

Donorschoose Project

Group RNGI

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Executive Summary

RNGLI created the following feasibility analysis for the Donorschoose Project. Outlined in the following report are the potential problems that could possibly be faced in a top management position in this project, the Technical Feasibility of the project, the Economic Feasibility of the project, and the Organizational Feasibility of the project.

Technical Feasibility

The Donorschoose project is feasible technically with hard work and dedication to the project, while there is some risk involved.

The risk involved with the technology is moderate.

- RNGLI will have to evolve to accommodate the system.
- High technology will be incorporated.
- Expanded bandwidth for donors and teachers is a must.

The risk involved with familiarity with technology is low.

- Ease of doing business is a must in this project.

Economic Feasibility

To determine the economic feasibility of the Donorschoose project a cost benefit analysis was done; see attached spreadsheet for details. Estimates show that the Donorschoose project is expected to be able to enhance the company's bottom line.

ROI: 2435927%

NPV: \$351,703,909

BEP: .000042 years

Organizational Feasibility

From an organizational perspective, the Donorschoose project has low risk and good strategic alignment.

- Top management support: The top executives of RNGLI strongly support the project.
- Organizational management: Overall our organizational management team supports the creation of the project. There may be small technical difficulties due to unavailability of a team member may occur, but will be worked around without affecting the system.
- Customers: The customers will expect an easily used and understood interface that is easily accessible.

Also included in the report is a layout of use cases, context diagram, level zero diagram, level 1 diagram for each use case process, and an ERD, to outline the layout of the system.

Potential Problems Faced in Top Management

Raghav:

A common problem to look out for in a project is time management. If you are not careful with time, you can end up losing a lot of money for the organization in the long run, and may not be able to complete the project with successful results. This could be a problem for a project in Donorschoose because it could cost the classroom time to wait and they may not even reach the end goal for their project to come to fruition.

Nikolina:

We need to be cautious of scope creep when managing information systems projects. Scope creep happens when new requirements are added to the project after the original project scope was already defined. As a project develops, it becomes more difficult and extensive to make changes to the existing project. The focus from the original goal is removed, and there is a lot of impact on cost and original scheduling. This could become a problem for a project in Donorschoose because not only could it end up costing the company more money, but the ending product may not end up being what the company originally expected because of necessary changes that were made to accommodate their new requirements. It could also push back the amount of time that the project was originally needed by.

Lubna:

Since it is a nonprofit organization so one of the challenges they may face in a project is high technical oriented. Optimizing the project will boost the donors experience. Poor online donors experience is a reason to ignore and leave the project. The page should be flexible and efficient. Like not creating any unnecessary design and a clear link for donors to be directed to a single donating page.

Gavin:

A problem that could be a high risk to a project is poor planning. When preparing to work on a project, estimations are made that are very important to the success of the project, and they need to be as accurate as possible. As the project goes on, the estimates can be updated to keep up with the progress of the project, but the goal in the end is to make sure that the team is meeting the expectations given to complete things according to plan. If it is assumed that something may be simple, and someone procrastinates and pushes that part aside to spend more

time on something else, you could risk having issues with what you thought was going to be simple. Poor planning can cost money and also it can risk losing business.

Ibrahim Abutuqayqah:

Inefficient Communication Process it's vital to keep everybody informed on the project status at all times. Lack of efficient communication will lead to errors and delays. Ineffective communication can always occur and lead to communication breakdown as both parties fail to deliver or process the received message. Without good communication, there will be no teamwork in the workplace and there sure to be misunderstandings and conflict.

Feasibility Analysis:

Technical Feasibility

Ibrahim Abutuqayqah

The technical feasibility Donors-choose platform will have to evolve its platform to accommodate the width array of products and services. High technology must be incorporated in the business model with expanded bandwidth for both donors and teachers. Ease of doing business must be facilitated. The goal of this project is to design and develop a reporting system which provides insights of day-to-day activities on the website. The reporting system is expected to increase the donation by 1% every year.

Economic Feasibility

Raghav Sharma

Target Market: Our target market is www.DonorsChoose.org; a crowdfunding website where teachers seek funds for their classroom projects. Individuals who are interested in donating to these classroom projects can search the website to find the project(s) of their choice, and donate to it.

