System and Software Architecture Description (SSAD)

Lose4Good.org Database Driven Socially Connected Website

Image21.png

USC-CSSE

Team 08

|  |  |  |
| --- | --- | --- |
| **Team Members Name** | **Primary Role** | **Secondary Role** |
| Ali Alotaibi | Requirements Engineer | System Architect |
| Ankit Kalwar | Operational Concept Engineer | Project Manager |
| Arul Samuel | System Architect | Requirements Engineer |
| Manas Jog | Prototyper | Requirements Engineer |
| Monil Ashok Parikh | Quality Focal Point | System Architect |
| Omkar Yerunkar | Project Manager | Feasibility Analyst |
| Shalini Srinivas | Feasibility Analyst | Life cycle planner |

# Version History

| Date | Author | Version | Changes made | Rationale |
| --- | --- | --- | --- | --- |
| 10/14/13 | AS,AA | 1.0 | * Original for CSCI577a: Tailored from ICSM OCD Template | * Initial Document for Valuation Phase |
| 10/16/13 | AA | 1.1 | * Updated the Use Case | * Enhancement |
| 10/16/13 | AA | 1.2 | * Updated the Context diagram | * Final document for Valuation Phase |
| 10/16/13 | AS, AA | 1.3 | * Updated the Context diagram and use case diagram | * Update the changes suggested in ARB session. |
| 12/02/13 | Ali, Manas ,Arul, Ankit | 2.0 | * Updated the Context diagram and use case diagrams and descriptions * Added Class diagram, Deployment Diagram, ER diagram and two sequence diagrams | * Draft document for Foundation Phase |

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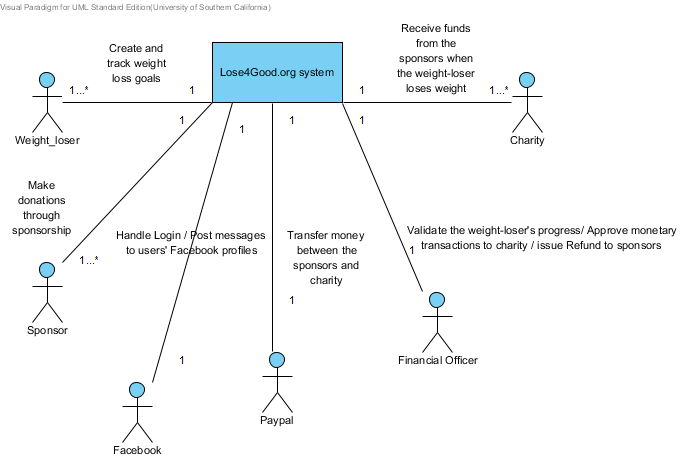
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# Introduction

##### The document’s purpose is to highlight the design considerations for the website obtained as a result of the object-oriented analysis and design process. The SSAD will be closely followed by the developers while building the system. It also provides as a medium for the easy and clear understanding of the structure of the proposed website. **Status of the SSAD**

##### SSAD is currently at the Foundation package. This document has been auto-generated from Visual Paradigm. This version, 2.0, contains the system context diagram, the use cases diagram and descriptions, the class diagram, the entity relational diagram, two Sequence diagrams, the Deployment diagram, as well as Hardware and Software Component Diagrams

# System Context Diagram



## Details

### Image1.png 1

### Image2.png Facebook

### Image2.png Paypal

### Image3.png Lose4Good.org system

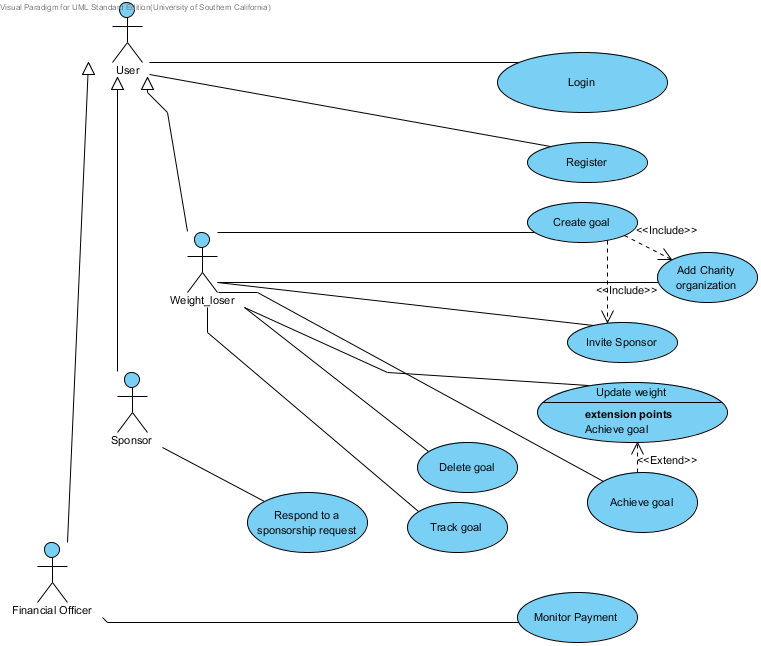
### Image2.png Charity

### Image2.png Financial Officer

### Image2.png Sponsor

### Image2.png Weight\_loser

# Use Case Diagram



## Details

### Image2.png Financial Officer

### Image2.png User

### Image2.png Sponsor

### Image2.png Weight\_loser

### Image5.png Delete goal

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | Medium |
| Use Case Status | Initial |
| Preconditions | Image5.png Create goal |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 10:11:36 PM |
| **Brief Description** | This use case allows the user to delete his/her goal if it was not sponsored yet. |
| **Preconditions** | The weight loser is logged in and the goal has already created |
| **Post-conditions** | The goal is deleted from the system. unless the use case wasn't completed or the goal has already been sponsored |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser clicks on delete goal on the goal track page |  | | 2 |  | The system checks that the goal has no sponsor and shows a confirmation message | | 3 | The weight loser clicks "Confirm" |  | | 4 |  | The system deletes the goal. | | 5 |  | The system shows a message to the user | |

|  |  |
| --- | --- |
| Exception Flow | |
| **Author** | Ali |
| **Date** | Nov 14, 2013 7:51:11 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser clicks on delete goal on the goal track page |  | | 2 |  | The system finds that the goal has been sponsored | | 3 |  | The system shows a message that the goal can't be deleted. | |

