**Software Requirements Specification**

**for**

**Kastle 2.0**

**Version 0.1 approved**

**Prepared by Jose Gonzalez**

**Safa Mahbub**

**Juan Perez**

**Knowledge is Power Program**

**12/1/2017**

# Table of Contents

Table of Contents................................................................................................................... <pg 2>

Revision History.....................................................................................................................<pg 3>

1. Introduction................................................................................................................ <pg 4>
   1. Purpose........................................................................................................... <pg 4>
   2. Intended Audience and Reading Suggestions................................................ <pg 4>
   3. Product Scope................................................................................................ <pg 4>
   4. Definitions, Acronyms, and Abbreviations .................................................. <pg 4>
   5. References......................................................................................................<pg 4>
2. Overall Description.................................................................................................... <pg 5>
   1. Product Perspective........................................................................................ <pg 5>
   2. Product Functions...........................................................................................<pg 5>
   3. User Classes and Characteristics....................................................................<pg 5>
   4. Operating Environment.................................................................................. <pg 6>
   5. Design and Implementation Constraints........................................................ <pg 6>
   6. User Documentation...................................................................................... <pg 6>
   7. Assumptions and Dependencies.................................................................... <pg 6>
   8. Apportioning of Requirements...................................................................... <pg 6>
3. External Interface Requirements............................................................................... <pg 7>
   1. User Interfaces............................................................................................... <pg 7>
   2. Hardware Interfaces....................................................................................... <pg 7>
   3. Software Interfaces........................................................................................ <pg 7>
   4. Communications Interfaces........................................................................... <pg 7>
4. Requirements Specification....................................................................................... <pg 8>
   1. Functional Requirements............................................................................... <pg 9>
   2. External Interface Requirements.................................................................<pg 10>
   3. Logical Database Requirements..................................................................<pg 10>
   4. Design Constraints.......................................................................................<pg 10>
5. Other Nonfunctional Requirements........................................................................ <pg 11>
   1. Performance Requirements..........................................................................<pg 11>
   2. Safety Requirements....................................................................................<pg 11>
   3. Security Requirements.................................................................................<pg 11>
   4. Software Quality Attributes.........................................................................<pg 11>
   5. Business Rules.............................................................................................<pg 11>
6. Other Requirements.................................................................................................<pg 12>

Appendix A: Glossary..........................................................................................................<pg 13>

Appendix B: Analysis Models.............................................................................................<pg 14>

Appendix C: To Be Determined List...................................................................................<pg 15>

# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Updated Information | 02/19/18 | Received a definite wireframe for the web application from Client. | 1.1 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# 1. Introduction

## 

## 1.1 Purpose

This document explains a set of requirements and functions that the Kastle 2.0 website will utilize. Aside from this document another document will be included, the Software Design Document which will give more detail on the implementation and functions of what is described.

## 1.2 Intended Audience and Reading Suggestions

This document is intended for developers, project managers, testers and document writers who wish to read it and be informed on the technology.

## 1.3 Product Scope

The project referred as Kastle 2.0 was brought to us by Knowledge is Power Program of Los Angeles also known as KIPP LA. Kastle 2.0 is a site where the KIPP LA organization will be able to maintain all their data (in the form of a Tableau dashboard) in one website rather than maintaining multiple websites for the different level of users. Added functionality to the site will include comment dashboards, bookmarking dashboards users would like to refer to in the future, and a recent dashboard so users can see the newest data available.

Successful use of the site will reduce the workload an admin will have to do in order to add new dashboards, manage user permissions, improve navigation system, implement a filtered search for dashboards, and utilize a single sign in to access all necessary data (i.e from the website and from the Tableau Private server). It shall also reduce the strain on a user to sign into multiple accounts in order to see the dashboards.

## 1.4 Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| KIPPLA | Knowledge is Power Program of Los Angeles |
| CMS | Content Management System |

## 1.5 References

There are no references in this document.

# 2. Overall Description

## 2.1 Product Perspective

Kastle 2.0 will be built using the Wordpress Content Management System (CMS). We have decided to use the Wordpress CMS because it is the most widely used CMS readily available in the market, there is a small learning curve to use this CMS, and there is a large support community. Wordpress has also being used by another affiliate KIPPLA website, which demonstrates that Wordpress is capable to handle KIPPLA clients needs.

