# Proposal for HOOF Information System – Inception Specifications

Specter Designs

**Introduction**

Specter Designs is a group consisting of University of Louisville Computer Information System Students. The team on the project consists of developers, designers, database architects, and a project manager. Our team has experience both in the classroom and outside of it in design and working with organizational systems. We believe this experience gives us an edge in designing a system that will meet HOOFs needs.

Our team consists of six members located locally in the Louisville area. We are familiar with the city and thus believe this project presents an opportunity to work with giving back to our community.

Point of contact: For any questions about any material enclosed in this specification or otherwise, contact Kyle Casson at kacass07@louisville.edu.

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## System Request

Project Sponsor: Suzanne Meeks, board member of Horses Offering Opportunities for the Future (further referred to as HOOF) and Dr. Robert Barker, CIS Department Chair

Business Need: The project exists to manage the information HOOF collects and to advertise more and gather more donations and volunteers through the website. The system also needs to hold information on program participants to allow tracking of them outside the program.

Business Requirements: On HOOF’s site, users will be given information on how to volunteer and several options for donating to the charity. The Information System will allow versatility in how HOOF uses the data they have. Specific requirements are outlined below:

* Capture and store information on the youths involved
* Provide anywhere and anytime access to reports, information, and other sources needed by the volunteers of HOOF.
* Segment information as needed such that participant info is securely stored.
* Offer a variety of ways to donate to offer convenience to donors.
* Offer event calendars and an easy way to update them for public knowledge of events.

Business Value: We expect the implementation of this system will be of a great value to HOOF. It will significantly reduce risks to business operations, and increase revenues with the increased options to donate. Volunteers will have smaller time obligations, making the organization more attractive to give time to. Events will be more well-advertised, bringing revenue and increased attendance. Mostly conservative estimates for the expected results of implementing systems to rectify these issues are below:

* Individual donations should increase by 20%, which correlates to about $550, with online options making the process significantly easier for the end donor.
* We expect to increase Grants by a conservative estimate of 20%, about $3,600 by halving the time to write grants.
* Proper Social Medial outreach could bring in another 10% conservative growth in individual donations, about $225.
* Expected risks for data are nearly eliminated, with the centralization and backup of data. This avoids costs that can be in the dozens of man hours to recover or recreate the needed information.
* Volunteers required time contribution should fall by at least 10%, since data entry will be more easily performed, and that less go between will be needed to access any information.
* Event attendance should increase by 10%, since these will be more broadcast on the web, making more potential donors aware of them. In turn, this should proportionally increase the revenue these events will bring in (around another 10%).

Special Issues or Constraints: With the large number of personal devices at HOOF, the information system must be versatile and widely compatible. HOOF’s grant only covers the upfront costs as well, so operating costs for any implemented system will need to be minimized. Lastly, HOOF members use QuickBooks for accounting, and would prefer if this software is compatible with the system setup.

## Vision Document

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| <29/Jan/18> | <1.0> | Vision Document | Nicholas Goodridge |
| <19/Feb/18> | <2.0> | Vision Document - Revised | Mason Wuest |
| <20/Feb/18> | <2.1> | Added Feasibility Note | Kyle Casson |
|  |  |  |  |

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**Vision (Small Project)**

### Introduction

    The purpose of this document is to collect, analyze, and define high-level needs and features of the HOOF KY. It focuses on the capabilities needed by the stakeholders and the target users, and **why** these needs exist. The details of how the HOOF KY fulfills these needs are detailed in the use-case and supplementary specifications.

#### References

* HOOF KY strategic assessments provided by Doctor Barker.

### Positioning

#### Problem Statement

|  |  |  |
| --- | --- | --- |
| The problem of |  | HOOF KY not having a centralized Database to backup and share data |
| affects |  | The board members of HOOF KY |
| the impact of which is |  | Difficulty of communication within the company, low data security, and poor tracking of donors, volunteers and the troubled youth they are helping |
| a successful solution would be |  | to create a website with a database that the board members could use store all company data that every appropriate member has access to which would help maintain data accuracy and security. |

#### Product Position Statement

|  |  |
| --- | --- |
| For | the board members of HOOF KY. |
| Who | have data spread through several personal computers and difficulty communicating. |
| The Database | is a software application. |
| That | will centralize the specified data. |
| Unlike | storing the data on personal devices in which the owner is the only one who will have access. |
| Our product | will centralize the data so that every board member can access the data at any time and changes to the data will be seen by all members. |

### Stakeholder and User Descriptions

    The stakeholders in this project would include the board members of HOOF KY, the troubled youth they help every year, and the donators who show a regular interest in the organizations.  This project will also affect the average user who is just curious about the organization or looking to donate either now or in the future.  The Board Members of HOOF KY can adequately represent the users as they rely heavily (if not entirely) on donations from people and the help of volunteers to keep the organization running.  The key problems perceived by the HOOF KY why is the lack of a fully functioning website, and there is no centralized data storage within the company.  Without a fully functioning website, the organizations outreach is severely limited, for example, a person interested may search for HOOF KY and find the current website but then be turned away by the disorganization and incompleteness of the website.  The lack of centralized storage also creates a lot of disorganization as all organization information/data is stored on personal devices and is backed up only if the device owner chooses to do so.  If one-member needs information/data that they don’t currently have, they must first track down the owner of the data, ensure the data they have is up to date and accurate and request it be sent to them.

#### Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| Board Members of HOOF KY | The board members of HOOF KY would the primary users of the new systems that have been proposed | This stakeholder would be responsible for this project’s funding, monitoring progress and providing feedback.  As they will be the primary user of the final product, their input and feedback will be very important when trying to ensure they’ve received a satisfactory product that they know how to use and maintain. |

#### User Summary

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| Potential Supporters | They represent the demand for a fully functional website as one of the primary users | They will be using the website to find information about the organization, to contact the organization as well as donate to the organization. | Self |
| Troubled youth looking for help | They represent the demand for a fully functional website and the organization itself | They will use the website to learn more about the organization and how they can receive/sign-up for help if they need it. | Self |
| Data Keepers for HOOF KY | They represent the demand for a centralized database | They will use a centralized database to store and backup all data pertaining to the company so that everyone who needs access to said data can access it from any device given access to the database and the data will be up to date and accurate | Board Members of HOOF KY |

#### User Environment

The users will be able to access their new specialized system remotely and locally. Remote access will allow for data to be read/written wirelessly. This being a primarily wireless system, housed centrally within the organization of HOOF KY, will allow for a user to improve efficiency as well as access time for sensitive data. Multiple mobile platforms will be supported and will allow for the primary users/ stakeholders to access/archive HOOF KY’s data without having just one type of device supported.

#### Summary of Key Stakeholder or User Needs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** |
| Secure Remote Access | High | Management of private information | None | Manage access by using a third-party software service to allow users to keep accounts and limit access to unauthorized users |
| Easy to Use | Moderate | Ability to provide the user with easy navigation and preventative maintenance technology | None | Provide a friendly UI and guided navigation in applications regardless of wireless device configuration that is currently in use. |
| Responsive | High | Rely on a technology link for fast response times for user access | None | Contact a third-party provider for hosting purposes to ensure fast/prompt access times whether it be server based or local access |
| Database Configuration | High | Can construct a centralized location for data to be managed and accessed | None | Design and implement a centralized system to allow remote/ local access to users to HOOF KY users as well as Board Members to keep track of donations, auction attendees, and individuals attending their programs. |
| Scalable | Moderate | None | None | Allow a great number of users to access the new hardware/ software and provide a smooth upgradable access for end users. Can be managed with a server based hardware and software. |
| Webpage | High | The current webpage is not up to the standards of a competitor website. | None | A complete redesign of the current web page to allow for visitors to adequately donate and access contact information. This will allow the board members of HOOF KY to manage finances and volunteer information more smoothly. |
| Backend Technology | High | Non-existent in current I.T. analysis | None | Install a server-based system to manage heavy traffic flow as well as data received from the website such as volunteer information. |

#### Alternatives and Competition

* + 1. Third Party designing and implementing front end/ back end technology
    2. HOOF KY designing and implementing its own website and keeping current data access methods
    3. Keep the current layout and website layout

### Product Overview

Assumptions and Dependencies

HOOF KY will be developed using the results of a cost benefit analysis; which allows their organization to be improved upon. Will be primarily developed using this approach and will adhere to this model mentioned in the system request document as well as the section 3 of the Vision document.

### Product Features

* 1. Allow remote user access
  2. See donor information – name, address, amount
  3. Manage auction information – name, amount, item purchased
  4. Manage primary user and stakeholder information – name, account, access times
  5. Manage attendee information – name, age, school, organization location
  6. Monitor server health – information on traffic and hosting services
  7. Classify users as different levels of access
  8. Manage back end services from webpage – volunteer information and donor information
  9. Manage content displayed on webpage
  10. View the status of the web traffic
  11. Schedule events and allow for them to be published to users and webpage visitors
  12. Campaign management – donations and events

### Other Product Requirements

* 1. Security for the HOOF KY organization includes authentication, data integrity, and data privacy.
  2. Authentication of the user is by username and password.
  3. Members of the organization can monitor and change the state of the information system.
  4. Virtual access and data entry should be encrypted for privacy concerns.
  5. Ease of use (especially safety related features) can be a concern due to security concerns
  6. Responsiveness is important for quick user requests or changes.
  7. Capacity -  Maximum number of users to visit the website or access internal centralized databases

### Appendix A - Feasibility

**Narrative:** This attached file represents our project feasibility analysis plan, where the major items that will make up our feasibility study are laid out.

**Feasibility Analysis**

The feasibility for this project will consist of several major elements. The technological, economical, and organizational. Each of these will have to be analyzed related to HOOF in a variety of ways.