	2015	2016	2017	2018	2019	Total
Benefits						
Total Donations		\$ 100,065,448	\$ 101,066,102	\$ 102,076,764	\$ 103,097,531	
Total Benefits		\$ 100,065,448	\$ 101,066,102	\$ 102,076,764	\$ 103,097,531	
Present Value Total Benefits		\$ 94,401,366	\$ 89,948,471	\$ 85,705,619	\$ 81,662,901	\$351,718,358
Operational Costs						
EC2 Server - a1.2xlarge		\$ 1,787	\$ 1,787	\$ 1,787	\$ 1,787	
RDS server - db.t3xlarge		\$ 2,383	\$ 2,383	\$ 2,383	\$ 2,383	
Total Operational Costs	\$ -	\$ 4,169.76	\$ 4,169.76	\$ 4,169.76	\$ 4,169.76	
Total Costs	\$ -	\$ 4,169.76	\$ 4,169.76	\$ 4,169.76	\$ 4,169.76	\$ 16,679.04
Present Value Total Costs	-	\$3,934	\$3,711	\$3,501	\$3,303	\$ 14,449
NPV (PV Total Benefits - PV Total Costs)						\$ 351,703,909
Total Benefit - Total Cost	\$ -	\$ 100,061,278	\$ 101,061,932.72	\$ 102,072,593.74	\$ 103,093,361.38	
ROI	2435927%					
Cumulative Cash Flow	\$ (4,169.76)	#####	\$ 201,119,041.20	\$ 303,191,634.94	\$ 406,284,996.32	
BEP	0.000042					

Organizational Feasibility

Nikolina Best

To understand how well the system will be accepted by its users and incorporated into the ongoing operations of the organization, we must look at a few different factors. From an organizational feasibility standpoint, we must identify the important stakeholders that this project will affect and the level of risk that this project poses. In other words, we are looking at organizational feasibility through the lense of a stakeholder analysis and strategic alignment.

Strategic Alignment:

The fit between this project and the business strategy is excellent and the organization leans toward gaining a lot from having this project initiated. The goal is to increase the donation by 1% every year, and would not pose a significant threat to the already well-running business activities. It stands to simply report on the day-to-day activities of the website and not affect anything else. Because of this, the strategic alignment is good and has a low risk factor.

Stakeholder Analysis:

We have three stakeholders that can affect and be affected by this new system. They are our top management support, organizational management team, and the system users.

Our top management include the top executives of the organization and they strongly support this system being built to help make their company more successful.

The organizational management team consists of Nikolina, Raghav, Gavin, Ibrahim, and Lubna and they all support the creation of the project. There may be small technical issues due to the unavailability of in-person work as a team, but they have found ways around this issue that will not affect the company or the system being built.

The third stakeholder will be the system users. They will be the ones using the interface and expect it to be easy to use and understand. The informational activity insights must be easy to access and easy to read, which requires an interface that puts all of the information in one place for ease of user access. User participation will be utilized throughout the process of creating the system to monitor these conditions.

User Cases

UC-1: Find user population

By: Raghav Sharma

<i>Use case name: Find user population</i>	<i>ID: UC-1</i>	<i>Priority: High</i>
<i>Actor: Management</i>		
<i>Description: The DonorChoose website has many visitors everyday. This will help find the total users that are accessing the website at the end of any time period (day/month/or year).</i>		
<i>Trigger: Management will access the data store to gather information to see how many users have accessed the website.</i>		
<i>Type: External</i>		
<i>Pre-conditions: N/A</i>		
<i>Normal Course:</i> <i>1. The system requests user population information from datastore</i> <i>2. The datastore gives information on user population to management</i>		
<i>Exceptions:</i>		

UC-2: Retrieve project information from database

By: Raghav Sharma

<i>Use case name: Retrieve project information</i>	<i>ID: UC-2</i>	<i>Priority: High</i>
<i>Actor: donor</i>		
<i>Description: When the user clicks on “See Class Projects” button, the data for projects is retrieved from the server, and then loads the information into the website.</i>		
<i>Trigger: Donator clicks button, and would like to see a project to donate to.</i>		
<i>Type: External</i>		
<i>Pre-conditions: N/A</i>		
<i>Normal Course:</i> <i>1.0 The user clicks on the “See Class Projects” button.</i> <i>.1 The page requests access to database for project information</i> <i>.2 The information is relayed to website</i> <i>.3 The user can now see the list of projects available to donate to.</i>		
<i>Exceptions:</i>		

UC-3: Display a list of projects to donate to

By: Nikolina Best

<i>Use case name: Display list of projects</i>	<i>ID: UC-3</i>	<i>Priority: High</i>
<i>Actor: donor</i>		
<i>Description: The Donorschoose website will display a list of projects for donors to choose from and will show details regarding each classroom project.</i>		
<i>Trigger: Requesting data by clicking the “see classroom projects” button will ask server for permission to display projects</i>		
<i>Type: External</i>		
<i>Pre-conditions:</i> <i>1.A server must be requested</i> <i>2. project information must be retrieved from the database.</i>		
<i>Normal Course:</i> <i>1.0 The user is presented the database information from the server.</i> <i>.1 The user is able to scroll through a list of eligible projects to donate to.</i> <i>.2 The user can choose (click) on a project.</i> <i>.3 The information is relayed to the website.</i> <i>.4 The user is presented with his/her chosen project.</i>		
<i>Exceptions:</i> <i>.1 The user can directly access the link for a specific project if the main list for Donorschoose is unavailable.</i>		

