**Principle of Software Requirements**

**CRN-73612-LabGroup 12**

# LAB-1: *Airport Flight Control System*

Stakeholder Needs and Requirements

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# Introduction

This report describes the stakeholder requirements for creating an Airport Flight Control System [AFCS] for the Oshawa Executive Airport. We are writing this report with the intent to understand the needs and features required to design this system.

# Project Description

The system will manage the flight schedules of all the airlines that have been affiliated with the airport authority of Oshawa Executive Airport [OEA]. The system will be designed around the basic constraints such as weather, size of Aircraft,

military operations, time, availability of crew - so on and so forth - with added requirements and features.

## Stakeholders

Stakeholders can be an individual or a group that has an interest in any activity that takes place in an organization. The decisions made by the stakeholders play an important role in defining any project. The first task of any project is to identify the stakeholders and record all the requirements that are to be met and validated.

In this particular project there are 5 major stakeholders :-

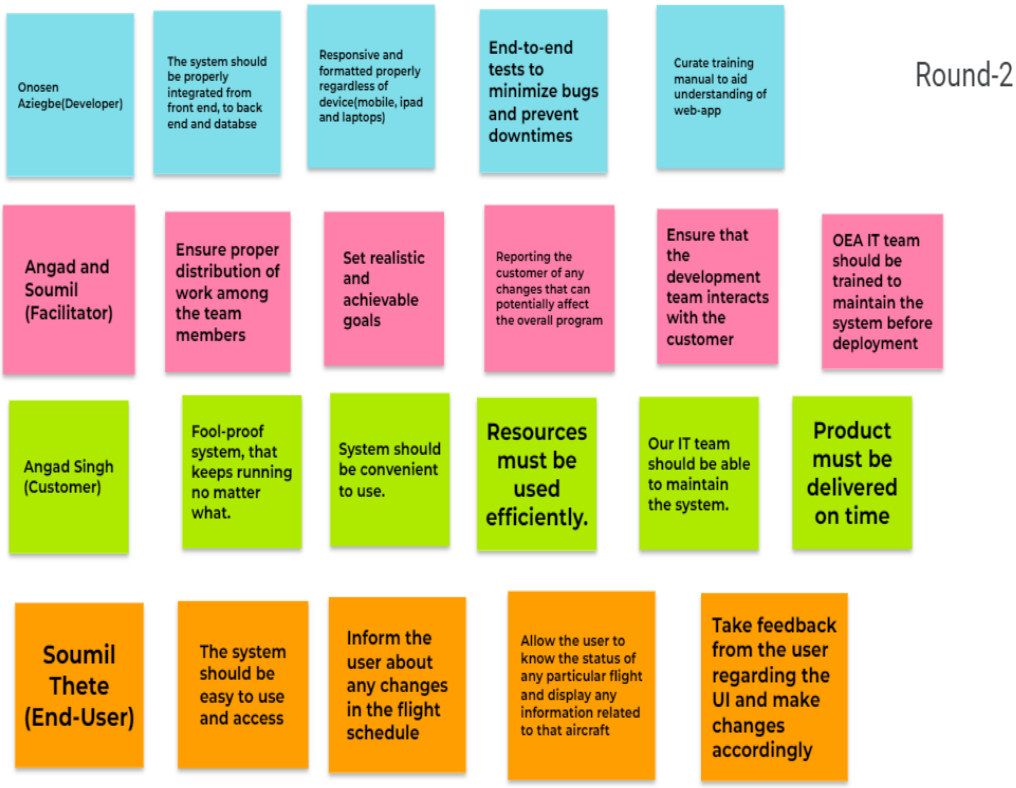
1. Airport Authority : the airport authority will mainly use the system to record the arrival/departure flight information to schedule different airport operations.
2. Airline Companies : the airline companies store all the information about their crew personnel and assign a number to the members who operate the flight.
3. Developers : the main role of developers is to ensure that all the requirements are fulfilled and the program works without any major problems.
4. Facilitator: a facilitator should set up meetings with the airport authority and make sure that everyone involved in the project attends it.

## Project Vision and Scope

For a mid-sized company's aircraft management departments who need basic flight scheduling functionalities, the Airport Flight Control System is a Web-based service that provides aircraft details like sizing, weather forecasts,

crew availability and additional support features that improve accessibility of flight system information at critical touch points. Unlike other services or package software products, our product provides very capable and accurate aircraft services at a moderate cost.

## Group Ideas




# USER STORIES

| Story Narrative | Story Narrative |
|---|---|
| As the: Airport Authority<br>We want: a sign-up page<br>So that: new staff members can be verified and access the system<br><br>Acceptance criteria :<br>• Users can submit their details through a form<br>• Users must enter their unique user ID<br>• Users should enter their valid email ID<br>• Users must also enter their contact number | As the: Developer<br>I want: the system to interact with the server<br>So that: any required data can be extracted from the database<br><br>Acceptance criteria:<br>• The system should connect with the server whenever a query is passed<br>• The database should respond by retrieving the required records and provide the user with the necessary information |

## Story Narrative

As an: end-user

I want: the system to take feedback or suggestions regarding the user interface

So that: the UI can be modified according to the user's needs

Acceptance criteria:

- The user can give feedback using a form
- The form should capture the details of the user like name and email ID.
- The form should provide a textbox area in order to record any suggestions from the user.