### Image5.png Track goal

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Use Case Status | Initial |
| Preconditions | Image5.png Create goal |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 11:11:29 PM |
| **Brief Description** | This use case allows weight loser to see his/her progress and the goal information |
| **Preconditions** | The user is logged into the system and the weight loser has created a goal. |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser clicks on "Track goal" |  | | 2 |  | The system retrieves the goal details | | 3 |  | The system shows the details of the goal progress and using graphs and charts | |

### Image5.png Monitor Payment

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | High |
| Use Case Status | Initial |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 6:19:21 PM |
| **Brief Description** | The financial officer is the person responsible to process the pending transactions in the system. There are two kinds of transactions, one that holds  money to be donated to charity and the second holds the money to be refunded to sponsors because the goal was not achieved. |
| **Preconditions** | The user is logged into the system as financial officer and there is at least one goal that has pending transactions and it is the end of the month. PayPal is up and running (to do the refund) |
| **Post-conditions** | The pending transactions are approved and the associated money is either donated to charity or sent back to sponsors. That is if the financial officer approved the pending transactions and the use case has been completed successfully |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The financial officer clicks on reports page |  | | 2 |  | The system checks the achieved and failed goals as well as the updated goal in the last month. | | 3 |  | The system generates a report of all the pending transactions. | | 4 | The financial officer clicks on a goal |  | | 5 |  | the system shows the transactions of that goal. | | 6 | The financial officer approves the transaction for the money to be send to charity |  | | 7 |  | The systems update the transaction status to be "completed" and show a message that the money has to be sent manually to the associated charity | | 8 |  | The system sends the transaction details via email to the charity organization. | | 9 | The financial officer approves the transactions for sponsors refund. |  | | 10 |  | The systems tries to refund the associated sponsors through PayPal. | | 11 |  | The systems update the transaction status to be "completed" | | 12 |  | The System sends transactions details via email to the sponsors. | | 13 | Financial officer repeats steps 4 to 11 for the rest of the goals |  | |

|  |  |
| --- | --- |
| Exception Flow | |
| **Author** | Ali Alotaibi |
| **Date** | Nov 23, 2013 8:00:16 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | After the client approves the refund transactions of a given goal (step 9 of main flow) |  | | 2 |  | The systems tries to refund the associated sponsors through PayPal. | | 3 |  | The system gets an error message from PayPal. | | 4 |  | The system shows a message to the sponsor that the refund can't be done. | |

|  |  |
| --- | --- |
| Alternative Flow | |
| **Author** | Ali Alotaibi |
| **Date** | Nov 27, 2013 12:45:41 AM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | After a financial officer clicks on a goal (step 4 of the main flow), financial officer chooses to mark a transaction as "Invalid Transaction" |  | | 2 |  | The system changes the status of the transaction to be "invalid" and remove the transaction form the pending list. | | 3 |  | The system sends a notification to the user. | |

### Image5.png Achieve goal

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Use Case Status | Initial |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 6:51:43 PM |
| **Brief Description** | If the weight loser achieves his/her goal, the system will show a congratulatory message and post them on facebook and tell sponsors and charity through email. |
| **Preconditions** | The weight loser is logged into the system and User has an active goal.Alsothe update goal has been completed. |
| **Post-conditions** | Emails are sent out to the associated sponsors and charities and congratulatory message is posted on weight loser's profile. That is unless the goal was not achieved or the user chooses not to share. |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | On the update weight page, The weight loser enters a new weight |  | | 2 |  | The system finds that the user's current weight is equal to the target weight. | | 3 |  | The system displays a congratulatory message to the user | | 4 |  | The systems asks if the user wants to share the congratulatory message on Facebook. | | 5 | The weight loser clicks "Share" |  | | 6 |  | The system accesses user information through Facebook | | 7 |  | The system posts the congratulatory message to the user's Faceook profile | | 8 |  | The system sends out emails to the associated sponsors and charities. | |

|  |  |
| --- | --- |
| Exception Flow | |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 7:04:02 PM |
| **Brief Description** |  |
| **Preconditions** | The user has already granted access the system to access Facebook profile |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | After the goal is achieved and the weight loser clicked on "Share congratulatory message on Facebook" |  | | 2 |  | The system Can't access user information through Facebook | | 3 |  | The system shows an error message to the user | |

### Image5.png Create goal

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | Medium |
| Use Case Status | Initial |
| Preconditions | Image5.png Login |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 3:19:38 PM |
| **Brief Description** | The weight loser can create a new weight-lose goal and choose a sponsor to support his goal and a charity to send the donated money to |
| **Preconditions** | The weight loser is logged in and has no active goal |
| **Post-conditions** | The goal has been created and at least one sponsor has been invited and a specific charity has been added to the goal. That is if the goal creation was not canceled or failed |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser clicks on create goal link on the homepage. |  | | 2 |  | The system redirects the user to the create goal page. | | 3 | The weight loser enters current weight, the amount of pounds he/she wants to lose(Maximum 25 lb ) and the duration to achieve that goal. |  | | 4 | The weight loser clicks "Proceed" |  | | 5 |  | The system invokes the Add Charity use case. | | 6 | The weight loser adds Charity successfully |  | | 7 |  | The system invokes the Invite Sponsor use case. | | 8 | The weight loser adds at least one sponsor successfully. |  | | 9 | The weight loser clicks on “Confirm and Create” button. |  | | 10 |  | The system creates the Goal and show a cofirmation message | |

|  |  |
| --- | --- |
| Exception Flow 1 | |
| **Author** | ArulSamuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 3:29:19 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser enters more than 25 lb. or an any invalid information |  | | 2 |  | The system shows an error message to the user. | |

