

UofL Research & Innovation Revamp

“The Problem Solvers”

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Contents

System Requirements

Use Case Diagram

Trace Matrix

Use Cases and Sequence Diagrams

Class Diagram

Database Design

Data Definitions

User Interface Navigation Diagram

Screen Layouts

Physical Architecture Design

Design Procedures for Security Concerns and Non-functional requirements

Gantt Chart

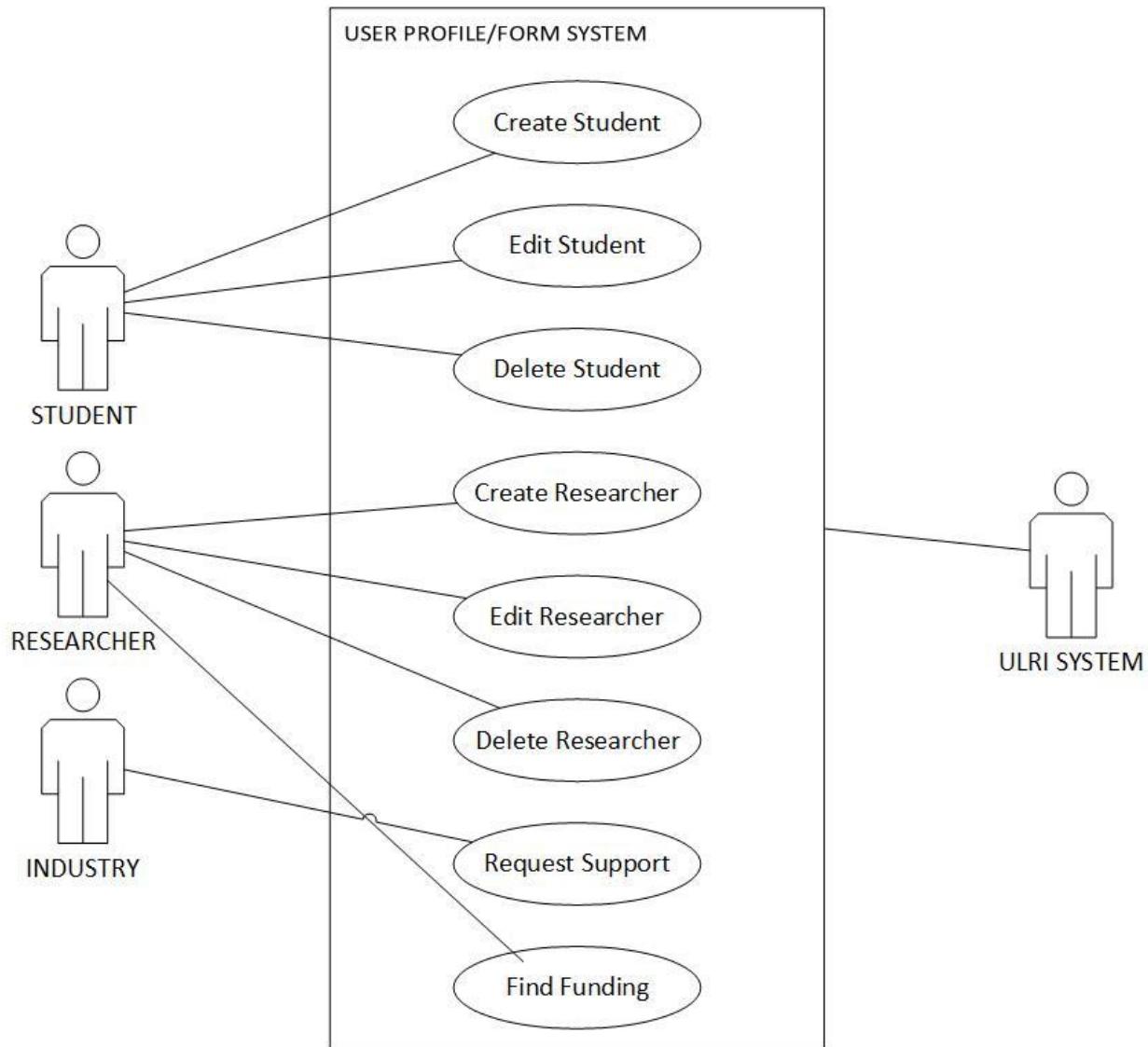
Elaboration Phase Prototype

System Requirements

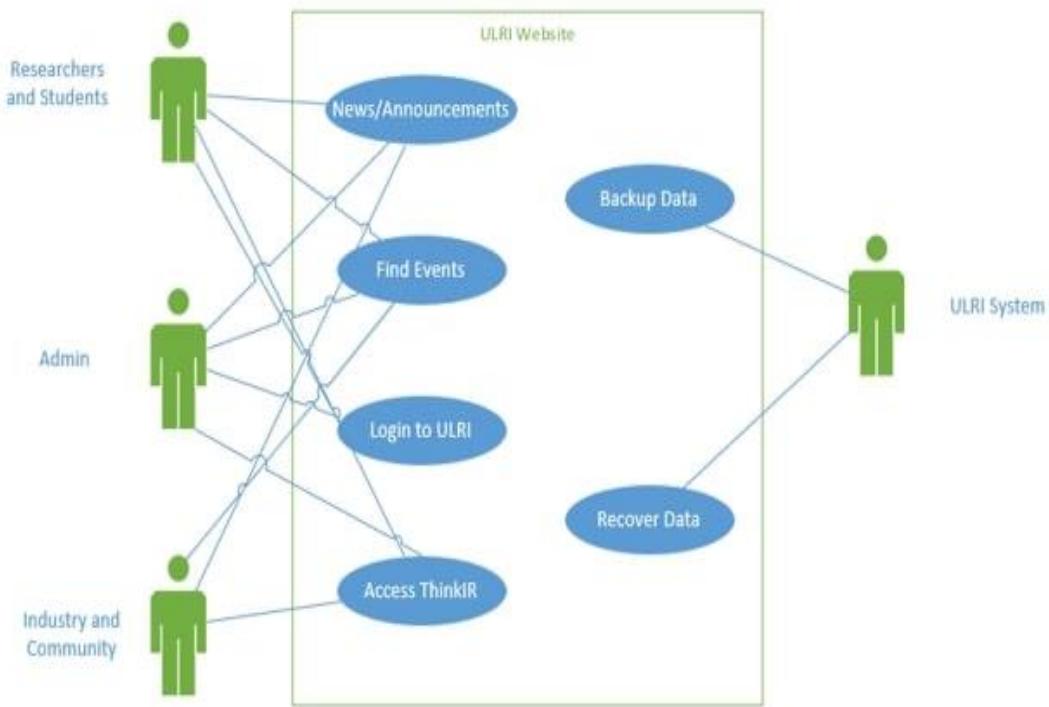
System Requirements		
ID	Requirement	Functional/Non-Functional?
R1	The new system shall create a grant	Functional
R2	The new system shall create a student	Functional
R3	The new system shall create an industry	Functional
R4	The new system shall create an administrator	Functional
R5	The new system shall create a researcher	Functional
R6	The new system shall create a community member	Functional
R7	The new system shall have an industry request form	Functional
R8	The new system shall connect users with funding	Functional
R9	The new system shall include the policies and procedures of ULRI	Functional
R10	The new system shall include updated News & Announcements	Functional
R11	The new system shall create, edit, and delete events	Functional
R12	The new system shall showcase successful research & innovation	Non-functional
R13	The new system shall include a contact form	Functional
R14	The new system shall include contact information for ULRI staff	Functional
R15	The new system shall have user access privileges	Functional
R16	The new system shall include information on developing a proposal	Functional
R17	The new system shall showcase Metrics & Awards to all users	Functional
R18	The new system shall be easy to navigate	Non-functional
R19	The new system shall be made with WordPress	Non-functional
R20	The new system shall be efficient for users	Non-functional
R21	The new system shall follow UofL Branding Guidelines	Non-functional
R22	The new system shall edit a grant	Functional
R23	The new system shall delete a grant	Functional
R24	The new system shall edit a student	Functional
R25	The new system shall delete a student	Functional
R26	The new system shall edit an industry	Functional

R27	The new system shall delete an industry	Functional
R28	The new system shall edit an administrator	Functional
R29	The new system shall delete an administrator	Functional
R30	The new system shall edit a researcher	Functional
R31	The new system shall delete a researcher	Functional
R32	The new system shall edit a community member	Functional
R33	The new system shall delete a community member	Functional

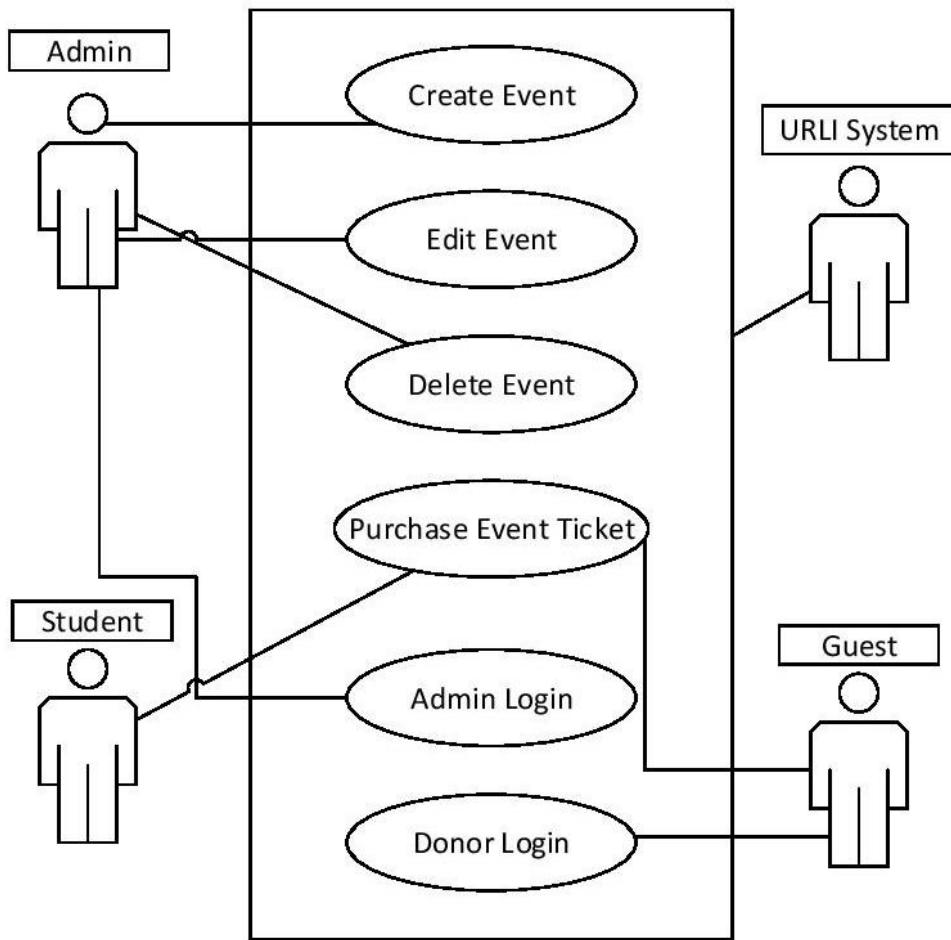
Use Case Diagram



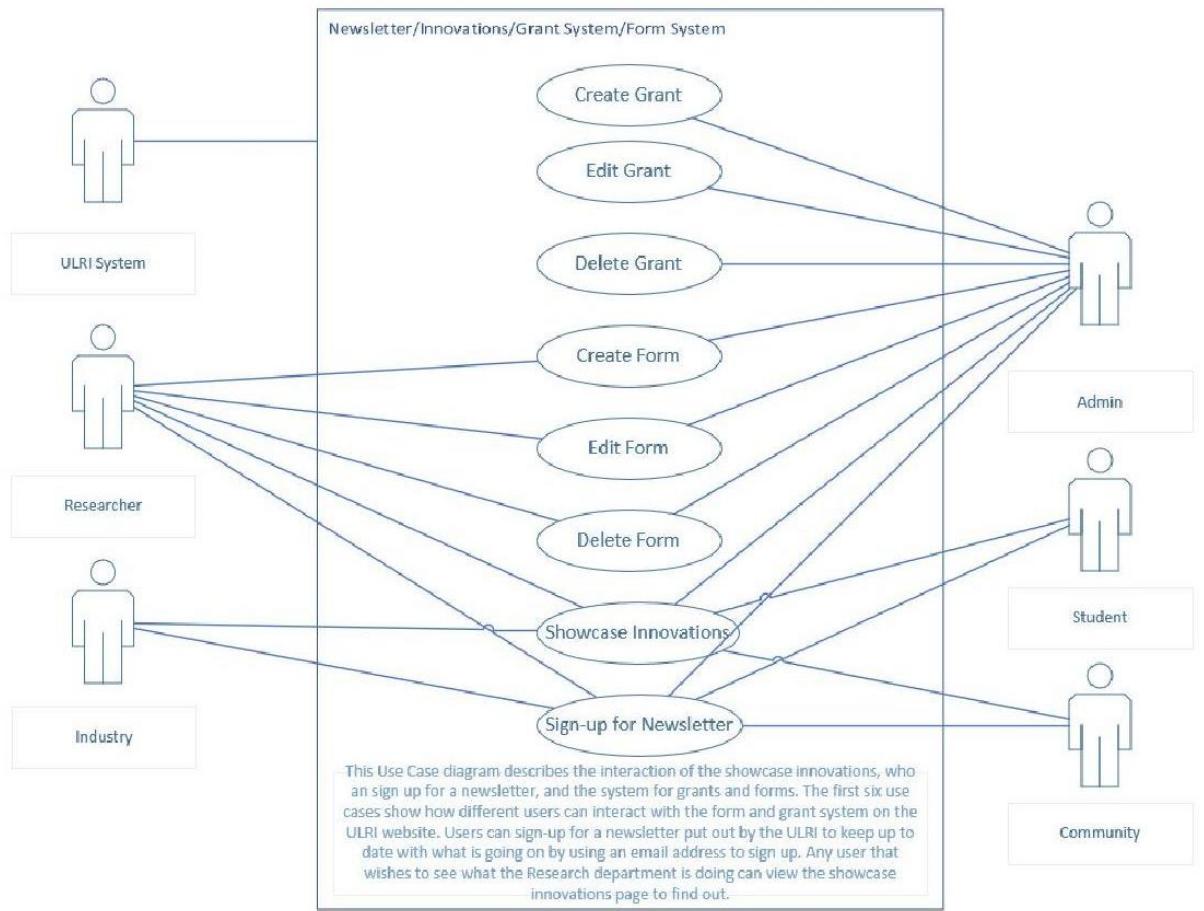
This use case diagram describes a user profile/form system. The first six use cases regard to student and researcher accounts on the ULRI website. Researchers can save funding opportunities to their profile for quick access. The request support use case is for industry professionals looking to for support. Their contact information and form is saved to the ULRI system.

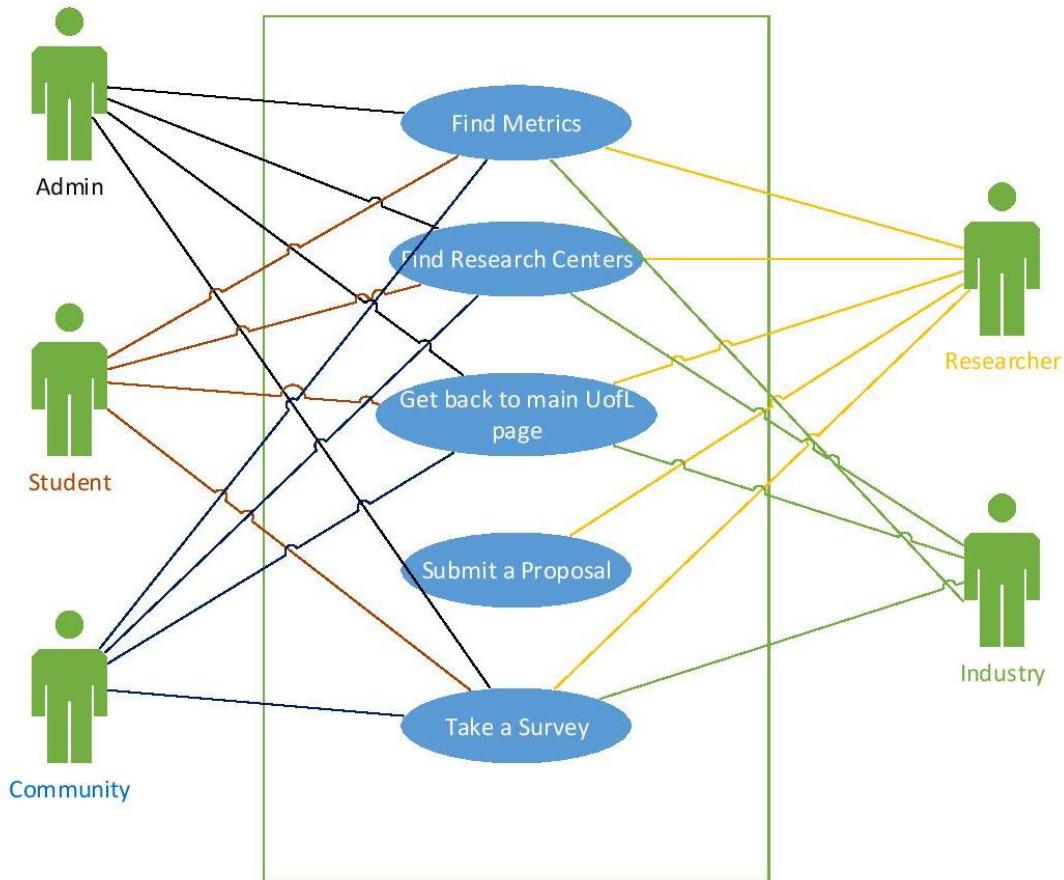


This diagram explains some of the user functionality of the ULRI website and explains some of the measures taken to ensure that not only user data is constantly maintained, but also website files and databases are safe. The four use cases that community at large will use will help individuals keep up with current news and events and allow users to access personalized pages. The use cases on the right are there to help maintain the integrity and usability of the website as a whole.

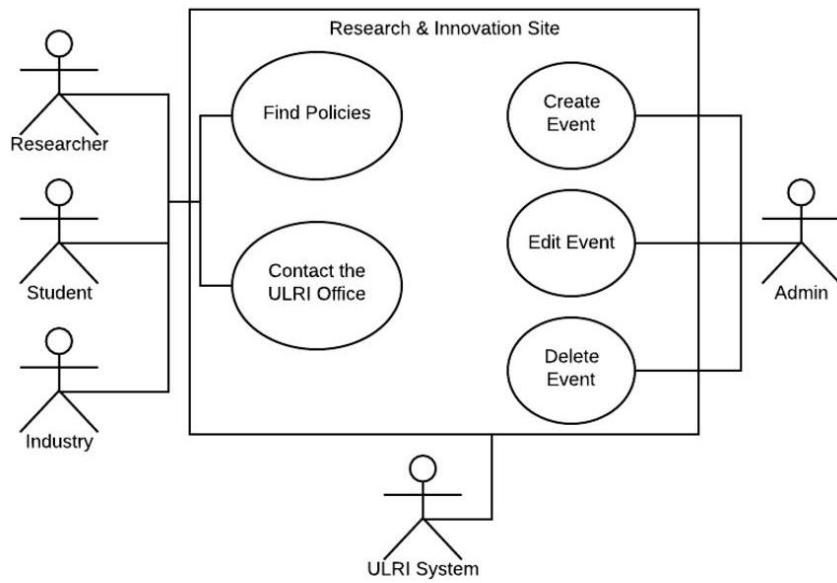


This diagram shows the relationship between the actors and activities they are tied with. Students and guests are allowed to purchase event tickets and admin is allowed to create, edit, and delete the event. Admin can login as admin and guests can login to donor login and the whole is controlled by URLI system.





