

# QA Fundamental Project: Inventory Management System (IMS)

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# Introduction

Who am I?

- Vaisala Sivanesakumar
- Joined the Software Developer cohort January 2022

How did you approach the specification?

- Agile & Project Management
- Databases
- Programming & Testing Fundamentals
- Continuous Integration & Build Tools





# Consultant Journey

What technologies have you learned for this project?


- **Kanban Board:** Jira
- **Version Control System:** Git
- **Source Code Management:** GitHub
- **Relational Database Management System:** MySQL Server
- **Back-End Programming Language:** Java
- **Build Tool:** Maven
- **Unit Testing:** JUnit


# Demonstration


 **IMS-PROJECT**  
Software project


**PLANNING**  
 Roadmap

**Board**

**DEVELOPMENT**  
 Code

 Project pages

 Add shortcut

 Project settings

You're in a team-managed project.  
[Learn more](#)

Projects / IMS-PROJECT

## IP board

  Epic ▾

### TO DO 5 ISSUES

As a developer, I want to create a Database so that I can use it store data and visually demonstrate my understanding

**AS A "DEVELOPER", I WANT TO CR...**

☒ IP-4

As a developer I want to create a functional application for a IMS in Java so that I can demonstrate fundamentals of my learning

**AS A "DEVELOPER", I WANT TO CR...**

☒ IP-5

As a developer I want to do Unit testing so I can test single method to see if it returns the expected output.

**AS A "DEVELOPER", I WANT TO CR...**

☒ IP-12

As a developer I want to do Integration testing so I can verify that the functionality of the combined methods and modules

**AS A "DEVELOPER", I WANT TO CR...**

☒ IP-13

As a developer I want to create a README file so I can summarise the project in there.

**AS A "DEVELOPER", I WANT TO CR...**

☒ IP-28

+ Create issue

### IN PROGRESS 2 ISSUES

As a developer, I want to create a Kanban board so that I can visualise the project and see the progress.

**AS A "DEVELOPER", I WANT TO CR...**

 21 FEB

☒ IP-2

As a developer, I want to use a Version Control System (Github). So that I can code using Feature Branch Model.

**AS A "DEVELOPER", I WANT TO CR...**

☒ IP-3

### ADD TO PRESENTATION 1 ISSUE

As a developer I want to do a Risk assessment so that I can outline the possible issues and risks faced during project time.

**AS A "DEVELOPER", I WANT TO CR...**

☒ IP-7

+ Create issue

### DONE ✓



Kanban Board

Epic

User story

Task

Linked issues

As a "developer", I ... / IP-4

As a developer, I want to create a Database so that I can use it store data and visually demonstrate my understanding

Attach Add a child issue Link issue

Description

Add a description...

Child issues

Order by ... +

0% Done

- IP-5 As a developer, I want to create an ERD, So that we can visualise how the tables will link to ... TO DO
- IP-8 As a developer, I want to choose a level of data normalization, so that I have a clearer idea ... TO DO
- IP-9 As a developer I want to create a table for Customer so I can store their details. TO DO
- IP-10 As a developer I want to create a table for items so I can store the details. TO DO
- IP-11 As a developer I want to create a table for Order so I can store the details. TO DO

Linked issues

is blocked by

- IP-2 As a developer, I want to create a Kanban board so that I can visualise the pro... IN PROGRESS
- GAP-6 As a developer, I want to create a Risk Assessment matrix, so that I can prepare fo... DONE

Activity

Show: All Comments History

Newest first 17



Add a comment...