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| Exception Flow 2 | |
| **Author** | Ali |
| **Date** | Nov 14, 2013 7:08:26 PM |
| **Brief Description** | The goal can't be created without |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser doesn't complete add charity or add sponsor use case successfully |  | | 2 |  | The system shows an error message and stop the goal creation process | |

### Image5.png Respond to a sponsorship request

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | Medium |
| Use Case Status | Initial |
| Preconditions | Image5.png Invite Sponsor |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 7:39:41 PM |
| **Brief Description** | After the weight loser sends an invitation to potential sponsors, a sponsor can respond to the invitation and donate money. |
| **Preconditions** | The associated goal is still valid and the user and the link is still valid. Also, PayPal is up and running |
| **Post-conditions** | Money is pledged to the lose4good account and the goal details is update. That is if the user pledges the money successfully and the use case is completed successfully. |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The sponsor clicks on the link associated with the invitation email from Lose4Good. |  | | 2 |  | The system validates the link and open the pledge money page | | 3 | The sponsor enters the amount of money to be donated for each pound the user lose |  | | 4 | The sponsor enters the required personal information. |  | | 5 | The Sponsor clicks "Proceed to PayPal" |  | | 6 |  | The system validates the the details and redirects the sponsor to PayPal | | 7 | The sponsor completes the payment through the PayPal. |  | | 8 |  | The system stores the transaction details returned by PayPal | | 9 |  | The system asks the sponsor what to do with the remaining money if the goal was not achieved | | 10 | The sponsor chooses refund me the remaining money |  | | 11 |  | The system shows thank you message to the sponsor and sends the transaction details to the sponsor's email | | 12 |  | The system asks the sponsor if he/she wants to register in lose4good as a weight lose. | | 13 | Click "Register" |  | | 14 |  | The system invokes "Register" use case | |

|  |  |
| --- | --- |
| Exception Flow | |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 7:59:45 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | After the user enters the amount of money and his/her information on Pledge Money page, and Clicks "Proceed" (Step 5 of Main Flow) |  | | 2 |  | The system validates the the details and redirects the sponsor to PayPal | | 3 |  | The system receives from PayPal that the payment was not successful | | 4 |  | The system show error message and ask the sponsor to try again. | |

|  |  |
| --- | --- |
| Alternative Flow | |
| **Author** | Ali Alotaibi |
| **Date** | Nov 14, 2013 8:18:24 PM |
| **Brief Description** | The sponsor will be asked whether to be refunded the money remaining money if the goal was not achieved or donate it anyway. In the main flow the choice was to get a refund |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The sponsor chooses to donate the remaining money to charity if the goal was not achieved |  | | 2 |  | The system update the goal with this choice | |

### Image5.png Invite Sponsor

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | Medium |
| Use Case Status | Base |
| Preconditions | Image5.png Add Charity organization |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 3:44:56 PM |
| **Brief Description** | This use case allows user to invite people to support his/her goal by donating money to lose4good account. |
| **Preconditions** | The user is logged in and has started the goal creation use case and added a charity organization |
| **Post-conditions** | The invitations are sent to the specified sponsors unless the invitation process was not successful. |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser clicks on invite sponsor |  | | 2 |  | The system Re-directs the user to the Invite sponsor page. | | 3 | The weight loser enters the sponsor name and email id. |  | | 4 |  | The system adds the sponsor to the temporarily selected sponsors list. | | 5 | The weight loser edits the default message to be sent in the email. |  | | 6 | The weight loser clicks "Conform" |  | | 7 |  | The system generates the invitation links and send the emails | | 8 |  | The system shows a confirmation message | |

|  |  |
| --- | --- |
| Exception Flow 1 | |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 3:49:46 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | On Invite sponsor page, the weight loser enters an invalid email id. |  | | 2 |  | The system displays an error message and ask for a valid email id. | |

|  |  |
| --- | --- |
| Alternative Flow | |
| **Author** | Ali Alotaibi |
| **Date** | Nov 26, 2013 8:21:48 PM |
| **Brief Description** | Weight loser may choose to post the invitation on his/her Facebook profile instead of sending emails to sponsor |
| **Preconditions** |  |
| **Post-conditions** | The invitation is posted on the weight loser's Facebook profile unless the system couldn't access Facebook or the use case wasn't completed successfully |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser clicks on invite sponsor |  | | 2 |  | The system Re-directs the user to the Invite sponsor page. | | 3 | The weight loser chooses to send the invitation through Facebook. |  | | 4 |  | The system opens share invitation page. | | 5 | The weight loser edits the default message and clicks send. |  | | 6 |  | The system accesses user information through Facebook | | 7 |  | The system post the invitation on the weight loser's Facebook. | |

|  |  |
| --- | --- |
| Exception Flow 1 | |
| **Author** | aalotaib |
| **Date** | Nov 26, 2013 8:35:23 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | On the invite sponsor page, the weight loser chooses to send the invitation through Facebook. |  | | 2 |  | The system opens share invitation page. | | 3 | The weight loser edits the default message and click send. |  | | 4 |  | The system Can't access user information through Facebook | | 5 |  | The system displays an error message | |

