FUEL DELIVERY ON DEMAND APPLICATION

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INTRODUCTION

In our day to day life fuel consumption by the increase of vehicles became more. As the consumption increases the availability also should increase. There are many fuel stations available in every area. But consider a situation where the vehicle stops due to the lack of fuel in an area which is far from the fuel station. In that case people usually push the vehicle to the nearest fuel station. This process is difficult and it is more difficult to the people those are unwell or aged.

In this case an application can be introduced which can be used for delivering fuel those who need to refuel the vehicle at their own location at any time. Those who needs the fuel can get it by placing an order in this application by paying an extra charge for the delivery.

MODULES

- ADMIN
- USER
- FUEL STATION MANAGER
- DELIVERY AGENT

MODULES

➤ ADMIN

➤ Login

➤ Verify fuel station

➤ Verify delivery agent

➤ View complaint

➤ Post reply

➤ FUEL STATION MANAGER

➤ Register

➤ Login

➤ Receive order

➤ Assign Delivery

➤ View Status

➤ Receive Payment

MODULES

➢ USER

- ➢ Register
- ➢ Login
- ➢ Search Fuel Station
- ➢ Place order
- ➢ Make Payment
- ➢ Post complaint
- ➢ View reply
- ➢ View delivery status
- ➢ Get delivery

➢ DELIVERY AGENT

- ➢ Register
- ➢ Login
- ➢ View delivery request
- ➢ Update delivery status
- ➢ Delivery

DEVELOPING ENVIRONMENT

➢ Front-End   :   Dart(Flutter)

➢ Back-End   :   Python(Django)

➢ Database   :   MySQL

➢ IDE   :   PyCharm, Android Studio

➢ Operating System : Windows 7 or Above , Android

➢ Processor : Intel Core i5

➢ RAM : 8 GB

METHODOLOGY

Fuel delivery on demand application is a mobile application that helps user to order fuel for the vehicle as per their needs. The system basically depends on GPS service. Thereby it helps the user to locate the near by fuel station and place the order. The system also helps the delivery agent to get the location of the user who placed the order.

The system mainly consist of four modules such as Admin, Fuel Station, User and Delivery Agent . The Admin and Fuel Station modules are represented using web application. These are created using Python Django. The rest two modules are done as mobile application which will be more suitable, considering the usage of the users. This is done using Flutter.

Django is a high-level open source Python web framework that encourages rapid development and clean, pragmatic design and it is also versatile in nature which allows to build applications for different-different domains. Now a days, Companies are using Django to build various types of applications like: content management systems, social networks sites or scientific computing platforms etc. It have simple syntax, HTTP libraries, Middleware support and a Python unit test framework.

PyCharm IDE is used for doing the web framework in this project. It is a dedicated Python Integrated Development Environment (IDE) providing a wide range of essential tools for Python developers, tightly integrated to create a convenient environment for productive Python, web, and data science development.

METHODOLOGY

As said above in this project flutter framework is also used for creating the mobile application part. Flutter is Google's free and open-source UI framework for creating native mobile applications. Flutter allows developers to build mobile applications with a single codebase and programming language. This framework contains SDK and their widget based UI library. Dart is a programming language designed for client development, such as for the web and mobile apps which is used in this framework. This language mainly focus on the development of front end. Dart is much easier to use so that it helps the developers to get tremendous control over the system.

The database system used in this project is the MySQL relational database management system. This database management system is based on SQL(Structured Query Language) queries. It can handle almost any amount of data, up to as much as 50 million rows or more. The default file size limit is about 4 GB. However, we can increase this number to a theoretical limit of 8 TB of data.

➢ Tables

➢ USER REGISTRATION

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	user_id 🔑	int(11)			No	None		AUTO_INCREMENT
2	username	varchar(50)	utf8mb4_general_ci		No	None		
3	password	varchar(20)	utf8mb4_general_ci		No	None		
4	address	varchar(100)	utf8mb4_general_ci		No	None		
5	gender	varchar(10)	utf8mb4_general_ci		No	None		
6	phone	varchar(50)	utf8mb4_general_ci		No	None		
7	email	varchar(50)	utf8mb4_general_ci		No	None		

