Code Inspection Report

J.U.S.T.I.C.E.

Judgment Utility Space Time Intensive Crime Evaluator

Client
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4/25/2018

JUSTICE
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 during the creation of the JUSTICE application. This document specifies our coding and commenting practices as well as software defects found during a review of all systems. Additionally, meetings are outlined.

1.2 References

1. JUSTICE System Requirements
2. JUSTICE System Design Document
3. Testing Report Document
4. Javascript Style Guide. Retrieved from https://www.w3schools.com/js/js_conventions.asp

1.3 Coding and Commenting Conventions

We use camelCase for variable and function names. In addition, we have spaces around our operators and a space after commas. We indent code lines using tab. For readability we avoid code lines longer than 80 characters. We use uppercase file names (excluding index.html since it is required to be lowercase). We add comments to portions of code we believe to be unclear simply by looking at it.

1.4 Defect Checklist

Defects in code can cause problems that inhibit maintainability. Possible defects range from missing comments to logic or programming errors. We categorized our defects into the following categories: **coding convention errors, logic errors, commenting errors, and security oversights**. Please view table 1 below for more information on these categories. The list of possible defects we expected to find during our code inspection are outlined in table 2. For information about specific tests completed please see the Testing Report Document.

Table 1. Defect Categories

Category	**Comments**
Coding Convention Errors	Written code does not meet standards and thus is more difficult to read or maintain.
Logic Errors	When the code does not have the intended outcome.
Commenting Errors	Comments are missing or inconsistent.
Security Oversights	Vulnerabilities in code that open up our application for exploitation or other unintended uses.

Table 2. Defect Checklist

Category	**Defect**
Logic Error	Component outputs unwanted text
Logic Error	Component does not render correctly
Commenting Error	Missing comments
Coding Convention Error	Variable or Function name not in camelCase
Coding Convention Error	Missing spacing around operators
Coding Convention Error	Code line longer than 80 characters
Coding Convention Error	File names are not uppercase
Coding Convention Error	Includes extraneous code
Security Oversight	Error displayed to user
Security Oversight	Exceptions caught improperly

2. Code Inspection Process

2.1 Description

Code inspection was completed by all team members. In order to get through all of the files, two of us reviewed the code and the other two of us took notes based on the findings of the first two. One of the note-takers documented which files were reviewed in table 4, the code description table, while the other note-taker documented defects found in the current file in table 5, the defects table.

2.2 Impressions of the Process

Our code inspection process has been moderately effective at finding and documenting defects. It has been a good way for us to come back to our code to comment everything properly which can often get forgotten about in the pursuit of functionality. The best way to improve our overall inspection process is to simply have more meetings dedicated to code inspection.

2.3 Inspection Meetings

Table 3. Meeting Times

Date	Time	Attendance
4/25/2018	2:30pm - 3:45pm	All Team Members

3. Modules Inspected

JUSTICE is a node based application written with the MERN (Mongo, Express, React, Node) stack.

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

Table 4. Code Description Table

#	File	Brief Description
1	FetchData.js	Populates data in our MongoDB.
2	App.js	Bundles the application components
3	App.css	Global style sheets for pages
4	index.js	Renders the react app on the Index.html page
5	Footer.js	Contains the component for the footer
6	CrimeModel.js	A JSON object for mongoDB to use client side
7	Header.js	Contains the component for the header
8	Main.css	Styling for the page content
9	Main.js	Bundles the main page content
10	Map.js	Component for the map
11	Sidebar.js	Component for the sidebar
12	SliderContainer.js	Container for the slidebar components
13	TableContainer.js	Container for the table components
14	index.html	Base page layout
15	CrimeController.js	Performs CRUD operations for our application

4. Defects

The following table reviews the defects found in our system.

Table 5. Defects

Defect Category	Location	Comments	Fixed
Commenting Error	FetchData.js	Lacking sufficient comments	Yes
Coding Convention Error	FetchData.js	Variable ‘MongoClient’ not in camel case.	Yes
Coding Convention Error	FetchData.js	File name is not uppercase	Yes
Commenting Error	App.js	Lacking sufficient comments	Yes
Coding Convention Error	Footer.js	Includes extraneous code	Yes
Coding Convention Error	CrimeModel.js	Includes extraneous code (commented out)	Yes
Coding Convention Error	CrimeController.js	Includes extraneous code (commented out)	No
Coding Convention Error	CrimeController.js	Includes extraneous code (console logs)	No
Coding Convention Error	CrimeController.js	Code line longer than 80 characters	No
Logic Error	CrimeController.js	Does not connect properly to the front end	No

Appendix A – Agreement Between Customer and Contractor

The customer agrees to a crime visualization system that allows the user to filter data in a variety of forms (maps, graphs, tables) relative to a chosen time frame. See System Requirements Specification for more information.
When future changes to this document occur a drafted new document shall be created. An electronic copy of both versions will be presented to the client for review. Upon approval, the draft will be finalized and signed off by both parties.

Client

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Team

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Appendix B – Team Review Sign-off

This document has been collaboratively written by all members of the team. In addition, 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.

Team

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Signature

Comments

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Appendix C – Document Contributions

The bulk of this document was written and formatted by Andrew McLamb. This document was written by one person to let the other team members focus on the development of the project. Arjun Saini filled in table 4 and 5 during the code inspection meeting.