### Image5.png Add Charity organization

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | Low |
| Use Case Status | Base |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 3:38:39 PM |
| **Brief Description** | This use case allow weight loser to choose the charity organization he/she wants to support. The system will provide a list of charity organizations to choose from |
| **Preconditions** | The user is logged in the system and has started the create goal use case |
| **Post-conditions** | The charity organization has been added to the new goal |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser clicks on add charity organization |  | | 2 |  | The system shows a list of the available charity | | 3 | The weight loser chooses a charity organization and clicks "Submit" |  | | 4 |  | The system adds the chosen charity to the goal | |

|  |  |
| --- | --- |
| Alternative Flow1 | |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 3:42:13 PM |
| **Brief Description** |  |
| **Preconditions** | The user doesn't find the charity organization of his/her choice. |
| **Post-conditions** | The suggested charity added to the suggested charity list unless the use case wasn't completed. |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight loser clicks on Suggest charity organization button |  | | 2 |  | The system how suggest charity page | | 3 | The weight loser enters charity information |  | | 4 |  | The system validates the input and add the charity to the suggested charity list | |

### Image5.png Update weight

#### Extension Points

|  |
| --- |
| Achieve goal |

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | Medium |
| Use Case Status | Initial |
| Preconditions | Image5.png Create goal |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 9:56:43 PM |
| **Brief Description** | This use case allows user to enter update his/her weight into the goal. Benchmark is the lowest weight the user has reached so if the user gains weight no money will be send to charity until he/she reaches the benchmark again. |
| **Preconditions** | The user is logged into the system and there is an active goal |
| **Post-conditions** | The goal is updated with the new weight and the benchmark is updated. That is unless the update weight failed |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The weight user clicks on update weight link. |  | | 2 |  | The system opens update weight page | | 3 | The weight user enters a new weight. |  | | 4 |  | The system checks that the new weight is less than the benchmark | | 5 |  | The system updates the benchmark to be equal to the new weight and update the remaining money. | | 6 |  | The system updates the goal with the new weight | |

|  |  |
| --- | --- |
| Exception Flow1 | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 9:56:51 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | On the update weight page, the weight loser enters an invalid weight |  | | 2 |  | The system shows an error message. | |

|  |  |
| --- | --- |
| Exception Flow2 | |
| **Author** | Ali |
| **Date** | Nov 14, 2013 8:06:09 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | On the update weight page, the user enters a new weight |  | | 2 |  | The system checks finds that the new weight is greater or equal to the benchmark weight. | | 3 |  | The system doesn't update the goal's benchmark. | | 4 |  | The system updates the goal with the new weight | |

### Image5.png Login

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | Medium |
| Use Case Status | Initial |

#### Use Case Descriptions

|  |  |
| --- | --- |
| main flow - Standard | |
| Super Use Case |  |
| Author | Arul Samuel, Ali Alotaibi, Manas Jog |
| Date | Oct 16, 2013 2:23:00 PM |
| Brief Description | This use case allows user to log in the system by using username and password or login through Facebook |
| Preconditions |  |
| Post-conditions | User is authenticated to use the system and redirected to the home page. That is unless the credentials were not correct or the use case was not completed successfully. |
| Flow of Events | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user enters email id and password and clicks on login |  | | 2 |  | The system checks if email and password fit required pattern | | 3 |  | the system checks if login attempts did not exceed 15 in 5 minutes. | | 4 |  | The system checks if the supplied credentials exist in the system | | 5 |  | The system redirects the user to homepage. | |

|  |  |
| --- | --- |
| Exception Flow 1 | |
| **Author** | Arul Samuel Ali Alotaibi |
| **Date** | Oct 16, 2013 2:30:01 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The users enters email and password that violates the required pattern. |  | | 2 |  | The system checks if email and password fit required pattern. | | 3 |  | The system displays error message that shows the user the pattern that was violated. | |

|  |  |
| --- | --- |
| Exception Flow 2 | |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 2:41:25 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user enters incorrect email id or/and password. |  | | 2 |  | The system checks if supplied credentials exist in the system | | 3 |  | The system displays "incorrect email or password" message. | |

|  |  |
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| Exception Flow 3 | |
| **Author** | manas, Ali Alotaibi |
| **Date** | Nov 16, 2013 9:11:35 PM |
| **Brief Description** |  |
| **Preconditions** | The user has tried to login 14th time in the last 5 minutes |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user tries to login for 15th time in 5 minutes. |  | | 2 |  | The system checks if login attempts did not exceed 15 times in 5 minutes. | | 3 |  | The system locks out the current session and disable login button. | |

|  |  |
| --- | --- |
| Alternative Flow 1 | |
| **Super Use Case** |  |
| **Author** | Manas Jog, Ali Alotiabi |
| **Date** | Nov 16, 2013 9:16:07 PM |
| **Brief Description** | The user can reset his/her password by entering the email used to register in the system |
| **Preconditions** | Email address used is registered. |
| **Post-conditions** | User's password is changed unless the password reset process was not successful. |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user clicks on forgot password. |  | | 2 |  | The system redirects the user to Forgot password page. | | 3 | The user enters email address and clicks submit. |  | | 4 |  | The system checks if email exists. | | 5 |  | The system generates a URL containing a random token string and send it as email. Also store it in the system with 24 hour expiry time. | | 6 | The user clicks on the random URL in the sent email. |  | | 7 |  | The system checks if URL exists in system and is valid. | | 8 |  | The system redirects the user to New Password page. | | 9 | The user enters a new password twice. |  | | 10 |  | The system heck if password matches and conforms to policies. | | 11 |  | The system udates the user account with the new password. | | 12 |  | The system redirects the user to login page. | |

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| Exception Flow 1 | |
| **Author** | Manas Jog |
| **Date** | Nov 16, 2013 9:30:07 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | On Forgot password page, the user enters email address |  | | 2 |  | The system checks if email exists. | | 3 |  | The system displays "Email does not exist" message. | |

|  |  |
| --- | --- |
| Exception Flow 2 | |
| **Author** | Manas Jog |
| **Date** | Nov 16, 2013 9:31:47 PM |
| **Brief Description** |  |
| **Preconditions** | URL used for password reset expired. |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user clicks on the random URL in the sent email(step 6 of alternative flow 1) |  | | 2 |  | the system checks if URL exists in the system and is valid. | | 3 |  | The system displays an error message "URL expired" and redirect user to Forgot Password page. | |