Technological feasibility will mostly be measured in compatibility. Because our plan is designed around a cloud-based approach, it should be easily incorporable into HOOF’s existing system relying on user devices. Maintenance should also not be an issue for HOOF’s lack of technical staff since all server maintenance will be in the hands of the cloud provider.

The economic analysis was conducted via net present value to get a preliminary return on investment for the project. Our estimates were s 56% ROI based on our expected costs for the system. The chart of costs is attached to this document, outlining where the costs are going and the point at which break-even will be achieved for the project.

The organizational analysis around how easy this would be to implement showed that the system would not be a significant overhaul but still may require training for board members and volunteers. The shift from the spread documents and paper based keeping of before is being completely digitized, so those in charge of data keeping will need retrained on how to use the new system. But after this training, there should be no impact on the organizational flow.

Based on this analysis, we feel this project should represent a reasonable investment for HOOF, as within all 3 feasibility scopes the project will interface well with the HOOF organization. They will benefit financially, the technology will fit their organizational needs, and there will be little organizational disruption in the implementation of this system.

Narrative: This represents the Net Present Value Analysis Previously Mentioned, with all values rounded to the tens place for readability, and negative values emphasized in red.



## Process Models

Process Model Narrative: These models represent 2 essential organizational process at HOOF. They show how the process currently is at HOOF, and how it will function after our improvements. The diagram represents a flow from top to bottom through the process. These are developed from system requirements we have outlined and our vision for the system as outlined in the vision document.

Narrative: This diagram represents the old business flow of the old fundraising process.



Narrative: This diagram represents the steps involved in the former business process of collecting donations.

Narrative: This diagram represents the new model for event organization. No new processes are added, existing ones are updated with capability by the system.

Narrative: This diagram represents the new model for the process of collecting donations. This diagram has functions related to donations that the system will perform added.

## System Requirements

**System Requirements - Narrative**

This section explains requirements that the system should be able to handle, based on the business needs of the organization. They are drawn from identified processes and areas of focus for the information system. Requirements have been divided into several categories and subcategories. The requirements are the basis for the use cases of the system.

**Functional Requirements:**

1. **Manage Donor Information**
   1. System will allow donors to enter, modify, and delete personal information
   2. System will ask donor if they want to create an account
   3. System will allow donors to set donation amount and frequency (I.E. one time, monthly, etc.)
   4. System will allow donor to create scheduled donations
   5. System will allow user to cancel donations
   6. System will produce a receipt for successful donations
   7. System will send the donor automated thank you email with receipt attached
   8. System will offer the donor sign up for the newsletter
   9. System will encourage the donor to follow HOOF KY on social media
   10. System will allow Donor to register, modify, or delete an Item for Auction
   11. System will allow the volunteer to unsubscribe to the newsletter
2. **Manage Volunteer Information**
   1. System will allow Volunteers to enter, modify and delete personal information
   2. System will ask volunteer if they want to create an account
   3. System will allow volunteer to modify account and personal information
   4. System will all volunteer delete account or personal information
   5. System will match the volunteer to events that works with volunteer’s availability
   6. System will Notify the volunteer via email of the events they were matched to, contact info for the event coordinator, and thank them for volunteering
   7. System will allow volunteers to log their volunteer hours
   8. System will offer the volunteer sign up for the newsletter
   9. System will encourage Volunteer to follow HOOF KY on Social media
   10. System will allow the volunteer to unsubscribe to the newsletter
3. **Camper information**
   1. System will allow Camper or legal guardian to enter, modify and delete personal information
   2. System will allow Camper to sign up for a summer camp or cancel
4. **Board Member information**
   1. System will allow board members to enter personal information and board position (I.E. President, accountant, etc.)
   2. System will allow board members to create/upload files and documents
   3. System will allow authorized board to modify information
   4. System will allow board members to delete information
5. **Events information**
   1. System will allow Board Member to create Events
   2. System will allow Board Members to modify Events
   3. System will allow Board Members to delete Events
   4. System will allow guest to register for events

**Non-Functional Requirements:**

1. **Information Management:**
   1. System will store Donor info into the Donor Database
   2. System will store Volunteer info into the volunteer database
   3. System will store Camper info in the camper database
   4. System will store Board Member info into the Board Members database
   5. System will track and store organization files and documents kept by each board member

## List of Use Cases, Risk Analysis, and Trace Matrix

**Use Cases - Narrative**

Use Cases represent situations a user might find themselves in, situations that the information system will need to be able to handle, elaborating the system requirements as translated to a user point of view. The use case explains the primary actor in a case and a brief description of what areas of the system the case will explain. Once the cases are performed more in depth, they will explain paths that the system is prepared to handle for each request and other users involved in the case.

**Risk Analysis**

Risks for the various use cases have been assigned. The risk level has been assigned based on   the following criteria.

High Risk: Any Use case where the organization’s donation income may be affected or the planning of organizational functions will be seriously interrupted.