➢ LOGIN

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	login_id 🔑	int(11)			No	None		AUTO_INCREMENT
2	username	varchar(20)	utf8mb4_general_ci		No	None		
3	password	varchar(20)	utf8mb4_general_ci		No	None		
4	u_id	int(11)			No	None		
5	type	varchar(20)	utf8mb4_general_ci		No	None		

DELIVERY AGENT

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action			
☐	1	d_id 🔑	int(11)			No	None		AUTO_INCREMENT	🖉 Change	⊖ Drop	▽	More
☐	2	username	varchar(20)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	3	password	varchar(11)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	4	address	varchar(100)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	5	phone	varchar(11)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	6	email	varchar(50)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	7	status	varchar(11)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	8	img	varchar(1000)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	9	vechicle	varchar(100)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More

Fuel Station

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action			
☐	1	fs_id 🔑	int(11)			No	None		AUTO_INCREMENT	🖉 Change	⊖ Drop	▽	More
☐	2	username	varchar(50)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	3	password	varchar(20)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	4	address	varchar(100)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	5	phone	varchar(11)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	6	email	varchar(50)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	7	document	varchar(1000)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More
☐	8	status	varchar(20)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽	More

➢ COMPLAINT

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	com_id 🔑	int(11)			No	None		AUTO_INCREMENT	🖉 Change ⊖ Drop ▽ More
☐	2	user_id	int(11)			No	None			🖉 Change ⊖ Drop ▽ More
☐	3	username	varchar(20)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More
☐	4	date	date			No	None			🖉 Change ⊖ Drop ▽ More
☐	5	complaint	varchar(200)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More
☐	6	reply	varchar(200)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More

➢ ORDER FUEL

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	order_id 🔑	int(11)			No	None		AUTO_INCREMENT	🖉 Change ⊖ Drop ▽ More
☐	2	date	date			No	None			🖉 Change ⊖ Drop ▽ More
☐	3	u_id	int(11)			No	None			🖉 Change ⊖ Drop ▽ More
☐	4	fuel	varchar(20)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More
☐	5	qty	varchar(20)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More
☐	6	latitude	varchar(50)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More
☐	7	longitude	varchar(50)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More
☐	8	status	varchar(20)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More
☐	9	fs_id	int(11)			No	None			🖉 Change ⊖ Drop ▽ More
☐	10	phone	varchar(20)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▽ More
☐	11	d_id	int(11)			No	None			🖉 Change ⊖ Drop ▽ More

➢ PAYMENT

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	p_id 🔑	int(11)			No	None		AUTO_INCREMENT	🖉 Change ⊖ Drop ▽ More
2	amount	varchar(50)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▽ More
3	order_id	int(11)			No	None			🖉 Change ⊖ Drop ▽ More
4	cardnumber	varchar(50)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▽ More
5	card_holdername	varchar(70)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▽ More