UC-4: Display a button of “Give” to donate to a project

By: Gavin Hooper

<i>Use case name: Donate to Project</i>	<i>ID: UC-4</i>	<i>Priority: High</i>
<i>Actor: User</i>		
<i>Description: A donate button (“Give”) is shown to give a specific amount to the project fund</i>		
<i>Trigger: Donor clicks “Give” button, and a screen to donate to the desired project is given</i>		
<i>Type: External</i>		
<i>Pre-conditions:</i> <i>1. Server must be requested</i> <i>2. Project information must be retrieved from database</i> <i>3. List of projects must be displayed</i>		
<i>Normal Course:</i> <i>1.0 The user clicks the “Give” button</i> <i>.1 The page requests information for completing a transaction</i> <i>.2 User fills out application for credit card for payment</i> <i>.3 The information is relayed to the datastore</i> <i>.4 The user is able to donate to the project</i>		
<i>Exceptions:</i>		

UC-5: Record categories of spending

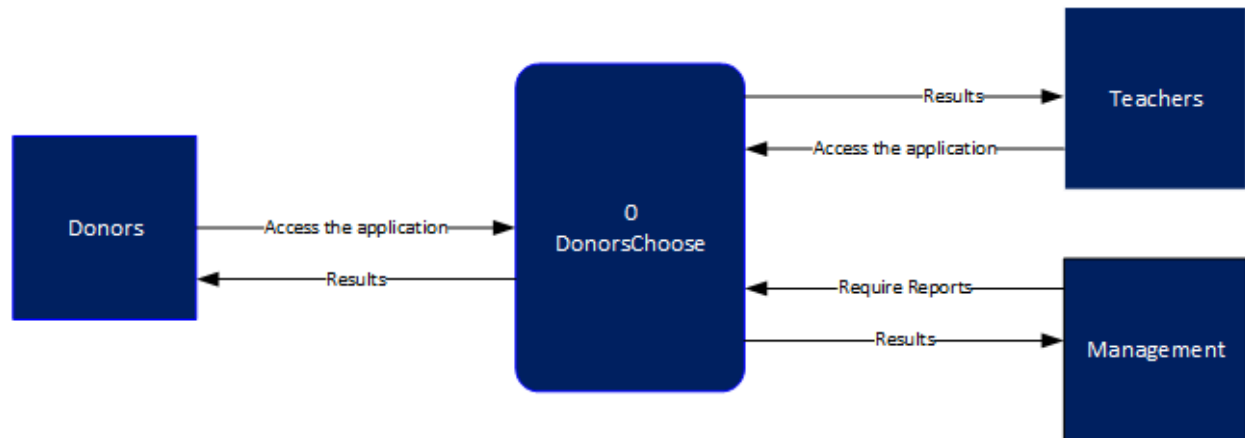
By: Raghav Sharma

<i>Use case name: Record categories of spending</i>	<i>ID: UC-5</i>	<i>Priority: High</i>
<i>Actor: Management</i>		
<i>Description: The field will show a list of specific fees and charges for the project and where the money donated is being allocated.</i>		
<i>Trigger: Management will access the datastore to request information on categories of products.</i>		
<i>Type: External</i>		
<i>Pre-conditions:</i> <i>1. Retrieve Project Information from Database</i>		
<i>Normal Course:</i> <i>1.0 Server receives information on specific project</i> <i>.1 Information on categories is shown</i>		
<i>Exceptions:</i>		