Pro tip: press **Ctrl** to comment

1

To Do

Details Start date, Due date, Assignee, Labels, Reporter

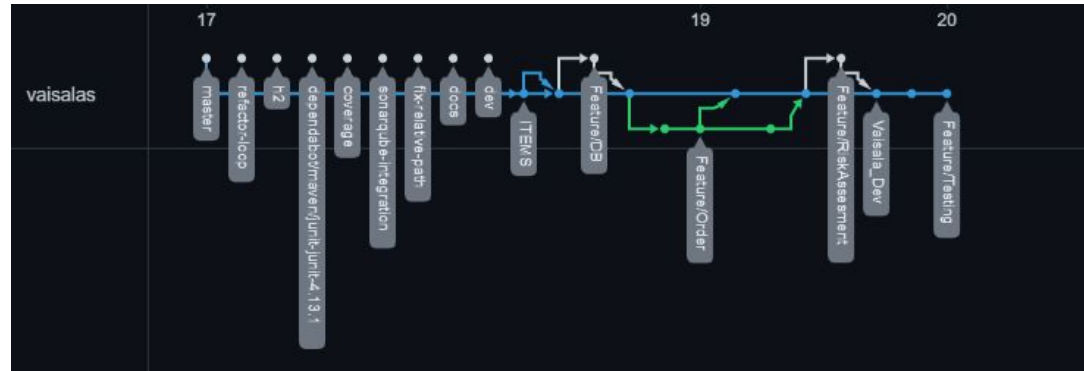
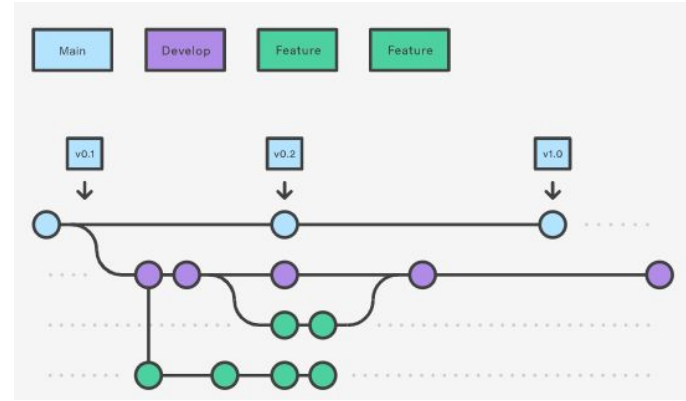
Created 2 days ago  
Updated 19 hours ago

