

**Youth For Restoration  
Website**

Software Requirement Specification

**Team Members**

**Frederico Castro, Gabriel Miranda,**

**Sethu Sundaramoorthy, Cyril Barthelet,**

**Ivan Fernandes, Zhenkang Yao**

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1. Introduction
   1. Purpose

The purpose of this document is to provide the specifications and requirements for developing a website for a non-profit organization named *Youth for Restoration*, yet to be published at the domain [*http://www.youthforrestoration.org*](http://www.youthforrestoration.org).

Additionally, this document intends to describe the technical aspects involved in the development of website such as the features, hardware/software interfaces, and design limitations, testing methodology for both the public and the administrator sections.

This document is destined to the system administrators and developers.

* 1. Scope

The scope of the Youth for Restoration website is to provide a consistent and high quality user experience for the visitors and for the administrators.

The system will consist of two main sections:

***Public website:*** intended to visits from any person with internet access;

***Administrator Panel:*** Private area where users may manage content from sections as blog, news and events schedule.

Since the potential visitors of the website may be very diverse in terms of their age and internet experience, the public pages of the website will be tailored to provide a clear and user-friendly environment. The primary objective of the design will be to promote the organization’s activities and to encourage the visitors to get involved with the cause.

The administration section will provide a sophisticated environment for the system administrators to manage users, produce content and to update the website information.

The project will also include the design of a vector logo for the organization.

* 1. Definitions, Acronyms and Abbreviations

|  |  |
| --- | --- |
| **Admin Panel** | Administration panel - Private part of the system that requires login authentication. |
| **Administrator** | Any user with highest level of authorization, which provides ability to manage all the operations of the Admin Panel, such as registering new users and deleting existing ones. |
| **Author** | Person submitting an article to the blog. |
| **Client** | Web browser in the user's machine or plug-ins and helper applications that enhance the browser to support special services from the website. |
| **CSS** | Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. |
| **Database** | Collection of all the information monitored by this system. |
| **Field** | A cell within a form. |
| **HTML (Hyper Text Markup Language)** | Markup language used to create web pages. |
| **HTTP - Hyper Text Transfer Protocol** | Transaction oriented client/ server protocol between a web browser and a web server. |
| **OS - Operating System** | Software that controls the operation of a computer and directs the processing of programs (as by assigning storage space in memory and controlling input and output functions). |
| **Product** | The website described by this document. |
| **Server or Web Server** | A computer that runs a Website. Using the HTTP protocol, the Web server delivers Web pages to browsers as well as other data files to Web-based applications. |
| **Session** | The session of activity that a user with a unique IP address spends on a Web site during a specified period of time. |
| **Stakeholder** | Any person with an interest in the project who is not a developer. |
| **System** | The whole application that involves the website. |
| **TBD** | (Abrev.) To be determined. |
| **User** | Anyone who is registered in the database that has login and ability to manage content. |
| **Visitor** | Anyone visiting the site. |
| **Widget** | An application or a component of an interface, which enables a user to perform a function or access a service. |

Table 1.1 - Definitions, Acronyms and Abbreviations.

* 1. Technologies to be used

The following table contains the list of technologies which will be used in the development of the website.

|  |  |
| --- | --- |
| **Technology** | **Description** |
| **HTML5** | Markup language used to create web pages. |
| **CSS3** | Style sheet language used for describing the look and formatting of a document written in a markup language. |
| **JavaScript** | Dynamic computer programming language used to allow client-side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. |
| **JQuery** | Cross-platform JavaScript library designed to simplify the client-side scripting of HTML. |
| **PHP** | Server-side scripting language designed for web development. |

Table 1.2 – Technologies to be used.

* 1. References

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    1. Overview

The subsequent section of this document brings to main sections, namely Overall Description and Specific Requirements. The former section states the general factors that affect the system and its requirements. The latter section is intended for the developers and it describes the functionalities in detailed technical terms.

1. Overall description

This section intends to describe the general factors that affect the system and its requirements in order to provide a background to the specific requirements brought by section 3.

