LEAP

Lightweight E-Book Access Platform

Sprint One

Presented By: Ω Tech

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1. Project Overview and Summary

The clients, Jaimé Phiffer of Capital Region BOCES and Jen Cannell of Questar III need a simple and easy to use central login platform in order to access e-books from all vendors and publishers. All users; younger students (grades K - 6), older students (grades 7 - 12), teachers, administrators, and the super administrator can view and filter e-books available to them. To checkout e-books, all users will be directed to the third-party websites. Older students, teachers, administrators, and the super administrator can reset their passwords. Teachers can also modify student accounts and administrators can also modify teacher accounts. The super administrator can modify other administrator accounts. The goal of LEAP is to make e-book management simpler for students and faculty by providing an easy to use portal to read e-books and manage their availability.

2. User Case Narratives

2.1 Younger Students

A younger student will navigate to the Lightweight E-book Access Platform (LEAP) login page. The younger student will attempt to login. If the younger student fails to login, the younger student will be brought back to the login page with an error message stating a wrong username or password was entered. After the younger student successfully logs in, a list of all available ebooks for the younger student will be displayed. The e-books displayed will be populated according to the school that the younger student attends, the younger student's grade level, and any additional e-books the younger student's teacher wants the younger student to have access to. The younger student can search and sort the e-books available to the younger student based on various e-book attributes such as name, grade level, publisher and genre. When the younger student clicks on the e-book, the younger student is taken to the third-party website where the ebook is located in order to checkout the e-book.

2.2 Older Students

An older student will navigate to the Lightweight E-book Access Platform (LEAP) login page. The older student will attempt to login. If the older student fails to login, the younger student will be brought back to the login page with an error message stating a wrong username or password was entered. The older student can choose to reset their password and be prompted to enter their username. Then the older student will follow the password reset process. The password reset process entails entering the student's email so that LEAP can email that student a link to reset the student's password. After the older student successfully logs in, a list of all available e-books for the older student will be displayed. The e-books displayed will be populated according to the school that the older student attends, the older student's grade level, and any additional e-books the older student's teacher wants the older student to have access to. The older student can search and sort the e-books available to the younger student based on various e-book attributes such as name, grade level, publisher and genre. When the older student clicks on the e-book, the older student is taken to the third-party website where the e-book is located in order to checkout the e-book.

2.3 Teachers

A teacher will navigate to Lightweight E-book Access Platform (LEAP) login page and attempt to login. If the teacher fails to login, the teacher will be brought back to the login page with an error message stating a wrong username or password was entered. The teacher can choose to reset their password and be prompted to enter their username. The teacher will then follow our password reset process. The password reset process entails entering the teacher's email so that LEAP can email that teacher a link to reset the teacher's password. After the teacher successfully logs in, the screen will display all the e-books the teacher has access to, including teacher-specific e-books such as instructor manuals and answer booklets. The teacher can choose to filter books based on different search criteria like appropriate grade level, genre, or subject. The teacher can choose to click on an e-book and be brought to the third-party website where the e-book is located in order to checkout the e-book. The teacher will have access to a user management area where the teacher can modify or view account settings for the teacher's students. These settings will include the student's password and the e-books the student has access to.

2.4 Administrators

An administrator will navigate to Lightweight E-book Access Platform (LEAP) login page and attempt to login. If the administrator fails to login, the administrator will be brought back to the login page with an error message stating a wrong username or password was entered. The administrator can choose to reset their password and be prompted to enter their username. The administrator will then follow our password reset process. The password reset process entails entering the administrator's email so that LEAP can email that administrator a link to reset the administrator's password. After the administrator successfully logs in, the screen will display all the e-books the administrator has access to, including administrator-specific e-books such as instructor manuals and answer booklets. The administrator can choose to filter books based on different search criteria like appropriate grade level, genre, or subject. The administrator can choose to click on an e-book and be brought to the third-party website where the e-book is located in order to checkout the e-book. The administrator will have access to a user management area where the administrator can modify or view account settings for the administrator's students. These settings will include the student's password and the e-books the student has access to.

In addition the administrator can go into settings and choose to edit account information for both teachers and students, modify third-party website settings, and view statistics. When the administrator chooses to edit accounts, the administrator will be prompted to either create a new account or edit an existing account. If the administrator chooses to create a new account, the administrator will be directed to a form to add a new teacher or student. Once the administrator is finished filling out the form, the administrator can choose done or cancel. If done is chosen, the form will be uploaded to the server. If cancel is chosen the administrator will be directed back to administrator settings. If the administrator chooses to edit an existing teacher or student account, the administrator will be directed to a search bar where the administrator can find the person and click the edit button in order to edit the account. When the administrator is editing a pre-existing user and the administrator is finished filling out the form, the administrator can choose done or cancel. If done is chosen, the form will be uploaded to the server. If cancel is chosen the administrator will be directed back to administrator settings. If the administrator chooses to modify the third-party website settings, the administrator will be directed to a list of all of the current publishers and vendors. The administrator can choose to click on add a new publisher or vendor, or they can click the edit button located next to one of the publishers or vendors. If the administrator chooses to add a new publisher or vendor, they will be directed to fill out a form. When the administrator is finished filling out the form, the administrator can choose done or cancel. If done is chosen, the form will be uploaded to the server. If cancel is chosen the administrator will be directed back to the modify vendors and publishers page. If the administrator chooses to edit a publisher or vendor, they will fill out an edit form. When the administrator is finished filling out the form, the administrator can choose done or cancel. If done is chosen, the form will be uploaded to the server. If cancel is chosen the administrator will be directed back administrator settings. If the administrator chooses to view statistics, the

administrator will be directed to the statistics page which will show statistics such as what books was rented the most.

2.5 Super Administrator

The super administrator will navigate to Lightweight E-book Access Platform (LEAP) login page and attempt to login. If the super administrator fails to login, the super administrator will be brought back to the login page with an error message stating a wrong username or password was entered. The super administrator can choose to reset their password and be prompted to enter their username. The super administrator will then follow our password reset process. The password reset process entails entering the super administrator's email so that LEAP can email that super administrator a link to reset the super administrator's password. After the super administrator successfully logs in, the screen will display all the e-books the super administrator has access to, including super administrator-specific e-books such as instructor manuals and answer booklets. The super administrator can choose to filter books based on different search criteria like appropriate grade level, genre, or subject. The super administrator can choose to click on an e-book and be brought to the third-party website where the e-book is located in order to checkout the e-book. The super administrator will have access to a user management area where the super administrator can modify or view account settings for the super administrator's students. These settings will include the student's password and the e-books the student has access to.