Context Diagram and Level 0

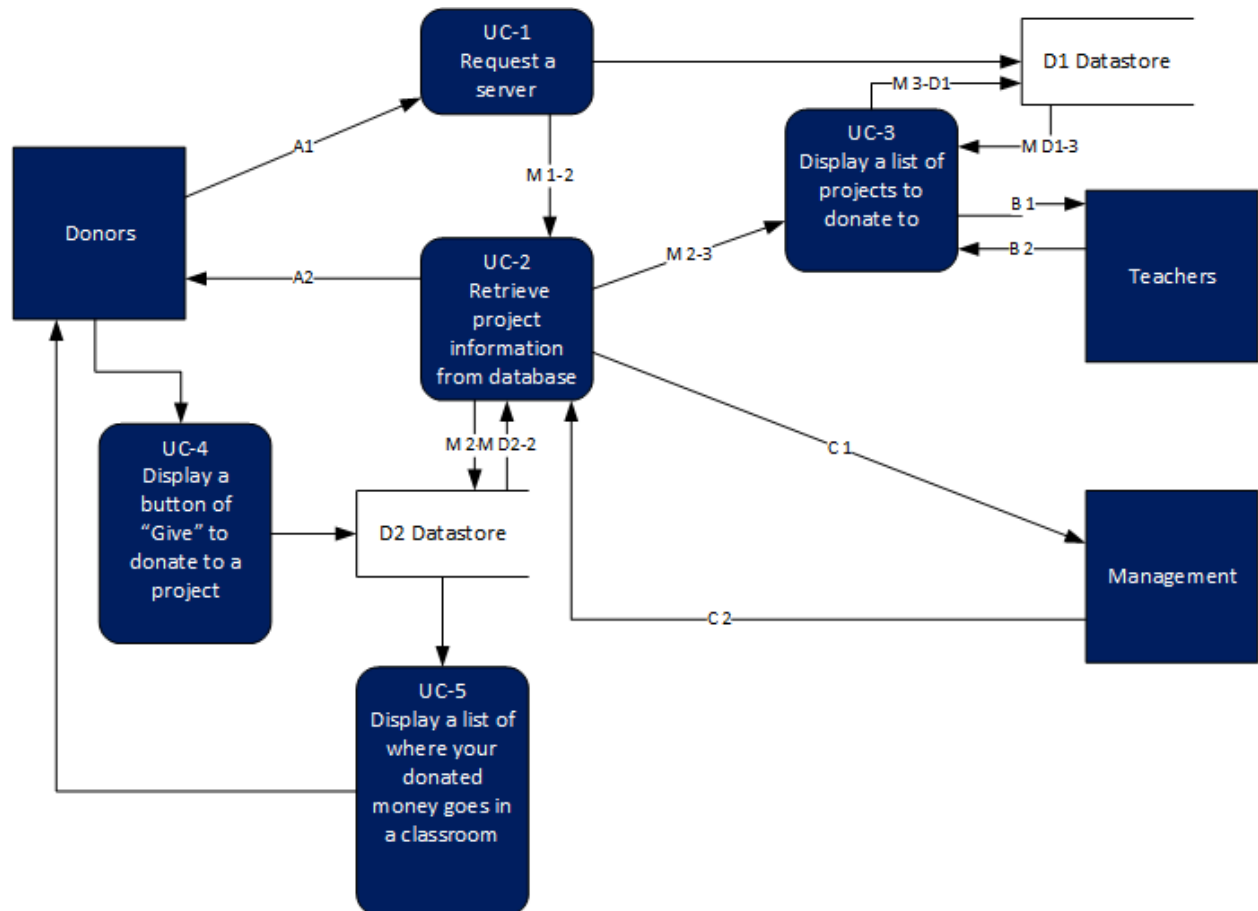
Context Diagram:

By: Ibrahim Abutuqayqah



Level 0 Diagram:

