



PROJECT REPORT
ON
FLIGHT LOGISTICS

(7th June 2017 to 3rd August 2017)

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Under the Guidance of

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DECLARATION BY STUDENT

I, **PuneetJyot Singh**, Student of **B. Tech - CSE** at **Guru Tegh Bahadur Institute Of Technology**, New Delhi, hereby declare that this Internship/Training Report is an authentic record of my own work carried out at “**Siemens Postal Parcel & Airport Logistic Private Limited**”, Gurgaon as requirement of 8 weeks Industrial Training under the mentorship of **Ms. Poorva Gupta** from **June 7th, 2017** to **August 3rd, 2017** as JAVA (J2EE) developer.

I also declare that the present project report is based on the above summer training, and is my original work. The content of this project report has not been submitted to any other university or institute either in part or in full for the award of any degree, diploma or fellowship.

ACKNOWLEDGEMENT

I would like to express my heartiest gratitude to my mentor, **Mr. Venkatesh Mathan (Senior Manager) & Ms. Poorva Gupta (Executive Engineer)**. They took time out of their highly busy schedules to guide me during my internship. They helped me at every step of my internship to provide me a great environment for learning and having a great industrial experience.

Siemens Ltd.

Siemens Ltd. is a part of Siemens AG, A German multinational conglomerate company headquartered in Munich, Germany. It is a leading powerhouse in electronics and electrical engineering with a business volume aggregating about Rs.12000 Cr. It operates in the core business areas of Industry, Infrastructure & Cities, Energy and Healthcare.

Siemens which originally founded on 12 October 1847 by Werner von Siemens placed its roots in India in 1867.

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ABSTRACT

The project focuses on making an application which will access the data of airport and present that data in a tabular format to users to ensure trouble-free experience. The application updates after every 5 hours so that users can have current information about flights. There is a login page so that only registered users can have access to the information as that is very critical.

The display of flight information is extremely important for an airport. Without the right flight information passengers, would not know where to go and when their flight will depart. Visitors are unknown about the arrival time of their relatives and airport personnel's are not informed about internal flight details. As a result the airport will end up in chaos. So to avoid this type of scenario it should be very important that people get informed with flight information that is both accurate and up-to-date.

INTRODUCTION

The Flight Logistics (FL) is the "Flight Information Center" and is the central database or repository for all operative systems and provides all flight-related data accurately and efficiently in a real-time environment.

In performing its tasks, the FL takes account of the different information requirements of the various users. For example, the System supplies specific information to airport personnel in the various departments, such as passengers, visitors and authorities operating at airport. Flight Schedule processing module of FL enables easy analyzing of flight schedules and their augmentation with all flight-event relevant information.

The FL also provides information about the performance of carriers by comparing the estimate time of their flights with arrival time. The graphical-user-interface ensures user-friendly operation and one can easily go through different reports related to flights and can get all the relevant information. Customers can also track flight status by examining flight departure status and flight arrival status.

TECHNICAL SPECIFICATIONS

Backend- Java SE-7(Java Platform, Standard Edition lets you develop and deploy Java applications on desktops and servers, as well as in today's demanding embedded environments. Java offers the rich user interface, performance, versatility, portability, and security that today's applications require) .

Features of Java Language

- Simple
- Object Oriented Language
- Portable and platform independent
- Robust
- Multithreaded
- Dynamic Linking
- Secure
- Performance

JSP- JSP technology is used to create web application just like Servlet technology. It can be thought of as an extension to servlet because it provides more functionality than servlet such as expression language, jstl etc.

A JSP page consists of HTML tags and JSP tags. The jsp pages are easier to maintain than servlet because we can separate designing and development. It provides some additional features such as Expression Language, Custom Tag etc.

AJAX- AJAX is a set of Web development techniques using many Web technologies on the client side to create asynchronous Web applications. With Ajax, Web applications can send data to and retrieve from a server asynchronously (in the background) without interfering with the display and behaviour of the existing page. By decoupling the data interchange layer from the presentation layer, Ajax allows for Web pages, and by extension Web applications, to change content dynamically without the need to reload the entire page.[3] In practice, modern implementations commonly substitute JSON for XML due to the advantages of being native to JavaScript.

Frontend-Bootstrap with CSS and JavaScript (We will use Layout it editor for frontend development and will use bootstrap because it helps us in making responsive project).

Bootstrap- Bootstrap is one of the most helpful tools in a web developer's toolbox. Bootstrap is an HTML, CSS and JavaScript framework that allows you to create clean-looking websites. It provides pre-built code that solves many of the tricky elements, such as responsiveness, that slow down web projects.