In addition the super administrator can go into settings and choose to edit account information for both teachers and students, modify third-party website settings, and view statistics. When the super administrator chooses to edit accounts, the super administrator will be prompted to either create a new account or edit an existing account. If the super administrator chooses to create a new account, the super administrator will be directed to a form to add a new teacher or student. Once the super administrator is finished filling out the form, the super administrator can choose done or cancel. If done is chosen, the form will be uploaded to the server. If cancel is chosen the super administrator will be directed back to super administrator settings. If the super administrator chooses to edit an existing teacher or student account, the super administrator will be directed to a search bar where the super administrator can find the person and click the edit button in order to edit the account. When the super administrator is editing a pre-existing user and the super administrator is finished filling out the form, the super administrator can choose done or cancel. If done is chosen, the form will be uploaded to the server. If cancel is chosen the super administrator will be directed back to super administrator settings. If the super administrator chooses to modify the third-party website settings, the super administrator will be directed to a list of all of the current publishers and vendors. The super administrator can choose to click on add a new publisher or vendor, or they can click the edit button located next to one of the publishers or vendors. If the super administrator chooses to add a new publisher or vendor, they will be directed to fill out a form. When the super administrator is finished filling out the form, the super administrator can choose done or cancel. If done is chosen, the form will be uploaded to the server. If cancel is chosen the super administrator will be directed back to the modify vendors and publishers page. If the super administrator chooses to edit a publisher or vendor, they will fill out an edit form. When the super administrator is

finished filling out the form, the super administrator can choose done or cancel. If done is chosen, the form will be uploaded to the server. If cancel is chosen the super administrator will be directed back super administrator settings. If the super administrator chooses to view statistics, the super administrator will be directed to the statistics page which will show statistics such as what books was rented the most. The super administrator with the can also add, edit and delete administrator accounts.

Sprint One

3. UML Use Case Diagram

3.1 UML Use Case Legend

System Boundary - Represents the system; actors go on the outside of the boundary and scenarios go inside.

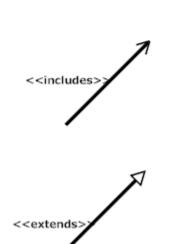
Actor - Actors can be human or non-human. Human actors can be found on the left side of the system and non-human actors can be found on the right side of the system. Actors interact with the system through scenarios.

Scenario - Processes that occur within the system and interact with actors.

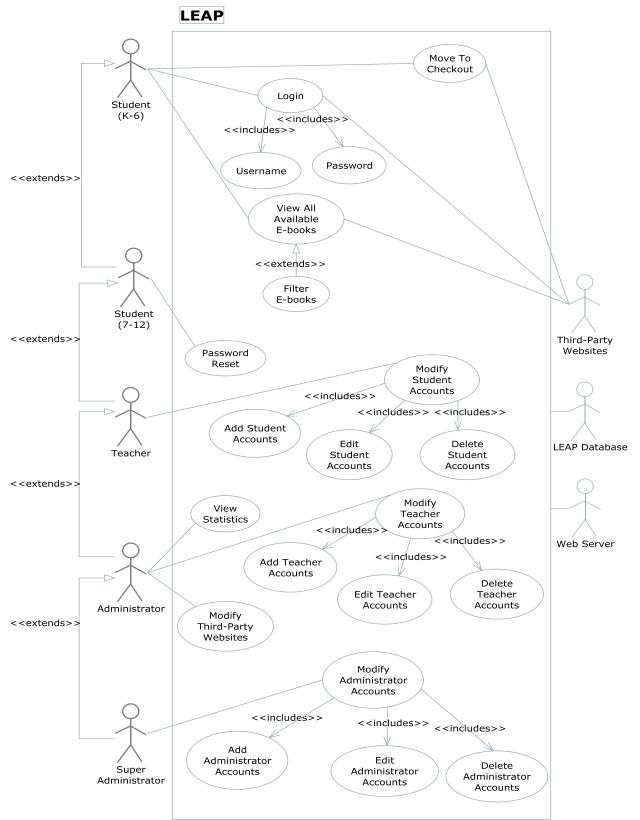
Participation Line - Shows what scenarios an actor can interact with.

Inclusion Arrow - An arrow that points from one scenario to another scenario in order to show that something must be included for the scenario.

Inheritance Arrow - An arrow that points between two scenarios showing that one scenario inherits functionality from another. The scenario being pointed at is the parent.



3.2 UML Use Case Diagram



4. UML Deployment Diagram

4.1 UML Deployment Diagram Legend



HTTP - The Hypertext Transfer Protocol is an application protocol for distributed, collaborative, hypermedia information system. HTTP is the foundation of data communication for the World Wide Web.



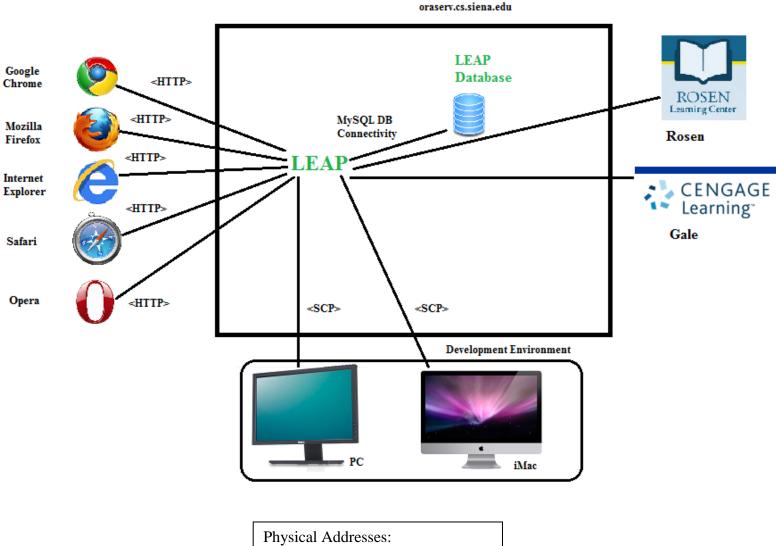
SCP- Securely transferring computers files between a local host and a remote host or between two remote hosts.