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| Alternative Flow 3 | |
| **Super Use Case** |  |
| **Author** | Ali Alotaibi |
| **Date** | Nov 14, 2013 8:35:44 PM |
| **Brief Description** | user can login to the system using Facebook |
| **Preconditions** |  |
| **Post-conditions** | User is authenticated to use the system and redirected to the home page. That is unless this use case flow was not completed successfully. |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user clicks on "Login Via Facebook" |  | | 2 |  | The system attempts to get user information through Facebook | | 3 |  | The system checks if response contains user information | | 4 |  | The system checks if user is already registered in the system | | 5 |  | The system redirects the user to the home page | |

|  |  |
| --- | --- |
| Exception Flow 1 | |
| **Author** | Manas Jog, Ali Alotaibi |
| **Date** | Nov 16, 2013 9:49:09 PM |
| **Brief Description** | If this is the first time the user uses login via Facebook, The system will add the user information into the system and the user will be a register user. |
| **Preconditions** |  |
| **Post-conditions** | User is added into the system as a new user and is authenticated to use the system and redirected to homepage. |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user clicks on Login via Facebook |  | | 2 |  | The system attempts to get information by Facebook | | 3 |  | The system checks if response contains user information | | 4 |  | The systems finds that the user is not registered in the system | | 5 |  | The system adds the user into the system | | 6 |  | The system redirects the user to home page | |

|  |  |
| --- | --- |
| Exception Flow 2 | |
| **Author** | Manas, Ali Alotaibi |
| **Date** | Nov 16, 2013 9:53:19 PM |
| **Brief Description** | The user did not grant access permissions to our website and hence invalid response was returned or connection with facebook could not be established. |
| **Preconditions** |  |
| **Post-conditions** | or the use case was not completed successfully. |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user clicks on "Login Via Facebook" |  | | 2 |  | The system attempts to get user information from Facebook | | 3 |  | The system checks if response contains user information. | | 4 |  | The system displays an error message that no information was retrieved from Facebook. | |

### Image5.png Register

#### Details

|  |  |
| --- | --- |
| Name | Value |
| Complexity | Low |
| Use Case Status | Initial |

#### Use Case Descriptions

|  |  |
| --- | --- |
| Main Flow | |
| **Super Use Case** |  |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 3:05:19 PM |
| **Brief Description** | This use case allow a new member to create an account in Lose4Good website |
| **Preconditions** | none |
| **Post-conditions** | User account has been created and user information is stored in the database unless the account creation was not successfully |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user clicks on register button on the login page. |  | | 2 |  | The system Redirects the user to the Account Creation page. | | 3 | The user enters his/her personal information and click on the register button. |  | | 4 |  | The system validates the entered information and checks for redundancy | | 5 |  | The system sends an activation link to the user's email and show a conformation message . | |

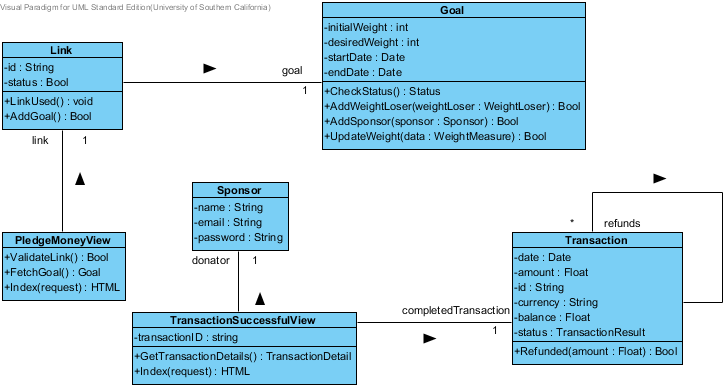
|  |  |
| --- | --- |
| Exception Flow 1 | |
| **Author** | Arul Samuel, Ali Alotaibi |
| **Date** | Oct 16, 2013 3:13:45 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | The user Tries to register while already having an account |  | | 2 |  | The system Show an error Message | |

|  |  |
| --- | --- |
| Exception Flow 2 | |
| **Author** | Ali |
| **Date** | Nov 14, 2013 7:02:06 PM |
| **Brief Description** |  |
| **Preconditions** |  |
| **Post-conditions** |  |
| **Flow of Events** | |  |  |  | | --- | --- | --- | |  | Actor Input | System Response | | 1 | User enters invalid Information |  | | 2 |  | The system shows an error Message and mark the invalid information | |

# Use Cases Grid

|  |  |  |  |
| --- | --- | --- | --- |
| ID | Name | Primary Actors | Supporting Actors |
| UC06 | Update weight | Weight\_loser |  |
| UC11 | Monitor Payment | Financial Officer |  |
| UC04 | Add Charity organization | Weight\_loser |  |
| UC05 | Invite Sponsor | Weight\_loser |  |
| UC01 | Login | User |  |
| UC09 | Respond to a sponsorship request | Sponsor |  |
| UC02 | Register | User |  |
| UC10 | Achieve goal | Weight\_loser |  |
| UC03 | Create goal | Weight\_loser |  |
| UC07 | Delete goal | Weight\_loser |  |
| UC08 | Track goal | Weight\_loser |  |