## Story Narrative

As an/the: Airline

I want: We want UI to be detailed and intuitive

So that: So that we can foster a seamless integration to the web app

Acceptance Criteria:
• Buttons and tabs should be correctly labelled based on various functions
•Airport colors or neutral colors should be used

## Story Narrative

As an/the: Developer

I want: I want to be able to test server performance and conduct frequent health checks

So that:So that I can fix any issues before production and after release

Acceptance Criteria:
• Server should always display running when function is called. Little/no downtimes

## Story Narrative

As an/the: Air-traffic Controller

I want: to know why the system made changes to a flight plan as soon as it makes that change

So that: I can double check if the system made any errors.

Acceptance Criteria:
•The system must send a notify the user

## Story Narrative

As an/the: Airlines

I want: an API to access information

So that: we can update crew roster

Acceptance Criteria:
•An API key should be provided to the airlines.

## Story Narrative

As an/the: OEA Authority

I want: an API for the product

So that:the airlines, affiliated with OEA can share their flight information.

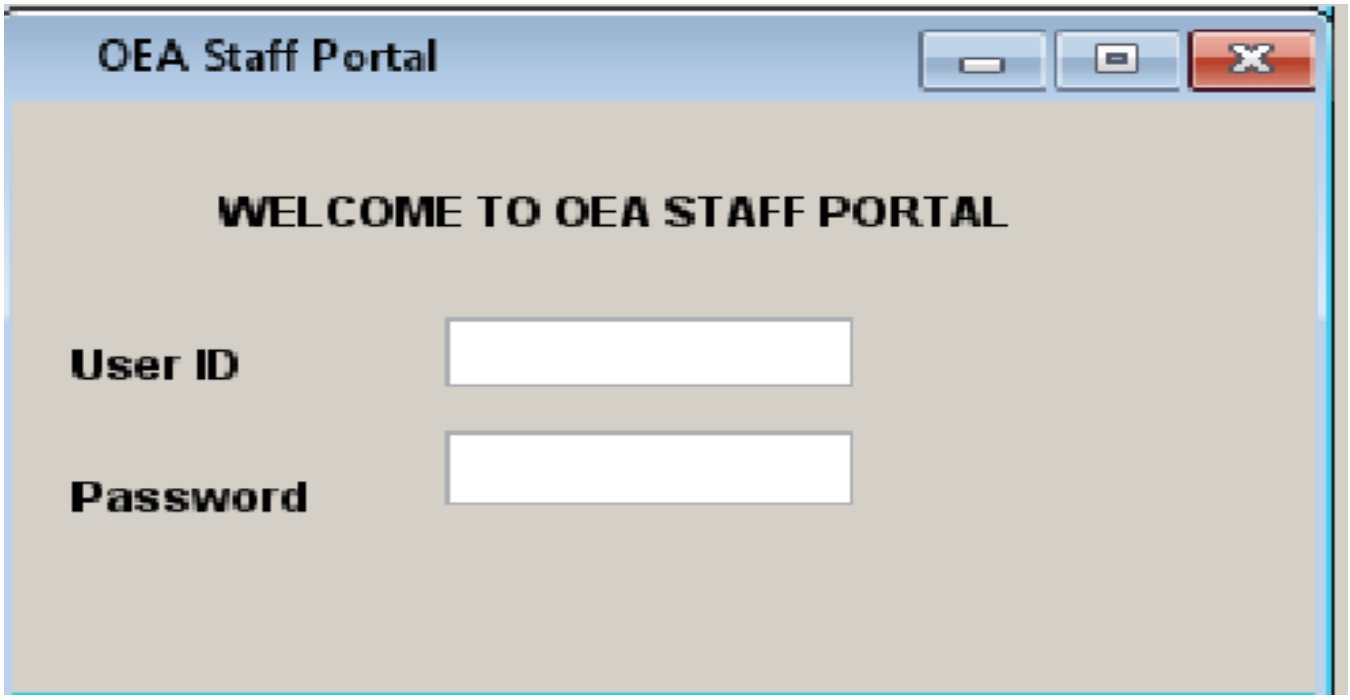
Acceptance Criteria:
• Ability to generate API key for arlines

## Project Constraints & Assumptions :

1. The system is web-based, so it will run on a web browser
2. It will run under any OS as long as it is connected to the internet
3. The airport authority members will have a valid user ID and email ID to access the system
4. This software needs the users (air traffic controllers , administrators etc) to have complete knowledge of the system.
5. The performance of the system may vary depending on the hardware and internet connectivity.

## User-Interface Diagrams

### 1.Login for the staff members



## 2. Homepage (basic template)

## Visual Paradigm

| Name ▲ | ID | Kind | Risk | Use Cases |
|---|---|---|---|---|
| Aircraft type | REQ005 | Functional | Medium | |
| Flight plan | REQ006 | Functional | Low | |
| Login | REQ003 | Functional | High | |
| Notification | REQ004 | Functional | Medium | |
| Sign Up | REQ001 | Functional | High | |
| UI | REQ002 | Interface | Medium | |