System Boundary- Represents what is within a system and what is outside of it.

Connection- Displays a relationship between boundaries.

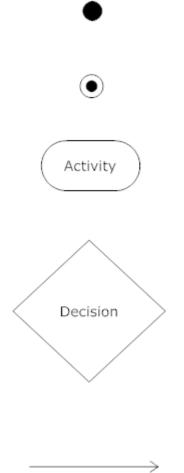
4.2 UML Deployment Diagram



Physical Addresses: PC: F8-B1-56-DA-B9-77 Mac: 40-6C-8F-19-C5-BC

5. UML Activity Diagram

5.1 UML Activity Diagram Legend



Initial Node - The initial node is the first node in the process. The initial node is the starting point for all movement.

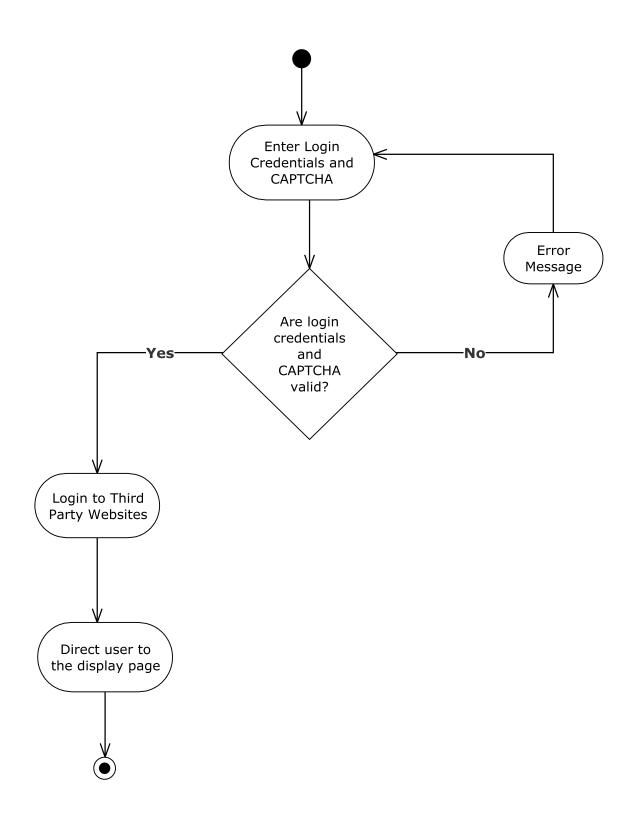
Final Node - The final node is the last node in the process. When the activity flow has reached here, the process is over. There may be more than one final node.

Activity Node - Describes behaviors that will take place at this step, where activity is the behavior.

Decision Node - Takes an incoming edge and presents multiple outgoing edges based on the decision of the process. The decision is typically posed as a question.

Flow - Shows the movement of action from one node to another.

5.2 Activity Diagram: Login



6. Website Map

6.1 Website Legend

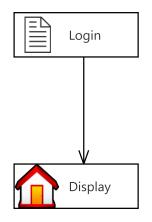


Home - Represents the main page the user will see upon a successful login.



Form – Represents data fields which require user input.