# Sponsorship Invitation Response



## Details

### Image7.png Goal

### Image7.png Link

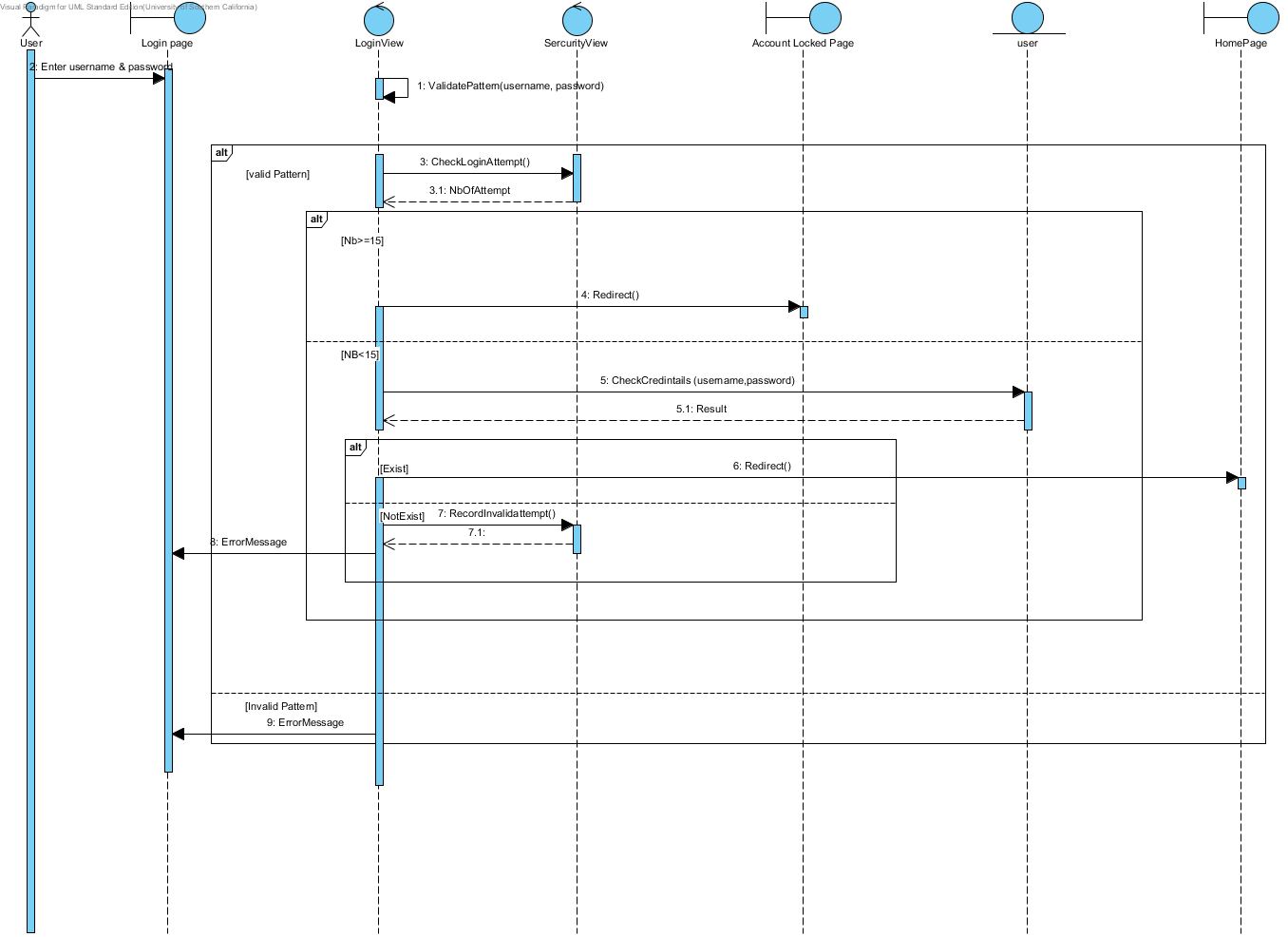
### Image7.png Sponsor

### Image7.png PledgeMoneyView

### Image7.png Transaction

### Image7.png TransactionSuccessfulView

# Direct Login



## Details

### Image2.png User

### Image3.png Login page

### Image3.png LoginView

### Image3.png SercurityView

### Image3.png Account Locked Page

### Image3.png user

### Image3.png HomePage

### Image9.png Operand8

### Image9.png Operand7

### Image9.png Operand9

### Image9.png Operand10

### Image9.png Operand11

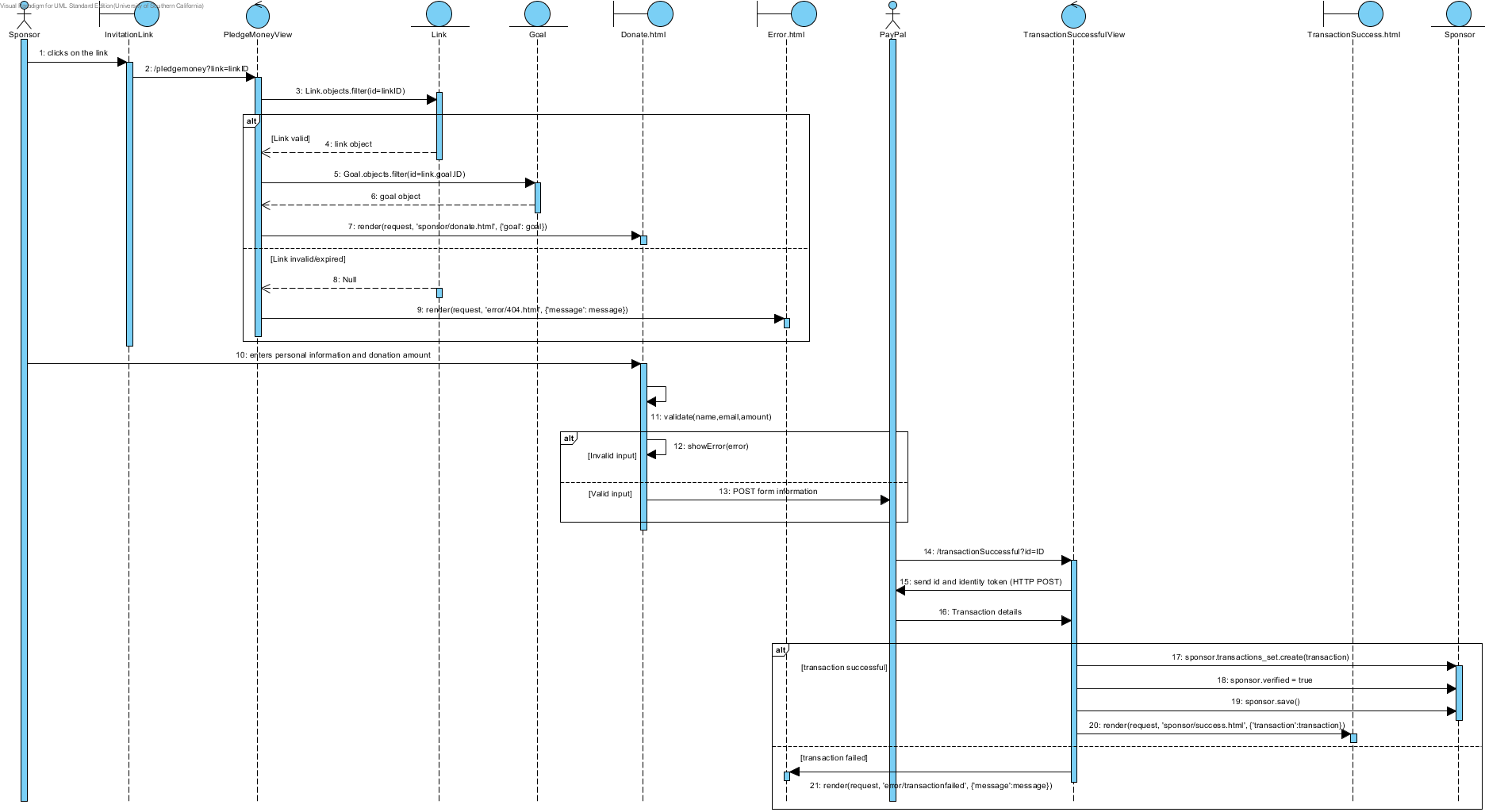
### Image9.png Operand12

### Image10.png CombinedFragment6

### Image10.png CombinedFragment5

### Image10.png CombinedFragment4

# Sponsorship Invitation Response



## Details

### Image2.png Sponsor

### Image3.png InvitationLink

### Image3.png PledgeMoneyView

### Image3.png Link

### Image3.png Goal

### Image3.png Donate.html

### Image3.png Error.html

### Image2.png PayPal

### Image3.png TransactionSuccessfulView

### Image3.png Sponsor

### Image3.png TransactionSuccess.html

### Image9.png Operand5

### Image9.png Operand6

### Image9.png Operand

### Image9.png Operand2

### Image9.png Operand3

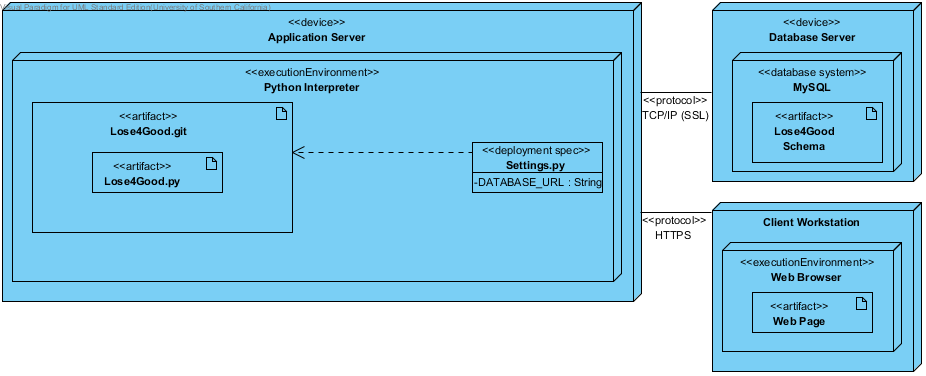
### Image9.png Operand4

### Image10.png CombinedFragment3

### Image10.png CombinedFragment2

### Image10.png CombinedFragment

# Deployment Diagram



## Details

### Image13.png Application Server

### Image13.png Database Server

### Image13.png Python Interpreter

### Image13.png MySQL

### Image14.png Lose4Good.git

### Image14.png Lose4Good Schema

### Image15.png Settings.py

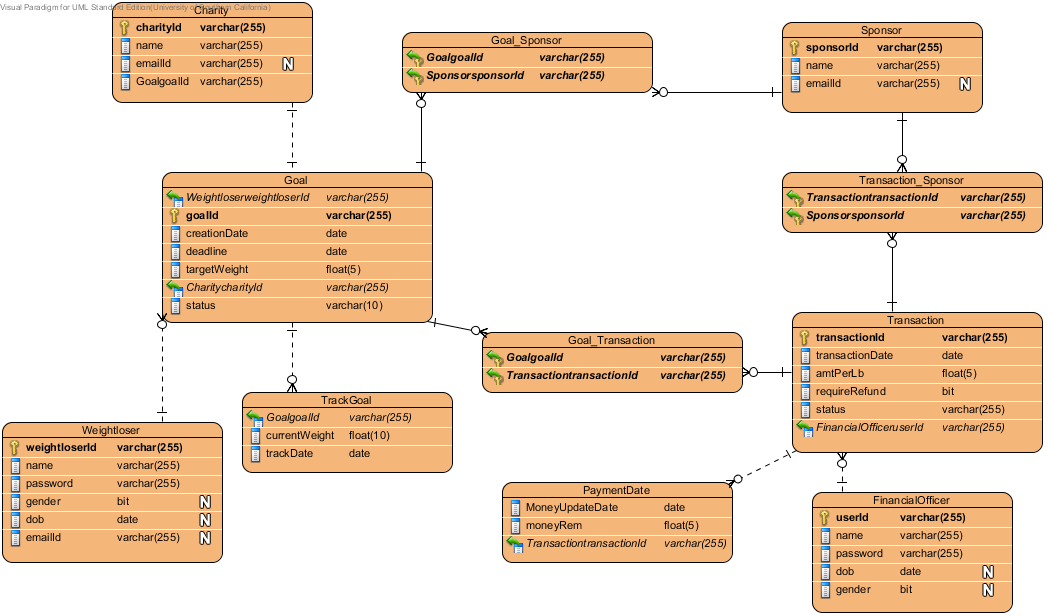