This use case diagram shows 5 low risk use cases including: find metrics, find research centers, get back to the main UofL page (uofl.edu), submit a proposal, and take a survey. These 5 use cases while low risk are very important additions to this webpage/system. The new webpage must show metrics so that visitors to the site can understand how much the ULRI center has accomplished and how much more they are ready to accomplish. The use case for finding research centers is also vital so that prospecting researchers or current ones can find a center that works best for them in a very easy and efficient manner assisting in their research needs. The next use case gets back to the main UofL page and isn't as important to students, but this is necessary to add for industries and researchers that aren't current students so that they can navigate easily to our main college page and find any other resources they may need. After that we have the use case for submitting a proposal. This use case only applies to researchers so that they can submit proposals for their research and see if the university will support it and allow them to use their facilities. Lastly, we have "take a survey", this is important for a few reasons. One of which being some researchers may need people to respond to surveys to assist in their research or to complete it and another being that the ULRI center may want to add their own surveys to see how they can continue to improve the environment for researchers or industries that want to get involved with the ULRI.



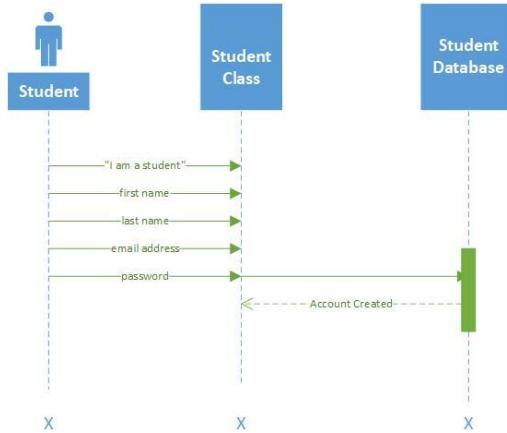
This use case diagram describes the different types of users that access the system to find relevant and accurate information. The first use case connects users with that information to show university and research policies as well as procedures. The second use case presents users with the information necessary to communicate between them and the research and innovation office. The administrator can access the system to create, edit, and delete events related to the research and innovation department.

Trace Matrix

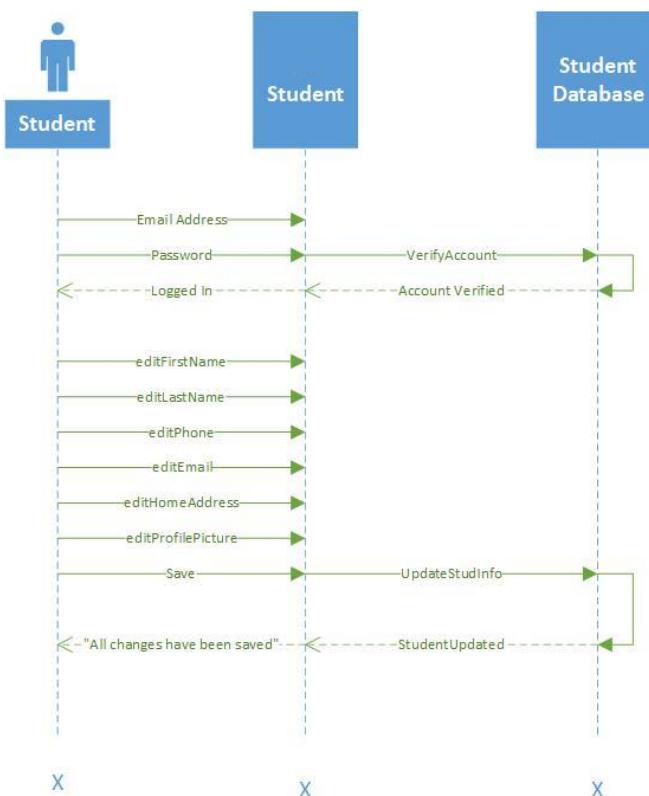
Traceability Matrix																			
System Requirements																			
User Cases	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19
UC 1	x														x	x	x		
UC 2															x	x	x		x
UC 3															x	x	x		x
UC 4		x													x	x	x		
UC 5															x	x	x		x
UC 6															x	x	x		x
UC 7			x												x	x	x		
UC 8				x											x	x	x		
UC 9	x														x	x	x		
UC 10															x	x	x	x	
UC 11															x	x	x	x	
UC 12					x										x	x	x		
UC 13						x									x	x	x		
UC 14						x									x	x	x		
UC 15				x											x	x	x		
UC 16					x	x									x	x	x		
UC 17						x									x	x	x		

Use Cases and Sequence Diagrams

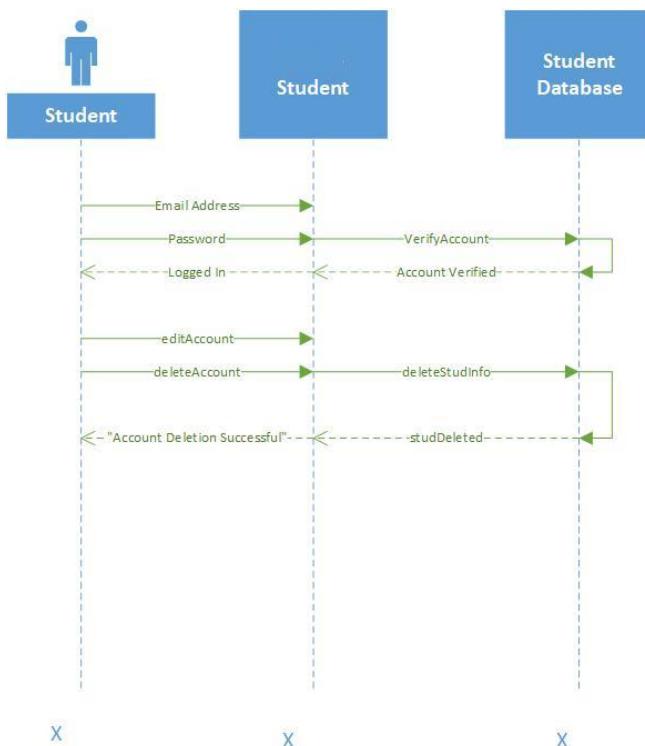
Use Case: Create Student
ID: 1
Brief Description: This use case describes how a student would create an ULRI account.
Primary Actors: Student
Secondary Actors: None
Preconditions: Student account does not exist
Main flow: <ol style="list-style-type: none">1. User goes to louisville.edu/research2. User clicks "Login" button on homepage3. User is directed to Login page4. User selects create account5. User selects "I am a student"6. User enters first name in text box7. User enters last name in text box8. User enters email in text box9. User enters password in text box10. User re-enters password in text box11. User clicks "Create an account" button at bottom of page12. User is directed to student account page13. User is added to student table in database14. User receives confirmation email
Postconditions: Student account created
Alternative Flows: none
Risk: Low



Use Case: Edit Student
ID: 2
Brief Description: This use case describes how a student would edit their ULRI account.
Primary Actors: Student
Secondary Actors: None
Preconditions: Student must have a ULRI account
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to Login page 4. User enters email in text box 5. User enters password in text box 6. User clicks "Login" button 7. User is directed to student account page 8. User selects "Edit Account" 9. User modifies student account <ul style="list-style-type: none"> 1. User edits First Name 2. User edits Last Name 3. User edits Phone Number 4. User edits Email Address 5. User edits Home Address 6. User changes profile picture 10. User clicks "Save" button 11. Pop up displays "All changes have been saved" 12. Student is edited
Postconditions: Student account modified
Alternative Flows: none
Risk: Low



Use Case: Delete Student
ID: 3
Brief Description: This use case describes how a student would delete their ULRI account.
Primary Actors: Student
Secondary Actors: None
Preconditions: Student must have a ULRI account
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to Login page 4. User enters email in text box 5. User enters password in text box 6. User clicks "Login" button 7. User is directed to student account page 8. User selects "Edit Account" 9. User clicks "Delete Account" button 10. Pop up displays "Are you sure you want to delete your account?" 11. Student selects "Yes" 12. Pop up displays "Student Deleted Successful" 13. Student is deleted from student table in database
Postconditions: Student account modified
<p>Alternative Flows:</p> <ol style="list-style-type: none"> 1. Student selects "No" 2. Student Account not deleted
Risk: Low



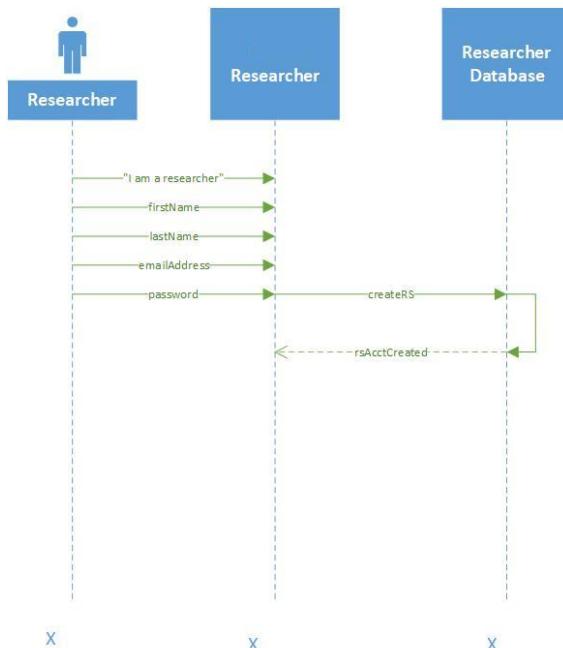
Use Case: Create Researcher
ID: 4
Brief Description: This use case describes how a researcher would create an ULRI account.
Primary Actors: Researcher
Secondary Actors: None
Preconditions: Researcher account does not exist
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks “Login” button on homepage 3. User is directed to Login page 4. User selects create account 5. User selects “I am a researcher” 6. User enters first name in text box 7. User enters last name in text box 8. User enters email in text box 9. User enters password in text box 10. User re-enters password in text box 11. User clicks “Create an account” button at bottom of page 12. User is directed to researcher account page <ol style="list-style-type: none"> 1. User enters phone number

- | |
|---|
| <ol style="list-style-type: none"> 2. User enters home address 3. User selects research area 4. User adds profile picture <p>13. User selects “Save button”</p> <p>14. User is added to researcher table in database</p> <p>15. User receives confirmation email</p> |
|---|

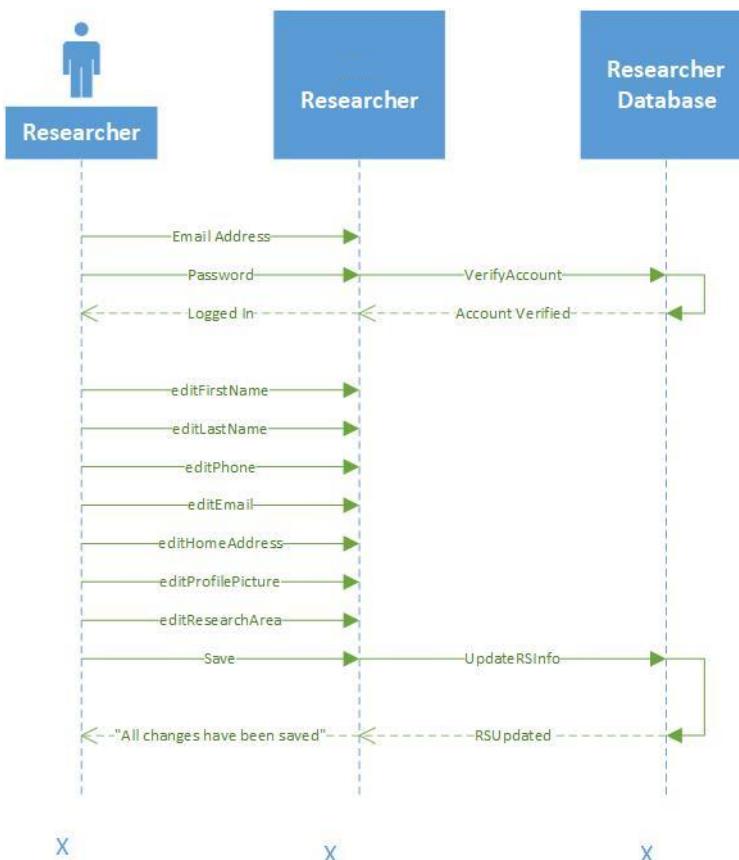
Postconditions: Researcher account created
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Alternative Flows: None

Risk: Low



Use Case: Edit Researcher
ID: 5
Brief Description: This use case describes how a researcher would edit their ULRI account.
Primary Actors: Researcher
Secondary Actors: None
Preconditions: Researcher must have a ULRI account
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to Login page 4. User enters email in text box 5. User enters password in text box 6. User clicks "Login" button 7. User is directed to student account page 8. User selects "Edit Account" 9. User modifies Researcher account <ol style="list-style-type: none"> 1. User edits First Name 2. User edits Last Name 3. User edits Phone Number 4. User edits Email Address 5. User edits Home Address 6. User edits research area 7. User changes profile picture 10. User clicks "Save" button 11. Pop up displays "All changes have been saved" 12. Researcher is edited
Postconditions: Researcher account edited
Alternative Flows: none
Risk: Low



Use Case: Delete Researcher
ID: 6
Brief Description: This use case describes how a researcher would delete their ULRI account.
Primary Actors: Researcher
Secondary Actors: None
Preconditions: Researcher must have a ULRI account
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks “Login” button on homepage 3. User is directed to Login page 4. User enters email in text box 5. User enters password in text box 6. User clicks “Login” button 7. User is directed to student account page 8. User selects “Edit Account” 9. User clicks “Delete Account” button 10. Pop up displays “Are you sure you want to delete your account?”

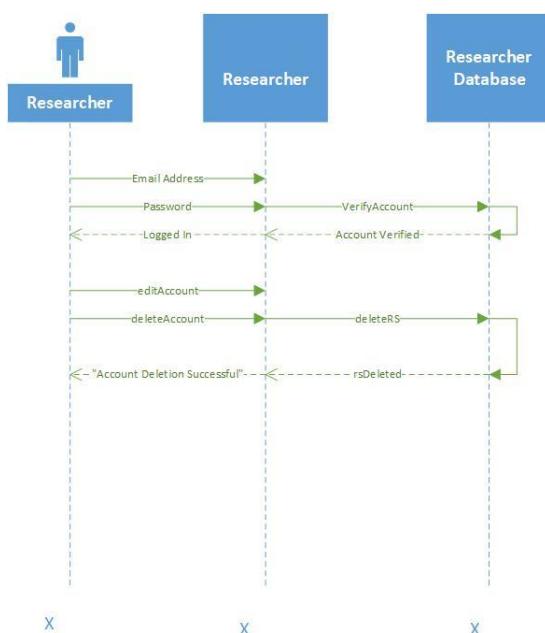
11. Researcher selects “Yes”
12. Pop up displays “Researcher Deleted Successful”
13. Researcher is deleted from researcher table in database

Postconditions: Researcher account deleted

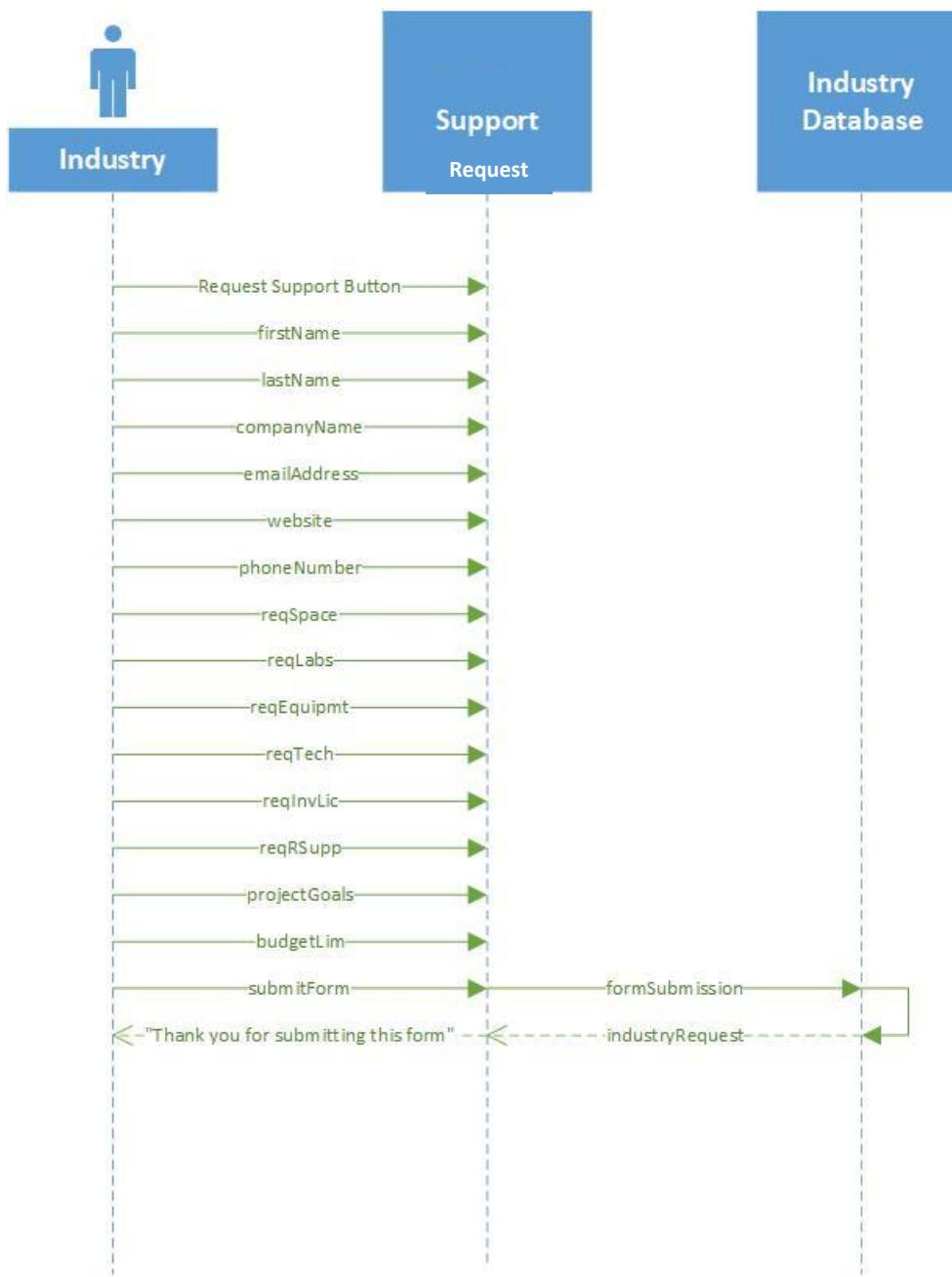
Alternative Flows:

