A close up of a sign

Description automatically generated

Papa John’s – Rota System

Product evaluation

Web application development

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# Introduction

This document will investigate various web design applications / frameworks and determine which is most suitable for us to use for the development of the Papa John’s Rota system. The document will address the following topics for consideration.

* Core Functionality – Does the application / framework allow us to meet the high-level requirements defined for the project.
* Responsive Design – Does the application / framework support responsive design? The application should support a Mobile first design intended for access via a smartphone running Android / iOS. But it should also be accessible from any internet connected device running a modern browser.
* Application Hosting / Costs – What are the costs associated with the application / framework being considered.
* Initial cost of development software
* Cost of hosting the website / application
* Any ongoing costs – Storage, concurrent users etc.

## High Level Requirements

The tool chosen for the development of this application will need to support the high-level requirements identified. The key items the tool must support are:

* Mobile friendly – The tool chosen needs to support a mobile optimized layout, the users of the system will be primarily accessing the site via smartphones running either iOS or Android operating systems.
* Login / Password – This site will only be for the use of Papa Johns staff and accessed via the internet. A login / password process will be used to access the sites secure content.
* Users – The tool will need to support a concept of users of the system that have profiles and associated passwords, the system will need to support the creation of new users, removal of users and password management tools (reminder / reset). The system will also need to have a concept of user roles to denote the type of user accessing the system (Manager, Staff).
* Calendar view – view the calendar and display staff currently allocated to shifts / hours.
* Rota management – The system will need the ability for an authorized user to allocate staff to a shift, remove staff from a shift.
* Send alerts – The system will need to be able to send automatic alerts to users to remind them a shift they are allocated to is about to start. The manager will also be able to send a custom alert to staff to notify them of important information.

## Tools for evaluation

We have assed the following tools for consideration in this project.

|  |  |  |
| --- | --- | --- |
| **Tool** | **Website** | **Notes** |
| Wix | [www.wix.com](http://www.wix.com) |  |
| Wordpress | [www.wordpress.com](http://www.wordpress.com) |  |
| Bubble | [www.bubble.io](http://www.bubble.io) |  |
| Manual (Visual studio, Html, Css, Sqlite) | N/A | Hand coded solution |

## Evaluation Matrix

Each of the tools will be scored against the following set of criteria to find the best fit for our project (Included Features in toolset).

### Required Features

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Wix** | **Wordpress** | **Bubble** | **Manual** |
| Mobile Friendly Design Optimizations included | Yes | Yes | Yes | No |
| Create User Accounts | Yes | Yes | Yes | Yes |
| Edit User Accounts | Yes | Yes | Yes | Yes |
| Delete User Accounts | Yes | Yes | Yes | Yes |
| Password management tools | Yes | Yes | Yes | Yes |
| Calendar Functionality | Yes | Yes | Yes | Yes |
| Create Calendar event / appointment | Yes (Paid Addon) | Yes (Paid Addon) | Yes | Yes |
| Edit Calendar event / appointment | Yes (Paid) | Yes (Paid Addon) | Yes | Yes |
| Delete Calendar event / appointment | Yes (Paid) | Yes (Paid Addon) | Yes | Yes |
| Email alerts (Automatic) | Yes | Yes | Yes | Yes |
| Email alerts (Triggered by Manager) | Yes | Yes | Yes | Yes |
| Database Editor | Yes (Paid) | Yes (Paid) | Yes | Yes |

### Editor

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Wix** | **Wordpress** | **Bubble** | **Manual** |
| WYSIWYG interface | Yes | Yes | Yes | Yes |
| Online content editor | Yes | Yes | Yes | No |
| Support Multiple Users | Yes | Yes | Yes (Paid) | Yes |
| Templates | Yes | Yes | No | No |
| Samples / Tutorials | Yes | Yes | Yes | Yes |
| Ease of use | High | Low | Medium | Medium |

### Costs / Plans

For the purposes of this project we are aiming for a low total cost of ownership, the product will be evaluated based on the lowest pricing tier that will meet the functional requirements.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature** | **Wix** | **Wordpress** | **Bubble** | **Manual** |
| Plan | Combo | Personal | Hobby | N/A |
| Cost | £6 per month | £4 per month | Free | £1 per month |
| Free Domain | Yes (1 year) | Yes (1 year) | Yes | No |
| Support | Yes | Yes | Yes | No |
| Storage Space | 3 GB | 6 GB | 2 GB | 10 GB |
| Free themes | Yes | Yes | No | No |
| Design Customization | Yes | Basic | Yes | Yes |

### Evaluation Summary / Scores

Products are scored one point for each supported desired feature and costs are allocated points based on ranking (1 being most expensive).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Wix** | **Wordpress** | **Bubble** | **Manual** |
| Required Features | 12/12 | 12/12 | 12/12 | 11/12 |
| Costs (Ranked) | 1 | 2 | 4 | 3 |
| **Score** | 13 | 14 | 16 | 14 |

## Recommendation

### Bubble

Our Rota website / application required a data first approach as we are primary concerned with the management of the Rota events. Bubble is the best fit for this development as it allows for the easy creation of data driven events and has enough storage and flexibility included within the free version to meet all our requirements. The free versions of both Wix and Wordpress are too limited in the functionality they provide in order to accomplish the functionality we need; both would require upgrading to a premium tier plan to unlock the event management features required. A totally manual solution was also considered building a website from scratch using asp.net, html, css and an sqlite database. Whilst this approach would allow the most flexibility in terms of what can be built, it was felt that the time required to learn all the necessary tools would create an unacceptable risk to the timeline and delivery of the project.