# CMSC 345

**Software Design and Development**

UMBC-CMSC 447 Section 2 Team 4
Team Awesome

# Planes for Hire

# Code Inspection Report

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*Planes for Hire*
Code Inspection Report

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# 1. Introduction

## 1.1 Purpose of This Document

The purpose of this document is to provide an overview of the coding practices that were adhered to in the the creation of the Planes for Hire application. Practices that will be included are coding and commenting conventions as well as any software defects, in addition to a review of all systems. Lastly, meetings will be outlined. Since no actual code has been written yet, we have no code to inspect. There will be more results and elaboration for Spiral 2.

## 1.2 References

Provide a list of all applicable and referenced documents and other media used during code inspection or in the preparation of this document. Minimally, references to the SRS and the SDD go here. See the Writing Resources on Blackboard for the appropriate formats for references.

1. Refsnes Data (1999-2015). w3schools.com. Retrieved from "http://www.w3schools.com/googleapi/"
2. The PH Group (2001-2015). PHP. Retrieved from "http://php.net/"
3. QuinStreet Inc (2015). SQLCourse.com. Retrieved from "http://www.sqlcourse.com/"
4. Planes for Hire System Requirements Document
5. Planes for Hire Design Document
6. Planes for Hire Testing Document

## 1.3 Coding and Commenting Conventions

We will be using camel case variable names and with c style coding conventions.This provides easy readability of code. We apply the formal format on php coding as well with all the comment and newlines. We also limit the code lines each page so that there are not many lines for just one simple page. There is also a short brief header comment on each page. We will use meaningful variable names that reflect their literal functionality. We use local SQL database and Apache web server on our computer for development. Database naming convention uses meaningful names that reflect their data elements and and their functionality.

### 1.4 Defect Checklist

Defects in code can cause bugs and make it difficult to maintain. Possible defects range from logic and programming errors to missing comments. We categorized our defects into the following categories: coding convention errors, logic errors, security oversights, commenting errors, database coding convention error. Please view the table below, Table 1, for a detailed list of defects we look for when reviewing code. Our list of found defects is found in Table 2. For information about specific tests completed please see the Testing Report Document.

**Table 1. Defect Categories**

| **Category** | **Comments** |
|---|---|
| Coding Convention Errors | Coding convention errors are when code deviates from the norm. This makes maintaining code difficult and is not good for application evolution. |
| Logic Errors | When code does not have the outcome originally intended. |
| Commenting Errors | Comments are not consistent or missing. |
| Security Oversights | Security oversights are vulnerabilities in code. They provide entry points for hackers and others to take advantage of your application in ways not originally intended and may inadvertently provide access to the underlying computer system. |
| Database Convention Error | When the database isn’t built to handle scalability or is unorganized. |

### Table 2. Defect Checklist

| **Category** | **Defect** | **Comments** |
|---|---|---|
| Logic Error | Search feature loads entire table. | In searching, all tables in database for airports are buffered in before the search begins. |
| Logic Error | Check out Duration | Once a user selects a date, they can't change it to "no days" if they change their mind. |
| Logic Error | Main page doesn't give message when no planes are available. | If a given airport doesn't have any planes, it should display an error message stating that there are not available planes. |
| Security Oversight | Same email for multiple users | Database should prevent user from making account in the event a user attempts to register an account with the same email as an existing user. |
| Logic Error | Cross platform defect | User cannot upload pictures when they are not on localhost |
| Security Oversight | Restore password for suspended accounts. | Admin cannot restore original user password when they are suspended. |
| Logic Error | Map issue | On the main page, without logging in, the map doesn't pan. |
| Database Convention Error | Scalability | New user tables are created for each user. This could lead to 100 tables that consist of 100 users. |
| Security Oversight | Encryption | User information not encrypted. |
| Commenting Error | Missing comments | Most of the files were missing comments which made it hard |

| | | |
|---|---|---|
| | | to read for other users. |
| Logic Error | Div shifting error. | The div storing forum data for checking in and out planes likes to shift to the bottom of the screen if the user resizes the screen. |
| Coding Convention Error | Profile Picture | User cannot add a picture from the Registration page |
| Logic Error | Paying issues | User can pay with negative dollars |
| Logic Error | Old dates when checking out | User is able to select a date before the current when checking out a plane. |
| Logic Error | Balance issues | User can have a negative balance |

## 2. Code Inspection Process

### 2.1 Description

Code inspection was completed by the coder who wrote the code while simultaneously navigating through that part of the application. It was also inspected by a peer through Github. In future spirals code will be reviewed in pairs in person, with the coder who wrote the code paired with another coder.

Our team performs weekly meeting to discusses application design approach and use case implementation. We also work on project documentation, and test any previously implemented use case design. Our meeting also involved discuss members job roles and responsibility.

### 2.2 Impressions of the Process

Our code inspection process has been effective but could been improved in meetings. We had a lot of issues with syncing on github when multiple users were working on the same files. During meetings, only few members showed up and contributed to the project.

We made a list of defects and things to do on github so that our team members were aware of it and were able to fix the issues. This also provided a method for Team members to easily comment on both good and bad code.