1. Researcher selects “No”
2. Researcher account is not deleted

Risk: Low



Use Case: Request Support
ID: 7
Brief Description: This use case describes how an industry professional can request support (equipment, lab space, assistance, etc).
Primary Actors: Industry
Secondary Actors: None
Preconditions: None
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User hovers over "Support" 3. User clicks "For Industry" 4. User is directed to Industry Support main page 5. User selects "Request Support" button 6. User enters first name and last name in text box 7. User enters company name in text box 8. User enters email in text box 9. User enters website (if applicable) in text box 10. User enters phone number in text box 11. User selects checkboxes for "Space", "Labs", "Equipment", "Access to technologies", "Inventions and Licensing", and/or "Researcher support" 12. User enters information about project goals in text box 13. User enters information about budgetary limitations in text box 14. User clicks "Submit form"
Postconditions: Industry requested support
<p>Alternative Flows:</p> <ol style="list-style-type: none"> 1. Industry selects "Space" 2. Industry selects "Labs" 3. Industry selects "Equipment" 4. Industry selects "Access to technologies" 5. Industry selects "Inventions and licensing" 6. Industry selects "Researcher support"
Risk: High



Use Case: Find Funding
ID: 8
Brief Description: This use case describes how a researcher can find funding
Primary Actors: Researcher
Secondary Actors: None

Preconditions: Must be logged in as a researcher to save search results

Main flow:

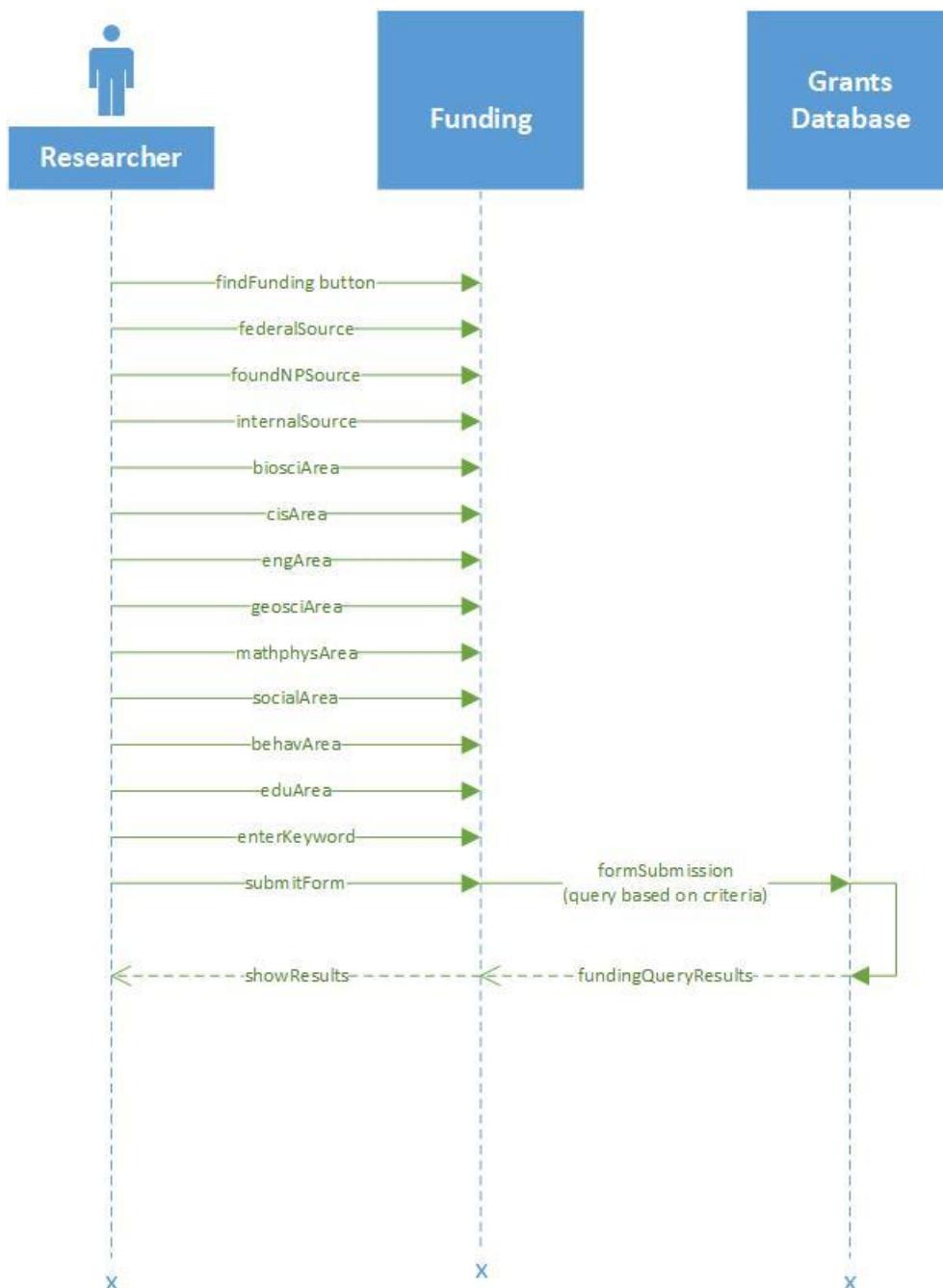
1. User goes to louisville.edu/research
2. User hovers over "Support"
3. User clicks "For Researchers"
4. User is directed to Research Support main page
5. User selects "Find Funding" button
6. User selects type of funding: "Federal", "Foundations/Nonprofits", and/or "Internal Grants"
7. User selects applicable research areas: "Biological Sciences", "Computer and Information Science", "Engineering", "Geosciences", "Mathematical and Physical Sciences", "Social", "Behavioral and Economic Sciences", and/or "Education and Human Resources".
8. User enters additional keywords (optional)
9. User clicks "Find Funding" button
10. System runs query to find the most applicable grants according to criteria
11. System presents results of query
12. User selects [Result #1]
13. User selects "Save to my favorites" button

Postconditions: None

Alternative Flows:

1. User selects different types of funding
2. User selects different applicable research areas

Risk: High



Use Case: Create Grant
ID: 9
Brief Description: The admin will be able to create grants in the system
Primary Actors: ULRI System
Secondary Actors: Admin

Preconditions: Grant is not created

Main flow:

1. User goes to louisville.edu/research
2. User clicks "Login" button on homepage
3. User is directed to Login page
4. User selects "I am an admin"
5. User enters username in text box
6. User enters password in text box
7. User clicks login
8. User is directed to ULRI system
9. User clicks "Create Grant"
10. User is directed to grant creation page
11. User selects which grant to create
12. User selects properties of grant
13. User clicks "Create"
14. User gets confirmation email of grant creation

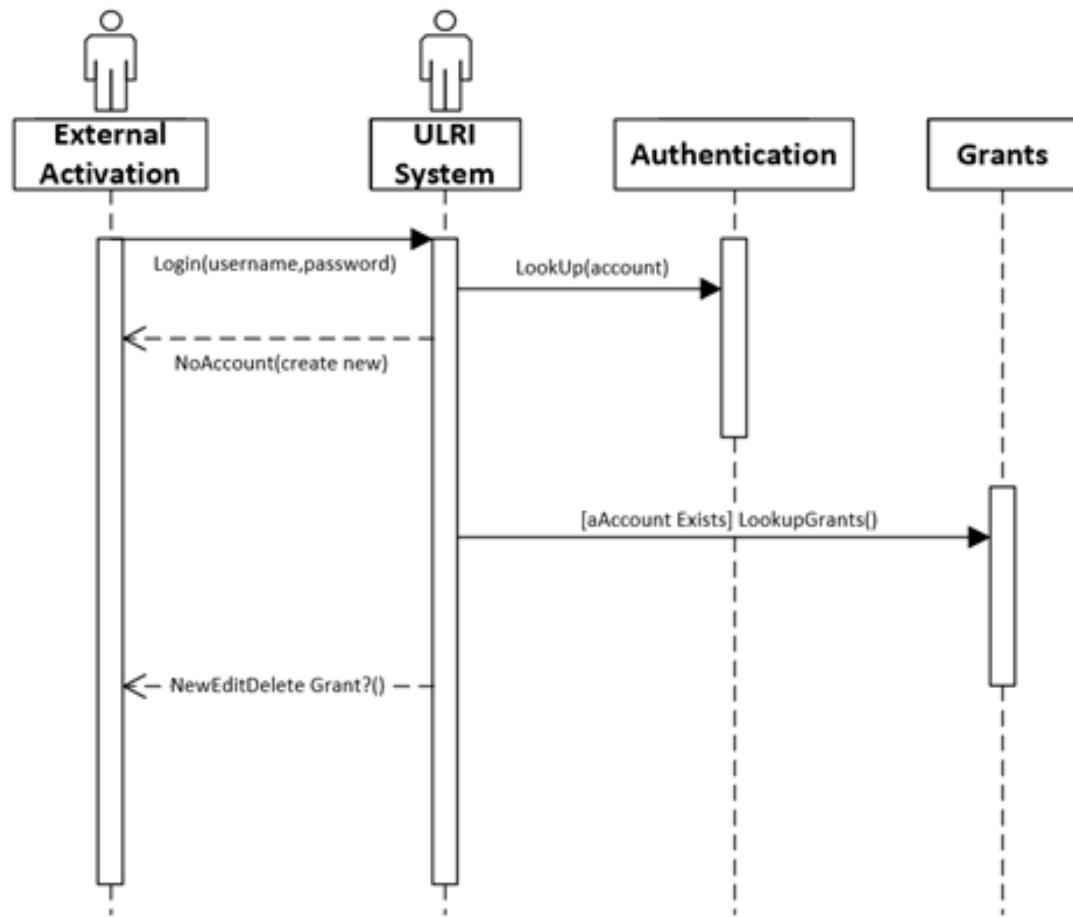
Postconditions: Grant is created

Alternative Flows: None

Risk: Low

Use Case: Edit Grant
ID: 10
Brief Description: The admin will be able to edit grants in the system
Primary Actors: ULRI System
Secondary Actors: Admin
Preconditions: Grant needs to be edited
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to Login page 4. User selects "I am an admin" 5. User enters username in text box 6. User enters password in text box 7. User clicks login 8. User is directed to ULRI system 9. User clicks "Edit Grant" 10. User is directed to list of created grants 11. User selects which grant to edit 12. User edits selected grant 13. User clicks "Save Edits" 14. Pop up displays "All changes have been saved" 15. User gets confirmation email that edits made to grant are saved
Postconditions: Grant is edited
Alternative Flows: None
Risk: Low

Use Case: Delete Grant
ID: 11
Brief Description: The admin will be able to delete grants in the system
Primary Actors: ULRI System
Secondary Actors: Admin
Preconditions: None
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to Login page 4. User selects "I am an admin" 5. User enters username in text box 6. User enters password in text box 7. User clicks login 8. User is directed to ULRI system 9. User clicks "Delete grant" 10. User is directed to list of created grants 11. User selects which grant to delete 12. User clicks "Delete" 16. Pop up displays "Are you sure you want to delete?" 17. User clicks "Delete" on pop up 18. Pop up displays "Grant has been deleted" 19. User gets confirmation email that grant has been deleted
Postconditions: Grant is deleted
Alternative Flows: None
Risk: Low



Use Case: Create Form
ID: 12
Brief Description: This use case describes how an admin can create a form
Primary Actors: ULRI System
Secondary Actors: Admin, Researcher
Preconditions: Form needs to be created

Main flow:

1. User goes to louisville.edu/research
2. User clicks “Login” button on homepage
3. User is directed to Login page
4. User selects “I am an admin”
5. User enters username in text box
6. User enters password in text box
7. User clicks login
8. User is directed to ULRI system
9. User clicks “Create Form”
10. User is directed to form creation page
11. User selects which form to create
12. User selects properties of form
13. User clicks “Create”
14. User gets confirmation email of form creation

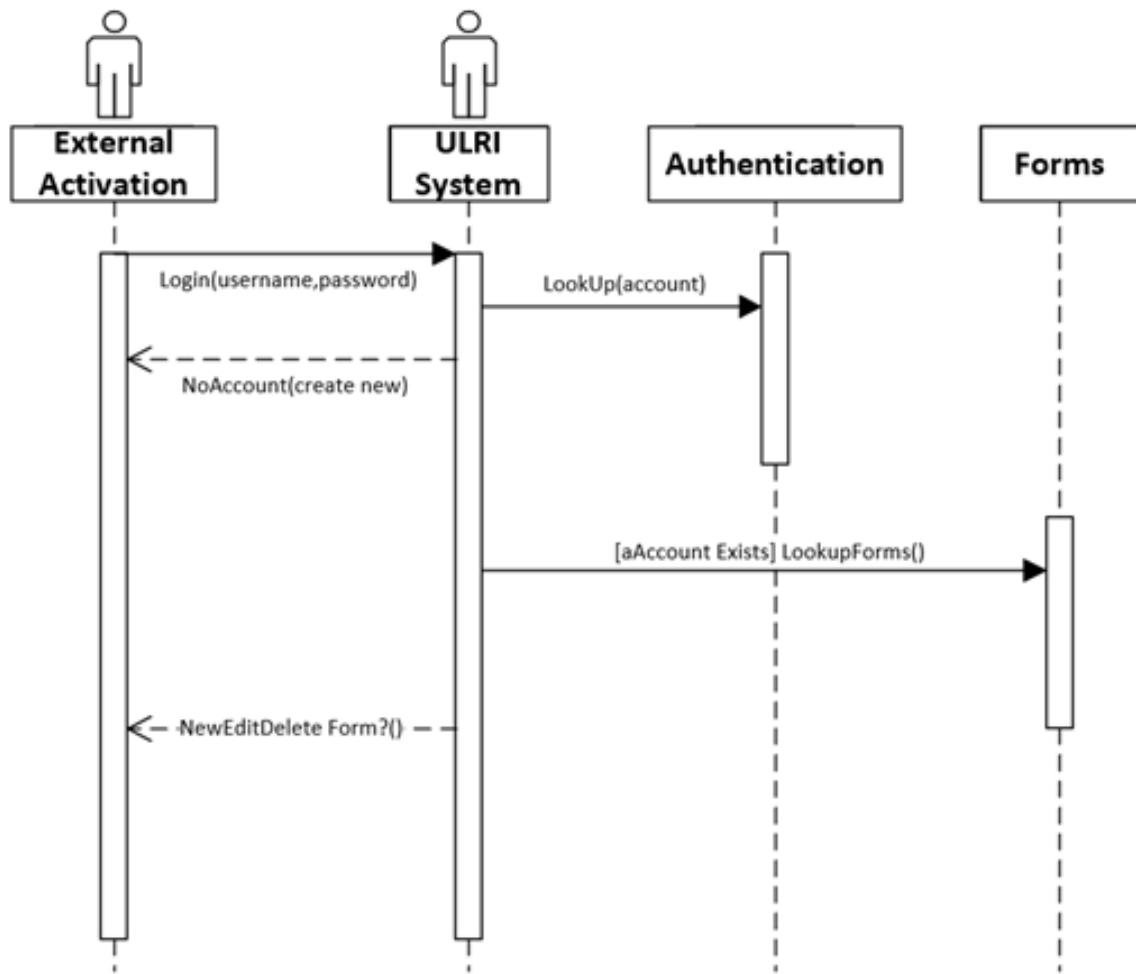
Postconditions: Form is created

Alternative Flows: None

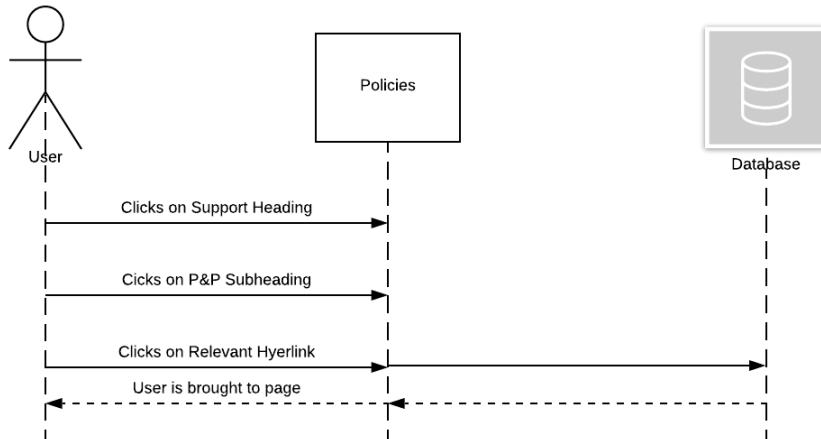
Risk: Low

Use Case: Edit Form
ID: 13
Brief Description: The admin will be able to edit forms in the system
Primary Actors: ULRI System
Secondary Actors: Admin, Researcher
Preconditions: Form needs to be edited
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to Login page 4. User selects "I am an admin" 5. User enters username in text box 6. User enters password in text box 7. User clicks login 8. User is directed to ULRI system 9. User clicks "Edit Form" 10. User is directed to list of created forms 11. User selects which form to edit 12. User edits selected form 13. User clicks "Save Edits" 14. Pop up displays "All changes have been saved" 15. User gets confirmation email that edits made to form are saved
Postconditions: Form is edited
Alternative Flows: None
Risk: Low

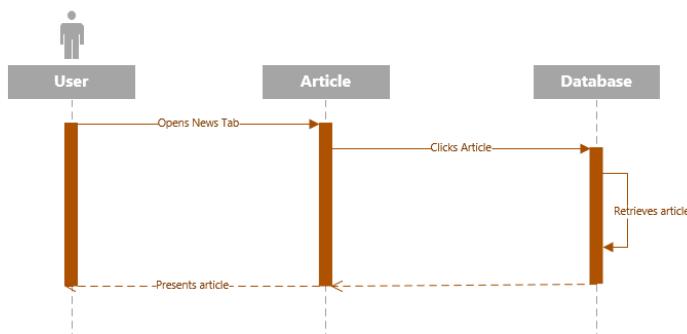
Use Case: Delete Form
ID: 14
Brief Description: The admin will be able to delete forms in the system
Primary Actors: ULRI System
Secondary Actors: Admin, Researcher
Preconditions: None
<p>Main flow:</p> <p>13. User goes to louisville.edu/research 14. User clicks "Login" button on homepage 15. User is directed to Login page 16. User selects "I am an admin" 17. User enters username in text box 18. User enters password in text box 19. User clicks login 20. User is directed to ULRI system 21. User clicks "Delete form" 22. User is directed to list of created forms 23. User selects which form to delete 24. User clicks "Delete" 20. Pop up displays "Are you sure you want to delete?" 21. User clicks "Delete" on pop up 22. Pop up displays "Form has been deleted" 23. User gets confirmation email that Form has been deleted</p>
Postconditions: Form is deleted
Alternative Flows: None
Risk: Low