- Advantages of using Bootstrap
- Easy to get started
- Great grid system
- Base styling for most html elements
- Extensive list of components
- Bundled JavaScript plug-ins
- Good Documentation

Database- MySQL is used as database for this application.

MySQL

MySQL provides a implementation of a SQL database very well suited for small to medium web pages. The database is free and open source with a commercial license available (MySQL is now owned by Oracle after they bought Sun).

Common applications for MySQL include php and java based web applications that require a DB storage backend, e.g. Dokuwiki, Joomla, xwiki etc. Very many applications that use MySQL are geared towards the LAMP stack (Linux, Apache, MySQL, php).

MySQL is usually used with 2 different storage engines, one is called MyISAM doesn't support transactions and stores each table in a set of 3 files. The second is called InnoDB which supports transactions, this storage engine stores all data in a single set of bytes or uses one set of bytes per database directory.

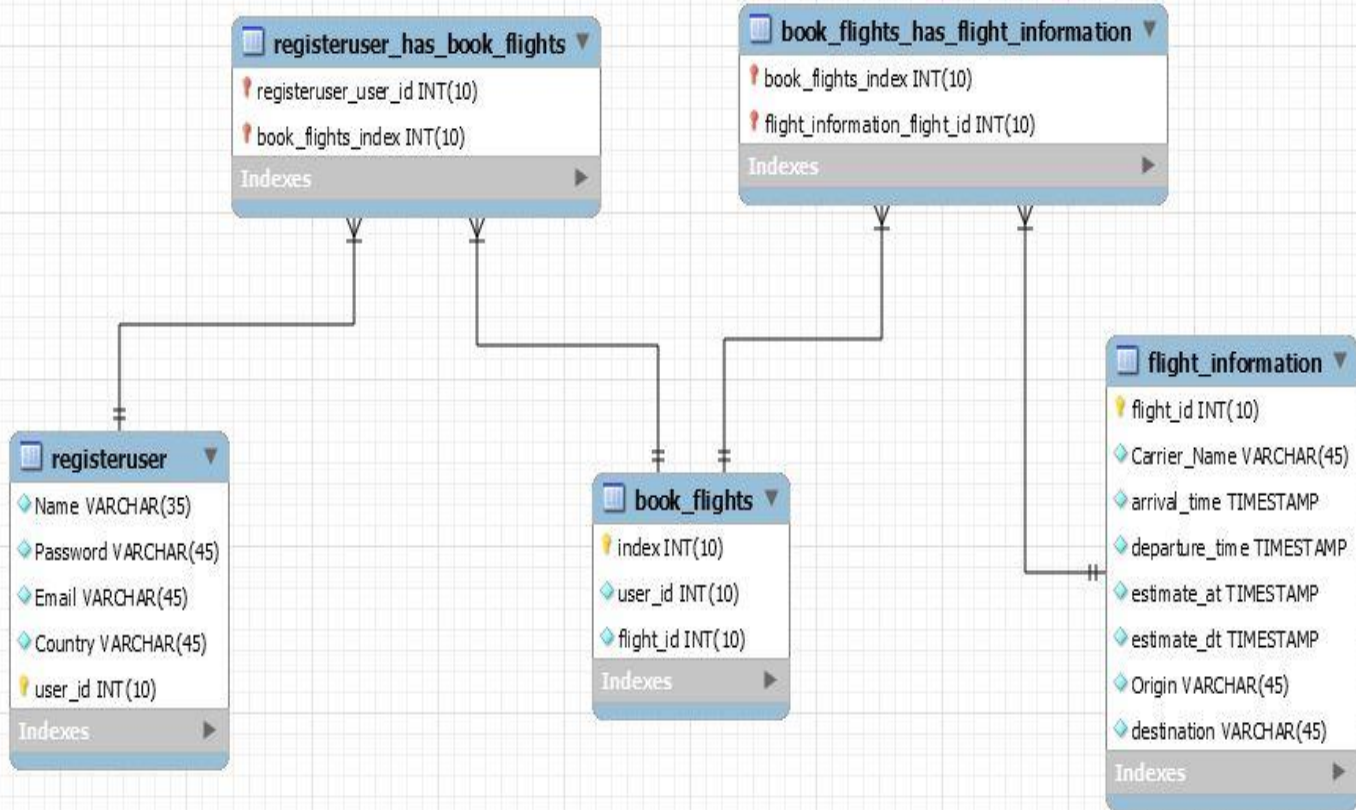
MySQL has one major advantage, since it is free, it is usually available on shared hosting packages and can be easily set up in a Linux, Unix or Windows environment. If a web application requires more than database, requires load balancing or sharing, it is easy to set up maybe instances of the database requiring only the hardware costs, as opposed to commercial databases that would require a single license for each instance.