Most of KIPPLA’s data is stored in a program/software called Tableau. Tableau is software that makes it easy to manage and manipulate data, while making the data visually appealing and readable. KIPPLA uses a Tableau Private which is different then Tableau Public in that the user is required to sign in to verify if the user has permission to see the data. Kastle 2.0 will integrate Tableau dashboards by embedding them in the site pages (i.e. iframes).

## 2.2 Product Functions

Functions that the website will provide are as follows.

1. One time sign in to the site and tableau private via Google sign in.
2. A login home page with user information
3. Recent activity tracking
4. Bookmarking dashboards
5. Commenting in dashboards
6. Description within menu options
7. A filtered search page

## 2.3 User Classes and Characteristics

* Admin

An admin will sign in and be able to add new dashboards with tableau iframe links that will allow the selected users picked by the admin to view those dashboards. Admins will be able to edit, delete, and approve publishing dashboards created by other users who have the permission to create dashboards. Admins will also be able to see comments staff leave on dashboards and take input on things they may do to improve the designated dashboard.

* Staff

A staff member will be able to see dashboards with their given permissions. Staff will be able to mark dashboards as bookmarked, so that these dashboards can be easily accessible. Staff will be able to see recent activity that has been done to the site to stay up to date. Staff will also have the ability to leave comments on the dashboards they would like to participate in or have questions about.

## 2.4 Operating Environment

The content of Kastle 2.0 will be stored in a database created by Wordpress. The site will temporarily be hosted on SiteGround because it offers the necessary requirements to run the website and is cost efficient. The site may change hosts once the project has been completed.

## 2.5 Design and Implementation Constraints

The server that the website will be hosted on (SiteGround) will be the hardware and memory for the site and as a result will impose their limitations as well. The limitations of Wordpress (generic plugin and widgets) will also affect the functionality of the software.

## 2.6 User Documentation

User Manual

## 2.7 Assumptions and Dependencies

CMS: Wordpress

Server: SiteGround

Tableau Private will also be used in conjunction with the site because it is the backbone of KIPPLA’s data management.

## 2.8 Apportioning of Requirements

As of now the biggest delay that seems probable is the single sign in. This has been a problem for multiple KIPPLA websites and has not yet been remedied. This gives us insight to see that this will predominantly be the biggest hurdle for the site.

# 

# 3. External Interface Requirements

## 3.1 User Interfaces

The user interface will direct the user to a sign in page. The user will sign in with a Google email/Google sign in option. This will then automatically sign them into their tableau private account allowing them to see the dashboards. The user will then be redirected to their homepage. The homepage will contain user profile information (user's name, position at the school, and school) that they can change, a bookmarked dashboards block, and a recent activity block. The user interface will contain a side menu (located horizontally across the top portion of the site) with categories of dashboards the user can access, a homepage option, and an advanced search page option. The menu categories will be dependent on the level of access of the user. Through this menu the user will be able to select which dashboard in a certain categories they want to view. Users can also favorite a dashboard on this menu. The dashboard page will display intractable tableau dashboard.

## 3.2 Hardware Interfaces

Users will use a monitor and speaker to view the site, dashboards, and videos. Users will also use a mouse and keyboard in order to interact with the site. Site is run by SiteGround.

## 3.3 Software Interfaces

Wordpress 4.9.4

PHP 7.0+ or 5.6

MySQL 5.53+

Apache 2.4+

## 3.4 Communications Interfaces

User will be able to directly email admins of the sites with a comment box on the dashboard pages, which will be done through a plug in “WPForms” on the CMS.