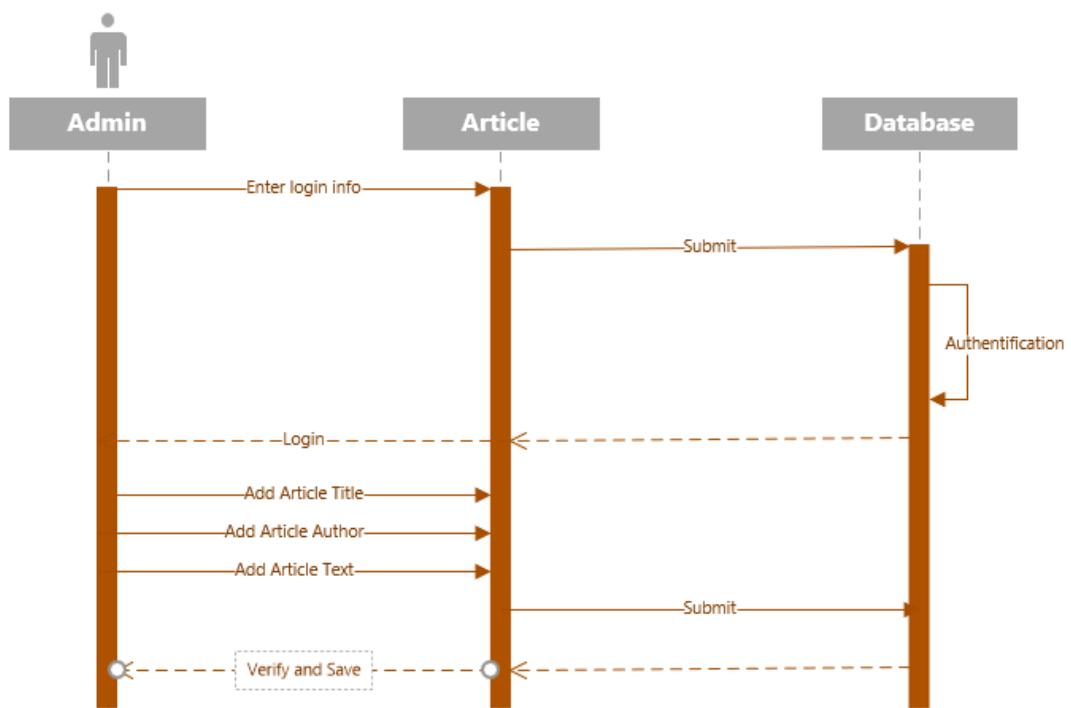


Use Case: Find Policies
ID: 15
Brief Description: This use case describes how a user can find the relevant pages and information to fit their need.
Primary Actors: Researcher, Student, Industry
Secondary Actors: None
Preconditions: None
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User hovers over "Support" 3. User clicks on "Policies & Procedures" 4. User is directed to the "Policies & Procedures" webpage 5. User clicks on a relevant hyperlink 6. User is redirected to another university or PDF webpage
Postconditions: User downloads a PDF
Alternative Flows: none
Risk: Low

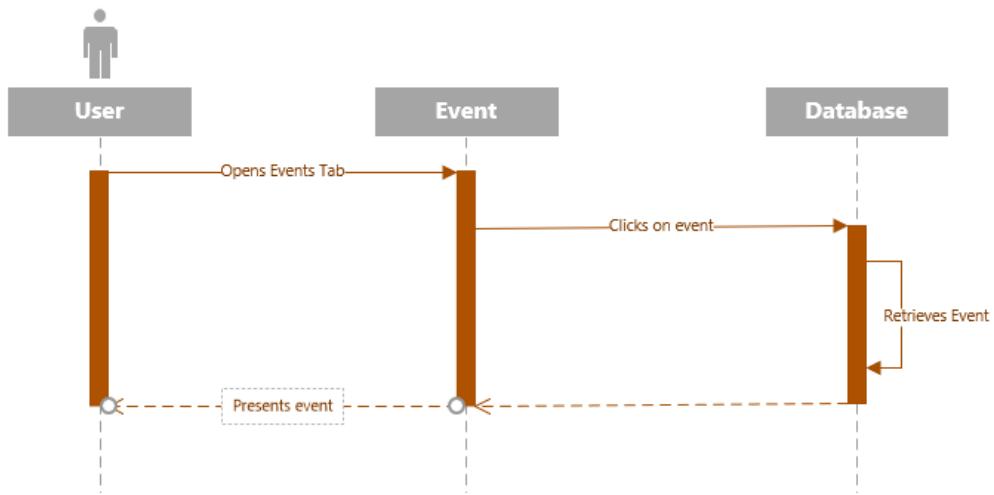


Use Case: Find News/Announcements
ID : 16
Brief Description: The system will present the user with news articles and announcements that are updated weekly/ The system will create, edit, and delete articles/announcements
Primary Actors: Researcher, Student, Industry, Admin, Community
Secondary Actors: None
Preconditions: User wants to find news/announcements or create/edit/delete articles or announcements
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User scrolls down to find articles/announcements 3. User clicks on article/announcement 4. User closes article/announcement 5. End of use case
Post conditions: Article of interest are found
<p>Alternative Flows:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User access' admin account 3. User clicks to add/edit/delete an article 4. User adds/edits/deletes article 5. User saves changes 6. End of use case
Risk: High

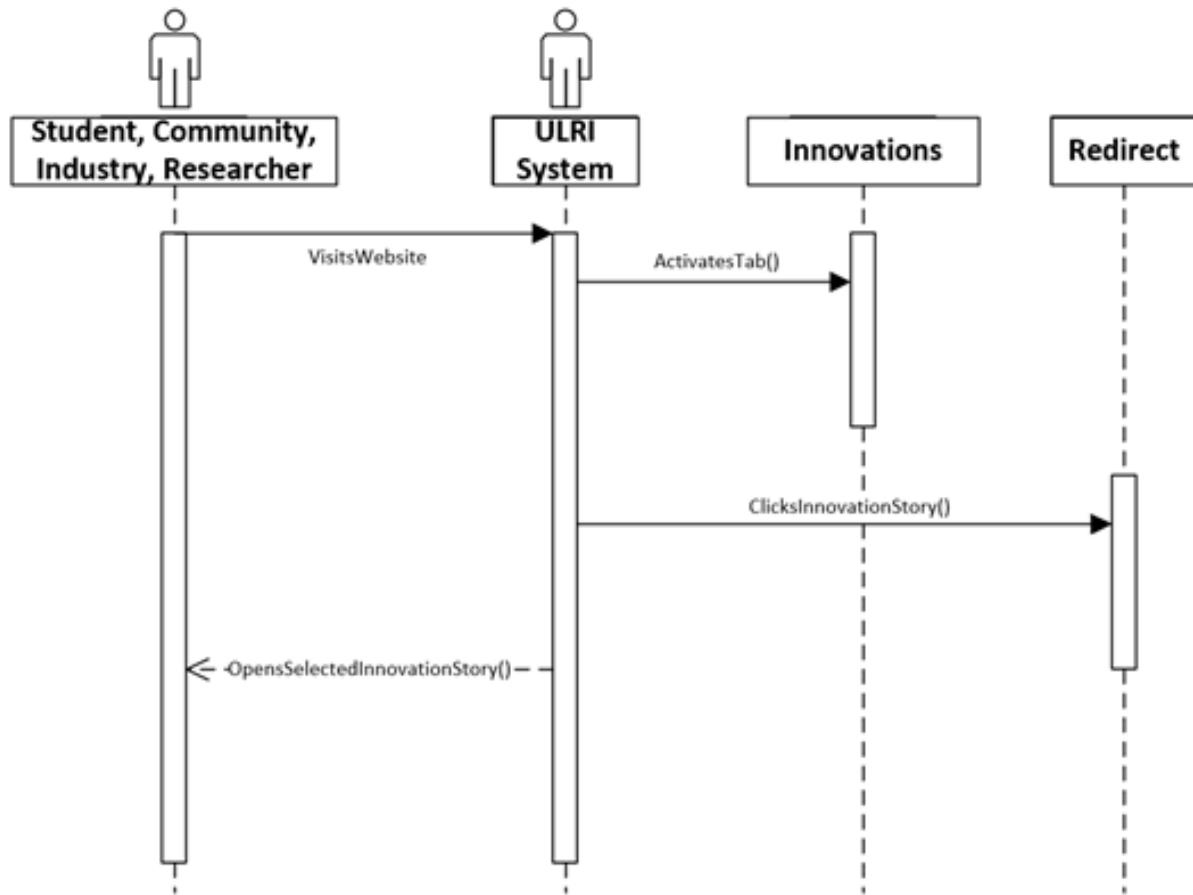




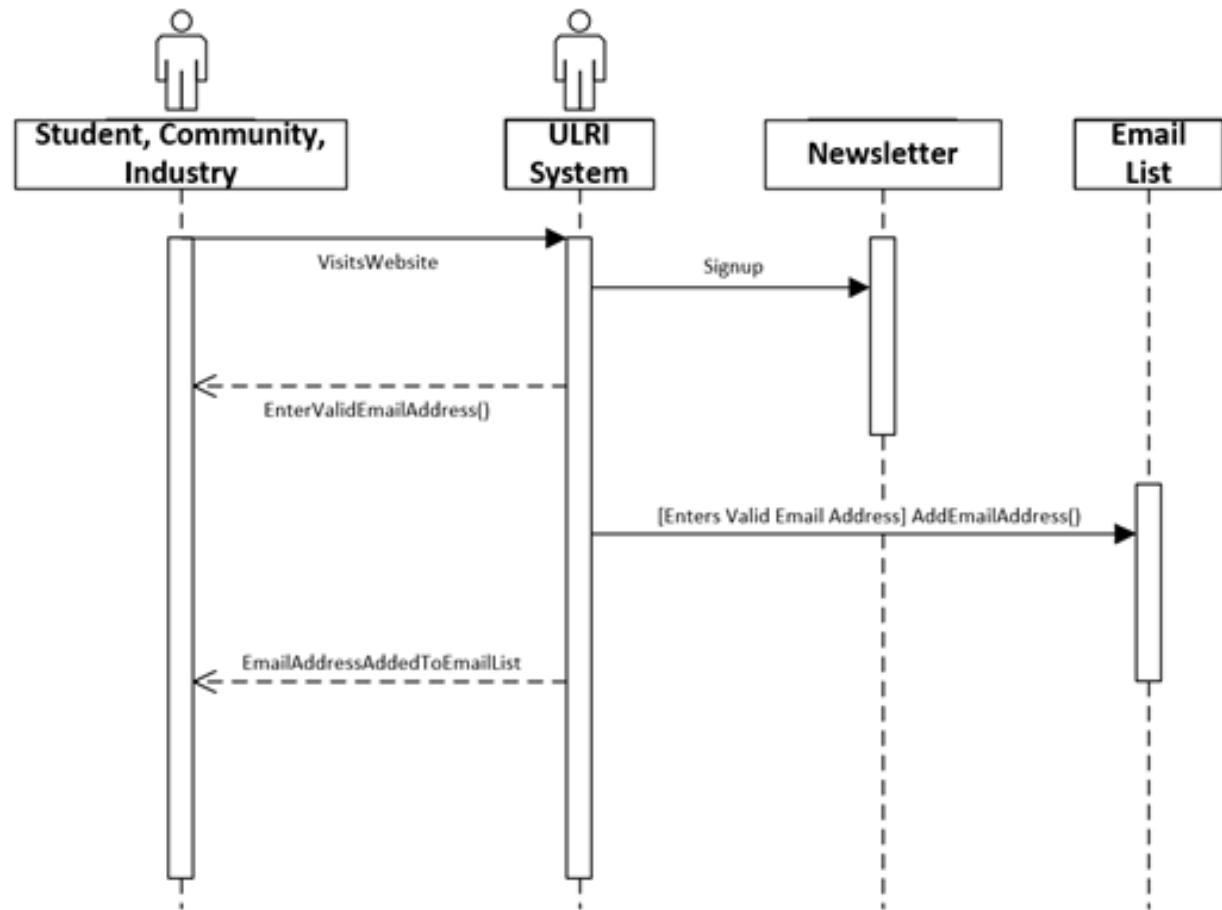
Use Case: RSVP for events
ID : 17
Brief Description: The system will present the user with a calendar of events that are updated weekly. The system will create, edit, and delete events
Primary Actors: Researcher, Student, Industry, Admin, Community
Secondary Actors: None
Preconditions: User wants to find events or create/edit/delete events
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User logs in with their account 3. User scrolls down to find events 4. User clicks on event they are interested in 5. User clicks button to RSVP for event 6. User closes event page 7. End of use case
Post conditions: Article of interest are found
<p>Alternative Flows:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User access' admin account 3. User clicks to add/edit/delete an event 4. User adds/edits/deletes event 5. User saves changes 6. End of use case
Risk: High



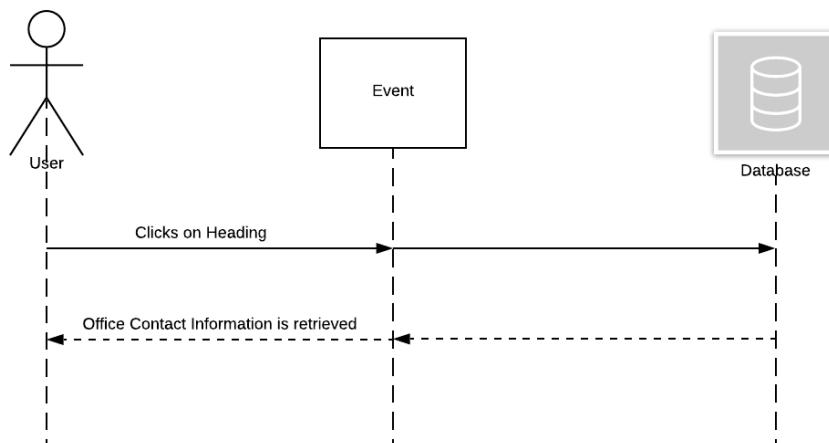
Use Case: Showcase Innovation
ID: 18
Brief Description: The system will present the users with images of innovation taking place at the University.
Primary Actors: Researcher, Student, Industry, Admin, Community
Secondary Actors: None
Preconditions: User wants to find out about innovation at UofL
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User finds “Innovation” tab 3. User clicks “Innovation” tab 4. User scrolls through innovation page 5. User finds innovation of interest 6. User clicks desired innovation 7. User is redirected to detailed page of innovation
Postconditions: Desired Innovations are found
Alternative Flows: None
Risk: Low



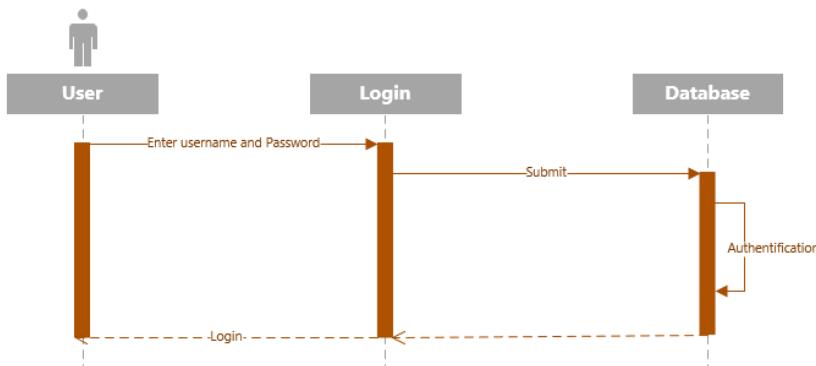
Use Case: Sign Up for Newsletter
ID: 19
Brief Description: Users will be able to sign up for a newsletter to be updated with ULRI news, events, and announcements. The system will create, edit, and delete (emails of) researchers, students, industry, admin, and community.
Primary Actors: Student, Industry, Community, ULRI System
Secondary Actors: None
Preconditions: Subscription to newsletter doesn't exist
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Newsletter" on page 3. User is directed to newsletter page 4. User selects "Sign-up" tab 5. User selects who they are (S-1) 6. User enters valid email in text box 7. User clicks "Sign-Up" button at bottom of page 8. User is directed back to home page 9. User's email put in database of newsletter 10. User receives confirmation email 11. User receives newsletter updates
Postconditions: User has subscription to newsletter
Alternative Flows: S-1: User selects if they are "Student, Industry, Researcher, Community"
Risk: Low



Use Case: Contact The ULRI Office
ID: 20
Brief Description: This use case describes how users can view the contact information for ULRI office.
Primary Actors: Researcher, Student, Industry
Secondary Actors: None
Preconditions: None
Main flow: 1. User goes to louisville.edu/research 2. User clicks on "Contact" 3. User is directed to the "Contact" webpage 4. User views email link, locations, and social media hyperlinks
Postconditions: None
Alternative Flows: 1. User scrolls to the bottom of the page
Risk: Low



Use Case: Login to ULRI
ID : 21
Brief Description: The system will grant user access privileges. After logging in, users should be able to see the status of grants and their proposals.
Primary Actors: Researcher, Student, Industry, Admin
Secondary Actors: None
Preconditions: User wants to access their individual profile/access rights and see grant status
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks on login button 3. User enters their credentials then hits enter 4. User will click log out button 5. End of use case
Post conditions: User will be able to access their specified website privileges
<p>Alternative Flows:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks on login button 3. User enters their credentials then hits enter 4. User clicks on a grant to view status 5. User clicks out of grant status to return to their profile 6. User click log out button 7. End of use case
Risk: High



Use Case: Find Metrics

ID: 22

Brief Description: Users will be able to see information regarding the Metrics of the ULRI office

Primary Actors: Researcher, Student, Industry, Admin

Secondary Actors: None

Preconditions: Metrics are unknown

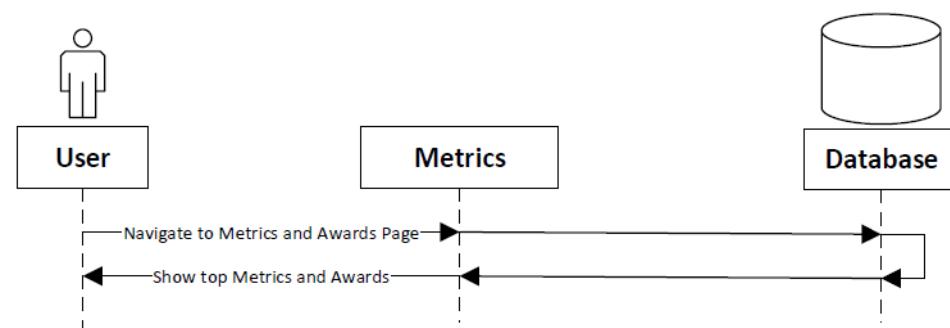
Main flow:

1. User goes to louisville.edu/research
2. User locates metrics on main landing page
3. Use case ends

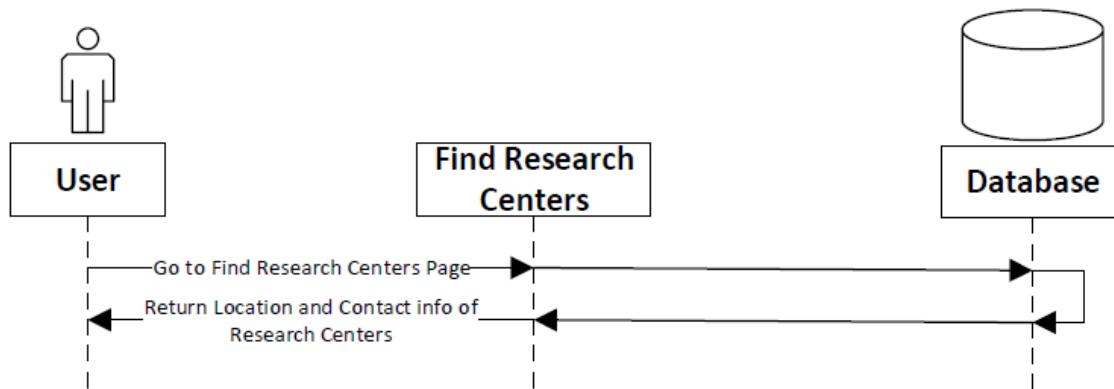
Postconditions: User finds metrics

Alternative Flows: none

Risk: Low



Use Case: Find Research Centers
ID: 23
Brief Description: Users will be able to find information regarding UL Research Centers in an easy to navigate manor
Primary Actors: Student, Researcher, Community
Secondary Actors: None
Preconditions: Research Center information is known to user
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Research Centers" tab 3. User is directed to Research Centers page 4. User locates a list of Research Centers 5. User locates contact information under title of specified Research Center 6. User locates address information under contact information of specified Research Center 7. Use case ends
Postconditions: User finds information for Research Center
Alternative Flows: none
Risk: Low



Use Case: Get back to main UofL page

ID: 24

Brief Description: Users will be able to get back to uofl.edu. The system will route back to the main UofL home page by selecting the UofL logo in the header. In doing so it will follow UofL branding guidelines

Primary Actors: Student, Researcher, Industry, Community, Admin

Secondary Actors: None

Preconditions: User is on a ULRI page

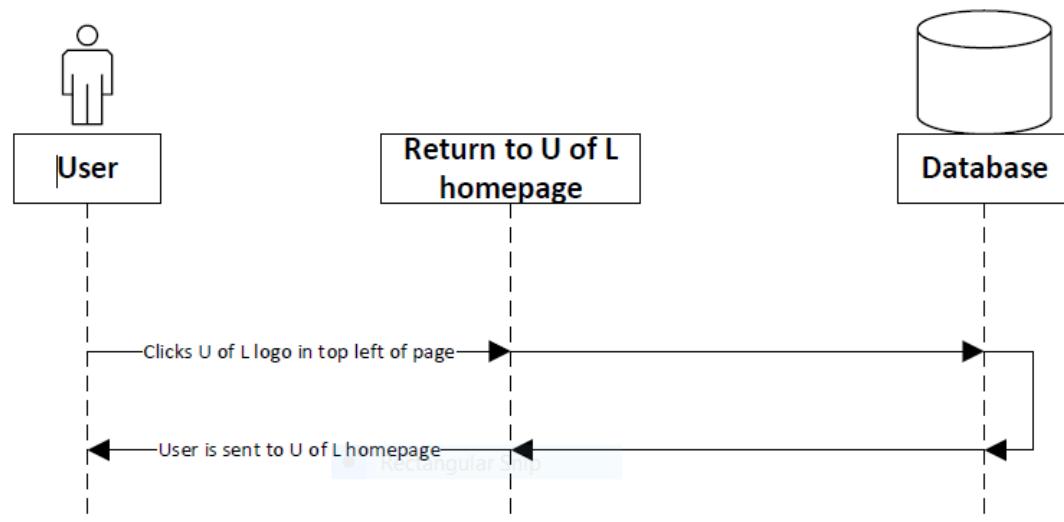
Main flow:

1. User goes to louisville.edu/research
2. User clicks the logo in the top left part of the header
3. User is directed to uofl.edu
4. Use case ends.