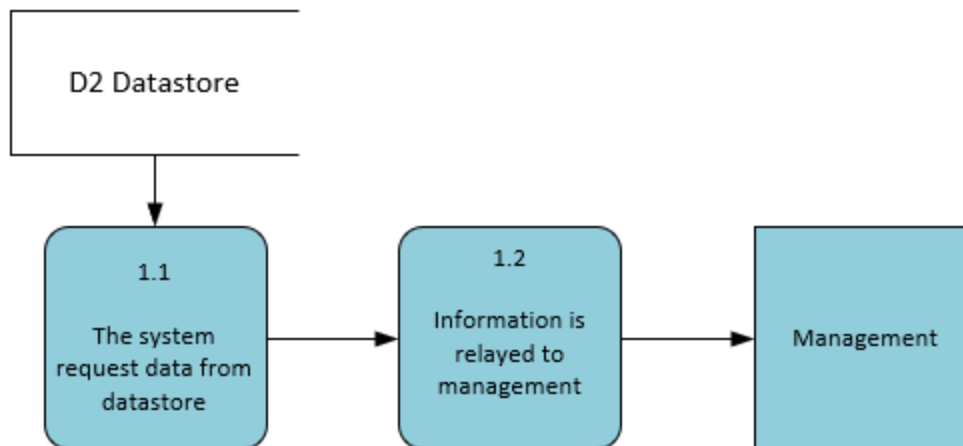
By: Ibrahim Abutuqayqah



Level 1 Diagrams

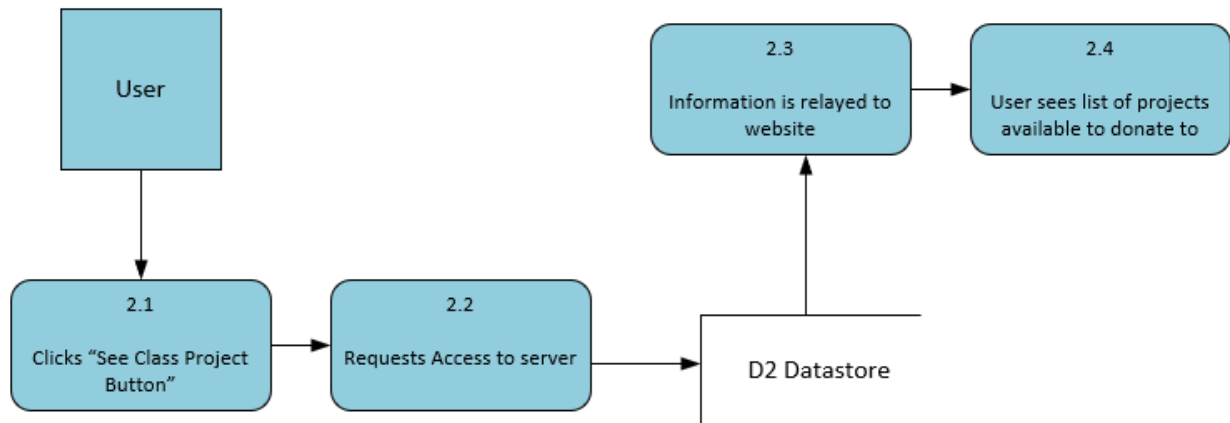
UC-1

By: Raghav Sharma



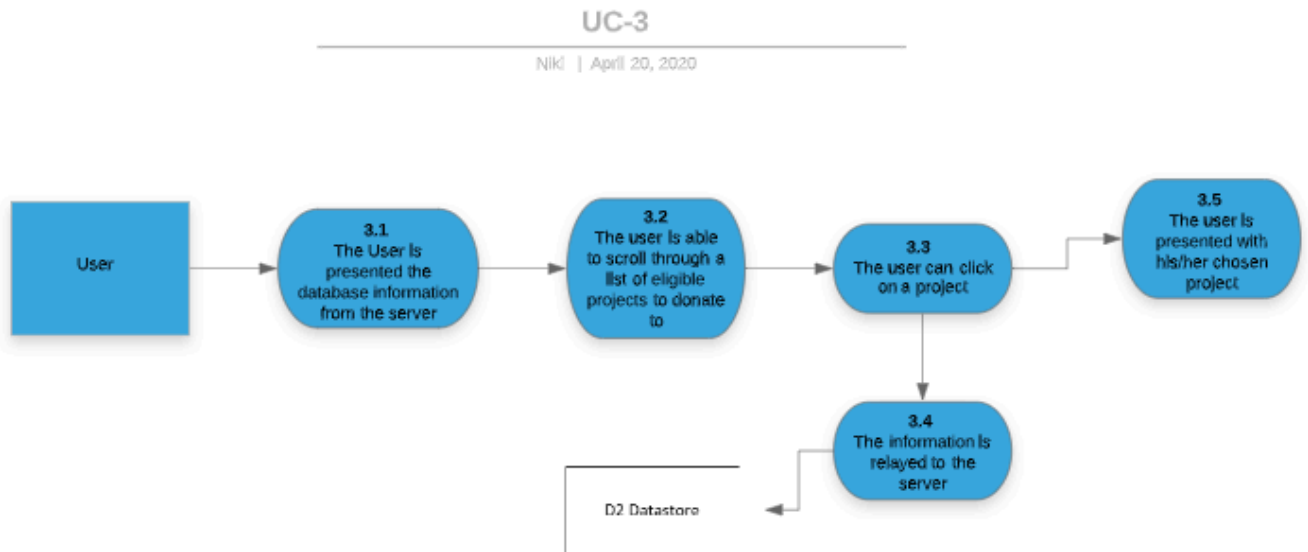
UC-2

By: Raghav Sharma



UC-3

By: Nikolina Best

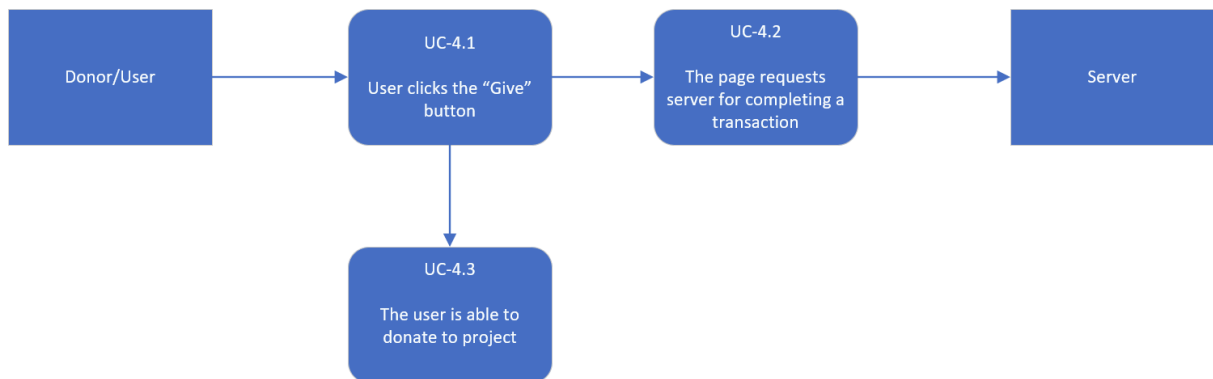


UC-4

By: Gavin Hooper

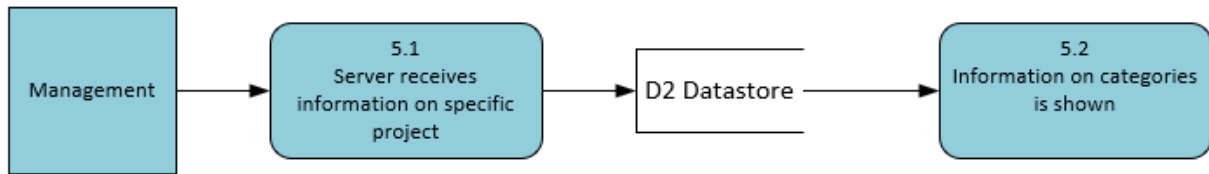
UC-4 Level 1 Diagram

Gavin Hooper



UC-5

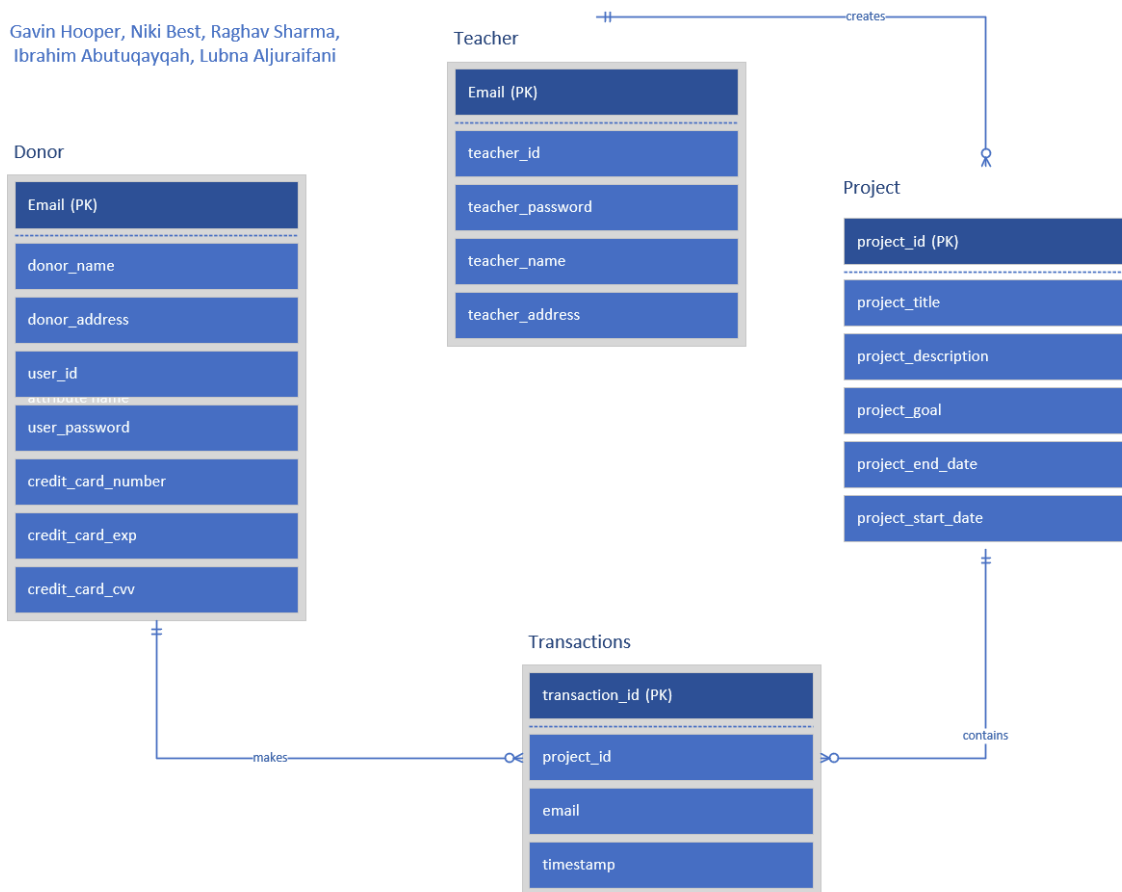
By: Nikolina Best



ERD Diagram

By: Gavin Hooper

Gavin Hooper, Niki Best, Raghav Sharma,
Ibrahim Abutuqayqah, Lubna Aljuraifani



Test Plan

Interface: ID:UI_1

Program ID: UI_1	Date: 5/13/2020
Test ID: 1	Requirement Addressed: None
Tester: Raghav	
Version Number: 1.0	

Objective: *The DonorChoose website has many visitors everyday. This will help find the total users that are accessing the website at the end of any time period (day/month/or year).*

Interface ID	Data Field	Value Entered
UI_1	<i>Search Box</i>	December

Script:

- 1. The system requests user population information from datastore*
- 2. The datastore gives information on user population to management*

Expected results:

The script should output a numeric value for the total users that visited Donorschoose for that specified month.

UI_1