FUNCTIONAL SPECIFICATIONS

By using this app, all the information about flights such as, **model number, air carrier, schedule, performance, fares, and number of booked seats** can be accessed easily by just analyzing the reports, which is shown with the help of different types of graphs. Airports frequently perform several tests that are used periodically to ensure that airplanes are airworthy. Each of the tests has a Federal Aviation Administration (FAA) test number, name, and a maximum possible score, which anyone can see. All these information is secured and have various security check level.

Having all these reports will allow us to measure the performance and efficiency of a carrier and will set a benchmark for other companies. Following are some images of our application which will help you understand better.

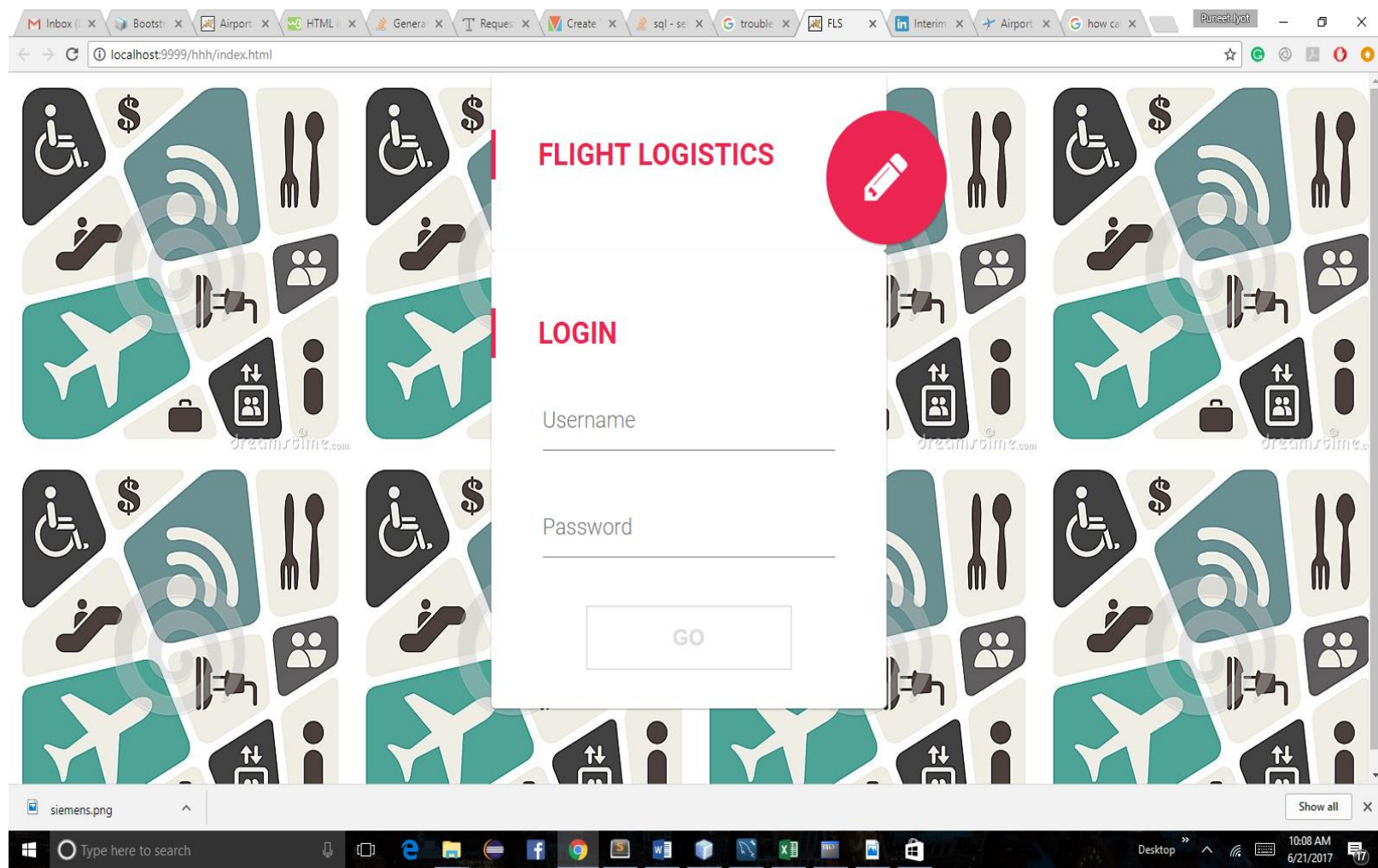
ER-Diagram



FLIGHT LOGISTICS MECHANISM

1) Login Page- If you have registered already then input your username and password and you will be logged in to home page.