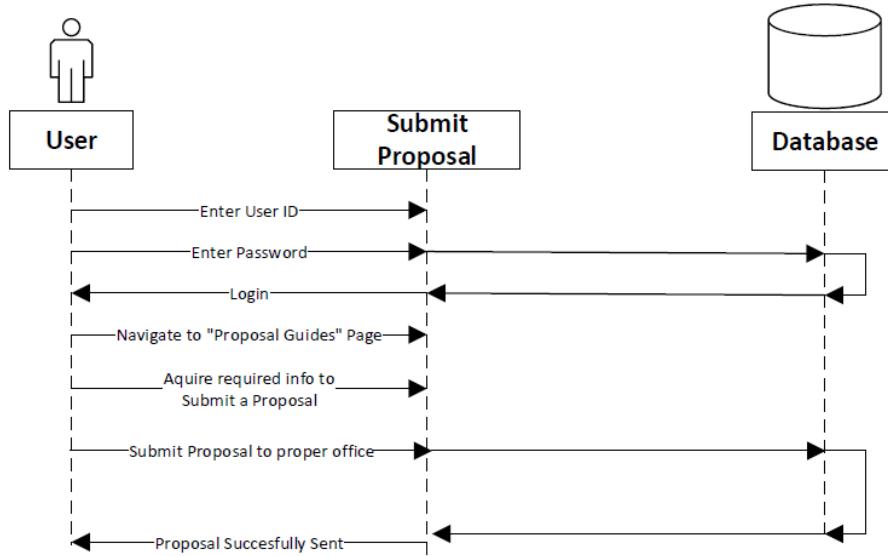
Postconditions: User is on the main UofL page (uofl.edu)

Alternative Flows: none

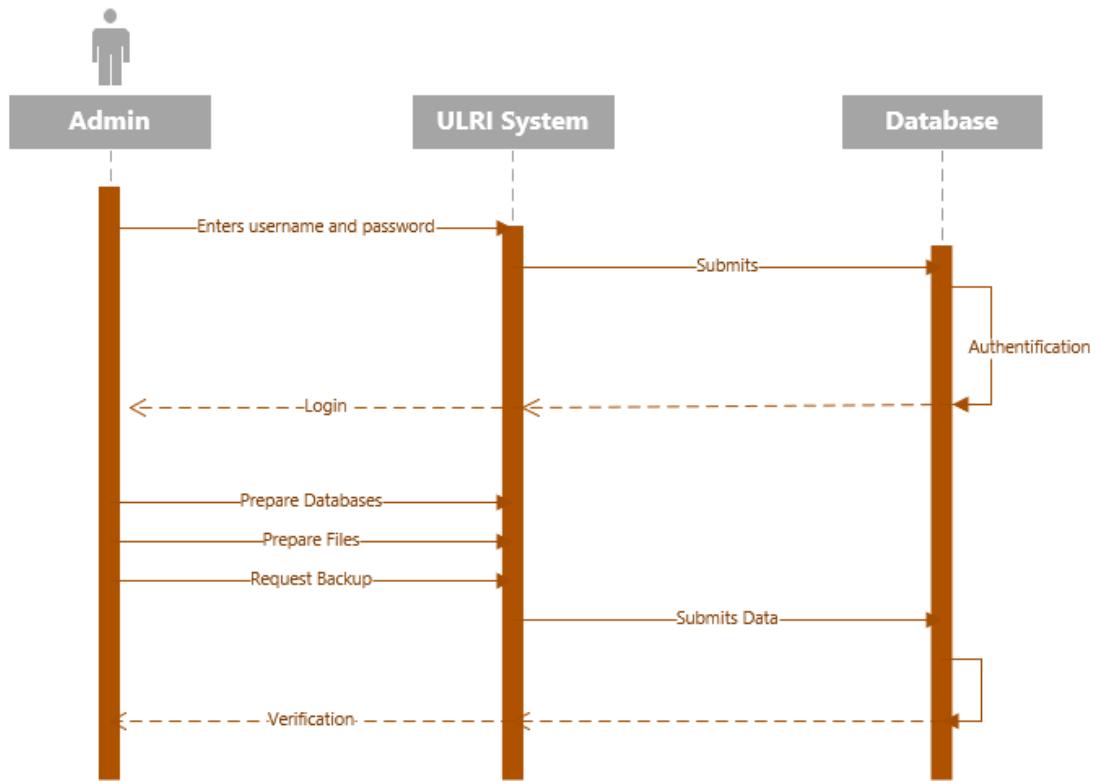
Risk: Low



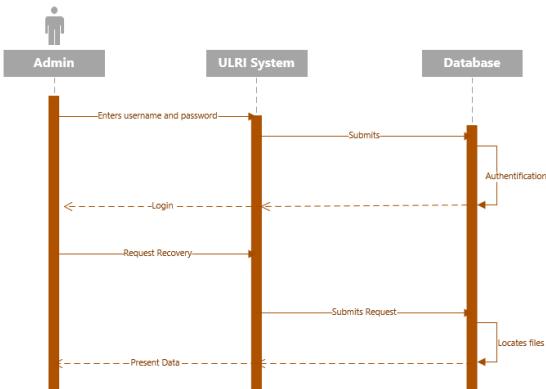
Use Case: Submit a proposal
ID: 25
Brief Description: Users will be able to see information regarding developing a proposal. The system will have a drop-down menu that shows them all the steps to develop a proposal. At the end there will be a button to submit a proposal in which the system will open a route to an email such as outlook.
Primary Actors: Researcher
Secondary Actors: None
Preconditions: User is a researcher logged into the ULRI website
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to Login page 4. User enters login information 5. User is directed to researcher account page 6. User locates drop down menu for "How to submit a proposal" 7. User follows listed steps for how to submit a proposal 8. User sends the email with full proposal information 9. End use case
Postconditions: User has sent proposal to proper recipient
Alternative Flows: none
Risk: Low



Use Case: Backup information
ID : 26
Brief Description: The system will backup website data
Primary Actors: ULRI system
Secondary Actors: None
Preconditions: Web page will have information/databases that need to be saved
<p>Main flow:</p> <ol style="list-style-type: none"> 1. System will have a specified time to run each backup 2. System will first save a copy of backup on local storage 3. System will upload a copy of the backup to cloud storage 4. End of use case
Post conditions: Website information/databases will be saved in multiple locations
Alternative Flows: None
Risk: High



Use Case: Recover information
ID : 27
Brief Description: The system will recover website data in case of emergency.
Primary Actors: ULRI system
Secondary Actors: None
Preconditions: Web page will have information/databases that need to be recovered
<p>Main flow:</p> <ol style="list-style-type: none"> 1. System will first seek to find the most recent backup file 2. System will attempt to recover this data from local storage 3. System will use this data to maintain the ULRI website 4. End of use case
Post conditions: Website information/databases will be recovered and reimplemented
<p>Alternative Flows:</p> <ol style="list-style-type: none"> 1. System will first seek to find the most recent backup file 2. System will attempt to recover this data from cloud storage 3. System will use this data to maintain the ULRI website 4. End of use case
Risk: High



Use Case:
Take a survey

ID: 28

Brief Description: The user should be able to take surveys whether that be on behalf of the office of research & innovation or for research purposes.

Primary Actors: Researcher, Student, Industry, Admin, Community

Secondary Actors: None

Preconditions: Survey is created on ULRI system

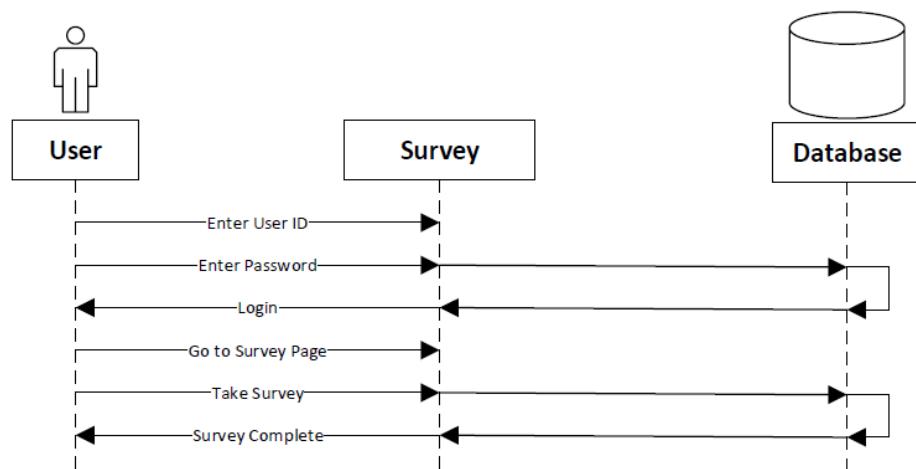
Main flow:

1. User goes to louisville.edu/research
2. User logs into the Louisville.edu/research page
3. User clicks surveys tab
4. User is directed to surveys page
5. User selects a created survey
6. User enters information requested on survey
7. Survey information is sent to system
8. Survey is marked as completed
9. Survey results are sent to the creator of the survey
10. End of use case

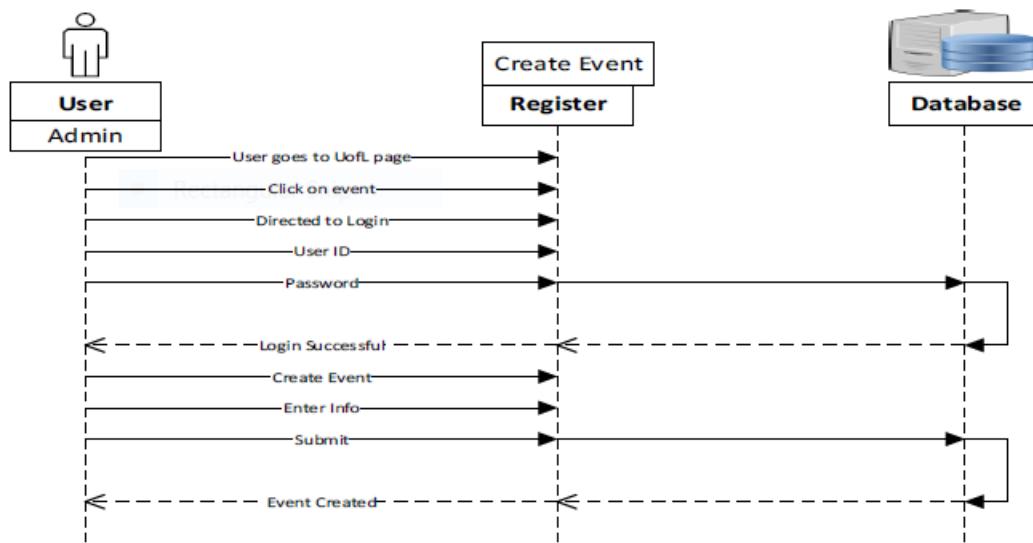
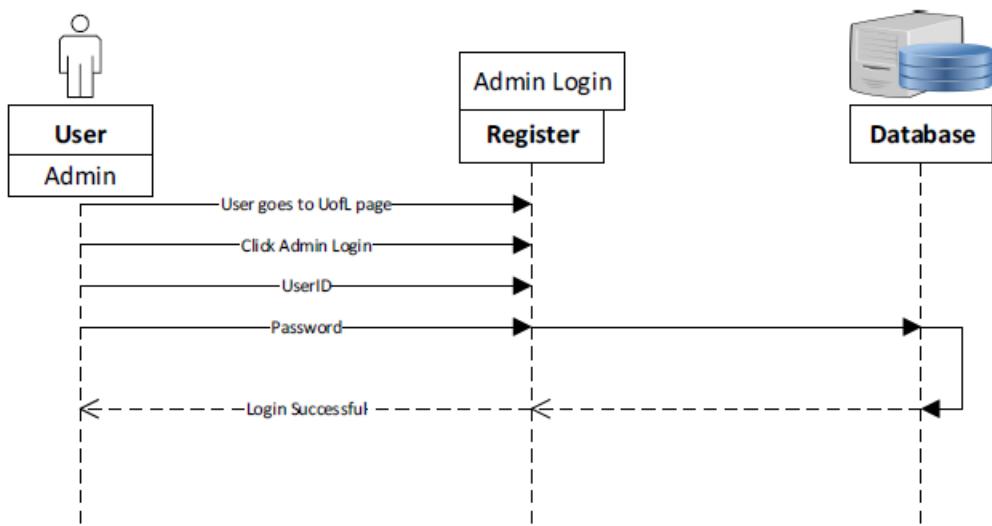
Postconditions: Survey information is gathered

Alternative Flows: None

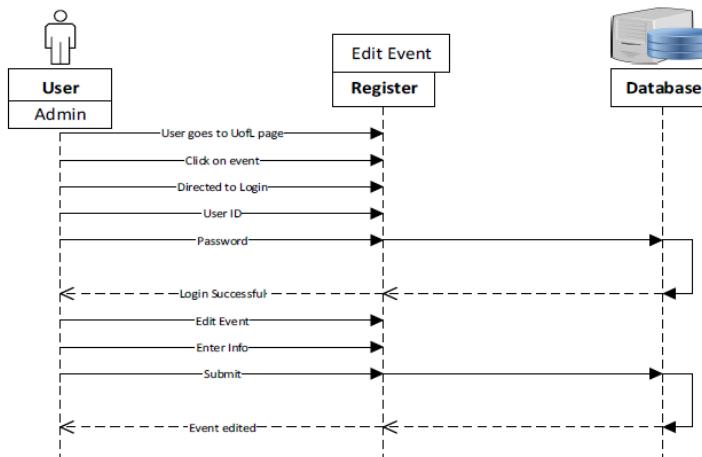
Risk: Low



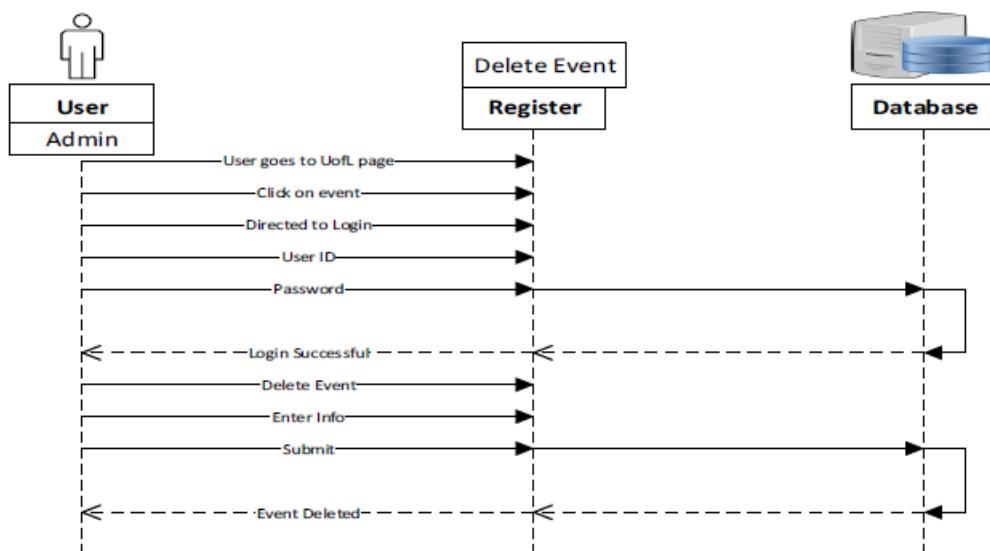
Use Case: Create an event
ID: 31
Brief Description: This use case describes how an admin would create an event.
Primary Actors: Administrator
Secondary Actors: None
Preconditions: No duplicate events
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks “Login” button on homepage 3. User is directed to the Login page 4. User enters email in text box 5. User enters password 6. User is directed to ULRI system 7. User clicks create event 8. User is directed to create event page 9. User enter details on form 10. User clicks on create 11. User gets confirmation notification 12. Event is created in the ULRI system
Postconditions: Event is created
Alternative Flows: none
Risk: Low