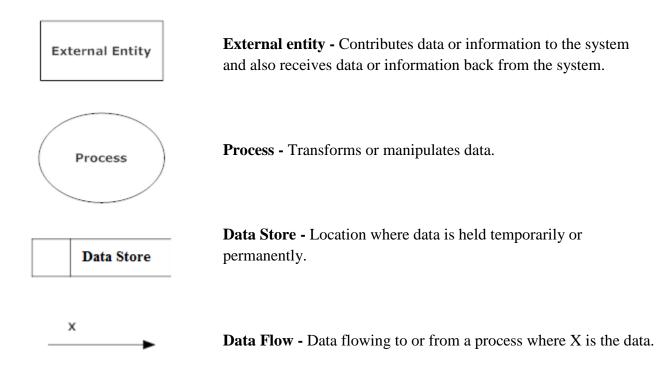
6.2 Website Map



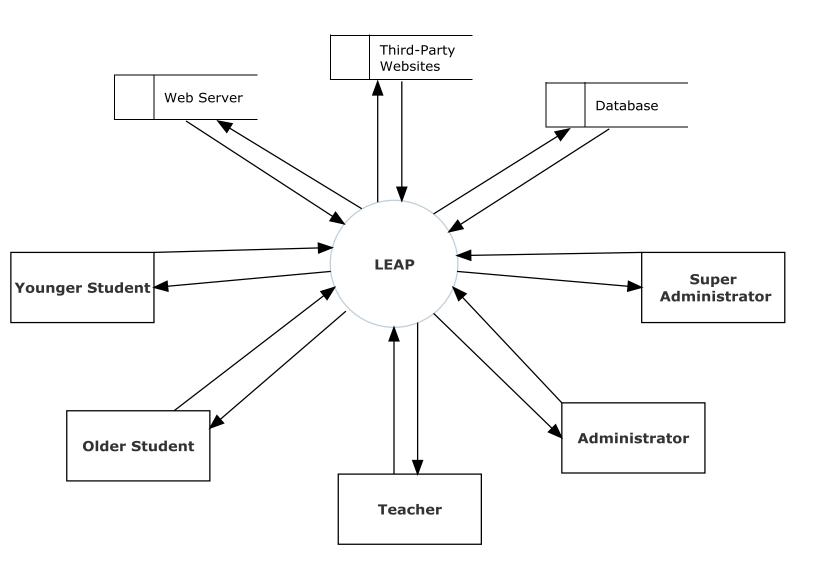
Sprint One

7. Data Flow Diagrams

7.1 Data Flow Legend

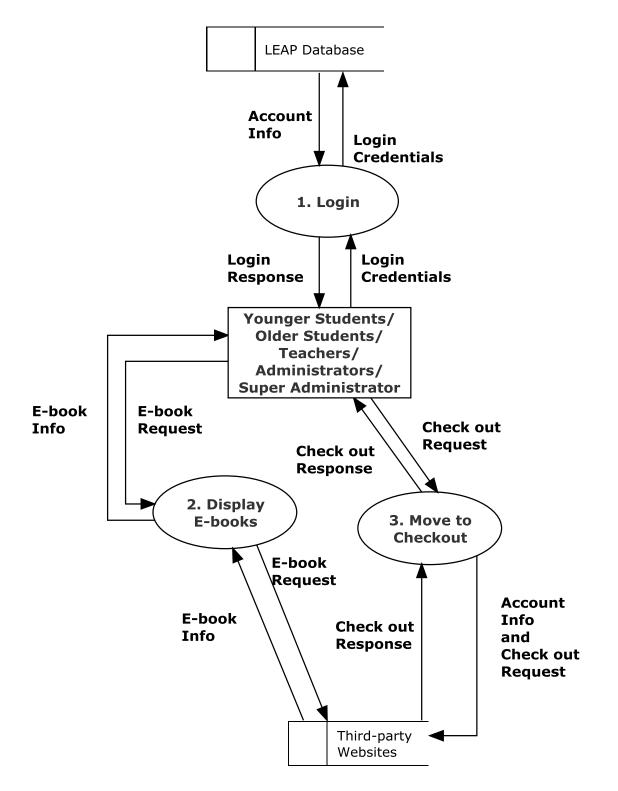


7.2 Context Diagram



7.3 Level 0 Diagram

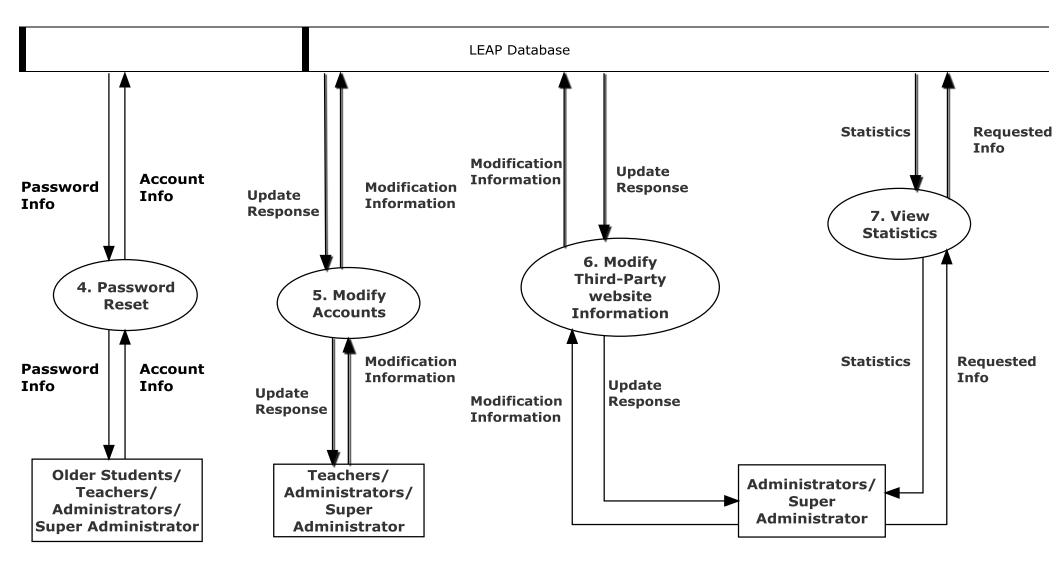
7.3.1 Part 1 of the Level 0 Diagram



Omega Tech

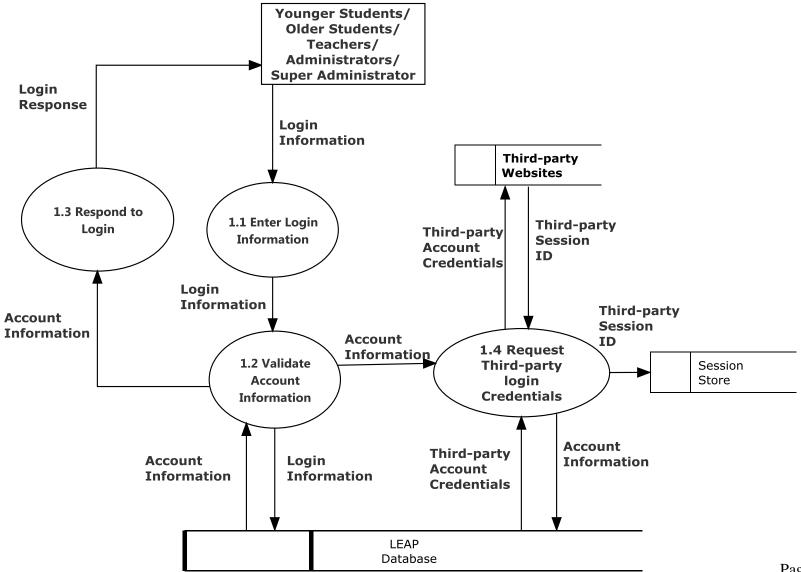
November 25th, 2014

7.3.2 Part 2 of the Level 0 Diagram



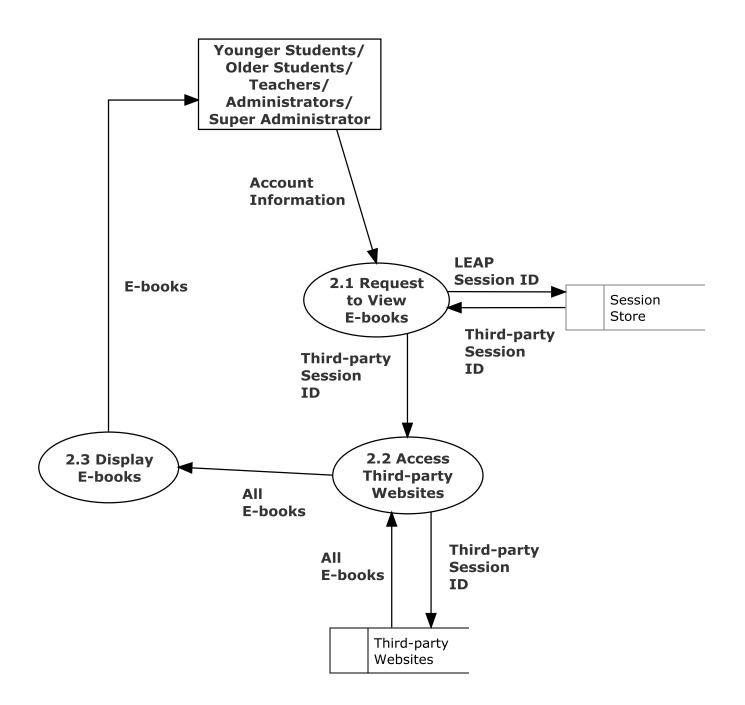
7.4 Level 1 Diagrams

7.4.1 Login

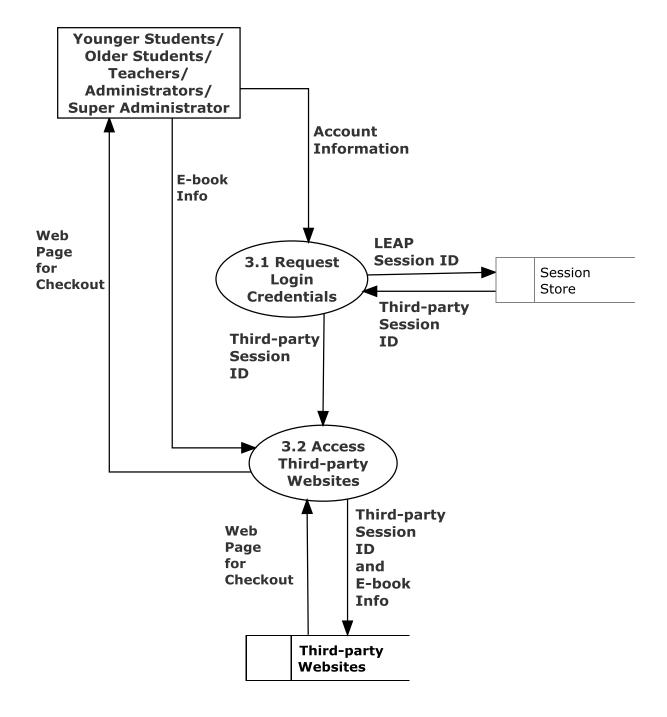


Page 20

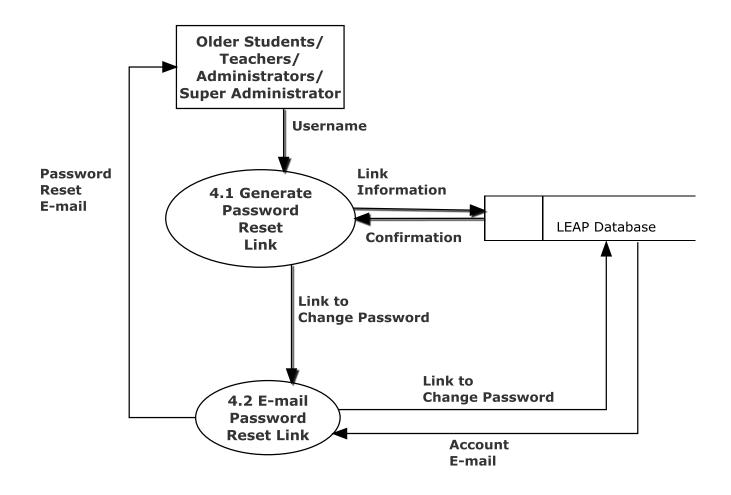
7.4.2 Display E-books



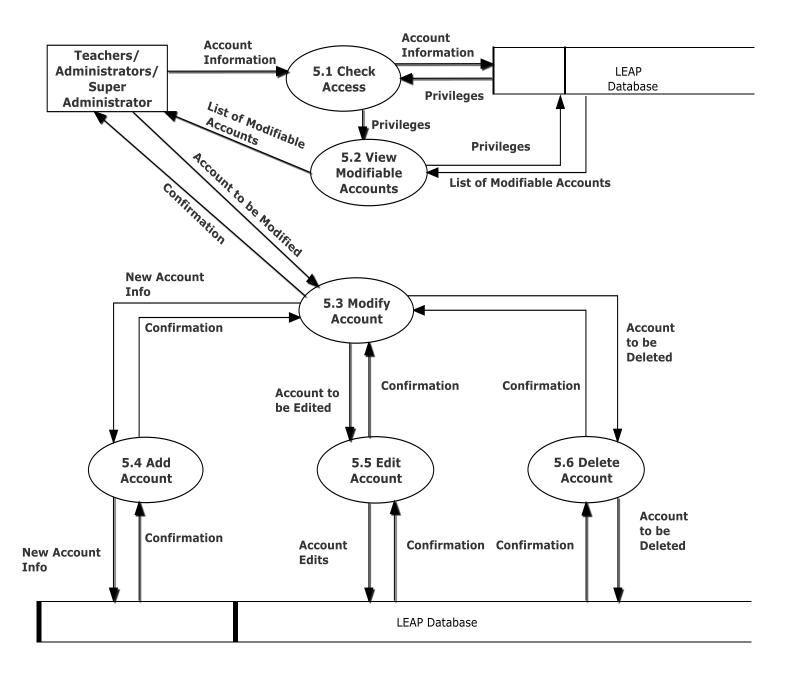
7.4.3 Move to Checkout



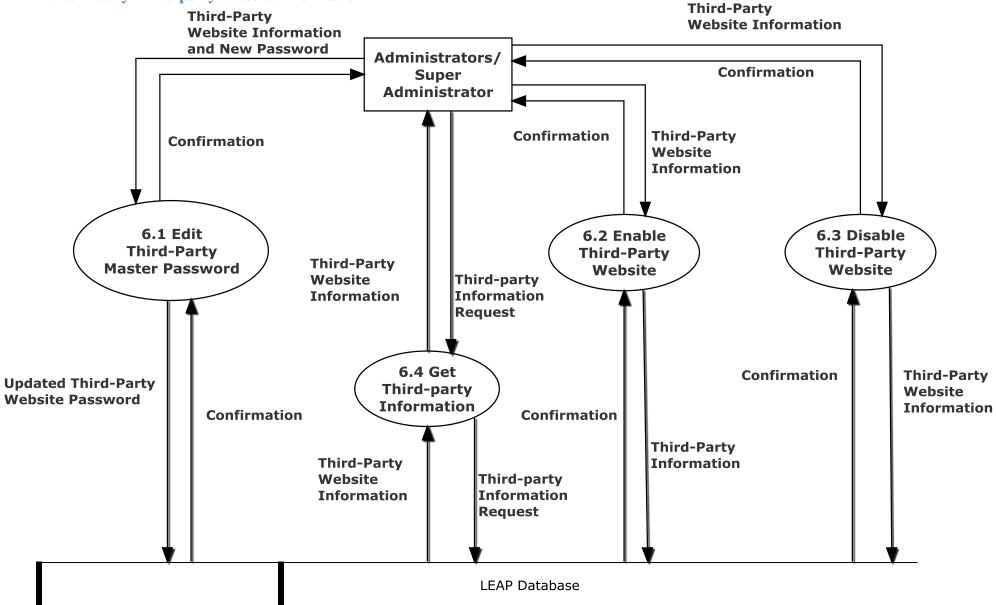
7.4.4 Password Reset



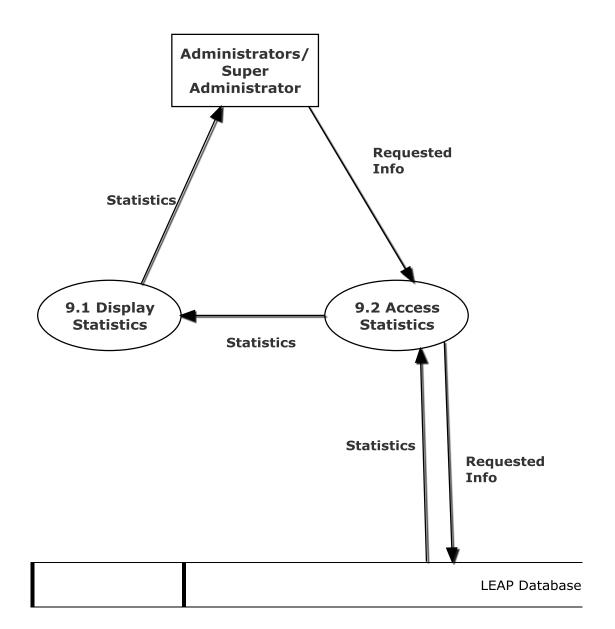
7.4.5 Modify Accounts





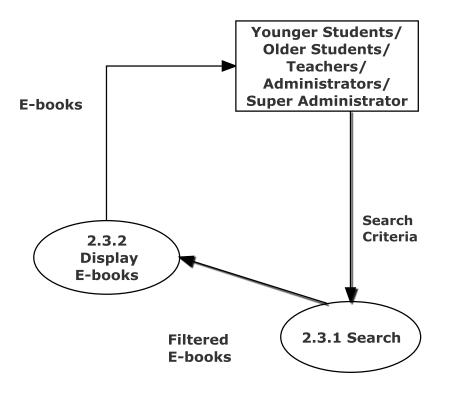


7.4.7 View Statistics

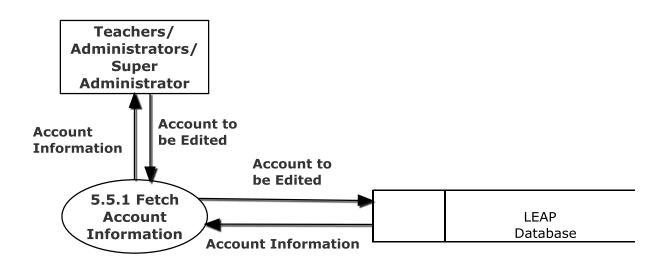


7.5 Level 2

7.5.1 Display E-books (2.3)



7.5.2 Edit Account (5.5)



8. Functional Requirements Inventory

The following list will detail the required functionality that LEAP will have once the system has been completely implemented. LEAP will be a web application viewable in all major internet browsers such as Internet Explorer, Mozilla Firefox, Google Chrome, and Safari. Compatibility with mobile devices is necessary.