DATA FLOW DIAGRAM

LEVEL 0
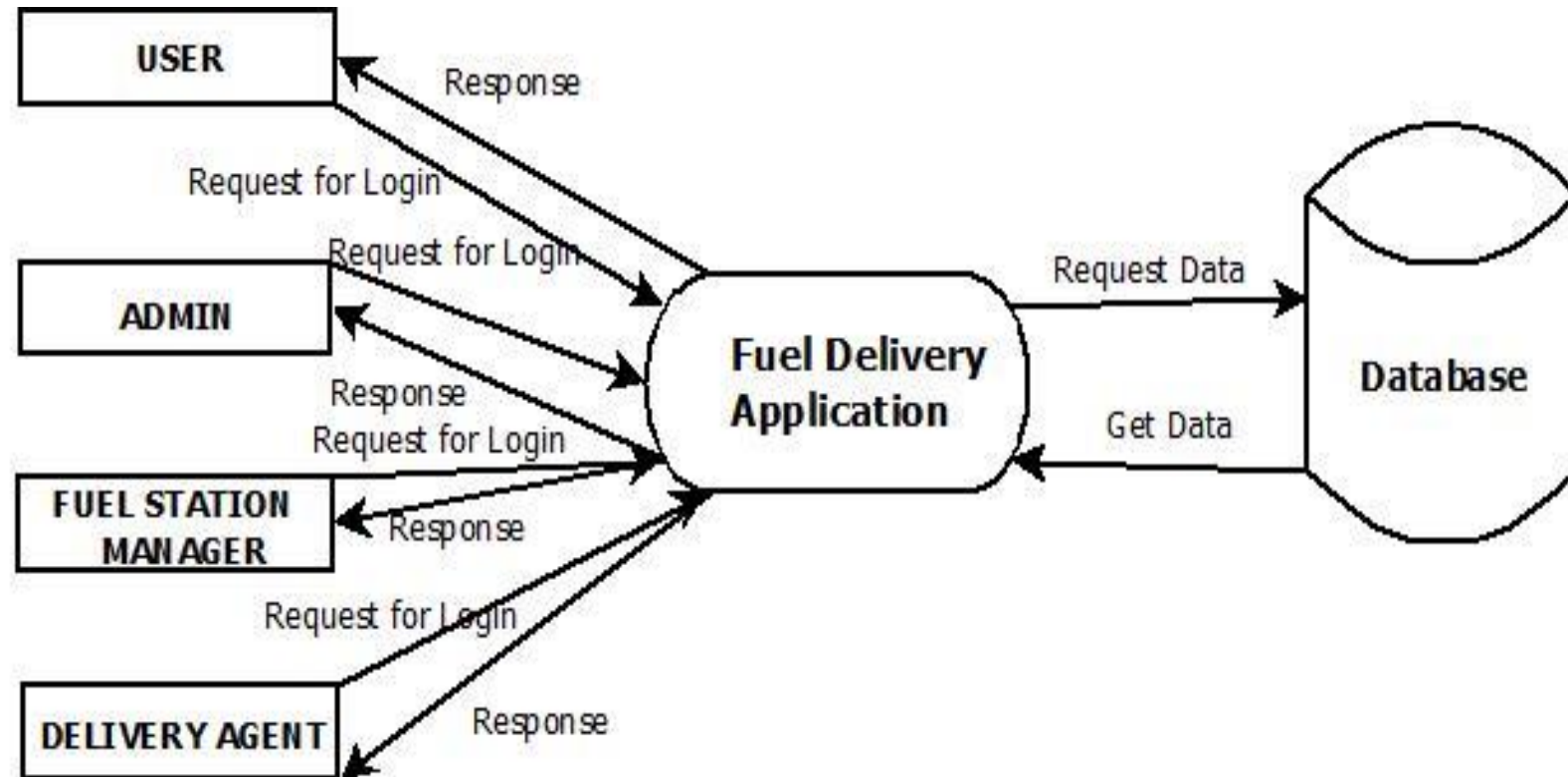
DATA FLOW DIAGRAM

LEVEL 1
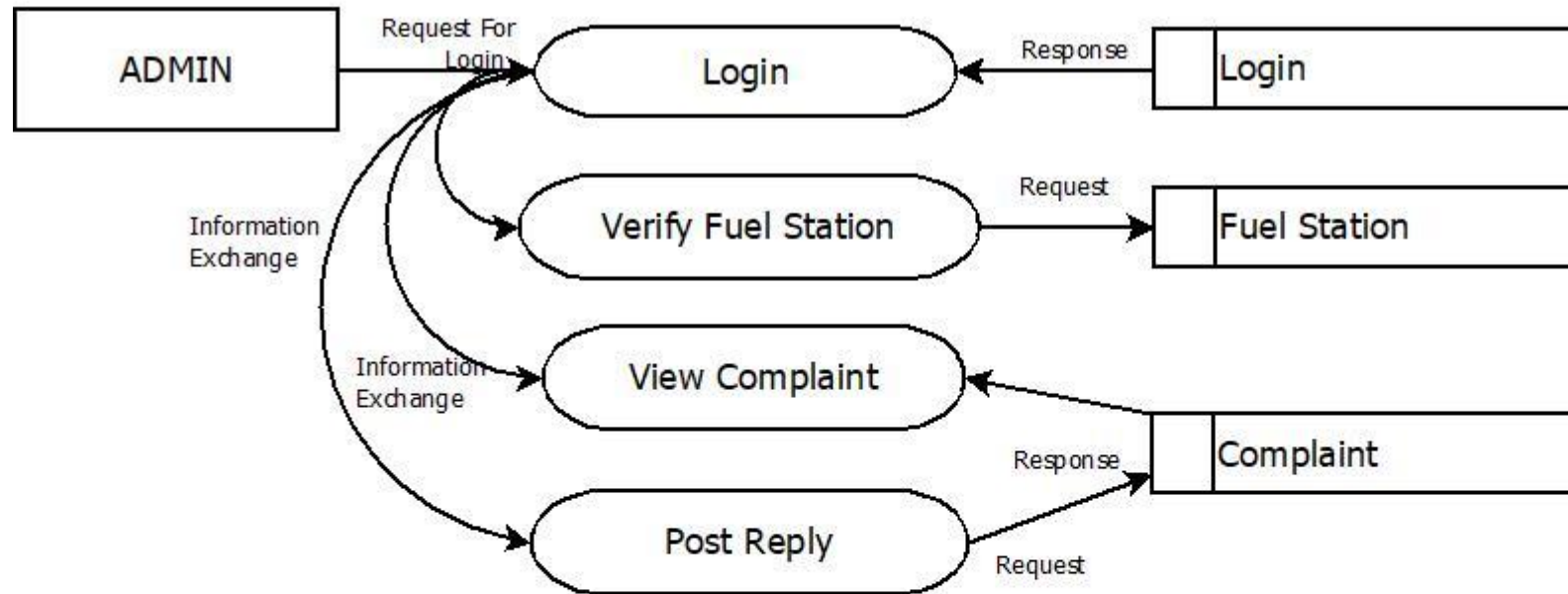
DATA FLOW DIAGRAM

LEVEL 2
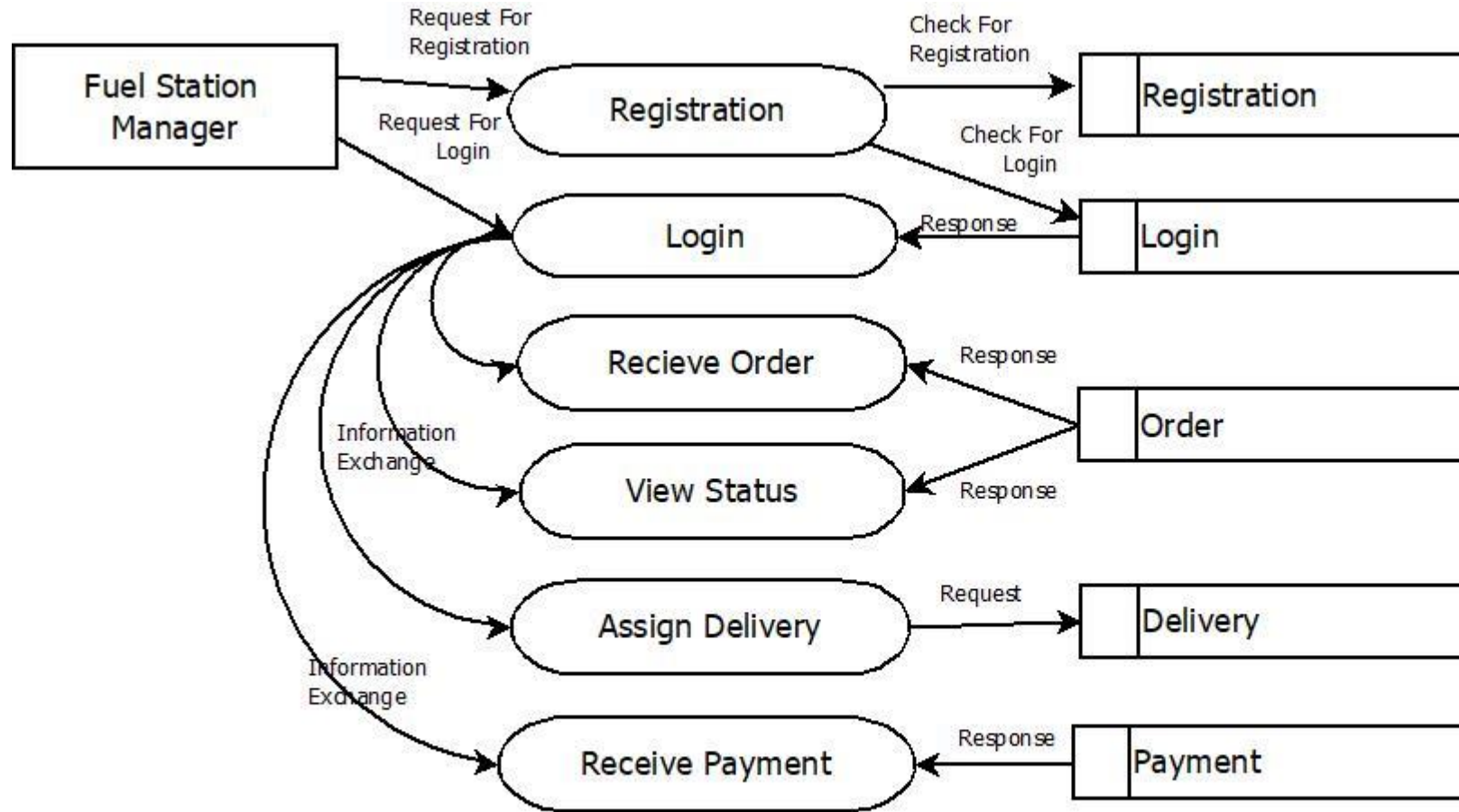
DATA FLOW DIAGRAM

LEVEL 3
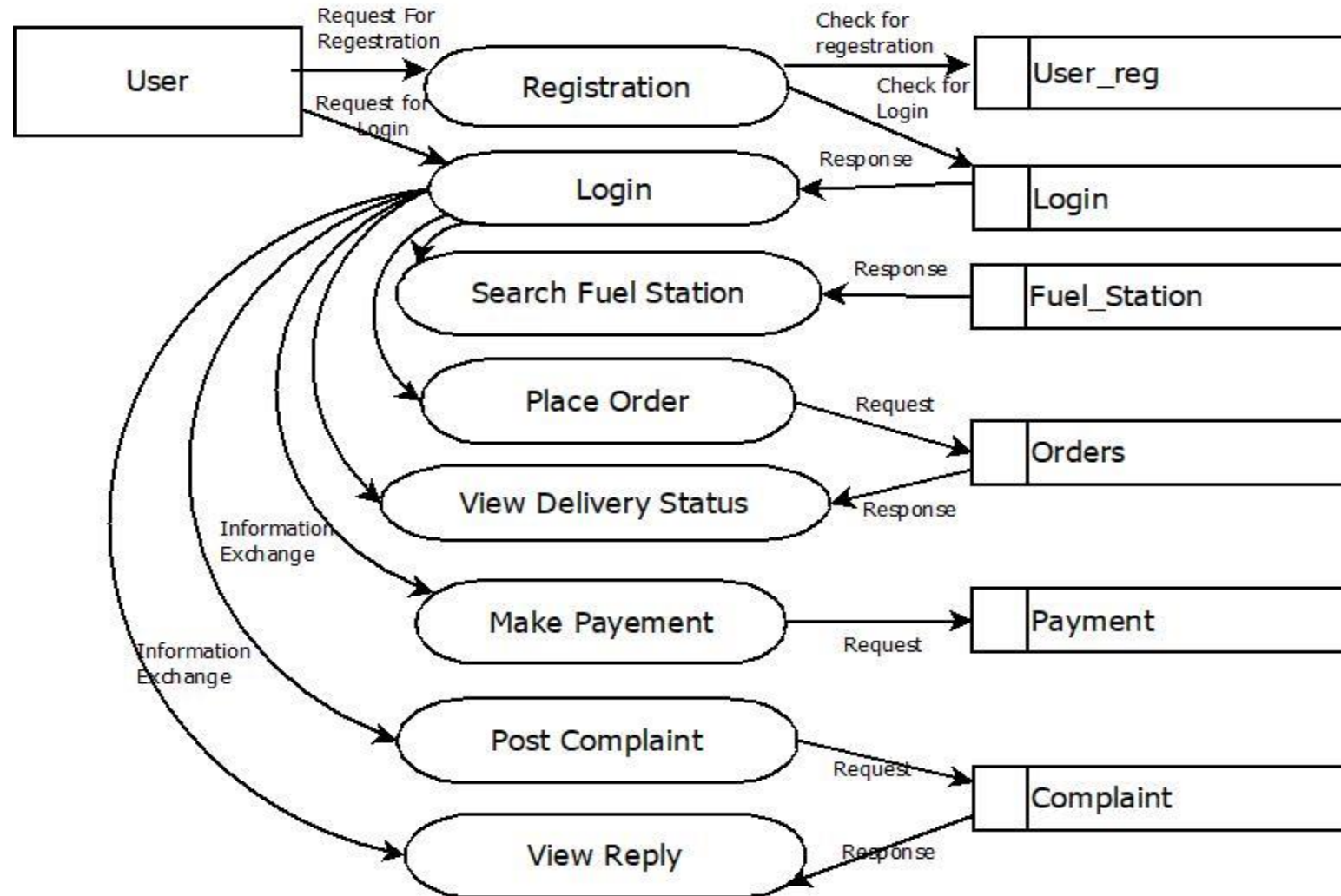
DATA FLOW DIAGRAM

LEVEL 4
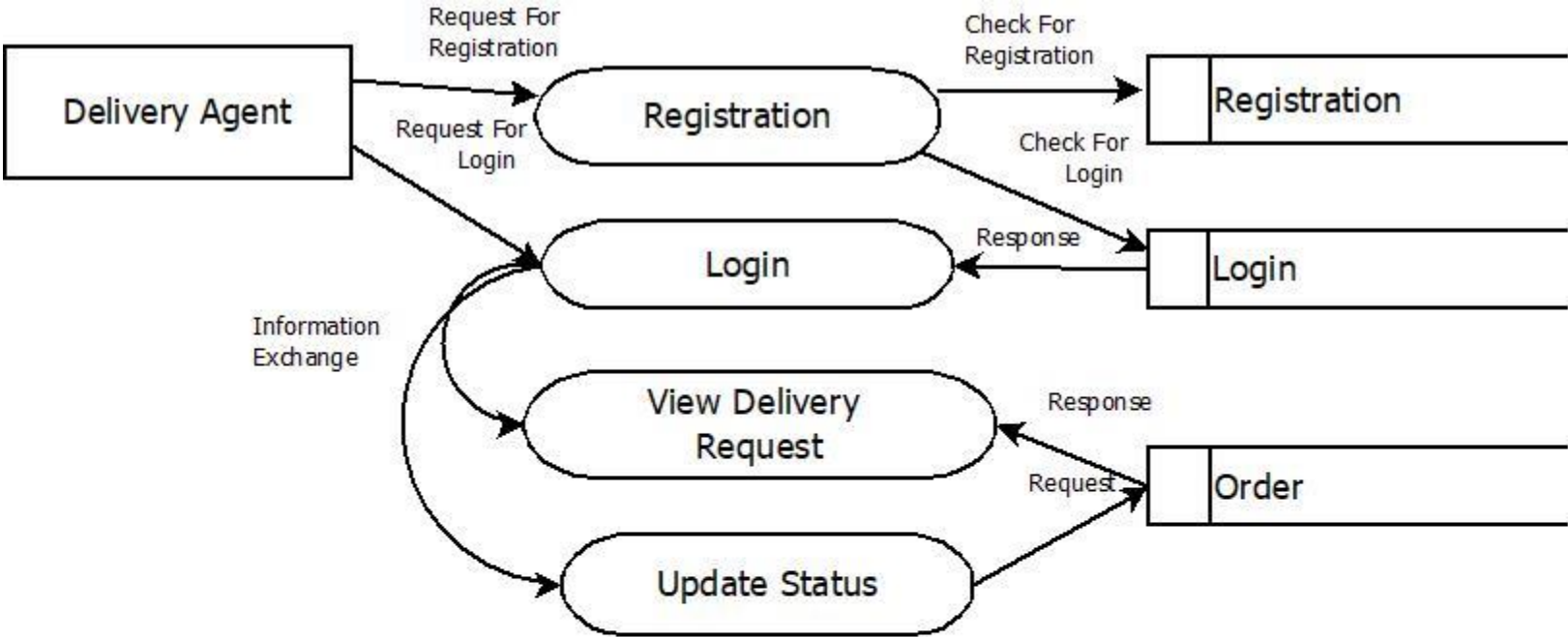
PROJECT PLAN

User Story ID	Task Name	Start Date	End Date	Days	Status
1	Sprint 1	20/04/2022	21/04/2022	4	Completed
2		25/04/2022	26/04/2022		Completed
3	Sprint 2	29/04/2022	29/04/2022	2	Completed
4		30/04/2022	30/04/2022		Completed
5	Sprint 3	02/05/2022	03/05/2022	5	Completed
6		03/05/2022	03/05/2022		Completed
7		09/05/2022	11/05/2022		Completed
8	Sprint 4	20/05/2022	23/05/2022	15	Completed
9		26/05/2022	27/05/2022		Completed