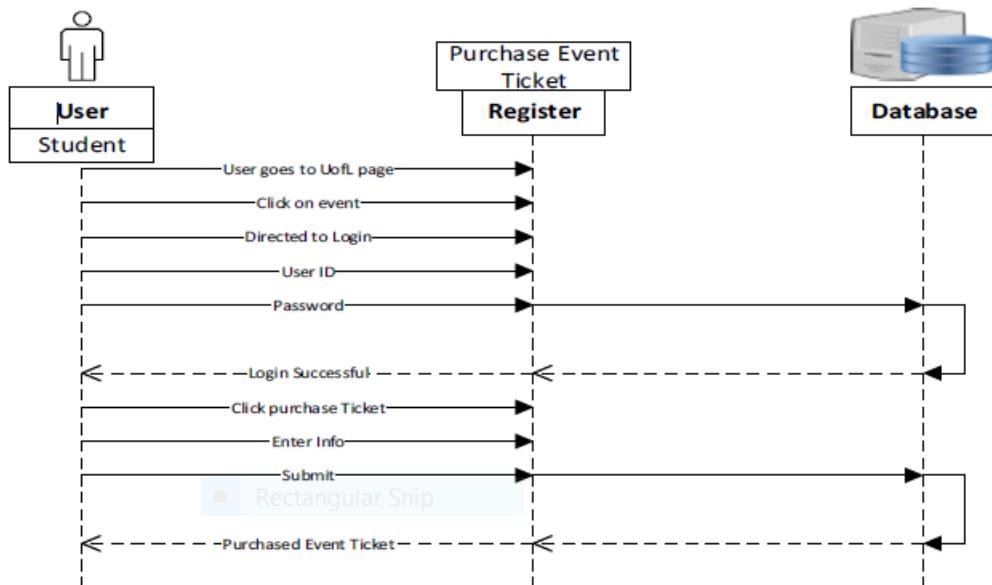
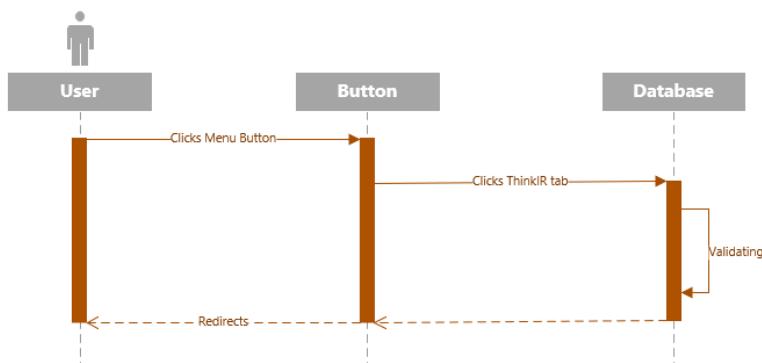
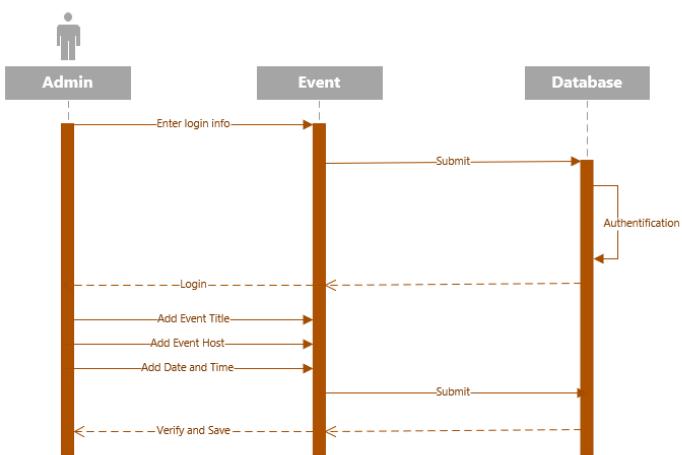


Use Case: Edit an event
ID: 32
Brief Description: This use case describes how an admin would edit an event.
Primary Actors: Administrator
Secondary Actors: None
Preconditions: Event must exist
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to the Login page 4. User enters email in text box 5. User enters password 6. User is directed to ULRI system 7. User clicks on edit event 8. User is directed to events webpage 9. User edits new details on event form 10. User clicks on confirm 11. User gets confirmation notification 12. Event is edited in the ULRI system
Postconditions: Event information is changed
Alternative Flows: none
Risk: Low

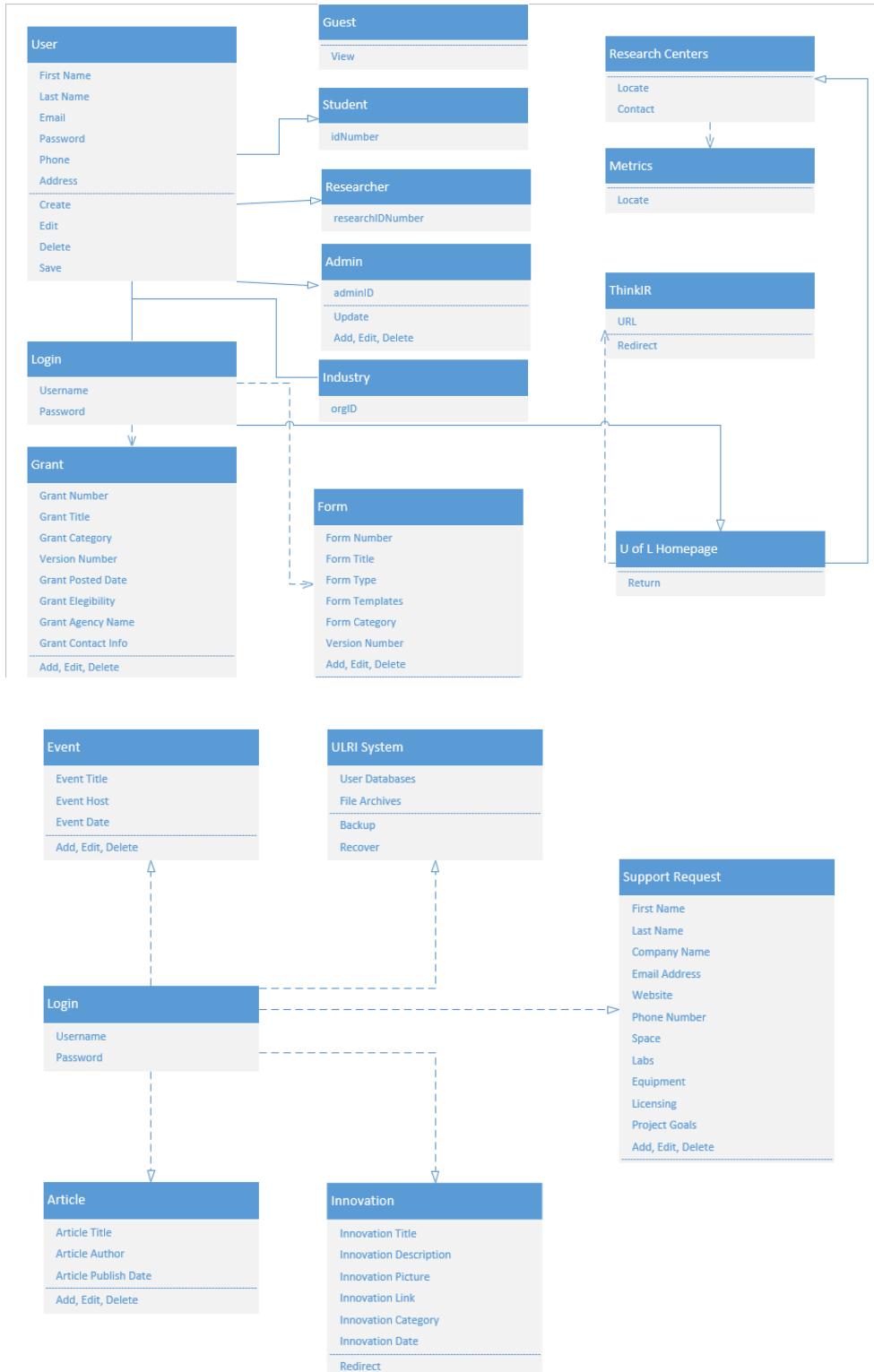


Use Case: Delete an event
ID: 33
Brief Description: This use case describes how an admin would delete an event.
Primary Actors: Administrator
Secondary Actors: None
Preconditions: Event must exist
<p>Main flow:</p> <ol style="list-style-type: none"> 1. User goes to louisville.edu/research 2. User clicks "Login" button on homepage 3. User is directed to the Login page 4. User enters email in text box 5. User enters password 6. User is directed to ULRI system 7. User clicks on edit event 8. User is directed to events webpage 9. User clicks on delete event on event form 10. User clicks on confirm 11. User gets confirmation notification 12. Event is deleted from the ULRI system
Postconditions: Event is deleted
Alternative Flows: none
Risk: Low

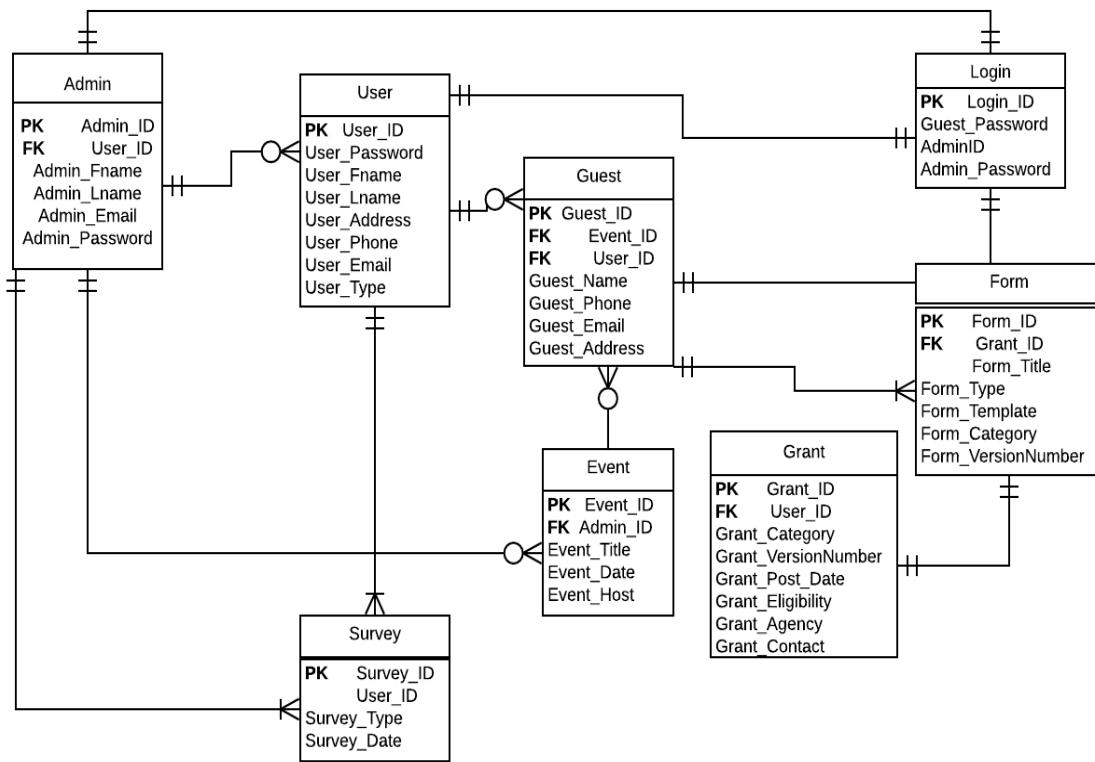




Class Diagram



Database Design



Data Definitions

Data Dictionary:

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
User	Abstract Class containing all user classes	userID	Unique Identification number	integer	10
		firstName	First Name of user	string	20
		lastName	Last Name of user	string	20
		email	Email address/username of user	string	25
		password	Password related to user account	string	15
		phone	User phone number	string	10
		Address	User address	string	25
		userType	Type of user account (student, researcher, admin)	string	10

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Grant	Compiles information about grants available to ULRI students, researchers	grantNumber	Unique Identification number	integer	10
		grantTitle	Title of grant	string	20
		grantCategory	Grant research area	string	20
		versionNumber	The version of the Grant	string	25

		grantPostDate	Date the grant was posted	date	MM-DD-YYYY
		grantEligibility	Qualifications	string	70
		grantAgency	Agency providing the grant	string	25
		grantContact	Point of contact for grant	string	20

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Support Request	Compiles information for industries requesting support.	requestID	Unique Identification number	integer	10
		firstName	First Name of user	string	20
		lastName	Last Name of user	string	20
		companyName	Company name of user	string	25
		email	User email address	string	15
		phone	User phone number	string	10
		website	User website for company	string	25
		Space	Request type	boolean	8
		Labs	Request type	boolean	8
		Equipment	Request type	boolean	8
		Licensing	Request type	boolean	8
		Project goals	User's project goals that they're requesting support	string	100

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length

Metrics	Class that calls ULRI metrics for a user	Locate	Locate the metrics of ULRI	class	16
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Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
U of L Homepage hyperlink	Navigates user back to U of L Homepage by clicking logo in top left	Return	Returns user to U of L homepage	boolean	8

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Form	An array of user objects				
		UserID	Unique Identification number for a user	int	8
		Form Number	Unique Identification number for a form	int	8
		Form Title	Unique identification name for a form	String	16
		Form Type	Classification for what the form will include	Int	8
		Form Templates	Premade structures for a form	String	16
		Form Category	classification for what a form pertains to	String	16
		Version Number	Number to specify the current version of the form	int	8

Admin

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Admin	Person in charge of admin account	AdminID	Unique Identification number	integer	10

		firstName	First Name of Admin	string	16
		lastName	Last Name of Admin	string	16
		email	Email address of Admin	string	30
		password	Password for Admin account	string	20

Donation

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Donation	Donation made by donor	donationID	Unique Identification number	integer	10
		donationAmount	Amount donated	Decimal	7
		firstName	First Name of donor	string	16
		lastName	Last Name of donor	string	16
		donationDate	Date of Donation	string	10

		donorID	Unique identification for donor	int	8
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Survey

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Survey	Survey done by users	surveyID	Unique Identification number	integer	10
		userID	Identification of user that completed survey	Int	8
		survey	survey created	String	500
		surveyDate	date when survey was completed	string	10

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Login	Login to ULRI System	GuestID	Unique Identification number	int	20
		GuestPassword	Created by the user to access account	string	20

		AdminID	Unique Identification number	int	20
		AdminPassword	Created by the user to access account	string	20

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Proposal	Proposal made by user	proposalName	Name given to proposal	string	40
		proposalID	Unique identification number	int	20
		proposalType	Gives proposal in different disciplines	string	20
		proposalDate	Submitted date	int	10

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
Contact	Contact information for ULRI office	firstName	First Name of listed contact	String	20
		lastName	Last name of listed contact	String	20
		emailAddress	Email of listed contact	String	40
		phoneNumber	Phone number of listed contact	Int	20
		officeAddress	Physical address	string	50
		Title	Position name	string	50

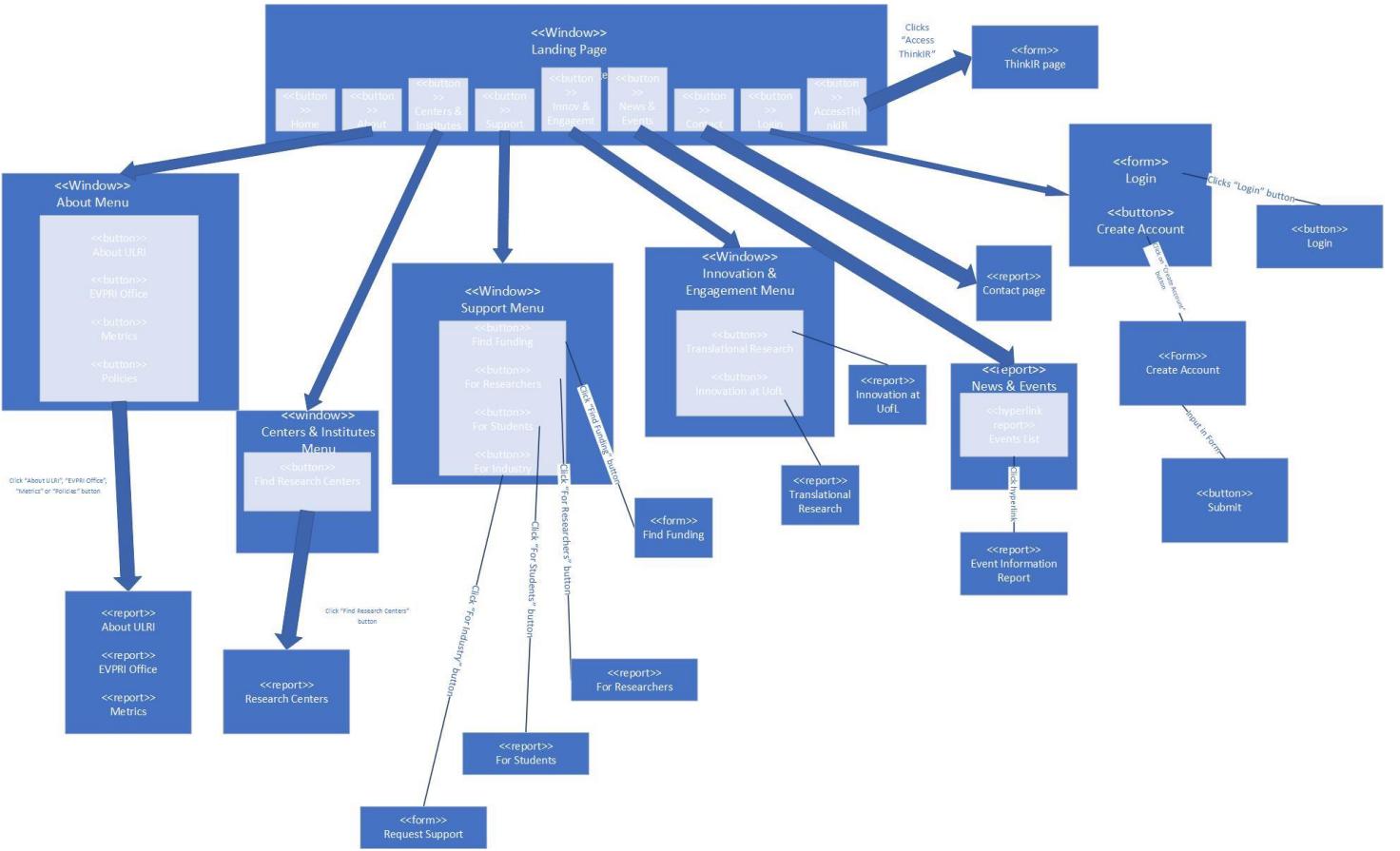
Entity Name	Entity description	Column Name	Column description	Data Type	Length
Event	A Sponsored gathering revolving around ULRI	Event Title	Name of the Event	String	50
		Event Host	Name of the Host	String	25
		Event Date	Date event will take place on	Date	10

Entity Name	Entity description	Column Name	Column description	Data Type	Length
Article	A document written for the ULRI website	Article Title	Title of a written article	String	100
		Article Author	Name of who wrote the article	String	25
		Article Publish Date	Date of when article became available	Date	10

Entity Name	Entity description	Column Name	Column description	Data Type	Length
Innovation	A demonstration of research findings	Innovation Title	Title of any innovations	String	100
		Innovation Desc.	Explanation of innovations	String	500
		Innovation Picture	Picture or video of demonstration	BLOB	65535

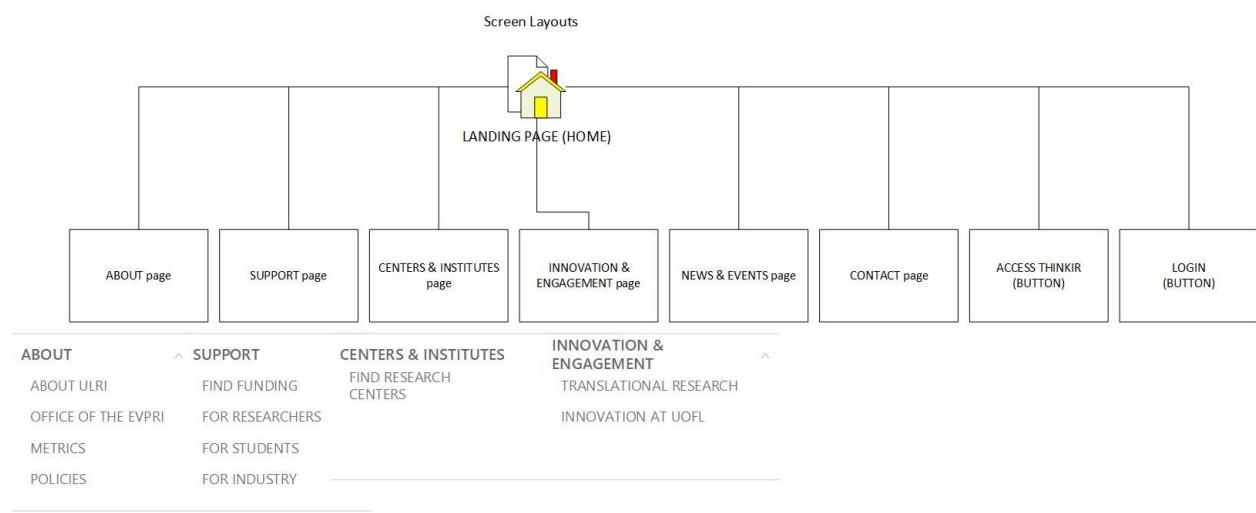
		Innovation Link	URL associated with Innovation	Hyperlink	100
		Innovation Category	Type of innovation	String	25
		Innovation Date	Date when showcase becomes available	Date	10

User Interface Navigation Diagram

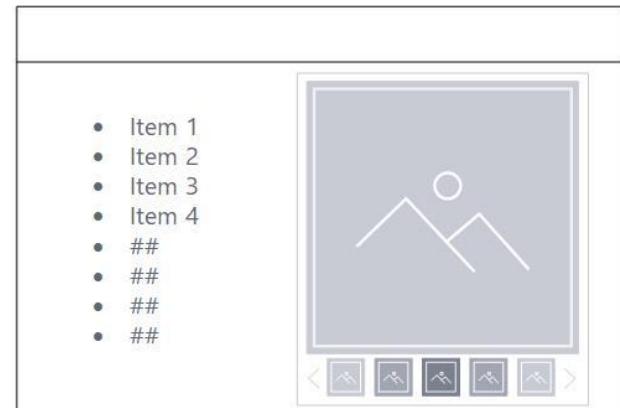


This navigation diagram depicts how the user would navigate through the ULRI system; this shows what types of screens the user would encounter.