Low Risk: A Use Case where the organization will not be interrupted with serious downtime and where income will not be impacted by the loss.

Other risks have been assessed, like the above criteria. They have been assigned high risk for loss of income and organizational time, and low risk if not.

The first other risk would be service provider downtime. This is a high risk because website and database downtime can seriously impact organizational income and operations.

A second risk for the organization would be the use of personal devices by employees. This is an area of low risk, as the central system will keep income coming in and the new central file system will keep files from now being lost.

Risk will be addressed going forward into the elaboration phase by focusing on areas identified as high risk. The use cases will be drawn out to completely show the functions involved in the high-risk case. These high-risk functions are heavily incorporated when establishing the system architecture to ensure the risk is minimized.

**Use Cases:**

**1. Find Information**

**Primary Actor: Online Web Visitor**

**Brief Description: This case will describe how someone seeking information on HOOF will navigate the website to obtain the information they want.**

**Risk:  High**

**2. Register Auction Item**

**Primary Actor: Item Donor**

**Brief Description: This case will describe how a person interesting in donating an item to HOOF’s silent auction will register their item with HOOF.**

**Risk:  High**

**3. Event Attendee**

**Primary Actor: Donor/supporter**

**Brief Description: This case describes how those who wish to attend auctions will register**

**Risk:  High**

**4. Write Grant**

**Primary Actor: HOOF Board member**

**Brief Description: describes how a HOOF board member will be able to use the system to pull the needed information to write a grant.**

**Risk:  High**

**5. Organize Event**

**Primary Actor: HOOF Board member**

**Brief Description:** Describes how the HOOF board will use the system to plan new events and integrate them into the calendar.

**Risk Level: High**

**6. Delete Event**

**Primary Actor:  HOOF Board Member**

**Brief Description:  Describes how the HOOF board will use the system to cancel events.**

**Risk Level: High**

**7. Modify Event**

**Primary Actor:  HOOF Board Member**

**Brief Description:  Describes how the HOOF board will modify planned events and update calendars accordingly.**

**Risk Level: High**

**8. Organizational Donation**

**Primary Actor: Organizational Representative**

**Brief Description: Describes how the representative of an organization looking to donate to HOOF will be able to contact them and arrange a donation.**

**Risk Level: High**

9. Attend Event

Primary Actor: Charity Event Attendee

Brief Description: Describes how any person attending a HOOF fundraiser event will be added to the system, and the branching paths for donating or not.

Risk Level: Low

10.  Log Work

Primary Actor: HOOF Volunteer

Brief Description: Describes how a HOOF volunteer will be able to log the actions and time they worked at an event or on a project.

Risk Level: Low

11.  Delete Work

Primary Actor:  HOOF Volunteer

Brief Description:  Describes how a HOOF Volunteer will be able notify that they need to delete hours from the Work Log.

Risk Level: Low

12.  Modify Work

Primary Actor:  HOOF Volunteer

Brief Description:  Describes how a HOOF Volunteer will be able to modify the time they worked at an event or a project.

Risk Level: Low

13.  Store User info

Primary Actor: System

Brief Description: Describes how the system will add and store the donors’ info

Risk Level: Low

14.  Delete User Info

Primary Actor:  System

Brief Description:  Describes how the system will delete the donors’ info.

Risk Level: Low

15. Modify User Info

Primary Actor:  System

Brief Description:  Describes how the system will modify the donors’ info.

Risk Level: Low

16.  System Stores and tracks

Primary Actor: System

Brief Description: Describes how the system will add, store, and track all organization files

Risk Level: Low

17.  Delete System Stores

Primary Actor:  System

Brief Description:  Describes how the system will delete certain organization files

Risk:  Low

18.  Modify System Stores

Primary Actor:  System

Brief Description:  Describes how the system will modify certain organization files

Risk:  Low

19.  User Enters Data

Primary Actor: Donor

Brief Description: Describes how donors will enter their personal information

Risk Level:  Low

**20.  User Deletes Data**

**Primary Actor:  Donor**

**Brief Description:  Describes how donors will delete their personal information**

**Risk Level:  High**

**21.  User Modifies Data**

**Primary Actor:  Donor**

**Brief Description:  Describes how donors will modify their personal information**

**Risk Level:  High**

22.  User creates account

Primary Actor: Donor

Brief Description: Describes how donor will create an account in the system

Risk Level: Low

**23.  Donor makes donation**

**Primary Actor: Donor**

**Brief Description: Describes how donor will donate money and the frequency in which they donate**

**Risk Level: High**

**24.  Donor Schedules Donation**

**Primary Actor: Donor**

**Brief Description: Describes how a donor will schedule donations in the future**

**Risk Level: High**

**25.  Donor cancels donation**

**Primary Actor:    Donor**

**Brief Description: Describes how donor will cancel scheduled or recurring donation**

**Risk Level:  High**

26.  Donor Receives Donation Receipt

Primary Actor: Donor

Brief Description: Describes how the donor receives receipts for their donation

Risk Level: Low

27.  Donor receives thank you

Primary Actor: Donor

Brief Description: Describes how a donor will receive a thank you for their donation

Risk Level: Low

28.  User signs up for newsletter

Primary Actor: Donor

Brief Description: Describes how the donor will sign up for the newsletter

Risk Level: Low

29.  User unsubscribes from newsletter

Primary Actor:  Donor

Brief Descriptions:  Describes how the donor will unsubscribe from the newsletter.

