Public Works Management System

by

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Major Subject: Computer Science

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(This is what I found from the two BB samples, we could remove some parts from the table content or add as the project needs)

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**Introduction**

The Public Works Management System is a web application which allows the citizens of Huntington to view the works being done by the Department of Public Works. These repairs being done by the department are depicted on a map with a color scheme of red for incomplete works and green for completed works.

* 1. Scope:

The project includes but is not limited to the following:

1. Admin Page:
2. Management of a dashboard for maintaining the citizen’s requests.
3. Adding a request for repair.
4. Editing the request in case of multiple requests for the same address.
5. Adding the completed requests to a completed reports page.
6. Viewing the reports on Map.
7. User Page:
8. The user is able to view a map in which he could type in his address and go to the pin to be able to see his request’s status.
9. Provision for the Department of Public Works to get an analysis of the work done by pulling up a report. Each report can be exported as an excel file or be printed for further use.
10. The admin can email the requests to her supervisor so that he could divide the work among the workers in the department.
11. A feature for the Admin to be able to plot markers on a map and delete them after the work is done.
12. Host and Test the System.
    1. Background

The Department of Public works currently uses an Excel based systems to manage all their records. Each time a citizen of Huntington calls and reports a problem they make a note of it in the excel sheet and get back to the request as soon as possible. The major challenges the department of Public Works faced is receiving many phone calls from citizens requesting repairs some are already had been attended but it would need more time, or informing about the problems, which were undone. For example, taking out the trash or repairing potholes during a rain.

* 1. Summary

A current web based system is available online for them to operate on and to use different operations on a single platform. They can create, edit, delete a request and plot them on a map for the users to understand that there’s work going on based on their request.

1) Members of the community can pull up a map of the city with pins showing the work that has been done in the city and request work be done

2) The city can better identify where problem spots are being addressed regularly which can be designated for more significant repairs (like repaving a whole road rather than filling potholes).

On the citizen side of the platform, when a user moves over the pin on the map (or clicks on it, whatever is most appropriate), a label would appear showing what activity has been completed there (pothole fixing, sidewalk easement install, repaving, etc.). It will show the date when the repair occurred, as well as have an area for other comments to be entered by the city. That said, the city needs to have permissions to create these objects as they come in, and they need the data from an excel spreadsheet to be converted so past work will be present on the map as well.

* 1. Road map to the Report

Section 2: Requirement Analysis: This section discusses various requirements of the project, some constraints, and dependencies of the project, the interfaces of the project.

Section 3: Design Procedure: In this section, various design issues regarding the project will be discussed. This comprises the top-level design, database design, and interface design.

Section 4: Functional Testing: This section discusses the testing of the tool and whether all the requirements have been met or not.

Section 6: Conclusions and recommendations.

**2.1.1 Problem Position statement**

|  |  |
| --- | --- |
| Elements | Description |
| For | Department of Public Works |
| Who | Secretary, Supervisor, Citizens of Huntington. |
| The Product Name | Public Works Management System |
| That | **A web-based system that allows the secretaries to create a form with requests from citizens and be able to edit them and delete them and plot them on a map.** |
| Sale Contract Management System Environment | Provide a web-based system to allow users to see the works going on in the department on a map. |

Table 1 Problem Position statement

2.2 Specific Requirements

2.2.1 User Profiles

There are 3 types of users:

2.2.1.1 Secretary

2.2.1.2 Supervisor

2.2.1.3 Citizens of Huntington

2.2.2 Admin Side:

2.2.2.1 Must login to Public Works Management System with their unique username and password.

2.2.2.2 Can log out of the system

2.2.3 Access a dashboard

Administrator must select a division name to view its dashboard.

System will access a dashboard depending on the chosen division.

System will show logged in as, depending on the administrator name.

Add Request

Administrator must select create form button to add a new request.

Administrator will fill the request information.

Administrator must press the submit button to save the request.

System will add the requests, id, date and address to the dashboard list.

Edit Request

Administrator must click the edit button to edit a request.

System will access the form page.

Administrator must click the submit button to save changes.

Assign the done requests

Administrator must click the done button to assign a request as completed.

Print Report

Administrator must click the print button to print the completed requests list.

System must open the print form.

Email Report

Administrator must click the email button to print the completed requests list.

System must open the email form.

Search

Administrator must click at the search bar.

System must show the search result.

View Map

Administrator must click at the view map button.

Systems must access the map and showing the pins for all requests.

Logout

Administrator must click at logout button.

System will logout the user access.

Add Figure 2: User Use Case Diagram

User (Citizens)

View Map

User will access the website.

Sytems must access the map and showing the pins for all requests.

Hyperlinks after normal administrator login

Home

Dashboards

Create Forms

Report

Log Out

2.3 Non-Functional Requirements

2.3.1 Hosting Server:

The server that hosts the system must have a high performance and support mysql for database and Xampp for the web pages.

2.3.2 Response time:

The system must be highly responsive to any request whether to read or write data.

2.3.3 Ease of use:

2.3.3.1 The subsystem must be user-friendly. In most cases, the user must not click more than four clicks to reach what he wants.

2.3.3.2 Easy to use, all age groups can use it without any technical experience.

2.3.4 Quality:

2.3.4.1 The system must be free of errors, easy to maintain, and upgradable.

2.3.5 Security: The system must authenticate and authorize all the system users and reject all unauthorized requests.

2.4 Functional Requirements

2.4.1 Administrator must have a unique username and password to access the website.

2.4.2 Administrator must use PHP MySQL to access the database.

2.5 Use-Case Diagram