# 4. Requirements Specification

|  |  |
| --- | --- |
| 1.1 | The web application shall allow email/password access to site |
| 1.2 | The web application shall allow Google single sign on |
| 1.3 | The web application shall allow the single sign in to Tableau Private Server |
| 1.4 | The web application shall have multiple levels of access |
| 1.5 | The web application shall have embed Tableau dashboards |
| 1.6 | The web application shall have comment boxes that email admins of the site |
| 1.7 | The web application shall have space for data protocols to be added |
| 1.8 | The web application shall allow the ability to tag dashboards |
| 1.9 | The web application shall allow the ability to favorite a dashboard |
| 1.10 | The web application shall allow icons |
| 1.11 | The web application shall have a menu on the top side |
| 1.11.1 | The menu shall display categories based on user level |
| 1.11.2 | The menu shall display a description of dashboards |
| 1.12 | The web application shall have a search bar |
| 1.12.1 | The search bar shall search by name, tag, favorites, and other specified given by KIPPLA. |
| 1.13 | The web application shall be accessible on laptops, desktops, and mobile devices |
| 1.14 | The web application shall display recently added dashboards |
| 1.15 | The web application shall display recently visited dashboards |

## 4.1 Functional Requirements

|  |  |
| --- | --- |
| 2.1 | The web application shall authorize user login input |
| 2.2 | The web application shall display search results from the users query |

## 4.2 External Interface Requirements

The web application will have a static block at the top of the screen. The top left corner will display KIPPLA’s logo, which if clicked, will redirect the user to their homepage. The top right will display the user name, which when clicked, will display the users level of permission and a menu option to go the user’s favorite page. Underneath the User name will be a search bar and to the right of that will be a link to a Frequently Asked Questions (FAQ) page. At the bottom of this static block, running the width of the page with be a multi-level menu.

The Menu will display all the categories available to the user. If the category is a generalized category with subcategories in it, clicking on a category with a mouse or on a touchscreen if on mobile will display the sub menu in the category. If the menu option chosen is leaf category, clicking on a category with a mouse or on a touchscreen if on mobile will display the dashboards in that category. Users will be to scroll down through all the dashboards. Users will see a short description of each dashboard and will also be able to favorite a dashboard with a button next to the title of the dashboard.

The Dashboard page will display embedded Tableau dashboards in an iframe. There will also be a comment text box on the bottom of the page that a user can write in with a keyboard that will automatically send and email with the contents in the text box to the admins of the site.

Home page will display the user's name, position, and school at the top of the page. Through plugins the homepage will also display links to recently added dashboards by the admins and recently visited dashboards that a user can click or tap on to visit that page.

## 4.3 Logical Database Requirements

## All database content is managed by the CMS.

## 4.4 Design Constraints SiteGround will be will be the main limitation of the site. The specifications of the server will determine the amount of load the site can take before it becomes unusable. The server will also determine the speed pages will be able to load.

# Wordpress, along with added plugins and templates, will determine the functionality of the site.

# 5. Other Nonfunctional Requirements

## 5.1 Performance Requirements

KASTLE 2.0 is hosted by SiteGround, which offers a variety of hosting options, each with their own different performances and features. We are currently using a tree trial for a year, which will eventually be shifted to SiteGround’s “StartUp” package. This will offer ten gigabytes of web space and be suitable for ten thousand visits monthly.

## 5.2 Safety Requirements

We will use Google sign on and Google authentication in order to keep user information safe. When a user has been verified through Google, Wordpress will then allocate user’s permission levels to display to appropriate information. In addition to Google’s and Wordpress’s safety protocols, viewers will not have the option to create an account. Only KASTLE 2.0 can add users based on new hires and job position changes that will be given from the admin.

## 5.3 Security Requirements

We will use Google sign on and Google authentication in order to keep user information safe. When a user has been verified through Google, Wordpress will then allocate user’s permission levels to display to appropriate information. In addition to Google’s and Wordpress’s safety protocols, viewers will not have the option to create an account. Only KASTLE 2.0 can add users based on new hires and job position changes that will be given from the admin.

## 5.4 Software Quality Attributes

Site should have a dynamic template so it can be accessed on any type of device (desktop, laptop, tablet, and mobile). The main job of the website is to act as an intermediary between users, tableau dashboards, and the data collected from KIPPLA data analytics team. The theme and templates used for the website are built strictly to keep in mind this goal and to visually display this information (Tableau dashboards). For this reasoning we ensure each page is wide enough to display an 1100X900 iframe, which will hold the Tableau dashboard.

## 5.5 Business Rules

# There will be multiple user levels so higher level users can have access to pages that lower level users should not have access to.

# 6. Other Requirements

# Appendix A: Glossary

# Appendix B: Analysis Models

# Appendix C: To Be Determined List