* 1. Product perspective

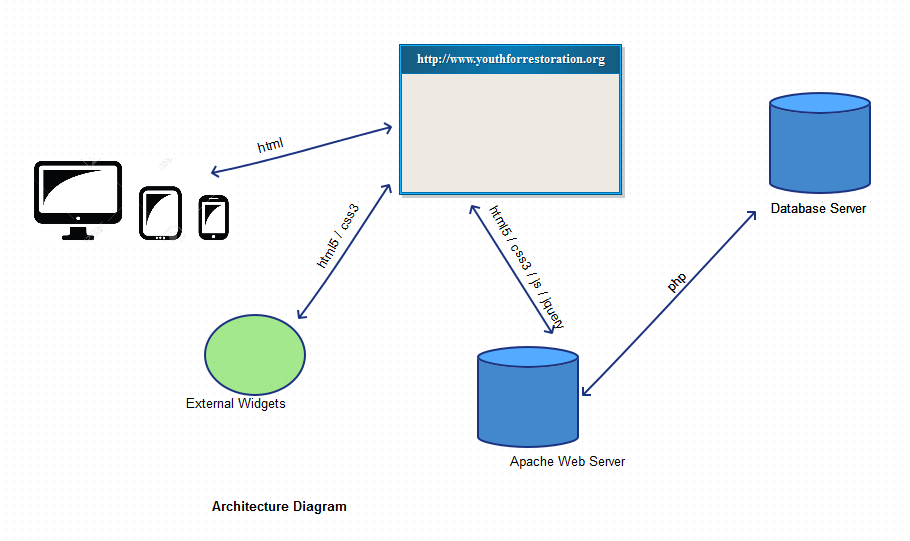


Figure 1. - Product Perspective.

* + 1. Software Interfaces
* Client on Internet: Web browser compatible with HTML5 for better experience, all Operating Systems;
* Web Server: TBD;
* Database Server: TBD;
* Development frontend:
  + HTML5;
  + CSS3;
  + JavaScript;
  + Jquery.
* Development backend
  + PHP.

**Supported browsers:**

|  |  |  |
| --- | --- | --- |
| **Minimum** | **Recommended** | **Full Support List** |
| Chrome (current version) | Chrome (current version) | Chrome (current version) |
| Internet Explorer 8 | Internet Explorer 11 | Internet Explorer 8/9/10/11 |
| Firefox (current version) | Firefox (current version) | Firefox (current version) |
| Safari 5 | Safari 8 | Safari 5/6/7/8 |

Table 2.1 - Supported Browsers.

* + 1. Hardware Interfaces
* Device with Internet connection.
* Devices supported: Computers, Phones and Tablets with browser application.
  1. Product functions

This section presents a summary of the major functions that the software will perform.

The *Youth for Restoration* website consists of two main interfaces, the public website and the Admin Panel.

* + - 1. **Use Case:** View home page.

**Brief Description:** Visitor types in [www.youthforrestoration.org](http://www.youthforrestoration.org) on his/her web browser, which then takes them to the home page of the website.

* + - 1. **Use Case:** Send message to Youth of Restoration.

**Brief Description:** Visitor clicks the contact link and is directed to the contact page. At this page, a visitor enters valid data on the input fields and a message is sent to the organization email.

* + - 1. **Use Case:** View Facebook widget.

**Brief Description:** Visitor enters the home page and is able to view the Facebook widget.

* + - 1. **Use Case:** View Photo Slider on the home page.

**Brief Description:** Visitor enters the home page and shall see a photo slider.

* + - 1. **Use Case:** Become a volunteer.

**Brief Description:** The visitor enters Get Involved link and is able to send a form with his/her information to become a volunteer.

* + - 1. **Use Case:** Make donation.

**Brief Description:** The user enters the donation link and is able to see the address to send a check.

**Admin Panel: Main Use Cases**

* + - 1. **Use Case:** Authorized access to Admin mode.

**Brief Description:** The administrator enters his/her credentials to access the admin panel of the website which allows them higher privileges on the system. Any unauthorized user/invalid credentials should be denied access to the admin mode.

* + - 1. **Use Case:** Manage Users.

**Brief Description:** Logged user with admin privileges enters the user section and is able to view, register, update and delete users.

* + - 1. **Use Case:**  Manage Sponsors.

**Brief Description:** Logged user enters the user section and is able to view, register, update and delete sponsors.

* + - 1. **Use Case:**  Manage Events.

**Brief Description:** Logged user enters the user section and is able to view, register, update and delete events on the schedule.

* + - 1. **Use Case:**  Manage News.

**Brief Description:** Logged user enters the user section and is able to view, register, update and delete news.

* + - 1. **Use Case:**  Manage Blog Posts.

**Brief Description:** Logged user enters the user section and is able to view, register, update and delete blog posts.

* + - 1. **Use Case:**  Manage Volunteers.

**Brief Description:** Logged user enters the user section and is able to view, register, update and delete volunteers.

**Public website**

Public web pages with content about the organization as follows:

* Home;
* About us;
* Get Involved;
* Contact;
* Blog;
* News;
* Donation;
* Become a sponsor.

**Admin panel**

* Administration actions (View, Register, Edit, Delete) for:
  + Users;
  + Sponsors;
  + Blog posts;
  + News;
  + Events on calendar.

