IMS Project

By

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Intro

- MVP
  - Crud functions for items/customer/ orders

- Fundamentals
  - Jira, Git, Java and MySQL

- Scope
  - Solo , Project lead is me. Documents, Read me, PNG of tables

Risk Assessment

	Very low	Low	Medium	High	Very high
Incidental		2	7		
Minor		6	1		
Serious				3	
Major	8	4, 5			
Catastrophic					

3				4	3	Review the code to see where the errors are present and use online forums to help solve issue.	Review content on QA community and look for addition guides on the internet
	03/05/2022	Mockito Knowledge	If this occurred, the testing using Mockito will not be correct				
4			Computer would start to run slow and potentially blue screen which would cause a loss of work	2	4		
	03/05/2022	Hardware limitations				Close any unnecessary programs, or upgrade the components	Keep all unnecessary programs closed to free up ram space

Moscow

Must have

- CRUD customer

- CRUD Items

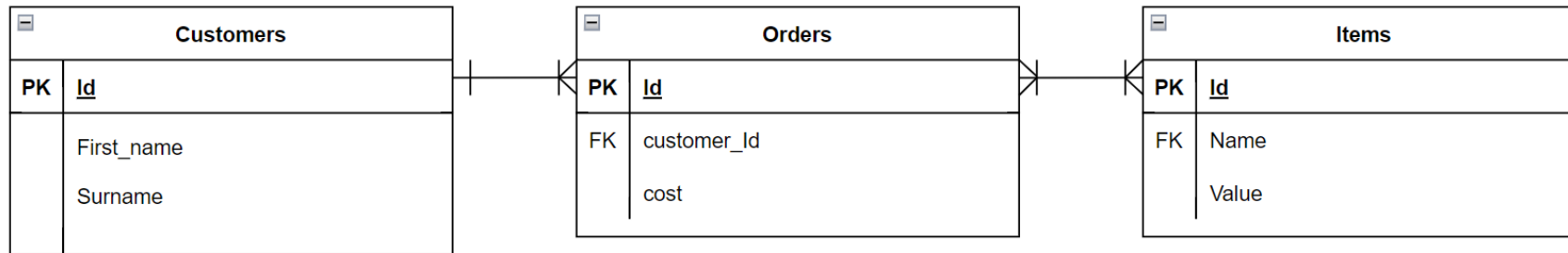- CRUD order

- Total order cost

Could have

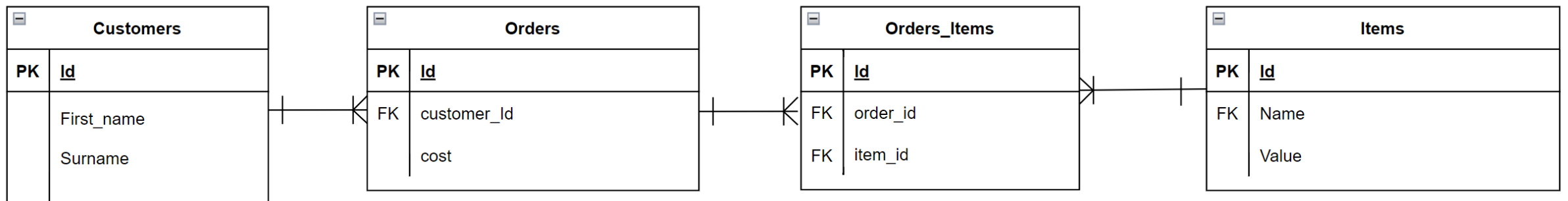- User integrated into system

- User login

Shouldn't have

- Stock levels

ERD

Before

Customers	
PK	**Id**
	First_name
	Surname

Orders	
PK	**Id**
FK	customer_Id
	cost

Items	
PK	**Id**
FK	Name
	Value

After

Customers	
PK	**Id**
	First_name
	Surname

Orders	
PK	**Id**
FK	customer_Id
	cost

Orders_Items	
PK	**Id**
FK	order_id
FK	item_id

Items	
PK	**Id**
FK	Name
	Value

UML Class

Runner

+ main(args: String[])

«enumeration» Domain

CUSTOMER
ITEM
ORDER
STOP

«enumeration» Action

CREATE
READ
UPDATE
DELETE
RETURN

IMS

- customers: CustomerController
- items: ItemController
- orders: OrderController
- utils: Utils

+ imsSystem()
+ doAction(crudController: CrudController<?>, action: Action)

DBUtils

- DB_USER: String
- DB_PASS: String
- DB_URL: String
+ instance: DBUtils

+ init(String ... path): int
+ executeSQLFile(String file): int
+ getConnection(): Connection
+ connect(String username, String password): DBUtils
+ getInstance(): DBUtils