Risk Level:  Low

30.  User follow HOOF KY on social media

Primary Actor: Donor

Brief Description: Describes how donor will follow HOOF KY on Social media

Risk Level: Low

31.  Volunteer Modifies Data

Primary Actor: Volunteer

Brief Description: Describes how Volunteer will modify personal data

Risk Level: Low

32.  Volunteer Deletes Data

Primary Actor: Volunteer

Brief Description: Describes how Volunteers will delete personal data

Risk Level: Low

33.  Volunteer is Assigned to event

Primary Actor: Volunteer

Brief Description: Describes how the Volunteer will be assigned to an event

Risk Level: Low

34.  Volunteer is reassigned to event

Primary Actor:  Volunteer

Brief Description:  Describes how the Volunteer will be reassigned to another event

Risk:  Low

35.  Volunteer is dropped from event

Primary Actor:  Volunteer

Brief Description:  Describes how the Volunteer will be dropped from an event

Risk:  Low

36.  Volunteer receives confirmation

Primary Actor: Volunteer

Brief Description: Describes how the volunteer will receive volunteer confirmation, contact info, and thanks for volunteering

Risk Level:  Low

37.  Volunteer logs hours

Primary Actor: Volunteer

Brief Description: Describes how Volunteers will log their Volunteer hours

Risk Level: Low

38.  Volunteer deletes log hours

Primary Actor:  Volunteer

Brief Description:  Describes how Volunteers will delete Volunteer hours

Risk:  Low

39.  Volunteer modifies log hours

Primary Actor:  Volunteer

Brief Description:  Describes how Volunteers will modify their Volunteer hours

Risk:  Low

40.  Camper Signs up

Primary Actor: Camper

Brief Description: Describes how a camper will sign up for a summer camp

Risk Level:  Low

**41.  Camper cancels camp event**

**Primary Actor:  Camper**

**Brief Description:  Describes what steps a camper will take to cancel their summer camp event**

**Risk:  High**

42.  Board member creates/uploads

Primary Actor: Board Member

Brief Description: Describes how Board Member will create or upload organization files

Risk Level: Low

43.  Board Members Modify Data

Primary Actor: Board Member

Brief Description: Describes how Board Members will modify data

Risk Level: Low

44.  Board Member Deletes Data

Primary Actor: Board Member

Brief Description: Describes how board member will delete data

Risk Level: Low

**45. Modify Auction Item**

**Primary Actor: Item Donor**

**Brief Description: This case will describe how a person interesting in donating an item to HOOF’s silent auction will update their registered item with HOOF.**

**Risk:  High**

**46. Remove Auction Item**

**Primary Actor: Item Donor**

**Brief Description: This case will describe how a person interesting in donating an item to HOOF’s silent auction will remove their item registered with HOOF.**

**Risk:  High**

Narrative: The diagram on the following pages represents a cross section of our use cases with the system requirements they will meet. System requirements are referred to by number (vertical axis) and use cases by name (horizontal axis).

**Trace Matrix:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Store User info | System Stores and tracks | | User enter data | | User Modifies Data | | User Deletes Data | User creates account | Donor makes donation |
| 1.1 |  | |  | | **X** | | **X** | **X** |  |  |
| 1.2 |  | |  | |  | |  |  | **X** |  |
| 1.3 |  | |  | |  | |  |  |  | **X** |
| 1.4 |  | |  | |  | |  |  |  |  |
| 1.5 |  | |  | |  | |  |  |  |  |
| 1.6 |  | |  | |  | |  |  |  |  |
| 1.7 |  | |  | |  | |  |  |  |  |
| 1.8 |  | |  | |  | |  |  |  |  |
| 1.9 |  | |  | |  | |  |  |  |  |
| 1.10 |  | |  | |  | |  |  |  |  |
| 1.11 |  | |  | |  | |  |  |  |  |
| 2.1 |  | |  | | **X** | | **X** | **X** |  |  |
| 2.2 |  | |  | |  | |  |  | **X** |  |
| 2.3 |  | |  | |  | |  |  |  |  |
| 2.4 |  | |  | |  | |  |  |  |  |
| 2.5 |  | |  | |  | |  |  |  |  |
| 2.6 |  | |  | |  | |  |  |  |  |
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| 3.1 |  | |  | | **X** | | **X** | **X** |  |  |
| 3.2 |  | |  | |  | |  |  |  |  |
| 4.1 |  | |  | | **X** | | **X** | **X** |  |  |
| 4.2 |  | |  | |  | |  |  |  |  |
| 4.3 |  | |  | |  | |  |  |  |  |
| 4.4 |  | |  | |  | |  |  |  |  |
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| 6.3 | **X** | |  | |  | |  |  |  |  |
| 6.4 | **X** | |  | |  | |  |  |  |  |
| 6.5 |  | | **X** | |  | |  |  |  |  |