10		30/05/2022	31/05/2022		Completed
11		06/06/2022	08/06/2022		Completed
12		13/06/2022	13/05/2022		Completed
13		14/06/2022	15/06/2022		Completed
14		17/06/2022	17/06/2022		Completed
15	Sprint 5	20/06/2022	21/06/2022	9	Completed
16		22/06/2022	22/06/2022		Completed
17		23/06/2022	24/06/2022		Completed
18		27/06/2022	27/06/2022		Completed
19		29/06/2022	29/06/2022		Completed
20		04/07/2022	04/07/2022		Completed
21		06/07/2022	06/07/2022		Completed

USER STORY

User Story ID	As a<type of user>	I want to <perform some task>	So that I can <achieve some goal>
1	Admin	Login	Access Home page
2	Admin	Manage Fuel Station	Reject/Accept Fuel Station
3	Admin	View Complaint	View the complaint posted
4	Admin	Post Reply	Give Response
5	Fuel Station	Registration	Register into the system
6	Fuel Station	Login	Access Home Page
7	Fuel Station	View Order	View User's Order For Fuel
8	Fuel Station	Assign Delivery	Make the delivery happen
9	Fuel Station	View Status	View the status of the delivery
10	Fuel Station	Accept Payment	Charge the user for the service

USER STORY

User Story ID	As a<type of user>	I want to <perform some task>	So that I can <achieve some goal>
11	User	Registration	Register into the system
12	User	Login	Access home page
13	User	Search Fuel Station	View available Fuel Stations
14	User	Place Order	Get Fuel
15	User	View Status	View the status of the order placed
16	User	Post Complaint	Share the complaint and view reply
17	User	Make payment	Pay the amount
18	Delivery Agent	Register	Register into the system
19	Delivery Agent	Login	Access the home page