CrudController<T> Interface

+ readAll(): List<T>
+ create(): T
+ update(): T
+ delete(): int

CustomerController

- customerDAO: CustomerDAO
- utils: Utils

ItemController

- itemDAO: ItemDAO
- utils: Utils

OrderController

- orderDAO: OrderDAO
- orders_itemsDAO: Orders_ItemsDAO
- customerDAO: CustomerDAO
- utils: Utils

Dao<T> Interface

+ readAll(): List<T>
+ create(T t): T
+ update(T t): T
+ delete(Long id): int
+ modelFromResultSet(ResultSet resultSet): T

CustomerDAO

+ readLatest(): Customer
+ readCustomer(Long id): Customer

ItemDAO

+ readLatest(): Item
+ readItem(Long id): Item

OrderDAO

+ readLatest(): Order
+ readOrder(Long id): Order

Order_ItemsDAO

+ modelFromResultSet(ResultSet resultSet): Orders_Items
+ readLatest(): Orderr
+ readAll(): List<Orders_Items>
+ add(Long orderIID, Long itemID): Orders_Items
+ delete(Long orderIID, Long itemID): int

Customer

- id: Long
- firstName: String
- surname: String

+ getId(): Long
+ setId(Long id)
+ getFirstName(): String
+ setFirstName(String firstName)
+ getSurname(): String
+ setSurname(String surname)
+ toString(): String
+ hashCode(): int
+ equals(Object obj): bool

Item

- id: Long
- name: String
- value: Double

+ getId(): Long
+ setId(Long id)
+ getName(): String
+ setName(String Name)
+ getValue(): Double
+ setValue(Double value2)
+ toString(): String
+ hashCode(): int
+ equals(Object obj): bool

Order

- id: Long
- customerId: Long
- cost: Double

+ getId(): Long
+ setId(Long id)
+ getCustomerId(): Long
+ setCustomerId(Long customerId)
+ getCost(): Double
+ setCost(Double cost)
+ toString(): String
+ hashCode(): int
+ equals(Object obj): bool

Orders_Items

- id: Long
- orderId: Long
- itemId: Long

+ getId(): Long
+ setId(Long id)
+ getOrderId(): Long
+ setOrderId(Long orderId)
+ getItemId(): Long
+ setItemId(Long itemId)
+ toString(): String
+ hashCode(): int
+ equals(Object obj): bool
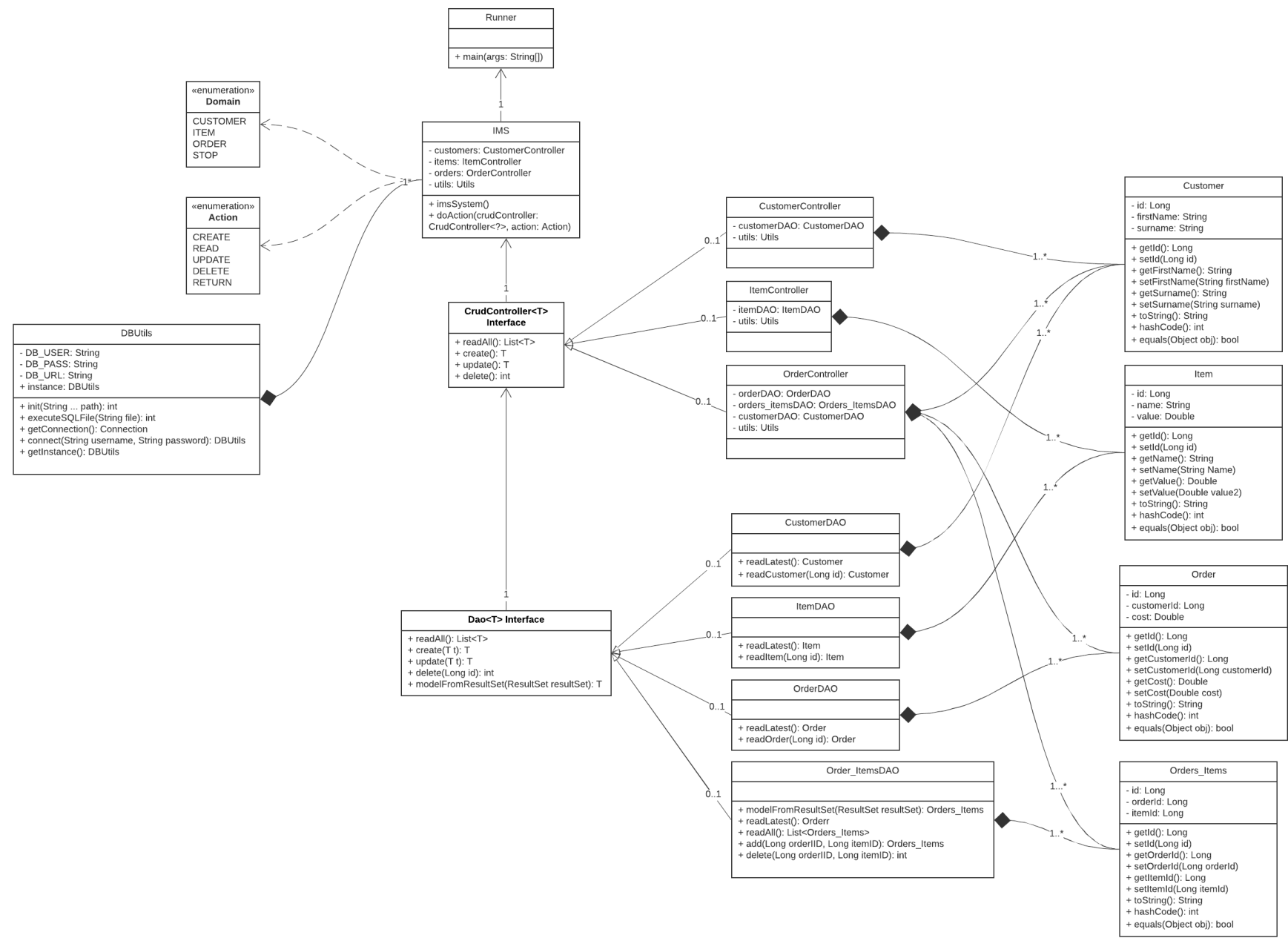
Sprints