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|  | | Organizational Donation | | Donor Schedules Donation | | Donor cancels donation | | | Donor Receives Receipt | | | | Donor receives thank you | | | User signs up for newsletter | | | | User Unsubscribes from Newsletter | |
| 1.1 | |  | |  | |  | | |  | | | |  | | |  | | | |  | |
| 1.2 | |  | |  | |  | | |  | | | |  | | |  | | | |  | |
| 1.3 | | **X** | |  | |  | | |  | | | |  | | |  | | | |  | |
| 1.4 | |  | | **X** | |  | | |  | | | |  | | |  | | | |  | |
| 1.5 | |  | |  | | **X** | | |  | | | |  | | |  | | | |  | |
| 1.6 | |  | |  | |  | | | **X** | | | |  | | |  | | | |  | |
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| 1.11 | |  | |  | |  | | |  | | | |  | | |  | | | | **X** | |
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| 6.4 | |  | |  | |  | | |  | | | |  | | |  | | | |  | |
| 6.5 | |  | |  | |  | | |  | | | |  | | |  | | | |  | |
|  | Register Auction Item | | Delete Auction Item | | | | Modify Auction Item | | | Follow on social media | | | | Volunteer Modifies Data | | | Volunteer Deletes Data | | Volunteer is Assigned to event | |
| 1.1 |  | | | |  | | |  | | |  |  | | |  | | |  | | |
| 1.2 |  | | | |  | | |  | | |  |  | | |  | | |  | | |
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| 1.9 |  | | | |  | | |  | | | **X** |  | | |  | | |  | | |
| 1.10 | **X** | | | | **X** | | | **X** | | |  |  | | |  | | |  | | |
| 1.11 |  | | | |  | | |  | | |  |  | | |  | | |  | | |
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| 2.3 |  | | | |  | | |  | | |  | **X** | | |  | | |  | | |
| 2.4 |  | | | |  | | |  | | |  |  | | | **X** | | |  | | |
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|  | Volunteer receives confirmation | | | | Volunteer logs hours | | | Volunteer Deletes Hours | | | Volunteer Modifies Hours | Camper Signs up | | | Camper Cancels event | | | Board member creates/uploads | | |
| 1.1 |  | | | |  | | |  | | |  |  | | |  | | |  | | |
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| 2.6 | X | | | |  | | |  | | |  |  | | |  | | |  | | |
| 2.7 |  | | | | X | | | X | | | X |  | | |  | | |  | | |
| 2.8 |  | | | |  | | |  | | |  |  | | |  | | |  | | |
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| 3.2 |  | | | |  | | |  | | |  | X | | | X | | |  | | |
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| 4.2 |  | | | |  | | |  | | |  |  | | |  | | | X | | |
| 4.3 |  | | | |  | | |  | | |  |  | | |  | | |  | | |
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|  | Writes Grant | Board Members Modify Data | Board Member Deletes Data | Create Event | Modify event | Delete event | Event Attendee |
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| 4.1 |  |  |  |  |  |  |  |
| 4.2 | **X** |  |  |  |  |  |  |
| 4.3 |  | **X** |  |  |  |  |  |
| 4.4 |  |  | **X** |  |  |  |  |
| 5.1 |  |  |  | **X** |  |  |  |
| 5.2 |  |  |  |  | **X** |  |  |
| 5.3 |  |  |  |  |  | **X** |  |
| 5.4 |  |  |  |  |  |  | **X** |
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## Initial Architecture Considerations

**Architecture Considerations**

Narrative: The architecture considerations represent the identified architecture options from two viewpoints; the realization and the design. In this section is a description of the high-level components of the system and a diagram of them. Both the description and the diagram are done from both viewpoints.

There is not a large amount of architecture considerations to factor in when designing the new system for HOOF. The architecture will be mostly on the hosting end, so HOOF will not have a significant amount to carry on theirs. We have designed a system view outlining the expected architecture that will be realized using WordPress as our hosting provider.

As seen in the attached diagrams, we outlined several requirements for the system that are demonstrated with the design viewpoint. We identified that the system will require a Database to hold information, as this will centralize the organizational information. The system will need a web host to hold the site and a cloud provider alongside this. A backup host to ensure integrity is also required, so that information will not be lost. External payment processing will be needed to ensure online donations can be safely taken. An application server will be needed so that web application function will be facilitated.

