

# Code Inspection Report

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Code Inspection Report

**Table of Contents**

	<u>Page</u>
1. Introduction	3-4
1.1 Purpose of This Document	3
1.2 References	3
1.3 Coding and Commenting Conventions	3
1.4 Defect Checklist	3-4
2. Code Inspection Process	4-5
2.1 Description	4-5
2.2 Impressions of the Process	5
2.3 Inspection Meetings	5
3. Modules Inspected	6
4. Defects	7
Appendix A – Peer Review Sign-off	8
Appendix B – Document Contributions	8

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to review and discuss our inspection of the code for our Robotics site. The intended readership is anyone interested in our coding processes. We will describe the process that we took to look over our code and the best and worst parts of our system. We specify the modules that have been inspected by name and description, and we state any defects that arise during our inspection.

## 1.2 References

1. System Design Document
2. Testing Report

## 1.3 Coding and Commenting Conventions

When coding, we attempted to go with the camel case naming conventions of variables, classes etc. The first letter of classes are always capitalized, and variables are lowercase. We have done our best to follow the coding conventions of PHP, HTML, and SQL.

## 1.4 Defect Checklist

Defects can cause bugs and make code difficult to handle. They can be very simple or more complex. We used the categories “Coding Conventions,” “Logic Error,” “Security Oversights,” and “Commenting.” We later added the category of “General Errors.” View the two tables below for explanations of the categories, and for a list of possible defects we could encounter. Refer to the testing report for information about tests.

Defect Categories

Categories	Explanation
Coding Conventions	When code is implemented or designed in a strange way. Makes it more difficult to maintain the code.
Logic Errors	When code doesn't do what we originally intended.
Security Oversights	Points in code where the security of the program could become compromised. They could allow unwanted access from outside sources.
Commenting	Comments are missing, or there are too many, or they are misleading.

General Errors	Specific part of code/file that has an issue when tested
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#### Possible Defects

Category	Defect
Commenting	Missing comments
Commenting	Too many comments
Commenting	Comments are misleading
Logic Error	Array Index out of bounds
Logic Error	Error in parentheses
Logic Error	Objects compared incorrectly
Coding Conventions	Improper variable naming
Coding Conventions	Improper method naming
Coding Conventions	Improper class naming
Security Oversights	Incorrect handling of password exception
Security Oversights	Vulnerability of variables or strings
Coding Conventions	Incorrect usage of object methods
Coding Conventions	Code duplication
Logic Error	Incorrect order or amount of parameters
Logic Error	Error in case sensitivity
Security Oversights	URL access restriction not working correctly
General Errors	A warning occurs at an unjustified time
General Errors	An unfixed error occurs

## 2. Code Inspection Process

### 2.1 Description

We did our best to inspect the code as we were writing it, as well as making sure that it was doing what was intended. We have attempted to either meet with at least one other group member to inspect code together, or have group members review the code on Github.

Since spiral 1 we have attempted to meet in groups a little bit more but it is still difficult due to schedules. Most of the time when we meet it is in pairs or as the whole group. We have been doing a little better regarding communication and we are working a little more comfortably as a group.

### 2.2 Impressions of the Process

Our process has been working well but we still need to improve on our documentation of issues/defects. We discussed that in the future we will attempt to keep each other informed about possible defects to handle in each of our files. This should make it easier to know what we do and don't need to do for the website.

The areas of code that are most likely to contain defects are the ones that we have not fully reviewed or finished yet. So for these reasons, the files `submit.php` and `ban_new.php` are the most likely to contain defects. The least likely are `login.php` and `newUser.php` because we have reviewed them the most and they do exactly what they are intended to do as of right now.

### 2.3 Inspection Meetings

As stated earlier, inspection meetings were mainly conducted in pairs or in the whole group. Any time that we didn't meet we reviewed the code separately on github. Refer to the table for meeting times and the members present.

Date	Time	Members present
2/20/2013	5:30pm - 7:00pm	All Members
2/21/2013	7:00pm - 9:00pm	Gaurang Bhatt, Sven Rivera
2/26/2013	4:00pm - 7:00pm	Chad Auld, Kyle Sprankle

2/27/2013	5:30pm - 7:00pm	All members
2/28/2013	6:00pm - 7:00pm	Kyle Sprankle, Gaurang Bhatt, Chad Auld
3/11/2013	5:30pm - 7:00pm	All members
3/25/2013	5:30pm - 7:30pm	All members
3/27/2013	5:15pm - 6:30pm	Kyle Sprankle, Chad Auld, Sven Rivera
4/1/2013	4:30pm - 6:00pm	Chad Auld, Kyle Sprankle
4/3/2013	5:30pm - 7:00pm	All members

### 3. Modules Inspected

Our website is based on a mix of PHP, HTML, and SQL, with small inclusions of CSS and JavaScript. We have made a few edits to the design format of our website, which required the use of a few new files and deletion of a few files that became unnecessary. Refer to the Table for a list of our files and brief descriptions of each.

Code Description Table

#	File	Brief Description
1	index.php	All input forms and content.
2	newUser.php	Processes and adds new user to a database.
3	login.php	Processes the login info to check for existing user.
4	logout.php	Terminates the login session.
5	submit.php	Form used for entering the new article. Processes the form well.
6	CommonMethods.php	Provides connection to the database with the specified username and password, as well as execute the queries.
7	style.css	Stylesheet to help modify the appearance of the website.

8	ban_new.php	File that handles the banning feature for admins. Validates input and updates database.
9	search.php	Page that handles search results.
10	no_search.php	Displays page with no search results.
11	validate.js	Handles and checks the input forms. Also has functions to update div tags using AJAX.
12	tags.php	Computes the five most popular tags.
13	edit.php	Edits fields of a specific submission (specified by selectSubmission.php). Validates input and updates database.
14	selectSubmission.php	Part of editing submission feature for admins. Gets input regarding which submission to edit.

Refer to the Design Document for more explanation on many of these files and how they interact.

## 4. Defects

The table describes the defects found in the system.

**Defect Table**

Category of Error	Location	Comments	Handled
Correctness	submitPage.php	Does not verify URL access	Not yet
Commenting	submitPage.php index.php	Not enough comments	Not yet
Correctness	submitPage.php	Does not provide review yet	Not yet
Logic Error	ban_new.php	Does not appropriately handle case sensitivity	Not yet
General Error	edit.php	Does not correctly redirect after updating database	Not yet
Security Oversight	login.php	Passwords were not	Yes

		encrypted	
General Error	index.php	Some links were not working properly	Yes
General Error	search.php	Search was not displaying results correctly	Yes

## Appendix A - Team Review Sign-off

Team

Name \_\_\_\_\_ Date \_\_\_\_\_

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Comments \_\_\_\_\_

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## **Appendix B - Document Contributions**

This document was mainly done by Kyle Sprankle with review from the rest of the team.