Configure

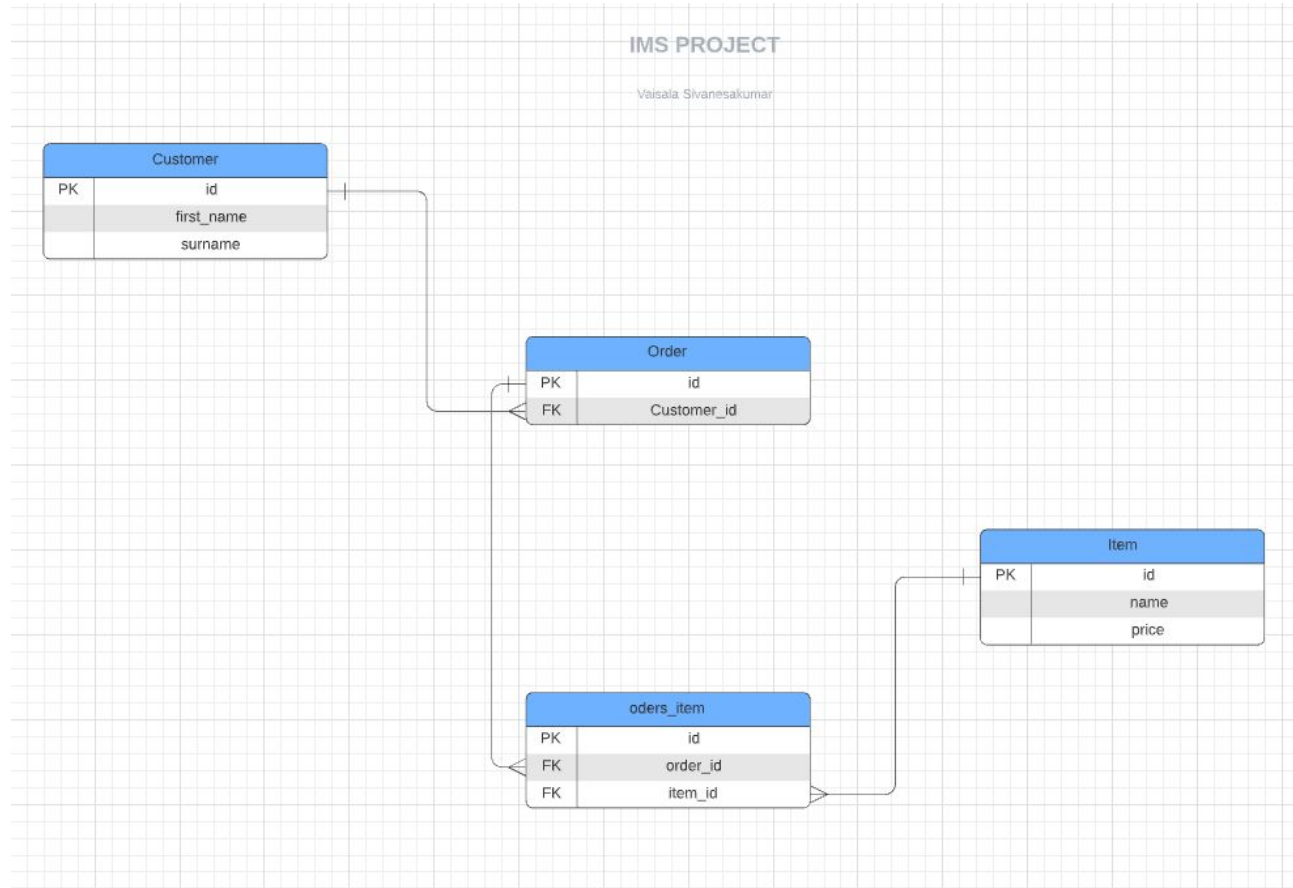
# Version Control - Git

How did I approach version Control?

- Master branch
- <My> Dev branch
- Feature branches



# ERD



# Testing

```
@Test
public void testReadAll() {
    List<Item> expected = new ArrayList<>();
    expected.add(new Item(2L, "Rogue Lawyer", 6.99));
    assertEquals(expected, DAO.readAll());
}
```

.For DAO(Data access object) - this tests the ability to connect and function with the database

```
@Test
public void testCreate() {
    final String F_NAME = "barry", L_NAME = "scott";
    final Customer created = new Customer(F_NAME, L_NAME);

    Mockito.when(utils.getString()).thenReturn(F_NAME, L_NAME);
    Mockito.when(dao.create(created)).thenReturn(created);

    assertEquals(created, controller.create());

    Mockito.verify(utils, Mockito.times(2)).getString();
    Mockito.verify(dao, Mockito.times(1)).create(created);
}
```

For Controller - this tests the systems front end for the users input.

```
@Test
public void testEquals() {
    EqualsVerifier.simple().forClass(Customer.class).verify();
}
```

For Domain - The test tests the Object itself





Console Problems Debug Shell Terminal Coverage x

java (20 Feb 2022 19:56:37)

Element	Coverage	ed Instructions	ed Instructions	tal Instructions
IMS-PROJECT	56.4 %	2,324	1,799	4,123
> src/main/java	60.3 %	1,695	1,114	2,809
> src/test/java	47.9 %	629	685	1,314

Current coverage for  
src/main/java  
**60.3%**



# Review

- **Sprint review:** What did you complete? What got left behind?
  - Testing - Still have to reach the industry standard of 80%
- **Sprint retrospective:** What went well? What could be improved?
  - The moment up until the coding section went well (Jira,Git,MySQL)



# Conclusion

- **Conclusion:** Reflections on the project, future steps, any other relevant info
  - This Project has allowed to put everything I learnt so far together
  - Future steps - First try to debug myself, however if I'm struggling to long it's fine to ask for help.