8.1 Younger Students

- Will be able to login to the system
- Will be able to view e-books
- Will be able to filter e-books
- Will be able to search for e-books based on different criteria
- Will be brought to third-party websites to check out e-books

8.2 Older Students

- Will be able to login to the system
 - They can also reset their passwords
- Will be able to view e-books
- Will be able to filter e-books
- Will be able to search for e-books based on different criteria
- Will be brought to third-party websites to check out e-books

8.3 Teachers

- Will be able to login to the system
 - They can also reset their passwords
- Will be able to view e-books
 - They can view teacher specific e-books
- Will be able to filter e-books
- Will be able to search for e-books based on different criteria
- Will be brought to third-party websites to check out e-books
- Will be able to modify student accounts
 - They can add, edit and delete student accounts

8.4 Administrators

- Will be able to login to the system
 - They can also reset their passwords
- Will be able to view e-books
 - They can view teacher specific e-books
- Will be able to filter e-books
- Will be able to search for e-books based on different criteria
- Will be brought to third-party websites to check out e-books
- Will be able to modify student accounts
 - They can add, edit and delete student accounts
- Will be able to modify teacher accounts
 - They can add, edit, and delete teacher accounts
- Will be able to modify third-party websites
- Will be able to view statistics

8.5 Super Administrator

- Will be able to login to the system
 - They can also reset their passwords
- Will be able to view e-books
 - They can view teacher specific e-books
- Will be able to filter e-books
- Will be able to search for e-books based on different criteria
- Will be brought to third-party websites to check out e-books
- Will be able to modify student accounts
 - They can add, edit and delete student accounts
- Will be able to modify teacher accounts
 - They can add, edit, and delete teacher accounts
- Will be able to modify third-party websites
- Will be able to view statistics
- Will be able to modify administrator accounts
 - They can add, edit, and delete administrator accounts

9. Non-Functional Requirements Inventory

This list will detail the specific properties that will be implicitly defined in the LEAP software. This list does not specify explicit features of LEAP, but rather what LEAP is intended to do.