Find User Population

Search For This Month

Submit

Interface: ID:UI_2

Program ID: UI_2	Date: 5/13/2020
Test ID: 2	Requirement Addressed: None
Tester: Raghav	
Version Number: 1.0	

Objective: *When the user logs into the website and clicks “See Class Projects” button, the data for projects is retrieved from the server, and then loads the information into the website.*

Interface ID	Data Field	Value Entered
UI_2	<i>username</i>	user123
UI_2	<i>password</i>	expass1

Script:

1.0 The user clicks on the “See Class Projects” button.

.1 The page requests access to database for project information

.2 The information is relayed to website

.3 The user can now see the list of projects available to donate to.

Expected results:

The script should output data for the specified project after being logged in as a user.

UI_2

Retrieve Project Information

Username:

Password:

Login

Project Information

^

v

Search

Interface: ID:UI_3

Program ID: UI_3	Date: 5/13/2020
Test ID: 3	Requirement Addressed: <i>1.A server must be requested</i> <i>2. project information must be retrieved from the database.</i>
Tester: Niki	
Version Number: 1.0	

Objective: *The Donorschoose website will display a list of projects for donors to choose from and will show details regarding each classroom project.*

Interface ID	Data Field	Value Entered
UI_3	<i>Choose Project</i>	"Light Up the World" Project

Script:

1.0 The user is presented the database information from the server.

.1 The user is able to scroll through a list of eligible projects to donate to.

.2 The user can choose (click) on a project.

.3 The information is relayed to the website.

.4 The user is presented with his/her chosen project.

Expected Results:

The user is able to view the chosen project.

UI_3

Classroom Projects

Choose your Project:

Item 1

Item 2

Item 3

Item 4

Item 5

Choose

Your Chosen Project:

Interface: ID: UI_4

Program ID: UI_4	Date: 5/13/2020
Test ID: 4	Requirement Addressed:
Tester: Raghav	
Version Number: 1.0	

Objective: *A donate button is shown to give a specific amount to the project fund.*

Interface ID	Data Field	Value Entered
UI_4	<i>Donate Field</i>	\$40.00

Script:

1.0 The user clicks on method of payment

.1 The page requests information for completing a transaction

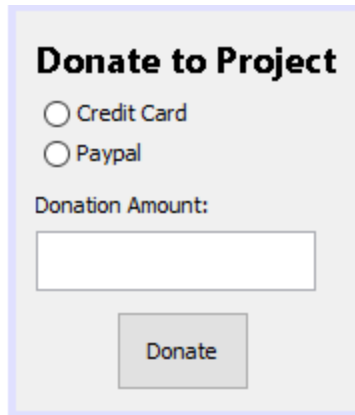
.2 The information is relayed to the datastore

.3 The user is able to donate to the project

Expected results:

The script should store the value entered into our database for the transaction.