Screen Layouts

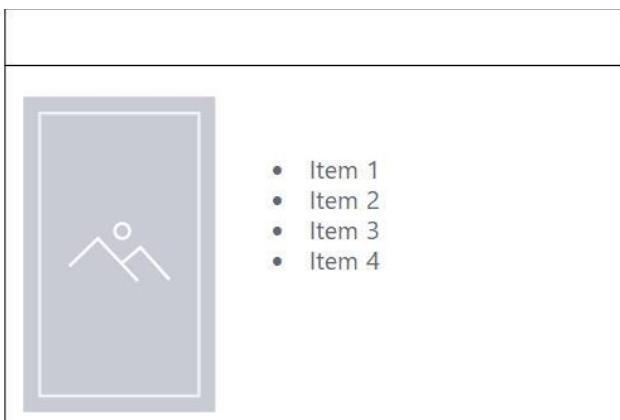


This diagram shows the navigation from the landing page and the menus for the different pages.



FIND RESEARCH CENTERS

This depicts the page where users can find out about different research centers. This would include hyperlinks to the pages.



CONTACT PAGE

This depicts the screen layout for the contact page.

ABOUT ULRI



To replace any placeholder text (such as this), just click it and start typing. We think this paragraph makes a great statement just as it is. But if you'd like to try a bit of customizing to make it your own, you can change the fonts with just a click.

This depicts the about page in which users can find out about ULRI's mission, vision, and goals

OFFICE OF EVPRI



To replace any placeholder text (such as this), just click it and start typing. We think this paragraph makes a great statement just as it is. But if you'd like to try a bit of customizing to make it your own, you can change the fonts with just a click.

This is where users can learn about the executive vice president of research and innovation

METRICS



To replace any placeholder text (such as this), just click it and start typing. We think this paragraph makes a great statement just as it is. But if you'd like to try a bit of customizing to make it your own, you can change the fonts with just a click.

This is where users can find out what type of metrics the ULRI is generating

POLICIES

- Item 1
 - Item 2
 - Item 3
 - Item 4
 - #
 - #
 - #
 - #
- Item 1
 - Item 2
 - Item 3
 - Item 4
 - #
 - #
 - #
 - #

List of policies and procedures for ULRI



FIND FUNDING FORM
(SEE PROTOTYPES FOR MORE DETAILS)

FIND FUNDING

This depicts a generic view of the “Find Funding” use case. It is detailed in the prototypes.



- Item 1
- Item 2
- Item 3
- Item 4

FOR RESEARCHERS

This depicts the page where researchers can find information on recent funding opportunities, partnerships, or programs.



- Item 1
- Item 2
- Item 3
- Item 4

FOR STUDENTS

This depicts the page where students can find information on recent funding opportunities, partnerships, or programs.



REQUEST SUPPORT FORM
(SEE PROTOTYPE FOR MORE DETAIL)

FOR INDUSTRY (REQUEST SUPPORT FORM)

This depicts the request support for industry users (detailed in prototypes)

INNOVATION AT UOFL

This page shows what innovations ULRI is producing

- Item 1
- Item 2
- Item 3
- Item 4
- ##
- ##
- ##
- ##



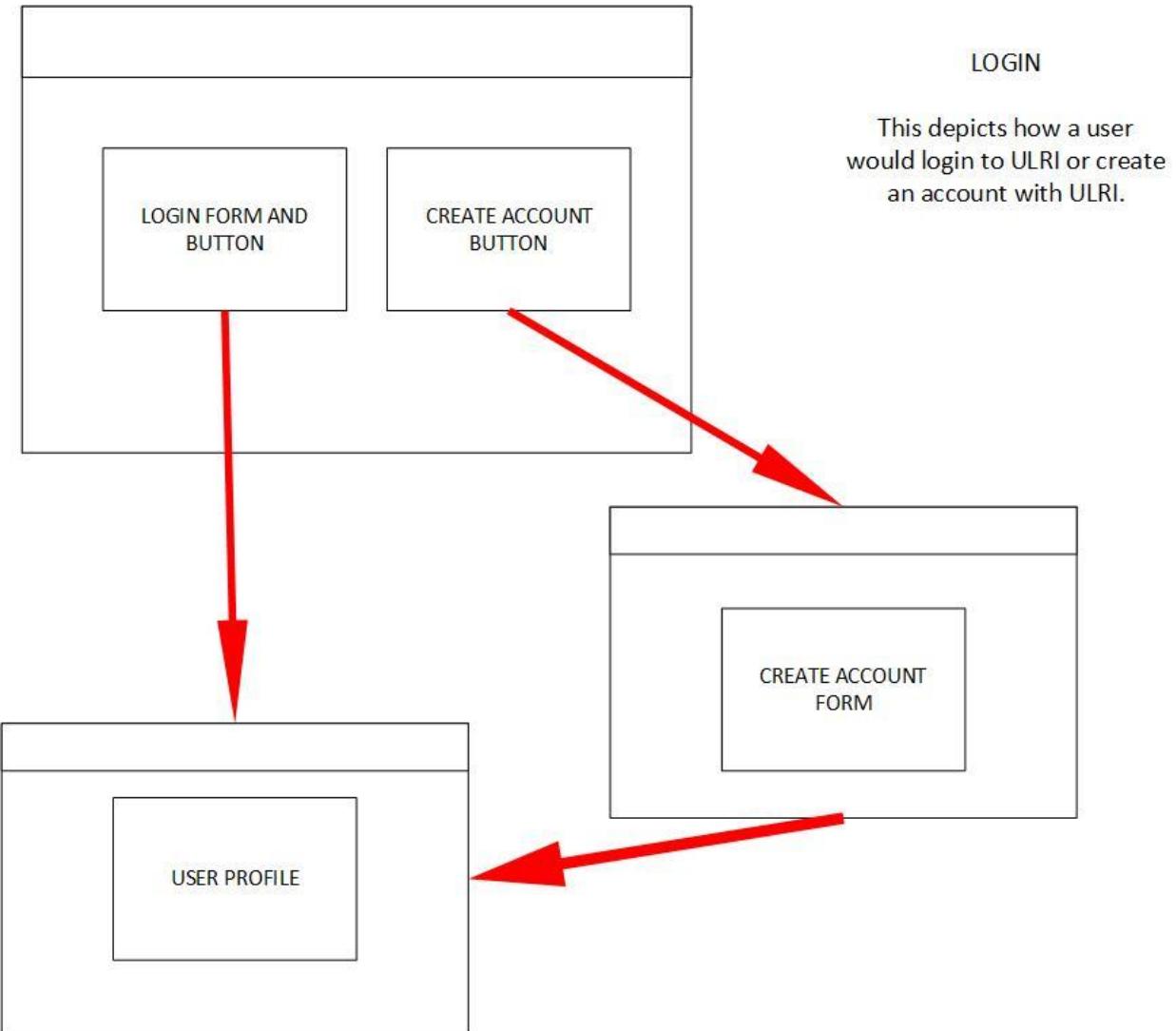
TRANSLATIONAL RESEARCH

This page depicts translational research at UofL with hyperlinks for pages for how to move forward with it.

To replace any placeholder text (such as this), just click it and start typing. We think this paragraph makes a great statement just as it is. But if you'd like to try a bit of customizing to make it your own, you can change the fonts with just a click.

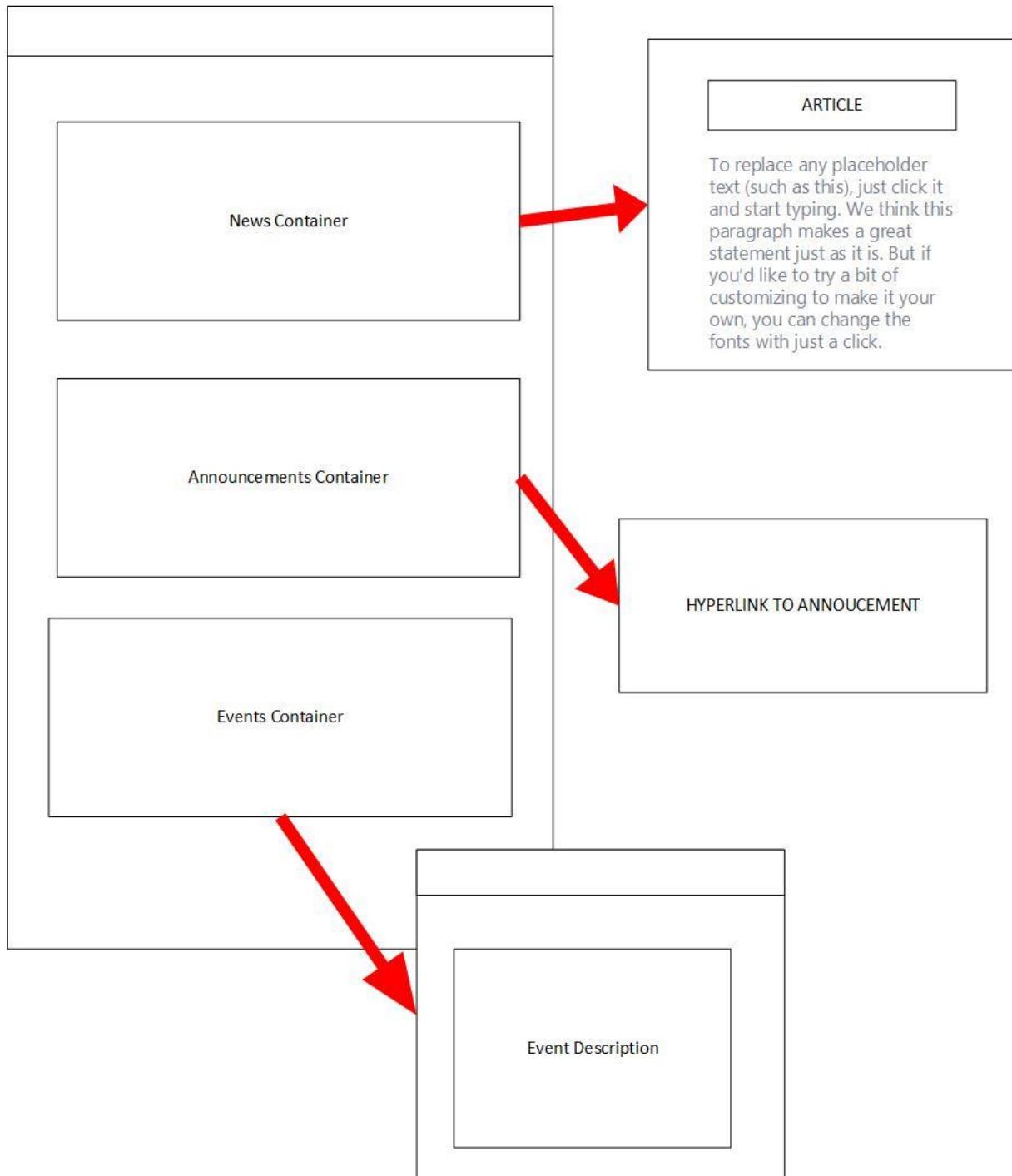
- Item 1
- Item 2
- Item 3
- Item 4





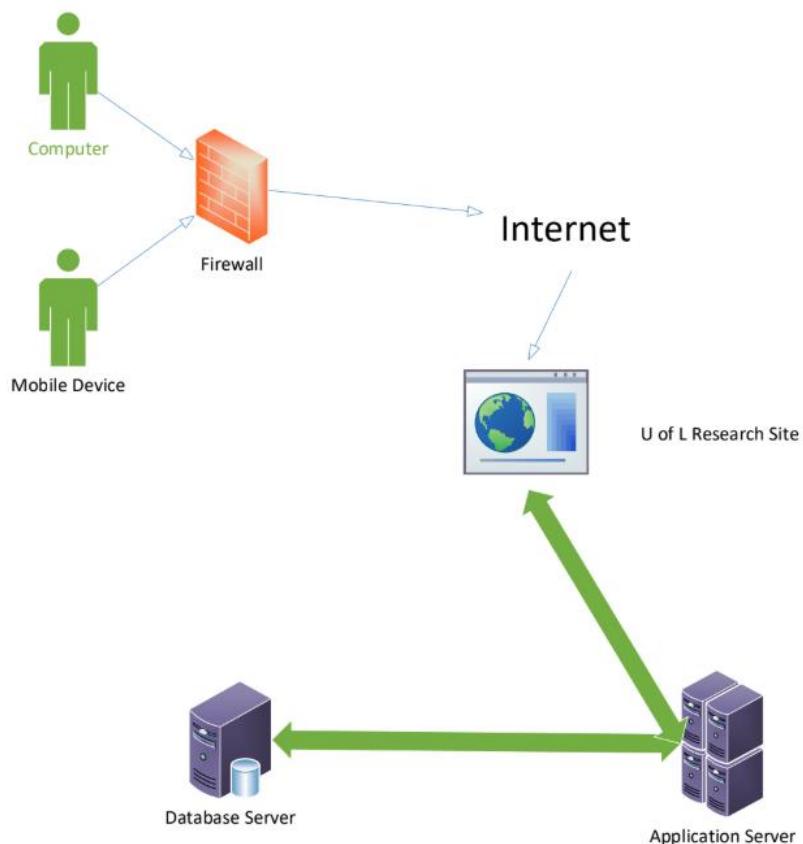
NEWS & EVENTS

This depicts how a user would find out about news, events, and announcements. When they click on an article, that would lead them to the article page. When they click on an event, it would lead them to the event description. When they click on an announcement it will hyperlink to an external website.



Physical Architecture Design

The physical architecture diagram illustrates how the system would be run. Users (mobile or computer) would connect to the website and from there the website and application server communicate the information necessary to one another. While that's happening the application server is also communicating with the database server to retrieve any info necessary for the user (i.e. their login profile, any saved grants, or any news stories they may have pinned to follow). This setup is the most cost efficient and time efficient way to create and run the system. An important factor in these is where the servers would be run from, for reliability and security reasons we thought it best for these servers to run off of a cloud not knowing if the university has adequate servers to host the system. If the university has these capabilities, then we would be able to cut down on costs even more by only needing a cloud database for backups of the system.



Design Procedures for Security Concerns and Non-functional Requirements

Security

As mentioned in the nonfunctional requirements, the new system shall be made with WordPress and be efficient for users. In order to create efficiency, users such as students, researchers, and administrators will have to login to the system in order to perform functions.

Students

students will need to provide both email address and password for verification when logging into their account

Researchers

Researchers will need to provide both email address and password for verification when logging into their account

Administrators

Administrators will need to provide both email address and password for verification when logging into their account

In order to back up our data, we found that using Amazon Web Services (AWS) for cloud computing on the Database and Application Servers would work best. We decided to do this because of the services that are available within AWS allowing our CMS to be WordPress which is compatible with AWS's Aurora relational database which is easily compatible with MySQL and WordPress supports MySQL ensuring no compatibility issues with the software. We decided to use Aurora as the RDS due to its scalability, specifically with the serverless option which auto adjusts going up and down in vCPUs and memory along with the price as it sees fit i.e. a huge spike in usage came up or a tool update has a glitch in it causing the usage to be temporarily increased you can adjust the memory and vCPU's being used at your convenience resulting in maximum uptime and efficiency for unplanned incidents. MySQL was the obvious choice here as well due to it being easily compatible with all the other software unlike many other SQL services. For the application server we decided to use Amazon EC2 seeing that it would easily mesh with all other software and having it offer on-demand services for cheap.

Since the exact usage may not be known immediately for the new site you could easily run the first month or two as tests off of an on demand price to discern what plan you would need resulting in a lower price when you stop using the on-demand feature and get a full contract. WordPress was chosen as the CMS due to its ease of access making it very simple and manageable to create and manipulate the research site with very intuitive controls in case there needs to be any overhauls in the future.

In regard to security, WordPress will enable us to install security plugins and enable a web application firewall. The security plugin we plan to install is Sucuri Scanner. Sucuri Scanner allows for file integrity monitoring, failed login attempts, and malware scanning. Sucuri also operates as a web application firewall --- they helped WordPress block 450,000 attacks in one month. Sucuri's firewall comes with a malware cleanup and blacklist removal guarantee so in the event of a breach, they will guarantee to fix our website.

