None

Start date

None

Due date

None

Development

1 branch

2 commits

1 pull request

3 days ago

MERGED

Reporter

Hodan Barkhad

Created May 13, 2022, 11:51 AM

Updated 3 days ago

Configure

Sprint review

Epic

Issues without epic

> Documentaion

> Testing

> Development

> Customer

> Order

> Items

> order items

+ Create Epic

Week 5 IMS 6 Jun – 10 Jun (30 issues)

125 0 0 Complete sprint

HB-14 As a developer, I need to create an items table on SQL. ITEMS 1 TO DO

HB-15 As a developer, I need to create an orders table on SQL. ORDER 1 TO DO

HB-16 As a developer, I need to create an orders item table on SQL. ORDER ITEMS 1 TO DO

HB-13 As a developer, I need to create a customers table on SQL. CUSTOMER 1 TO DO

HB-50 As a user, I want to view all items in the system so I can have access to the item inventory. ITEMS 2 TO DO

HB-51 As an user, I want to update items in the system so I can ensure item inventory in the system correctly reflects the actual inventory. ITEMS 3 TO DO

HB-52 As a user, I want to delete an item from the system in order ensure the inventory only includes items that are available. ITEMS 2 TO DO

HB-45 As a user, I want to add a customer to the system in order to keep records of new customers. CUSTOMER 3 TO DO

HB-46 As a user, I want to view all customer in the system so I can have all the customers details written out. CUSTOMER 2 TO DO

HB-47 As a user, I want to update a customer in the system in order to keep the records on the system up to date. CUSTOMER 3 TO DO

HB-48 As a user, I want to delete a customer's record in the system so I can can comply with data safety regulations if a customer wishes to not have their details to be stored in the system. CUSTOMER 2 TO DO

HB-53 As a user, I want to add orders in the system in order to keep records of items that were ordered. ORDER 6 TO DO

HB-59 As a user, I want to view all orders in the system so that I can have access and review all new and current orders. ORDER 4 TO DO

HB-55 As a user, I want delete an item in an order so that an item isnt mistankenly added to the wrong order. ORDER 4 TO DO

HB-58 Create UML Diagram. DOCUMENTAION 4 TO DO

HB-56 Create ERD after project completion. DOCUMENTAION 5 TO DO

HB-57 Create ReadMe.md file. DOCUMENTAION 4 TO DO

HB-81 As a Developer, I need to test my customer domain class to ensure it passes industry standard. TESTING 0 TO DO

HB-82 As a Developer, I need to test my item domain class to ensure it passes industry standard. TESTING 6 TO DO

HB-83 As a Developer, I need to test my order domain class to ensure it passes industry standard. TESTING 6 TO DO

HB-84 As a Developer, I need to test my customer DAO class to ensure it passes industry standard. TESTING 2 TO DO

HB-85 As a Developer, I need to test my Item DAO class to ensure it passes industry standard. TESTING 6 TO DO

Acceptance Criteria

▼ Week 5 IMS 6 Jun – 10 Jun (4 of 30 issues visible)

15 0 0 Complete sprint

HB-15 As a developer, I need to create an orders table on SQL. ORDER 1 TO DO

HB-53 As a user, I want to add orders in the system in order to keep records of items that were ordered. ORDER 6 TO DO

HB-59 As a user, I want to view all orders in the system so that I can have access and review all new and current orders. ORDER 4 TO DO

HB-55 As a user, I want delete an item in an order so that an item isnt mistakenly added to the wrong order. ORDER 4 TO DO

+ Create issue

▼ Backlog (0 issues)

0 0 0 Create sprint

Your backlog is empty.

+ Create issue

Order / HB-53

As a user, I want to add orders in the system in order to keep records of items that were ordered.

To Do

Description

Add a description...

Child issues

Order by 100% Done

HB-66 Create Order Domain c... DONE

HB-67 Create Order DOA class DONE

HB-68 Create Order Controlle... DONE

▼ Week 5 IMS 6 Jun – 10 Jun (5 of 30 issues visible)

11 0 0 Complete sprint

HB-14 As a developer, I need to create an items table on SQL. ITEMS 1 TO DO

HB-50 As a user, I want to view all items in the system so I can have access to the item inventory. ITEMS 2 TO DO

HB-51 As an user, I want to update items in the system so I can ensure item inventory in the system correctly reflects the actual in... ITEMS 3 TO DO

HB-52 As a user, I want to delete an item from the system in order ensure the inventory only includes items that are available. ITEMS 2 TO DO

HB-49 As a user, I want to add items to the system in order to keep records of all the items. ITEMS 3 TO DO

+ Create issue

▼ Backlog (0 issues)

0 0 0 Create sprint

Your backlog is empty.

+ Create issue

Items / HB-50

As a user, I want to view all items in the system so I can have access to the item inventory.

To Do

Description

Add a description...

Child issues

Order by 0% Done

HB-102 Create an Item Domai... TO DO

HB-103 Create an Item DAO c... TO DO

HB-104 Create an Item Contr... TO DO

Sprint Review:

Projects / Hodan-QA

Week 5 IMS

🔍 HB 👤 Epic ▾ Type ▾

🔗 ☆ ⌚ 0 days remaining [Complete sprint](#) ⋮

GROUP BY None ▾ [Insights](#)

TO DO

IN PROGRESS 2 ISSUES

Create UML Diagram
DOCUMENTAION

HB-58 40 👤

Create ReadMe.md file
DOCUMENTAION

HB-57 4

DONE 28 ISSUES ✓ +

As a developer, I need to create an items table on SQL.

ITEMS

HB-14 ✓ 1

As a developer, I need to create an orders table on SQL

ORDER

HB-15 ✓ 1

As a developer, I need to create an orders item table on SQL

ORDER ITEMS

HB-16 ✓ 1

As a developer, I need to create a customers table on SQL

CUSTOMER

HB-13 ✓ 1

As a user, I want to view all items in the system so I can have access to the item inventory.

ITEMS

HB-50 ✓ 2 👤

As an user, I want to update items in the system so I can ensure item inventory in the system correctly reflects the actual inventory.

ITEMS

HB-51 ✓ 3 👤

Performance Review

- 28 out of 30 issues were completed, with UML diagram and ReadMe file in progress.
- Minimum set of requirements completed.
- Most of Must have/Should have were completed.
- The Order Items table only had the CRD function of CRUD because it only need those attributes to fulfil its' function.
- I wanted to create an Order Items total cost variable but I was on a time crunch due to underestimating the time required to build the functioning Java classes and SQL schema



▼ Questions

Thank You For Listening