Coding process can be tedious, for instance, the avatar was difficult to implement. Source code found was used for a different platform. Had to recode file uploading process rather that using example code. Very time consuming and difficult.

## 2.3 Inspection Meetings

The following is the inspection meetings where codes were reviewed. There were no specify roles assigned to each team member. Everyone shared the roles and workload equally. However, Tam and Andrew lead the development process.

**Table 3.**

| Date | Name | Location | Time |
|---|---|---|---|
| 3/13/2015 | Tam, Andrew, Sundar, Roberto | 2nd Floor Library | 10 am to 3 pm |
| 3/23/15 | Tam, Andrew, Sundar, Roberto | Math and Psychology Building Basement | 6:45 pm to 7:30 pm |
| 3/25/15 | Tam, Roberto, Duke, Sundar | Math and Psychology Building Basement | 6:45 pm to 7:30 pm |
| 3/27/15 | Tam, Sundar, Andrew | 2nd Floor Library | 9 am to 3 pm |
| 3/30/15 | Tam, Sundar, Andrew | 2nd Floor Library | 5:15 pm to 7: pm |
| 4/1/15 | Tam, Sundar, Andrew | 2nd Floor Library | 5:15 pm to 7: pm |
| 4/3/15 | Tam, Andrew, Sundar | RLC | 8 am to 4 pm |
| 4/10/15 | Tam, Andrew, Roberto, Sundar | 2nd Floor Library | 11 am to 4 pm |

# 3. Modules Inspected

Planes for Hire is a javascript and php based application written with the help of GitHub and phpMyAdmin. Currently code exists to handle url paths as well as the controller logic for each view.

Please refer to the table below to view files with associated brief description of their functionality.

**Table 4.**

| # | File | Brief Description |
|---|---|---|
| 1 | index.html | Loads Main.php |
| 2 | Main.php | Includes headHTML and tailHTML.<br>Utilizes registration.php<br>Utilizes login.php<br>Utilizes logout.php<br>Utilizes search.php<br>Utilizes checkIn.php.<br>Utilizes checkInResult.php<br>Utilizes checkOut.php<br>Utilizes userProfile.php<br>Utilizes admin.php<br>Utilizes planesForHire.js<br>Utilizes planesForHire.css<br>Utilizes link.php to establish link between server and database for querying. |
| 3 | registration.php | Utilizes link.php to establish link between server and database for querying.<br>Utilizes confirm.php |
| 4 | logout.php | Destroys session cookie created by login.php |
| 5 | link.php | Class containing methods for establishing connection between server and database |

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|---|---|---|
| 6 | confirm.php | Initializes session variable and appends a new user into the database. |
| 7 | headHTML | Contains planes for hire css and js. |
| 8 | tailHTML | Couple of lines of code to finish off html body of most pages. |
| 9 | picsUploads | Directory storing user profile pictures, as well as default image. |
| 10 | planesForHire.sql | Stores export of current database.  Necessary for porting database to different machine. |
| 11 | populatePlaneOption.php | Called from multiple php documents in order to populate list of planes. |
| 12 | search.php | Makes search queries on database tables.  Shows relevant airports. |
| 13 | planesForHire.css | Defines layout elements of the website. |
| 14 | planesForHire.js | Defines functionality of html elements on website. |
| 15 | userProfile.php | Utilizes uploadFile.php<br>Utilizes planesForHire.js for functionality.<br>Utilizes planesForHire.css<br>Utilizes updateUserProfile.php |
| 16 | updateUserProfile.php | Updates user information as well as provide all other database functionality for userProfile.php |
| 17 | admin.php | Utilizes adminHead.html |

| | | |
|---|---|---|
| | | Utilizes adminTail.html<br>Utilizes updateTable.php |
| 18 | updateTable.php | Provide admin functionality for users and database functions. |
| 19 | checkInResult.php | Shows weather user owes late fee or not. |

## 4. Defects

The following table reviews the defect found in our system.

**Table 5.**

| **Category: Defects** | **Comment** | **Location** | **Fixed** |
|---|---|---|---|
| Commenting Error: Too many comments, missing comments | Comments are inconsistent and can range from little to excessive comments. | Most files | No |
| Logic Error:<br>User account | Multiple users can use same email ID as their username | Database | No |
| Secured network | opened network | Database<br>link.php | No |
| Coding Error:<br>User friendliness | Some buttons are not obvious | Main.php<br>headHTML.html | No |
| Logic Error:<br>Unprotected database | Easy to manipulate records in the database by an unknown user | link.php<br>Database | No |

# Appendix A – Team Review Sign-off

This document has been collaboratively written by all members the team. Additionally, all team members have reviewed this document and agree on both the content and the format. Any disagreements or concerns are addressed in team comments below.

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# Appendix B – Team Review Sign-off

This document has been collaboratively written by all members the team. Additionally, all team members have reviewed this document and agree on both the content and the format. Any disagreements or concerns are addressed in team comments below.

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## Appendix C – Document Contributions

Roberto wrote the purpose of the document, appendices, and the very brief description for 2.1. Sundar wrote references. He played a role in editing and reviewing the document as well as creating and assembling the documents. Tam and Sundar wrote section 1.3.

For Spiral 2, everyone updated the information.