- LEAP will be designed to be efficient
- LEAP will be very user friendly, providing an easy to use and understand interface
- LEAP will be easy to access by all types of users
- LEAP will be have compatibility will multiple browsers, as well as a variety of mobile devices
- LEAP will be stable; meaning that all errors will be handled appropriately and we will work to ensure LEAP will not crash
- LEAP will be a secure platform

10. Logical Data Dictionary

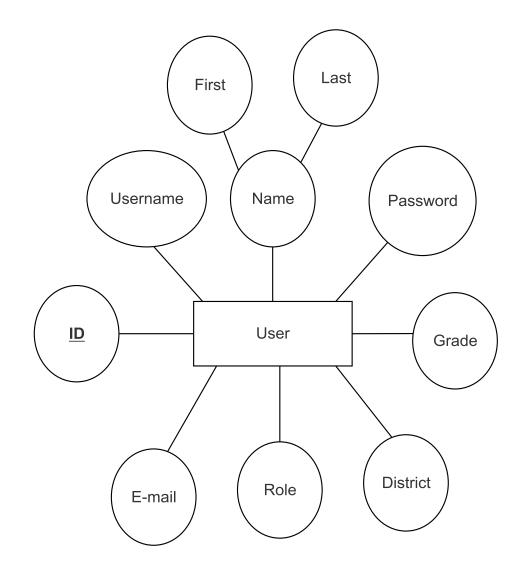
Data Name	Data Type	Data Type Size	Description	Applicaple to	Acceptable Input	Example	Comments
					letters, numbers,		
					and some special		
userName	Varchar	5-32 characters?	Username of member	log in	characters	Justin2good	
						2a3d2263156632	
					letters, numbers,	71bc93c5008e5129	
					and some special	faed75be1c1ae907	
password	char	64 characters	password of member	log in	characters	f820a50356577ccc86	
userID	int	1-32 bits	Unique id of member	Look up	Int	1	userID one is super Admin
							1= Younger Student
							2= Older Student
			Member role				3= Teacher
Role	tiny int	8 bits	(younger Student)	Identify privileges	Int	2	4= Admin
					Uppercase and		Character .
					lowercase English		(dot, period, full stop)
					letters (a-z, A-Z)		provided that it is not the first or last
					Digits 0 to 9		character,
					Characters ! # \$ %		and provided also that it does not
					&'*+-/=?^_`{		appear two or more times
e-mail	Varchar	7-64 characters or null	e-mail of user	reseting password	}~	j2good@yopmail.com	consecutively.
					ASCII char 32		
					(space), -, A-Z, a-z,		
					, ASCII char 128 to		
First Name	varchar	1-30 characters?	First name of member	Add users to system	ASCII char 165	Justin	
				<i>,</i> ,	ASCII char 32		
					(space), -, A-Z, a-z,		
					1		
					, , ASCII char 128 to		
Last Name	varchar	1-60 characters?	Last name of member	Add users to system	ASCII char 165	Rousseau	
				,	Letters, space, and		
					some special		
District	varchar	1-32 characters?	School District	log in/ e-book access		South Colonie	looking into local districts
Grade	tiny int	8 bits	Grade level	identify role	null, 0-12	0	0 is Kindergarten, null is not student

10. Logical Data Dictionary Continued

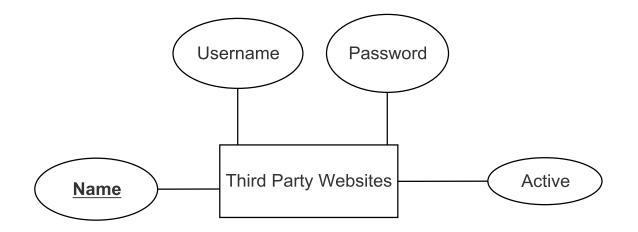
Data Name	Data Type	Data Type Size	Description	Applicaple to	Acceptable Input	Example	Comments
Third party website			third party website				looking into third
name	varchar	1-32 characters?	name	identify third party	letters and space	Rosen	party weebsites
Third party username	varchar	1-32 characters?	third party user name	login into third party	letters	justin2bad	
					letters, numbers,		
					and special		
Third party password	varchar	128 characters	third party password	login into third party	characters	hahalamaDmIn	
				log in to third party			
				websites/login			
Active	bit	1 bit	1 for in use 0 for not	process	1 or 0	1	

11. ER Diagram

11.1 ER Diagram for Users Table



11.2 ER Diagram for Third Party Websites Table



12. User Displays

12.1 Login

Username	
Enter Username	
Password	
Password	
yet	[Different Image]







Welcome To Lea	ıp
Enter Username	×
The Username is required	
Password	
Password	×
The password is required	
yet	[Different Image]
Please enter a value	^







Welcome To Leap	
Enter Username	
Password	
Password	
auk	[Different Image]







Login To Leap: OK!	User Information
User Agent: Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/38.0.2125.111 Safari/537.36 Last Activity: 1416498012 Login To Rosen: OK! Session ID: JSESSIONID=83975E411445562B1AF4F9C8666B640C; Path=/ Login To Gale: OK! Session ID: JSESSIONID=1C09D623B0726490EB55D08ED6538800.omni1; Path=/auth/; HttpOnly	 User_ID: 2 Username: student Password(SHA256): 2040esa31br/10082a4e50b0dd4cef7808c61a05f84c35db42cc78a2a72875b Role: Young Student E-Mail: student@leap.com First Name: Young Last Name: Student District: Questar III Grade: 6
Login To Gale Professional: OK!	Logout
Session ID: JSESSIONID=EAD2BFAEE3EAA5D3359104B600E47C94.omni2; Path=/auth/; HttpOnly	









13. Testing Requirements

Each functional requirement will be tested according to our software development model; the agile scrum methodology. The tests will be conducted in different web browsers, such as Mozilla Firefox, Google Chrome, Internet Explorer, and Apple Safari. Additionally, tests will be conducted on mobile devices. Upon completion of an item, we will do unit testing or functional testing as needed. We will also conduct overall system testing and any necessary regression testing as more items are developed. Towards the end of our development cycle, we will be coordinating with our clients to achieve beta testing. This will include students that will use the system upon completion, enabling us to also receive feedback on any non-functional requirements.