The realization viewpoint outlines systems that we have identified will fill these needs. For our content management system to tie the pieces together, we have decided to use the open source WordPress, since its large market share means there is a great deal of customization and support available. For the payment processing we have decided to give the user multiple options to complete the transaction. We offer both PayPal and iATS, giving the user several options that will work well with our organization and take the obligation of security off our end. We have decided that the website site and database will be hosted on HostGator, as they offer the service of offering both on a service that is affordable and has little down time. The service specializes in WordPress hosting and thus will work well with other aspects of our system. We have selected Dropbox as a manner to backup organizational files. Lastly, we decided to use GlassFish as an application should the need arise, to facilitate web app communications with the database.

Narrative: The following two diagrams outline the components of this information system. Users, Board Members, and the various servers and technology user are all outlined.

Diagram 1 Narrative: This diagram represents the design viewpoint of our system, what general items will be required by the system.



Diagram 2 Narrative: this diagram represents the realization viewpoint of the system, with ideal system names included to represent which system will be used to fill the needs outlined in the previous diagram.



## Team Charter

Specter Designs Team Charter

Narrative: This section contains the foundation of the team on this project, concerning how design will be performed going forward. Describe below is how the team will conduct itself as a unit.

Our team goals are the ensure that a complete proposal is presented to the client, and that this proposal will be of high quality and in the running for selection by the client. The team goals also include that all required materials of the project are completed in advance, giving more time for quality checks and review. Another goal is to ensure equality in the group, that all opinions are heard and taken into consideration such that the best idea will result from this deliberation. This goal leads to another that the team will always have a unified vision to give the project a consistent forwards path towards completion. The Team will have a designated leader, who will have limited roles including conflict resolution and ensuring that members are participative and communicative.

Meetings for the group will be carried out in a variety of ways. Meetings are scheduled primarily in class, as that is a guaranteed time everyone will be in attendance. The best days in general to ensure that the group’s schedule is open have already been found, so meetings can more easily be scheduled on those days. When meetings are conducted, the most important idea is that everyone will have a voice in the proceedings. Every meeting will be set up with a goal in mind, and meetings will be conducted with that goal as the focus such that by the time the meeting is over the goal will have been accomplished and the members of the group will have a good basis for the work they might have to individually accomplish. Meeting decision will be put into writing, in most cases via a Word document, and this will be sent to the entire group for posterity.

Intra-team communications will primarily be communicated via GroupMe, as it is an easy and reliable way to facilitate messages between our members. To communicate with the client and instructor, email will be heavily favored as it will give an electronic record of the correspondence should this come to be required. In any email communication, the entire group should be CC’d onto the email, ensuring that every member will get a record of the communication and have the instruction for their own reference. Such a record will avoid relying on memory for specific instructions on the project, and ensure that everyone will be in on any major correspondence. Should any group member fail to regularly communicate or be a part of group functions, the designated team leader will attempt to contact them, but in case of repeated ignored communications the matter will be presented to the instructor for resolution.

Team decisions are carried out via a majority consensus. Consensus for the decisions is gathered through making sure that everyone in the group has input for the decision, so that every voice will be heard on the matter. From that, the position that has the most support will have to be the taken path. In the case of conflicts about these decisions, discussion can still be had to see if others might be convinced of the change of course. However, all members of the group have agreed to follow the majority decision, even if they might not fully agree with it, to ensure that the group shares the same focus for achieving our end goal. If any major, unresolvable disagreement should occur, the established team leader will make a final decision, and all group member agree to be bound by the leader’s judgement.

The documents required for our assignments will be stored in office online with shared access to the team. This ensures consistency, as there should only be one copy in existence avoiding the problem of multiple versions complicating completing the assignment. This will also be the process for PowerPoints, and whatever other file forms may be required for the project.

## Gantt Charts

Narrative: The Gantt charts represent the detailed outline of how each stage of the project will be delegated and performed. Process details include start and end dates, process names and numbers, as well as the duration of the task, with a visual representation included.





## Inception Phase Prototypes

**Inception Phase Mockups**

Narrative: The inception phase diagrams represent a rough sketch of what HOOF pages and databases will look like under our design. We have designed pages representing the home page as well as areas we have designed as high-risk functions – donations and the database.

Diagram 1: This represents a view of the donation page for HOOF. It offers an option to enter information and send the use to iATS for payment processing, or to offer donations through PayPal or Amazon Smile.

