

Date	15 October 2022
Team ID	<a href="https://github.com/IBM-EPBL/IBM-Project-27934-166010">https://github.com/IBM-EPBL/IBM-Project-27934-166010</a>
Project Name	Project - Smart Solutions for Railways
Maximum Marks	4 Marks

## Data Flow Diagrams: Project Design Phase-II Data Flow

### Diagram & User Stories

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

#### Example: [\(Simplified\)](#)

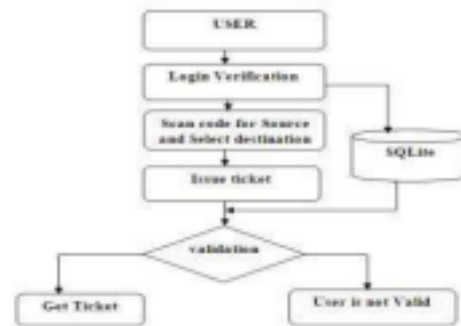
**Step 1:** The work here starts during the first time installation of our application where the user has to sign up. During sign up the basic customer information like first name, last name, date of birth, mobile no, city, state etc., will be gathered and it will be stored into MySQL database. So every time when the user buys the ticket this customer information is sent to the database for security purpose and also the ticket is generated accordingly. During sign up the username will be set as the user's mobile number or Email-id and the password will be as per the choice of the user. On the other hand if the user has an account then he can sign in directly. Thus the user can use different android phones and will not be restricted to only his phone. The above information will be send to server with the help of internet.



**Fig 1. System Architecture**

**Step 2:** The user scan Qr-code for source and select destination, number of tickets, single or return journey. Then the user is directed to the payment option. Payment can be done through prepaid services, i.e. the balance of the mobile no will be displayed along with the cost of the ticket and if the

user agrees to proceed then the equivalent 'amount' of the ticket will be deducted from the balance of the mobile no.



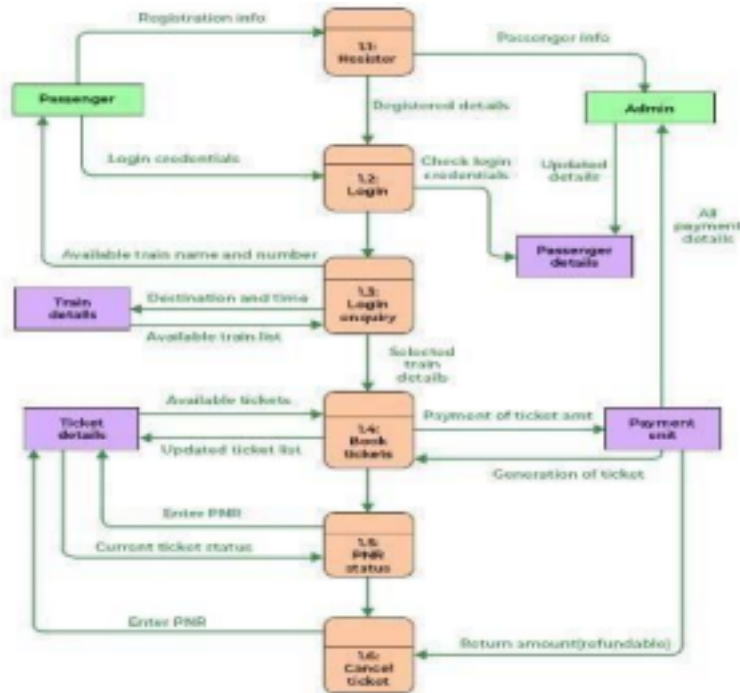
**Fig 2. Flow Process of Ticket Booking.**

**Step 3:** Once the customer click the buy button a code in the railway server validates the pin number and passwords, if it is successful it saves both the journey details and customer info in the server's MySQL database.

**Step 4:** The code on the server side generates the time of buy and the expiry timing of the ticket; the details are saved in the railway's MySQL database. Then Ticket no. is generated on server side, saved in the database and also sent back to the user mobile and saved in the application memory which serves as a ticket for the user.

**Step 5:** In this module the checker will enter the Ticket no. which will validate and verify the journey details from the railway database, especially the time and date of the ticket.

## Example: Data Flow Diagram for Reserving ticket



## User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Reserving ticket	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
Customer (Mobile user)	Reserving ticket	USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1

Customer (Mobile user)	Reserving ticket	USN-3	As a user, I can register for the application and enter the details for reserving the ticket.	I can register & access the dashboard with Facebook Login	Low	Sprint-2
Customer (Mobile user)	Dashboard	Users	The details will be stored safely	I can access it using database	Medium	Sprint-3
Customer (Web user)	Reserving ticket	User	Enter the details and click submit button to book ticket	I can use the QR code which is been generated	High	Sprint-1
Customer Care Executive	Connecting the service provider	Customer	Connects with the service by logging in	Can get connected with the server	Medium	Sprint-3
Administrator	Provides the services	Admin	The data is given by the user	Can add or update the data provided by the user	High	Sprint-1