UI_4



Donate to Project

☐ Credit Card

☐ Paypal

Donation Amount:

This is a UI mockup for a donation form. It features a light gray background with a thin blue border. At the top, the title "Donate to Project" is displayed in bold black text. Below the title are two radio button options: "Credit Card" and "Paypal". Underneath these options is the label "Donation Amount:" followed by a white rectangular text input field. At the bottom of the form is a gray rectangular button with the text "Donate" in black.

Interface: ID: UI_5

Program ID: UI_5	Date: 5/13/2020
Test ID: 5	Requirement Addressed: <i>1. Retrieve Project Information from Database</i>
Tester: Nikolina	
Version Number: 1.0	

Objective: *The field will show a list of specific fees and charges for the project and where the money donated is being allocated.*

Interface ID	Data Field	Value Entered
UI_5	<i>View More Information Field</i>	"Technology"

Script:

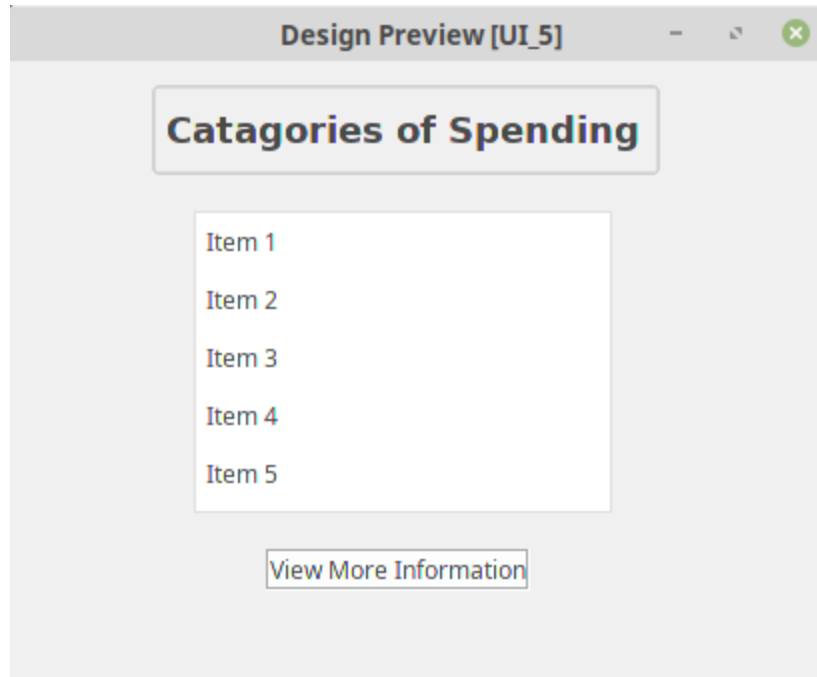
1.0 Server receives information on specific project

.1 Information on categories is shown

Expected Results:

The user information is displayed for the user.

UI_5



Gantt Chart

	Project	34 days	Tue 3/31/20	Fri 5/15/20	
	Milestone 1	6 days	Tue 3/31/20	Tue 4/7/20	
	Executive Summary	6 days	Tue 3/31/20	Tue 4/7/20	Gavin
	Table of Contents	6 days	Tue 3/31/20	Tue 4/7/20	Raghav
	Potential Ideas and Solutions	6 days	Tue 3/31/20	Tue 4/7/20	Raghav,Niki,Gavin,Ibrahim,Lubna
	Feasibility Analysis	6 days	Tue 3/31/20	Tue 4/7/20	Raghav,Niki,Ibrahim
	Milestone 2	6 days	Wed 4/8/20	Wed 4/15/20	
	Use case	6 days	Wed 4/8/20	Wed 4/15/20	2,3,4 Ibrahim,Niki,Raghav,Gavin
	Context Diagram	6 days	Wed 4/8/20	Wed 4/15/20	2,3,4 Ibrahim
	Level 0 diagram	6 days	Wed 4/8/20	Wed 4/15/20	2,3,4 Ibrahim
	Level 1 diagrams	6 days	Wed 4/8/20	Wed 4/15/20	2,3,4 Gavin,Niki,Raghav
	ERD Diagram	6 days	Wed 4/8/20	Wed 4/15/20	2,3,4 Gavin
	Milestone 3	4 days	Tue 4/28/20	Fri 5/1/20	
	Input and Output Screens	4 days	Thu 4/16/20	Tue 4/21/20	Ibrahim,Niki,Raghav
	Final draft	7 days	Thu 5/7/20	Fri 5/15/20	
	Test plan	7 days	Mon 5/4/20	Tue 5/12/20	12,13 Niki,Raghav
	Schedule and Gantt chart	7 days	Mon 5/4/20	Tue 5/12/20	12,13 Niki,Raghav