### Image14.png Lose4Good.py

### Image13.png Client Workstation

### Image13.png Web Browser

### Image14.png Web Page

# Entity Relationship Diagram1



## Details

### Image17.png Charity

### Image17.png Sponsor

### Image17.png Goal\_Sponsor

### Image17.png Goal

### Image17.png Transaction\_Sponsor

### Image17.png Transaction

### Image17.png Goal\_Transaction

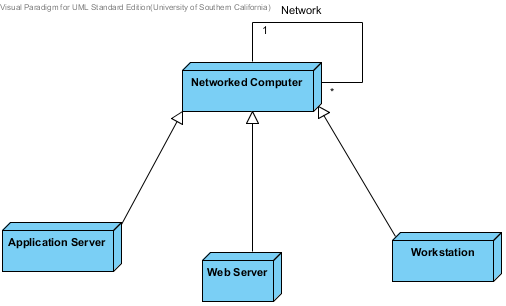
### Image17.png TrackGoal

### Image17.png Weightloser

### Image17.png PaymentDate

### Image17.png FinancialOfficer

# Hardware Component Class Diagram



## Details

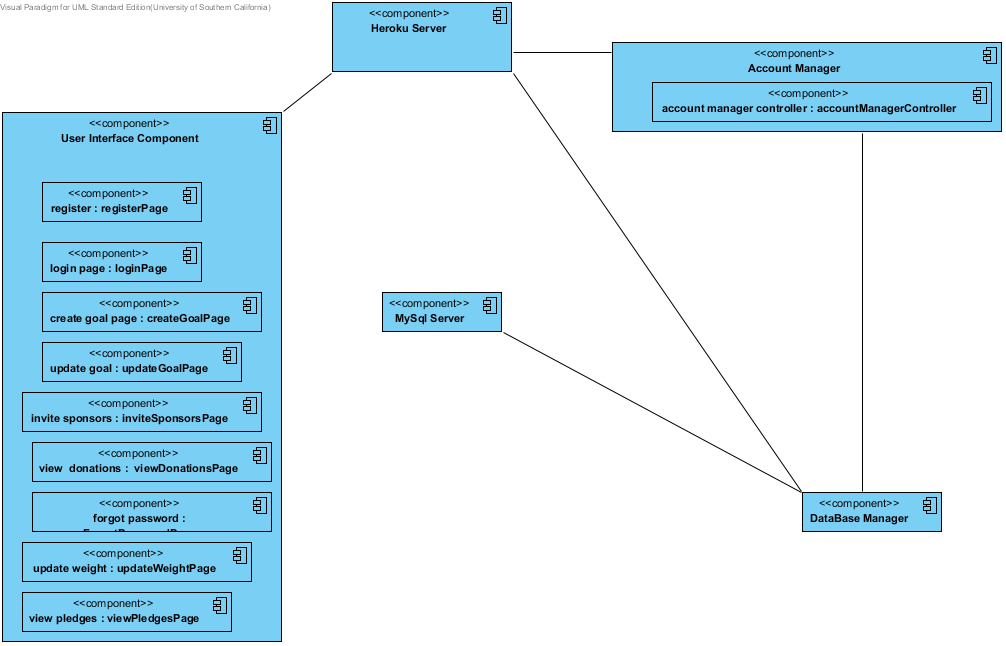
### Image13.png Networked Computer

### Image13.png Application Server

### Image13.png Workstation

### Image13.png Web Server

# Software Component Class Diagram



## Details

### Image20.png Heroku Server

### Image20.png Account Manager

### Image20.png account manager controller : accountManagerController

### Image20.png User Interface Component

### Image20.png register : registerPage

### Image20.png login page : loginPage

### Image20.png create goal page : createGoalPage

### Image20.png MySql Server

### Image20.png update goal : updateGoalPage

### Image20.png invite sponsors : inviteSponsorsPage

### Image20.png view donations : viewDonationsPage

### Image20.png forgot password : ForgotPasswordPage

### Image20.png DataBase Manager

### Image20.png update weight : updateWeightPage

### Image20.png view pledges : viewPledgesPage

## Chosen NDI

|  |  |
| --- | --- |
| **NDI/NCS Products** | **Purposes** |
| PayPal | API used for making secure transactions |