> **IMS Sprint 1** 3 May – 6 May (22 issues)

📑 IMS-9 As a user, I want to ADD a customer to the system, so that the database contains all customers CUSTOMER

📑 IMS-10 As a user, I want to READ all customers in the system, so that I can see which customers are currently registered in the database CUSTOMER

📑 IMS-11 As a user, I want to UPDATE a customer in the database, so that all information of customers is correct CUSTOMER

📑 IMS-12 As a user, I want to DELETE a customer in the database, so that I can remove any customers information to respect privacy laws (GDPR) CUSTOMER

📑 IMS-13 As a user, I want a customer database, so that I can store all information clearly CUSTOMER

Epic ✕

Issues without epic

> ⬛ Items

> ⬛ Customer

> ⬛ Orders

> ⬛ Documentation

Tasks

Items / **IMS-5**

As a user, I want to ADD an item to the system, so that the database shows all available items

Done ✓ Done

Description

Tasks

1. Create Testing for Code

2. Write out code

3. Check if the code pass testing

4. Push to Git

Documentation /
IMS-23

As a Developer, I want an UML Document, so that I am aware on how the classes/packages are linked

In Progress

Description

Task

1- Create UML Document

User Stories

🔖 IMS-5 As a user, I want to ADD an item to the system, so that the database shows all available items **ITEMS**	4	=	DONE ∨	GM ⋯
🔖 IMS-6 As a user, I want to READ all items in the system, so that I can see which items are currently in the database **ITEMS**	4	=	DONE ∨	GM
🔖 IMS-7 As a user, I want to UPDATE an item in the database, so that all information of items is correct **ITEMS**	4	=	DONE ∨	GM
🔖 IMS-8 As a user, I want to DELETE an item in the database, so that I can remove any unnecessary items **ITEMS**	4	=	DONE ∨	GM
🔖 IMS-14 As a user, I want an items database, so that I can store all information clearly **ITEMS**	2	∧	DONE ∨	GM

Epic ✕

Issues without epic

> 🟪 Items

> 🟪 Customer

> 🟪 Orders

> 🟪 Documentation

Linked issues ✛

relates to

🔖 IMS-5	As a user, I want to...	= GM	DONE ∨
🔖 IMS-6	As a user, I want to...	= GM	DONE ∨
🔖 IMS-7	As a user, I want to...	= GM	DONE ∨
🔖 IMS-8	As a user, I want to...	= GM	DONE ∨

GitHub

Your branches

`develop`	🗗	Updated 4 hours ago by GuvMehat
`order`	🗗	Updated 5 hours ago by GuvMehat
`Documents`	🗗	Updated yesterday by GuvMehat
`items`	🗗	Updated yesterday by GuvMehat
`customer`	🗗	Updated 2 days ago by GuvMehat

```
Guv@DESKTOP-81AB6NG MINGW64 ~/Desktop/QA/Training/Week 5 Assesment/22AprEnable1_
IMS (Documents)
$ git commit -m "IMS-20 #in-progress Started the Risk assessment"
[Documents 0d54530] IMS-20 #in-progress Started the Risk assessment
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Documents/IMS RA.docx
```

GuvMehat IMS-20 #in-progress Started the Risk assessment

..