14. Testing Results

	Α	В	С	D	E	F	G	Н		J	K
	LEAP										
2	Log In	into L E A D	. Log into third-party we	heitae							
4	LUY a user		. Log into third-party we	bolles.							
5			Test Cases								
6	Pass/Fail Status	Test Number	Description	Action to perform test (input)	Steps to be Executed	State Before Test	Expected result	Observed result	Comments	Tested By	Test Date
7	Р	1.001	Null everything	Leave everything Blank.	Press submit.	Empty Form.	Fill out username, password, and captcha	The user is notified that usename, password, and CAPTCHA are all required.		Omega Tech	11/24/2014
8	Р	1.002	Null Username Field	Leave username field blank.	Fill out the password, captcha and submit.	Empty Form.	Displays message "Please fill out username Field"	The user is notified that a username is required.		Omega Tech	11/24/14
9	Р	1.003	Null Password Field	Leave password field blank.	Fill out the username, captcha and submit.	Empty Form.	Displays message "Please fill out password field"	The user is notified that their password is required.		Omega Tech	11/24/14
10	Ρ	1 004	Null Username and Password Fields	Leave username and password field blank	Fill out captcha. Press submit.	Empty Form.	Diplays message "please fill out username Field."	The user is notified that their username and password is required.		Omega Tech	11/24/14
11	Ρ	1.005	Incorrect Password for given username.	Input incorrect Username and password combination. But correct captcha	Press submit.	Empty Form.	Displays message: Password does not match username.:	An error message is displayed at the top of the screen stating that password is incorrect.		Omega Tech	11/24/14

12	Ρ	1.006	Non-existing username.	Input a username which does not exist.	Fill out an incorrect username and a password.	Empty Form.	Displays message: "Username does not exist, Contact your teacher."	An error message is displayed at the top of the screen stating that the username does not exist.		Omega Tech	11/24/14
13	Р	1.007	Correct Username and Password	Input the correct username and password. Also correct captcha	Fill out the correct username and password.	Empty Form.	No Error. Redirected to home page	The user is redirected to the home page.		Omega Tech	11/24/14
14	Ρ	1.008	Username length less than 5 characters.	Input a username less than 5 characters.	Fill out the correct password and CAPTCHA and press submit.	Empty Form.	Displays message: "Username must be between 5 and 50 characters."	The user is notified that the username must be between 5 and 50 characters.		Omega Tech	11/24/14
15	Ρ	1.009	Password length less than 5 characters.	Input a Password less than 5 characters.	Fill out the correct username and CAPTCHA and press submit.	Empty Form.	Displays message: "Password must be between 5 and 50 characters."	The user is notified that the Password must be between 5 and 50 characters.		Omega Tech	11/24/14
16	Р	1.010	Null Captcha Field	Leave CAPTCHA blank	Fill out everything except captcha	Empty Form.	Displays message:"captcha is incorrect"	The user is notfied that they should enter a value for the CAPTCHA		Omega Tech	11/24/14
17	Ρ	1.011	Incorrect Captcha Field	Input correct username and password, with incorrect CAPTCHA	Fill out the correct CAPTCHA	Empty Form.	Displays message:"captcha is incorrect"	An error message displayed saying: "CAPTCHA message is incorrect."		Omega Tech	11/24/14
25	Р	= Unit Su		100%	passing		passed		Date o	f last test =	11/24/14
26		11	tests			0	failed				

15. Appendices

15.1 Appendix A: Cross Reference Index
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15.2 Appendix B: Source of Information

Our clients, J'aimé Pfeiffer and Jen Cannell will serve as our primary sources of information throughout the project. We will actively communicate with them to ensure that the project meets all of their requirements and specifications. Additionally, we will use our professors, Dr. Lim and Dr. Fryling as resources for information that cannot be provided by the client

15.3 Appendix C: Glossary of Terms

Activity Diagram: A flow chart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.

Administrators: A user type of LEAP defined in the User Case Narrative

BOCES: Boards of Cooperative Educational Services

Chrome: A web browser created by Google Inc.

Data Dictionary: A set of information describing the contents, format, and structure of a database and the relationship between its elements, used to control access to and manipulation of the database.

Data Flow Diagram: A representation of how data will move and interact throughout a system. **Firefox**: A web browser created by the Mozilla Foundation.

GB: Gigabyte

GHz: Gigahertz

Internet Explorer: A web browser created by Microsoft Inc.

L.E.A.P: Lightweight E-Book Access Platform, this software project.

Safari: A web browser created by Apple Inc.

UML Deployment Diagram: Used to visualize the topology of the physical components of a system where the software components are deployed.

UML Use Case Diagram: A diagram created to represent users' interactions with a system.

Younger Students: A user type of LEAP defined in the User Case Narrative

Website Map: Is a list of pages of a web site accessible to users.

15.4 Appendix D: Timeline

	Task Name	Start	Finish	Duration	Sep 2014 Oct 2014 Nov 2014 Dec 2014
ID					8/31 9/7 9/14 9/21 9/28 10/5 10/12 10/19 10/26 11/2 11/9 11/16 11/23 11/30 12/7 12/14
1	Software Plan	9/9/2014	9/23/2014	11d	
2	Software Plan Documents Due	9/19/2014	9/19/2014	1d	0
3	Software Plan Presentation	9/23/2014	9/23/2014	1d	
4	Requirements Specification	9/25/2014	10/28/2014	24d	
5	Requirements Specification Documents Due	10/27/2014	10/27/2014	1d	
6	Requirements Specification Presentation	10/28/2014	10/28/2014	1d	
7	Preliminary Design	11/18/2014	11/26/2014	7d	
8	Preliminary Design Documents Due	11/26/2014	11/26/2014	1d	0
9	Preliminary Design Presentation	12/2/2014	12/2/2014	1d	
10	Client Meetings	9/11/2014	12/2/2014	59d	
11	Team Meetings	9/9/2014	12/2/2014	61d	