20	Delivery Agent	View Delivery Request	Deliver the fuel
21	Delivery Agent	Update Delivery Status	Complete the delivery process

PRODUCT BACKLOG

User Story ID	Priority <High/Medium/Low>	Size (Hours)	Sprint <#>	Status <Planned/In Progress/Completed>	Release Date	Release Goal
1	Medium	5	1	Completed	21/04/2022	Creation Of Login Page
2	High	5		Completed	26/04/2022	Manage Fuel Station
3	Medium	5	2	Completed	29/04/2022	View Complaint
4	Medium	5		Completed	30/04/2022	Post Reply
5	Medium	4	3	Completed	03/05/2022	Fuel Station Registration
6	Medium	2		Completed	03/05/2022	Fuel Station Login
7	Medium	4		Completed	11/05/2022	View User's Order
8	High	2	4	Completed	23/05/2022	Assign Delivery
9	Medium	1		Completed	27/05/2022	View Delivery Status
10	High	1		Completed	31/05/2022	Accept Payment

PRODUCT BACKLOG

User Story ID	Priority <High/Medium/Low>	Size (Hours)	Sprint <#>	Status <Planned/In Progress/Completed>	Release Date	Release Goal
11	Medium	2		Completed	08/06/2022	User Registration
12	Medium	1	4	Completed	13/06/2022	User Login
13	Medium	2		Completed	15/06/2022	View Fuel Station
14	High	1		Completed	17/06/2022	Order Placement
15	Medium	1		Completed	21/06/2022	View Status of the order
16	Medium	1	5	Completed	22/06/2022	Post Complaint and View Response
17	High	2		Completed	24/06/2022	Make Payment
18	Medium	1		Completed	27/06/2022	Delivery Agent Registration
19	Medium	1		Completed	29/06/2022	Delivery Agent Login
20	Medium	3		Completed	04/07/2022	View Delivery Request
21	Medium	1		Completed	06/07/2022	Update delivery status

