**Qatar Airways – Voyage Report**

**Introduction:** Voyage report is a document maintained by almost every airlines to keep track of various journey parameters and incidents. Traditionally this document was created and managed by either an online portal or through an application software. In both cases, user has to enter the report by typing them. In this PoC, we are taking this process one step ahead. As the cabin crews are trained thoroughly to communicate via speech, so it will be very feasible if they can enter the report via speech instead of typing. So for this purpose, we have created a mobile application where the crew lead will enter the report after end of every journey and the submitted report will get analyzed and useful attributes will get extracted by our intelligent backend system and finally this analyzed report will get submitted to the final data vault which is primarily called **Airlines Information Management System (AIMS).**

**Architecture:**

LUIS

Web API

DB

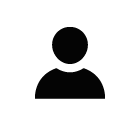
Web App Server

**Web Browser**

Mobile Device

**Crew Lead**

**Admin**





Flow 1: Store Analyzed Report to DB

Flow 2: Get Analyzed report and display in Dashboard

**Block Diagram of Voyage Report Management System**

**Building Blocks:**

* Mobile Application
* Web API
* LUIS (Language Understanding Intelligent System)
* Database
* Dashboard

**Component Used:**

* Mobile Application – Android (Google Speech-to-Text)
* Web API – Expres.js
* LUIS – Trained with possible utterances
* Database – Mongo DB
* Dashboard – React.js

**Voyage Report Dashboard:** This dashboard is a **react.js** application. This dashboard shows all the submitted report statements along with the identified **intent and entities**.

* **Views:**
  1. Login – **(/login**)
  2. Home – **(/home**)
  3. Details – **(/report/:reported**)
* **Component Hierarchy of Views:**
  1. **Login:**

App

Login

* 1. **Home:**

App

Home

NavBar

Header

ReportSummary

Footer

ReportAttributes

ReportSnapshot

* 1. **Details:**

App

Details

NavBar

ReportDetailHeader

JourneyReport

Footer

**Login Component:**

* Simple Login page.
* Username: **admin**, Password: **admin@qatar.**
* If username and password is incorrect, show appropriate error message.
* If correct credentials entered, then move to Home page (route: **/home**).

**Home Component:**

* In this component, we are displaying all submitted report statements along with their report id, flight no and date of submission.
* Attributes of report statements are marked as blue. This highlighting is done by node module “**react-highlight-words**”.
* Every report statement is associated with a colored bullet, which indicates the **sentiment** of the statement, i.e. **positive, negative or neutral**.
* Every report associated with a button named “**View Details**”, which will navigate user to details **(/report/:reportid**) page.

**Details Component:**

* This component is unique for each report.
* This component shows intent and entities of each statements of a report in a tabular format.
* This component uses **react-table** to display the intent and entities. For more details about react table, please refer to following URL; [*https://react-table.js.org/#/story/readme*](https://react-table.js.org/#/story/readme)