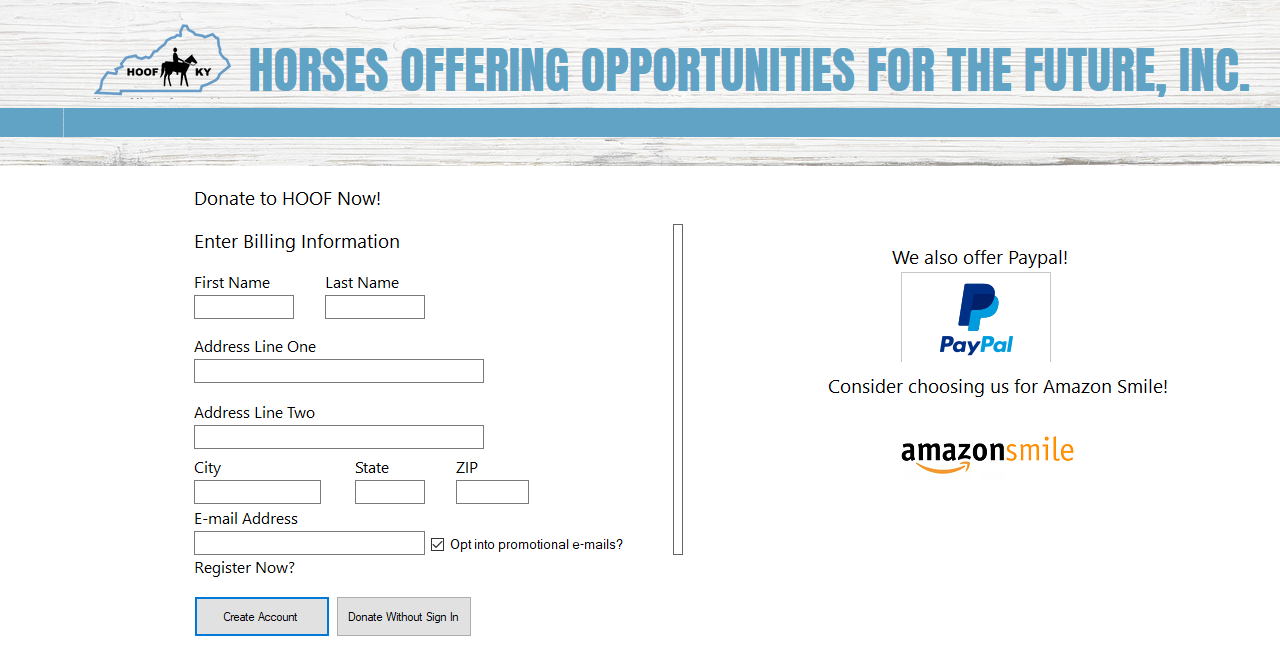


Diagram 2: This represents the HOOF home page, continuing to feature the mission statement. It offers the options for donors to login to their accounts to repeat donations or update information, or for volunteers to sign in to theirs to update information to register available for events. It also features a quick link to donate now to facilitate user ease.

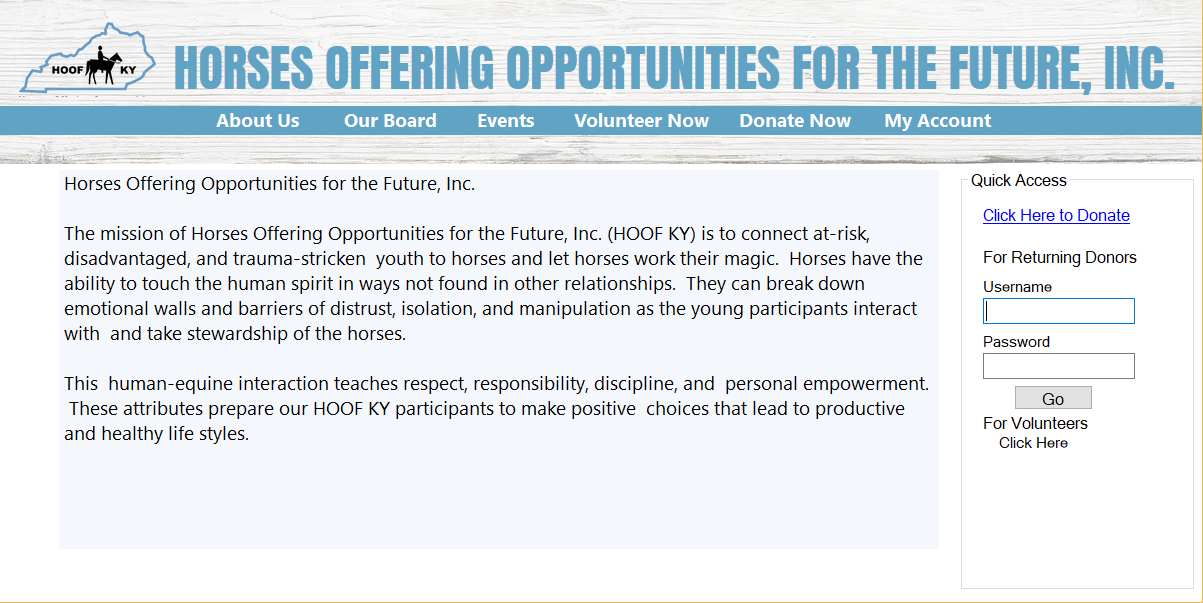


Diagram 3: This is a mockup of the MySQL database as it will be managed through the phpMyAdmin tool that integrates with WordPress. It offers a view of what a small volunteer table could look like, and gives a view of how other tables in the database will be accessed.