📄 Before ERD.PNG   IMS-21 #comment Created a starter ERD

📄 IMS RA.docx   IMS-20 #in-progress Started the Risk assessment

As a Developer, I want an ERD Document, so that I am aware on how the database is linked

📎 Attach   🗁 Add a child issue   🔗 Link issue   ⌄   ...

Description

Add a description...

Activity

Show: All   **Comments**   History   Newest first ⬇

GM   [Add a comment...]

Pro tip: press **M** to comment

GM   Gurveer Mehat   26 minutes ago

Created a starter ERD

Edit · Delete · 🙂

Developer Journey

- Week 0 no knowledge (pre course learning)
- Week 1 gained git knowledge
- Week 2 databases(MySQL) knowledge
- Week 3/4 Java Knowledge

Version control

- 0.0.1 – Customer
- 0.0.2 – Items
- 0.0.3 – Orders
- 0.0.4 – bug fixes in schema

Next time

0.1.1 – customers

i.E - Sprint completed . Epic . Issue

Test Coverage

- Test coverage achieved : 80.1%

Element	Coverage	Covered Instructions	Missed Instructions	Total Instructions
∨ 🗃 22AprEnable1_IMS	87.2 %	3,398	501	3,899
∨ 📁 src/main/java	80.1 %	2,014	501	2,515
＞ ⊞ com.qa.ims.controller	83.2 %	484	98	582
＞ ⊞ com.qa.ims.exceptions	0.0 %	0	3	3
＞ ⊞ com.qa.ims.persistence.dao	74.7 %	669	227	896
＞ ⊞ com.qa.ims.persistence.domain	88.9 %	706	88	794
＞ ⊞ com.qa.ims.utils	64.6 %	155	85	240
＞ 📁 src/test/java	100.0 %	1,384	0	1,384

CRUD

- All CRUD created for items and orders

- Tested all aspects of CRUD for items and order

- User stories were completed

```java
@Test
public void testReadAll() {
    List<Items> expected = new ArrayList<>();
    expected.add(new Items(1L, "Key", 9.99));
    expected.add(new Items(2L, "book", 19.99));
    expected.add(new Items(3L, "case", 5.50));
    expected.add(new Items(4L, "pen", 0.99));
    assertEquals(expected, DAO.readAll());
}
```

IMS-9   As a user, I want to ADD a customer to the system, so that the database contains all customers   CUSTOMER

IMS-10   As a user, I want to READ all customers in the system, so that I can see which customers are currently registered in the database   CUSTOMER

IMS-11   As a user, I want to UPDATE a customer in the database, so that all information of customers is correct   CUSTOMER

IMS-12   As a user, I want to DELETE a customer in the database, so that I can remove any customers information to respect privacy laws (GDPR)   CUSTOMER

IMS-13   As a user, I want a customer database, so that I can store all information clearly   CUSTOMER

Unit testing

- Used Mockito
  - Isolate the code
- Tested try aspect of CRUD code
- Didn't test catch aspect of code

```java
@Test
public void testReadAll() {
    List<Order> expected = new ArrayList<>();
    expected.add(new Order(1L, 1L, 0.0));
    expected.add(new Order(2L, 3L, 0.0));

    List<Customer> customers = new ArrayList<>();
    customers.add(new Customer(1L, "Guv", "Mehat"));
    customers.add(new Customer(2L, "Hermun", "Mehat"));

    List<Orders_Items> ois = new ArrayList<>();
    ois.add(new Orders_Items(1L, 1L, 4L));

    List<Items> item = new ArrayList<>();
    item.add(new Items(1L, "hello", 2.99));

    Mockito.when(dao.readAll()).thenReturn(expected);
    Mockito.when(customerDAO.readAll()).thenReturn(customers);

    assertEquals(expected, controller.readAll());

    Mockito.verify(dao, Mockito.times(1)).readAll();
    Mockito.verify(customerDAO, Mockito.times(1)).readAll();
}
```

Demo

- Quick test of application

Sprint review

- Integrating git bash and Jira

- Use of old classes to make new classes

- Schema Errors

- Which increased time spent on crud tasks

- Current goals missed are documentation, Read me

Thank you for listening

Any questions?