SPRINT BACKLOG PLAN

Backlog Item	Status and Completion date	Original Estimate in hours	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13
User story #1,2			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
UI Designing	20/04/22	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Database Connectivity	21/04/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0
Coding	26/04/22	4	0	0	2	0	0	0	2	0	0	0	0	0	0
Testing	26/04/22	2	0	0	0	0	0	0	2	0	0	0	0	0	0
User story #3,4															
UI Designing	29/04/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0
Database Connectivity	29/04/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0
Coding	30/04/22	4	0	0	4	0	0	0	0	0	0	0	0	0	0
Testing	30/04/22	2	0	0	0	2	0	0	0	0	0	0	0	0	0
User story #5,6,7															
UI Designing	03/05/22	3	3	0	0	0	0	0	0	0	0	0	0	0	0
Database Connectivity	03/05/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0
Coding	03/05/22	3	0	0	3	0	0	0	3	0	0	0	0	0	0
Testing	11/05/22	2	0	0	0	2	0	0	0	0	0	0	0	0	0

SPRINT BACKLOG PLAN

Backlog Item	Status and Completion date	Original Estimate in hours	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13
User story #8,9,10,11,12,13,14			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
UI Designing	27/05/22	4	2	0	0	0	0	0	0	0	0	0	0	0	0
Database Connectivity	27/05/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0
Coding	17/06/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0
Testing	17/06/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0
User story #15,16,17,18,19,20,21															
UI Designing	22/06/22	4	0	0	0	0	0	0	0	0	4	0	0	0	0
Database Connectivity	24/06/22	2	0	0	0	0	0	0	0	0	0	2	0	0	0
Coding	06/07/22	2	0	0	0	0	0	0	0	0	0	0	3	0	0
Testing	06/07/22	2	0	0	0	0	0	2	0	0	0	0	3	0	0
Total		50	5	6	6	4	0	2	7	0	4	2	8	6	0

SPRINT BACKLOG ACTUAL

Backlog Item	Status and Completion date	Original Estimate in hours	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Completed <Y/N>
User story #1,2			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	
UI Designing	20/04/22	2	2	0	0	0	0	0	0	0	0	0	0	0	0	Y
Database Connectivity	21/04/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0	Y
Coding	26/04/22	4	0	0	2	0	0	0	2	0	0	0	0	0	0	Y
Testing	26/04/22	2	0	0	0	0	0	0	2	0	0	0	0	0	0	Y
User story #3,4																
UI Designing	29/04/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0	Y
Database Connectivity	29/04/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0	Y
Coding	30/04/22	4	0	0	4	0	0	0	0	0	0	0	0	0	0	Y
Testing	30/04/22	2	0	0	0	2	0	0	0	0	0	0	0	0	0	Y
User story #5,6,7																
UI Designing	03/05/22	3	3	0	0	0	0	0	0	0	0	0	0	0	0	Y
Database Connectivity	03/05/22	2	0	2	0	0	0	0	0	0	0	0	0	0	0	Y
Coding	03/05/22	3	0	0	0	0	0	0	3	0	0	0	0	0	0	Y
Testing	11/05/22	2	0	0	0	2	0	0	0	0	0	0	0	0	0	Y

SPRINT BACKLOG ACTUAL

Backlog Item	Status and Completion date	Original Estimate in hours	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Completed <Y/N>
User story #8,9,10,11,12,13,14			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	
UI Designing	27/05/22	4	0	0	0	0	0	0	0	0	0	0	4	0	0	Y
Database Connectivity	27/05/22	2	0	0	0	0	0	0	0	0	0	0	0	2	0	Y
Coding	17/06/22	2	0	0	0	0	0	0	0	0	0	0	0	2	0	Y
Testing	17/06/22	2	0	0	0	0	0	0	0	0	0	0	0	2	0	Y
User story #15,16,17,18,19,20,21																
UI Designing	22/06/22	4	0	0	0	0	0	0	0	0	4	0	0	0	0	Y
Database Connectivity	24/06/22	2	0	0	0	0	0	0	0	0	0	2	0	0	0	Y
Coding	06/07/22	2	0	0	0	0	0	0	0	0	0	0	2	0	0	Y
Testing	06/07/22	2	0	0	0	0	0	0	0	0	0	0	2	0	0	Y
Total		50	5	8	6	2	0	2	7	0	4	2	8	6	0	Y