If a credentials doesn't match then a dialog box will appear asking you to input again correct username and password.



2) Register User- If you are using this tool first time then you have to register first. All 5 fields are mandatory and you can't register without completing the details.

REGISTER X

Username

Password

Repeat Password

Email

India

NEXT

3) Home Page- After logging in you will be redirected to the home page; here all the upcoming booked flights of current week are displayed. If you want to access all upcoming flights, then click on booked flight tab next to book flight tab.

WELCOME Puneet

Flight Logistics! Complete Flight Information

16:09:59PM

Home

Book Flights

Booked Flights

Track Flight

FlightNumber	CarrierName	ArrivalTime	Departure Time	Origin	Destination
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
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G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
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G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-151	Indigo	2017-08-01 18:00:10.0	2017-08-01 14:00:10.0	Kolkata	Hyderabad
G8-152	Indigo	2017-08-02 18:00:10.0	2017-08-02 14:00:10.0	Kolkata	Hyderabad
G8-152	Indigo	2017-08-02 18:00:10.0	2017-08-02 14:00:10.0	Kolkata	Hyderabad
G8-152	Indigo	2017-08-02 18:00:10.0	2017-08-02 14:00:10.0	Kolkata	Hyderabad

4) Book Flights- If you want to book the flight you can go to book flights page and can enter origin, destination and departure date and can check all the available flights details. You can also book flights by clicking on the price button, a dialog box will appear with message “Are You Sure you want to Book the flight G8-151(Flight id)?”

Flight id	Airline	Depart	Arrival	Duration	Booking Status	Price(per adult)
G8-151	Indigo	2017-08-01 14:00:10.0	2017-08-01 18:00:10.0	04:00:00	Booked	2800
G8-151	Indigo	2017-08-01 14:00:10.0	2017-08-01 18:00:10.0	04:00:00	Not Booked	2800

If you click on “OK” another dialog box will appear as shown in image below with message “Booked” and your flight will be booked.

If a flight is fully booked you will get another message “All flights are booked” and you cannot book another seat.

WELCOME Puneet

Flight Lo

16:20:01PM

Home

Book Flights

Booked Flights

Track Flight

Kolkata

Hyderabad

08/01/2017

Search

Flight id	Airline	Depart	Arrival	Duration	Booking Status	Price(per adult)
G8-151	Indigo	2017-08-01 14:00:10.0	2017-08-01 18:00:10.0	04:00:00	Booked	2800
G8-151	Indigo	2017-08-01 14:00:10.0	2017-08-01 18:00:10.0	04:00:00	Not Booked	2800

WELCOME Puneet

Flight Lo

16:20:01PM

Home

Book Flights

Booked Flights

Track Flight

Kolkata

Hyderabad

08/01/2017

Search

Flight id	Airline	Depart	Arrival	Duration	Booking Status	Price(per adult)
G8-151	Indigo	2017-08-01 14:00:10.0	2017-08-01 18:00:10.0	04:00:00	Booked	2800

5) Booked Flights- If you want to check all the flights you booked then you have to click on “Booked Flights” tab and you can get all the details of booked flights.

You have to enter flight number and 2 dates between which you are searching for that flight and you will get all the details regarding the flight.

Flight id	Airline	Depart	Arrival	Origin	Destination
G8-152	Indigo	2017-08-02 18:00:10.0	2017-08-02 14:00:10.0	Kolkata	Hyderabad
G8-152	Indigo	2017-08-02 18:00:10.0	2017-08-02 14:00:10.0	Kolkata	Hyderabad

- 6) **Track Flights**- Here you can track your flight by examining the arrival and departure status of the flight. If flight has departed you can check the arrival status and if the flight is already arrived you can check if it was on time or not.

Flight id	Origin	Destination	Departure Time	Departure Status	Arrival Status
G8-152	Kolkata	Hyderabad	2017-08-02 14:00:10.0	Not departed yet	Not arrived yet
G8-152	Kolkata	Hyderabad	2017-08-02 14:00:10.0	Not departed yet	Not arrived yet
G8-152	Kolkata	Hyderabad	2017-08-02 14:00:10.0	Not departed yet	Not arrived yet

CONCLUSION

During my training period, I successfully learned about JAVA (J2EE). Before starting this project it was a challenge for me to develop proper logic .Gradually I managed to do this project but it wouldn't have been possible without the help of My Mentor.

BIBLIOGRAPHY

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