| Facebook Login API, | Incorporated in the system for login mechanism. |

## Connectors

In this project, we use Python/MySQL Connector to enable the Python web application to retrieve and query data from the database.

## Architectural Styles and Frameworks

|  |  |  |
| --- | --- | --- |
| Name | Description | Benefit, Cost, |
| Model-View-Template (MVT) | Model-View-Template is a framework used in Python Framework Django, it is very similar to the popular framework Model-View Controller (MVC) as it separate the system into 3 different layer making it less coupling.   * **Model**   The Model takes care of and handle the stored data, In python it is represented by a python class that contains methods and variables to handle a particular type of data, for example in our system, user’s goal.   * **View**   The view is similar to the MVC’s Controller, In Python it is renamed as View because this tier or component’s main goal, usually, is to determine what kind of data to be viewed or presented   * **Template**   Is similar to the MVC’S View. Template is responsible of how the data passed from View is going to be represented, HTML files in our case | **Benefit**  The main advantage of MTV, as the MVC, is the separation of concerns. Making our system less coupling and flexible as well as easy to modify. This is very important for any web application in general but as our client plan to expand the system in the future into different systems, like Stop4Good, Study4good, etc. flexibility and reusability is very important.  **Cost:**  No particular cost from using MTV especially as Django provides a lot of features that makes developing web application easier. |