The public pages section will have the following features:

* Photo slider for the home page;
* General search field for blog posts, news and events;
* Social media integration
  + Social media widgets;
  + Share button for posts and news.
  1. User characteristics

The baseline functionality of the proposed website is intended for users who are familiar with using basic Internet skills such as opening a web browser. However, the admin mode of the proposed website requires users with at least high school level education or some technical skills involving administering a website.

* 1. Constraints

1. Regulatory policies - The proposed website for Youth For Restoration shall adhere to all applicable State and Federal regulations in accordance with the 501(c) (3) non-profit status.
2. Interfaces to other applications - Certain features of the website at times could be impacted due to its reliability on interfacing with other applications such as social media, Payment processing sites etc.
3. Control functions - The contents of the website shall be administered by an authorized user with administrator privileges.
   1. Assumptions and dependencies

Certain advanced functionalities in the Administration mode of the proposed website shall be developed under the assumption that there exists a administrator capable of manage it. Any changes to this condition shall require changes to the existing document.

1. Specific requirements

This section is about detailed requirements and it is intended to support web developers.

* 1. External interfaces

The software system of the Youth For Restoration website primarily resides on the Apache Web server. The system interfaces with the database server using php programming language to store and retrieve data, links with external widgets such as social media and payment related applications interface using JavaScript. Finally, it also interfaces with the client web browser using Hyper Text Transfer Protocol on any network enabled windows or Mac client computers.

* 1. Functions

In this sub-section the functionalities that the website will offer are described in detail.

* + 1. Main Functions

**Public mode:**

1. The website shall be accessible using most commercial browsers.
2. The website shall display the home page by default upon entry by the user.
3. The website shall prominently display the widgets for social media and payment related external interfaces.
4. The website shall have a drop-down menu option to choose additional features.

**Admin mode:**

1. The website shall display a “The website is currently down for maintenance. Please check back shortly.” while undergoing upgrades.
2. The website shall allow an authorized user with higher privileges to edit or delete the contents of the website.
   * 1. Use Cases

*[This is the template for complete uses cases on the next version of this document]*

**1. *Use Case:*** TBD

***Brief Description:*** TBD

***Priority:*** TBD

***Trigger:*** TBD

***Precondition:*** TBD

***Basic Path:*** TBD

***Alternate Path:*** TBD

***Post condition:*** TBD

***Exception Path:*** TBD

* 1. Security Requirements

1. The Admin Panel access will require login authentication by user email and password. Each email will be unique, therefore there may not exist two users with the same email.
2. For the security of the passwords storage on the database, the system will provide Advanced Encryption Standard (AES) encryption.
3. The system shall not allow access if any or both inputs, namely email and password, are incorrect.
4. The login session should logout the user in case of inactivity for 30 minutes. If the user comes back to the site within that time period, it is still considered one user session because any number of visits within those 30 minutes will only count as one session. If the user returns to the Admin Panel after the allotted time period has expired, then it is counted as a separate user session.
5. If the user eventually forgets his password, the system will provide a link for a password recovery. After the input of the user email, if it is registered on the system’s database, the system will automatically send an email with a link for password recovery.
   1. Performance requirements
6. The website shall be available and accessible to users at all times with the exception of any scheduled maintenance.
7. The ideal response time of the proposed website shall up to 0.1 second. The acceptable response rate for most user functions on the website shall be between 0.1 to 1 second.
8. The website shall safely and securely store any user data if applicable.
   1. Logical database requirements

The database will store the various contents of the website, such as users' accounts, blog posts, events, contact information. The library used will be <SQLite OR MySQL>.

* + 1. Data entities and their relationships

|  |  |  |
| --- | --- | --- |
| **Data** | **Attributes** | **Use** |
| **User's account** | * Name * Email * Privileges | This data is used to store information about the users and administrators of the website. |
| **Blog post** | * Title * Subtitle * Author * Content | Data that stores all the data related to the blog posts. |
| **Sponsor** | * Name of the company * Company logo * Contact * Description * Date of entry | This data stores the sponsors' information to be presented in the website. |
| **Event** | * Title * Subtitle * Location * Date * Description * Sponsors | This data stores all previous and next events of the organization. |

3.1 - Data Entities

* 1. Design constraints

There are certain limitations that should be considered during the development of the Youth For Restoration website.

1. The proposed website should be scalable to allow services to increased number of users. With the constant transformation of social media and other technologies, the embedding of external applications should be adaptable.
2. Decision has to be made working with the client whether to plan to host the website locally on client hardware or on a third party commercial system. If the decision made is to host locally then, the reliability and hardware/software maintenance factors should be considered.