Gantt Chart

Iteration 3

ID	Task Name	Start	Finish	Duration	Mar 2020				
					16	17	18	19	20
1	UC 1 (Yamini)	3/16/2020	3/16/2020	1d					
2	UC 2 (Yamini)	3/16/2020	3/16/2020	1d					
3	UC 3 (Yamini)	3/16/2020	3/16/2020	1d					
4	UC 4 (Yamini)	3/16/2020	3/16/2020	1d					
5	UC 5 (Yamini)	3/16/2020	3/16/2020	1d					
6	UC 6 (Yamini)	3/16/2020	3/16/2020	1d					
7	UC 7 (Yamini)	3/16/2020	3/16/2020	1d					
8	UC 8 (Yamini)	3/16/2020	3/16/2020	1d					
9	UC 9 (MILES)	3/16/2020	3/16/2020	1d					
10	UC 10 (MILES)	3/16/2020	3/16/2020	1d					
11	UC 11 (MILES)	3/16/2020	3/16/2020	1d					
12	UC 12 (MILES)	3/16/2020	3/16/2020	1d					
13	UC 13 (MILES)	3/16/2020	3/16/2020	1d					
14	UC 14 (MILES)	3/16/2020	3/16/2020	1d					
15	UC 15 (ERIC)	3/16/2020	3/16/2020	1d					
16	UC16 (JAKE)	3/16/2020	3/16/2020	1d					
17	UC 17 (JAKE)	3/16/2020	3/16/2020	1d					
18	UC 18 (MILES)	3/16/2020	3/16/2020	1d					
19	UC 19 (MILES)	3/16/2020	3/16/2020	1d					
20	UC20 (ERIC)	3/16/2020	3/16/2020	1d					
21	UC 21 (JAKE)	3/16/2020	3/16/2020	1d					
22	UC 22(HAGAN)	3/16/2020	3/16/2020	1d					
23	UC 23 (HAGAN)	3/16/2020	3/16/2020	1d					
24	UC 24 (HAGAN)	3/16/2020	3/16/2020	1d					
25	UC 25 (HAGAN)	3/16/2020	3/16/2020	1d					
26	UC 26 (JAKE)	3/16/2020	3/16/2020	1d					
27	UC 27 (JAKE)	3/16/2020	3/16/2020	1d					
28	UC 28 (HAGAN)	3/16/2020	3/16/2020	1d					
29	UC 29 (JAKE)	3/16/2020	3/16/2020	1d					
30	UC 30 (ERIC)	3/16/2020	3/16/2020	1d					
31	UC 31 (ERIC)	3/16/2020	3/16/2020	1d					
32	UC 32 (ERIC)	3/16/2020	3/16/2020	1d					
33	UC 33 (ERIC)	3/16/2020	3/16/2020	1d					
34	UC 34 (LAXMI)	3/16/2020	3/16/2020	1d					
35	UC 35 (LAXMI)	3/16/2020	3/16/2020	1d					
36	UC 36 (LAXMI)	3/16/2020	3/16/2020	1d					
37	UC 37 (LAXMI)	3/16/2020	3/16/2020	1d					

ITERATION 4

ID	Task Name	Start	Finish	Duration	Mar 2020				
					16	17	18	19	20
1	UC 1 (Yamini)	3/16/2020	3/16/2020	1d					
2	UC 2 (Yamini)	3/16/2020	3/16/2020	1d					
3	UC 3 (Yamini)	3/16/2020	3/16/2020	1d					
4	UC 4 (Yamini)	3/16/2020	3/16/2020	1d					
5	UC 5 (Yamini)	3/16/2020	3/16/2020	1d					
6	UC 6 (Yamini)	3/16/2020	3/16/2020	1d					
7	UC 7 (Yamini)	3/16/2020	3/16/2020	1d					
8	UC 8 (Yamini)	3/16/2020	3/16/2020	1d					
9	UC 9 (MILES)	3/16/2020	3/16/2020	1d					
10	UC 10 (MILES)	3/16/2020	3/16/2020	1d					
11	UC 11 (MILES)	3/16/2020	3/16/2020	1d					
12	UC 12 (MILES)	3/16/2020	3/16/2020	1d					
13	UC 13 (MILES)	3/16/2020	3/16/2020	1d					
14	UC 14 (MILES)	3/16/2020	3/16/2020	1d					
15	UC 15 (ERIC)	3/16/2020	3/16/2020	1d					
16	UC16 (JAKE)	3/16/2020	3/16/2020	1d					
17	UC 17 (JAKE)	3/16/2020	3/16/2020	1d					
18	UC 18 (MILES)	3/16/2020	3/16/2020	1d					
19	UC 19 (MILES)	3/16/2020	3/16/2020	1d					
20	UC20 (ERIC)	3/16/2020	3/16/2020	1d					
21	UC 21 (JAKE)	3/16/2020	3/16/2020	1d					
22	UC 22(HAGAN)	3/16/2020	3/16/2020	1d					
23	UC 23 (HAGAN)	3/16/2020	3/16/2020	1d					
24	UC 24 (HAGAN)	3/16/2020	3/16/2020	1d					
25	UC 25 (HAGAN)	3/16/2020	3/16/2020	1d					
26	UC 26 (JAKE)	3/16/2020	3/16/2020	1d					
27	UC 27 (JAKE)	3/16/2020	3/16/2020	1d					
28	UC 28 (HAGAN)	3/16/2020	3/16/2020	1d					
29	UC 29 (JAKE)	3/16/2020	3/16/2020	1d					
30	UC 30 (ERIC)	3/16/2020	3/16/2020	1d					
31	UC 31 (ERIC)	3/16/2020	3/16/2020	1d					
32	UC 32 (ERIC)	3/16/2020	3/16/2020	1d					
33	UC 33 (ERIC)	3/16/2020	3/16/2020	1d					
34	UC 34 (LAXMI)	3/16/2020	3/16/2020	1d					
35	UC 35 (LAXMI)	3/16/2020	3/16/2020	1d					
36	UC 36 (LAXMI)	3/16/2020	3/16/2020	1d					
37	UC 37 (LAXMI)	3/16/2020	3/16/2020	1d					

ITERATION 5

ID	Task Name	Start	Finish	Duration	Mar 2020			Apr 2020				
					29	30	31	1	2	3	4	5
1	Class Diagram - Jake	3/30/2020	4/8/2020	8d								
2	Database Design - Laxmi	3/30/2020	4/8/2020	8d								
3	Data Dictionary (3) - Jake	3/30/2020	4/8/2020	8d								
4	Data Dictionary (3) - Laxmi	3/30/2020	4/8/2020	8d								
5	Data Dictionary (3) - Yamini	3/30/2020	4/8/2020	8d								
6	Data Dictionary (3) - Miles	3/30/2020	4/8/2020	8d								
7	Data Dictionary (3) - Hagan	3/30/2020	4/8/2020	8d								
8	Data Dictionary (3) - Eric	3/30/2020	4/8/2020	8d								
9	Windows Nav Diagram - Yamini	3/30/2020	4/8/2020	8d								
10	Screen Layouts - Yamini	3/30/2020	4/8/2020	8d								
11	Gantt Chart - Yamini	4/8/2020	4/8/2020	1d								
12	Prototypes (9) - Yamini	3/30/2020	4/8/2020	8d								
13	Prototypes (4) - Hagan	3/30/2020	4/8/2020	8d								
14	Prototypes (5) - Laxmi	3/30/2020	4/8/2020	8d								
15	Prototypes (3) - Jake	3/30/2020	4/8/2020	8d								
16	Prototypes (2) - Eric	3/30/2020	4/8/2020	8d								
17	Prototypes (8) - Miles	3/30/2020	4/8/2020	8d								

Elaboration Phase Prototype

The prototype describes the landing page of the ULRI website. The website navigates to an about page, a support page (breaks down into support for students, for researchers, and for industries), a centers & institutes page, innovation & engagement page, news & events page, and contact page. There is a slider gallery of recent innovation achievements. Below is a showcase of our metrics and mission statement. Below that is a calendar of events and below that is a list of quick access links.

Office of the Executive Vice President of Research and Innovation
University of Louisville
Jouett Hall
Louisville, Kentucky 40292

Phone: 502-852-6512
[Email Us](#)

The screenshot shows the UofL Office of Research & Innovation homepage. At the top, there's a red header bar with the title "UofL Office of Research & Innovation". On the right side of the header is a "Login" button. Below the header, there's a navigation menu with six items: "About", "Support", "Centers & Institutes", "Innovation & Engagement", "News & Events", and "Contact".

Find Funding

This prototype shows a search form for finding funding opportunities. It includes fields for selecting funding sources (Federal Grants, Foundations/Nonprofits, Internal Grants), applicable research areas (Biological Sciences, Computer and Information Science, Engineering, Geosciences, Clinical Research, Social Sciences, Mathematical and Physical Sciences, Behavioral and Economic Sciences, Education and Human Resources), and additional keywords. A "Find Funding" button is at the bottom.

This prototype describes how a researcher would find funding. They fill out a form in which they select funding sources and applicable research areas. The system then runs a query through the database of grants and matches the user with the most relevant funding opportunities. The user then can select the title of the grant for more information and click “save to my favorites” to save on their profile for quick access.

The footer of the website includes the address "Office of the Executive Vice President of Research and Innovation, University of Louisville, Jouett Hall, Louisville, Kentucky 40292", a phone number "Phone: 502.852.6512", and an "Email Us" button.

The screenshot shows the UofL Office of Research & Innovation homepage, identical to the one at the top of the page but with a different background color.

Find Funding

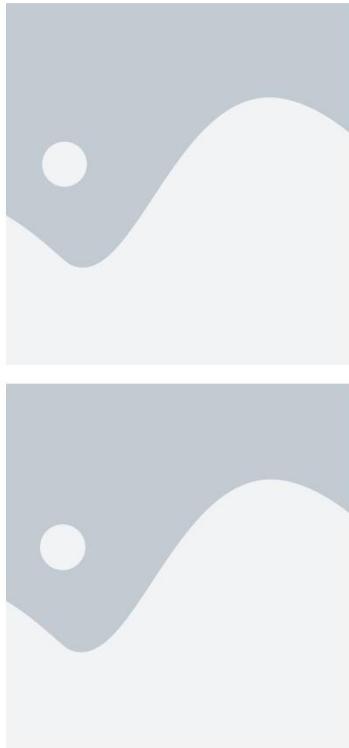
This prototype displays a list of funding opportunities. Each item has a title ("Lorem Ipsum"), a short description, and a "Save to my favorites" button. There are seven items in the list.

The footer of the website includes the address "Office of the Executive Vice President of Research and Innovation, University of Louisville, Jouett Hall, Louisville, Kentucky 40292", a phone number "Phone: 502.852.6512", and an "Email Us" button.

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Request Support



Full Name

Company Name

Email

Phone Number

Website (if applicable)

How can we help you?

- Space
- Labs
- Equipment

- Access to technologies
- Inventions and Licensing
- Researcher Support

What are your project goals?

Do you have any budgetary limitations? If so, explain below

[Submit Form](#)

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This prototype describes how an industry professional would request support. They would enter their contact information and indicate what specific type of support they are looking for. They would also include their project goals and whether they have budgetary limitations. After they submit the form, their information is saved in the industry table in the ULRI database and also sent to staff so they can start addressing the request promptly.

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Login to ULRI

The login form is contained within a red-bordered box. It features two input fields: 'Email Address' and 'Password', both represented by grey rectangular boxes. Below the password field is a 'Forgot Password?' link. A red 'Login' button is positioned centrally below the inputs. To the right of the form, a vertical line separates it from a sidebar. The sidebar contains a red link 'Don't have an account?' followed by a smaller link 'Create one here'. At the bottom of the sidebar is another red 'Create Account' button.

Email Address

Password

[Forgot Password?](#)

[Login](#)

Don't have an account?
[Create one here](#)

[Create Account](#)

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[Email Us](#)

This prototype describes how a user would login to the ULRI system. To get to this page, they would click the white login button on the header. Then they would enter their email and password. If they forgot their password, they can click forgot password. If they have yet to create an account, they can sign up by clicking the create account button.

UofL Office of Research & Innovation

Login

About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

News

The News section displays a grid of six news articles. Each article card includes a small placeholder image, the title "Lorem Ipsum", and a brief description below it. A search bar labeled "Search News" is located at the bottom of the grid.

Article 1: Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet.

Article 2: Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet.

Article 3: Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet.

Article 4: Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet.

Article 5: Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet.

Article 6: Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet, Lorem ipsum dolor sit amet.

Search News

Announcements

Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet

Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet

Events

The Events section displays a grid of events across four months: January, February, March, and April. Each month has two columns of events. Each event card includes the date, title, and a brief description.

January:

- JAN 08: Lorem Ipsum (Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor)
- JAN 29: Lorem Ipsum (Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor)

February:

- FEB 03: Lorem Ipsum (Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor)
- FEB 15: Lorem Ipsum (Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor)

March:

- MAR 07: Lorem Ipsum (Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor)
- MAR 20: Lorem Ipsum (Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor)

April:

- APR 05: Lorem Ipsum (Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor)

Search Events

This prototype describes the News & Events page. The first block is a list of recent news articles and the user can also search through old articles using the search bar. Then the next block is a list of recent announcements (can be hyperlinks). The next block is a calendar of events for ULRI. The user can select the title of an event for more information. The user can also search through events if necessary.

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Create an Account

I am a ... Student Researcher

First Name
Last Name

Email Address
Password

[Create Account](#)

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This prototype aligns with UC1 and UC4 of “Create Student” and “Create Researcher”. This prototype shows how the student and researcher can create an account (after selecting create account button on login page).

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Login

About

Support

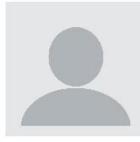
Centers & Institutes

Innovation & Engagement

News & Events

Contact

Student Profile



Yamini Polcum

First Name	Lorem Ipsum
Last Name	Lorem Ipsum
Phone	Lorem Ipsum
Email	Lorem Ipsum
Home Address	Lorem Ipsum
Username	Lorem Ipsum
Password	*****

[Edit Account](#)

This prototype aligns with UC 1 – 6. It shows the Student and Researcher profile which showcases their account information. If they wish to edit the information they can click the “edit account” button.

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Login

About

Support

Centers & Institutes

Innovation & Engagement

News & Events

Contact

Researcher Profile



John Smith

First Name	Lorem Ipsum
Last Name	Lorem Ipsum
Phone	Lorem Ipsum
Email	Lorem Ipsum
Home Address	Lorem Ipsum
Research Area	Lorem Ipsum
Username	Lorem Ipsum
Password	*****

[Edit Account](#)

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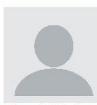
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About Support Centers & Institutes Innovation & Engagement News & Events Contact

Login

Edit Student Profile



Yamini Polcum

First Name
 Last Name
 Phone
 Email
 Home Address
 Username
 Password

Save **Delete Account**

This prototype shows how the student can edit their account (UC 2) and delete their account (UC 3).

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Login

Edit Student Profile



Yamini Polcum

Are you sure you want to
delete your account?

Yes **No**

Save **Delete Account**

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Edit Student Profile



Yamini Polcum

Account Deletion
Successful!

Save **Delete Account**

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Edit Researcher Profile

John Smith

First Name
 Last Name
 Phone
 Email
 Home Address
 Research Area
 Username
 Password

Save **Delete Account**

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Edit Researcher Profile

John Smith

Are you sure you want to delete your account?

Yes **No**

Password

Save **Delete Account**

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Edit Researcher Profile

John Smith

Account Deletion Successful!

Password

Save **Delete Account**

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This prototype shows how the researcher can edit their account (UC 5) and delete their account (UC 6).

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About

Support

Centers & Institutes

Innovation & Engagement

News & Events

Contact

Contact Information

Kevin H. Gardner

Executive Vice President for Research and Innovation

Email: evpri@louisville.edu

Phone: 502-852-8373

Address: Jouett Hall

University of Louisville

Louisville, KY 40292-0001

(40208 for UPS, FedEx)



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This prototype describes the Contact page for ULRI.

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About

Support

Centers & Institutes

Innovation & Engagement

News & Events

Contact

Policies & Procedures

PDF Shortcuts

Intellectual Property & Institutional Compliance

- Institutional Compliance Plan ([PDF](#))
- Intellectual Property Policy ([PDF](#))

Research Credentialing at Affiliated Hospitals (Instructions will be included in the revised iRIS Manual)

- Credentialing Checkform, 9-11 ([PDF](#))
- Norton Form ([PDF](#))
- ULH Form ([PDF](#))

Scientific or Scholarly Merit Information

Policy for Review of Research for Scientific or Scholarly Merit and Guidance (is now included in HSPPD's HRPP Manual, Chapter 7)

- Scientific or Scholarly Merit Form ([PDF](#))
- HRPP Manual, Chapter 7 ([PDF](#))

Conflict of Interest

- Individual Conflict of Interest Policy
- Institutional Conflict of Interest Policy

Direct Costs on Externally Sponsored Programs

- Direct Costs on Externally Sponsored Programs Policy
- Charging Direct Costs to Sponsored Programs Procedure
- Direct Cost Allowability Matrix
- Guidance for Direct Charging of Administrative and Clerical Salaries to Sponsored Programs
- Guidance - Typical Direct and Indirect Costs and Examples of Unallowable Costs

(A-Z)

- Action When a Required HIPAA Authorization in Human Subjects Research is not Obtained
- Authority of the IRB
- Classified or Sensitive Research Policy
- Cost Sharing
- Definition of Sponsored Activities
- Deposit Of Checks Without Properly Executed Agreement
- Effort Reporting Alignment with Annual Workload Assignment Policy
- Ethical Conduct and Reporting of Research
- Federal Regulations, Policies, and Circulars
- Guidelines for Designating Funding, Gift Or Sponsored Program
- IRB Report of Findings Policy
- Model Procedures for Resolving Disputes in Research or Scholarly Activity
- NIH Awards: Progress Reports and Carryover Requests Procedure - moved to Research Handbook, Chapter 7.8
- Ownership of Data
- Payroll and Other Expense Transfers
- Policy Statement of Sponsored Programs
- Pre-Award Spending Policy
- Proposal Clearance Requirement
- Responding to Allegations of Research Misconduct
- Responding to Violations of University of Louisville Research Policies (Policy)
- Responding to Violations of University of Louisville Research Policies (Procedure)
- Responsible Conduct of Research Policy
- Sponsoring Visiting Researchers/Scholars for Research Purposes
- Sponsoring Visiting Students for Research Purposes
- Suspension or Termination of Previously Approved Research
- Tuition Remission for Graduate Research Assistants
- Unanticipated Problems Involving Risks to Subjects or Others

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This prototype describes how the user can find information on policies and procedures of ULRI.

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[Login](#)[About](#)[Support](#)[Centers &
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Engagement](#)[News &
Events](#)[Contact](#)

Create Grant

Grant Title:

Grant Category:

Grant Details:

Estimated Grant Funding:

Grant Closing Date For

Applications:

Grant Eligibility:

Additional Info on Grant Eligibility:

Grant Agency Name:

Grant Agency Description:

Grant Contact Info:

[Create Grant](#)

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Edit Grant

Grant Title:

Grant Number:

[Submit Edits](#)[Delete](#)

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Edit Grant

Grant Title:

Grant Deleted

Grant Number:

[Submit Edits](#)

[Delete](#)

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Create Form

Form Title:

Form Type:

Form Category:

Form Description:

Form Template:

[Templates](#)

[Create Grant](#)

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Form Title:

Form Number:

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Edit Form

Form Title:

Form Deleted

Form Number:

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Support

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Institutes

Innovation &
Engagement

News &
Events

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Sign-Up For Newsletter

First Name:

Last Name:

Email Address:

[Sign-Up](#)

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This prototype describes how users can sign up for the ULRI newsletter.

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Login

About

Support

Centers &
Institutes

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Engagement

News &
Events

Contact

Innovations

Innovation



Basic Description, Basic Description, Basic Description, Basic Description,
Basic Description

Innovation



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This prototype
describes how users
can see innovations
happening at the
University.

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Create an Event

Event Name:

Event URL:

[Submit](#)

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This prototype describes how admin can create an event within the ULRI system.

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Edit an Event

Event Na...

Belknap

Event Deleted

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[Submit](#)

[Delete](#)

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This prototype describes how admin can delete an event within the ULRI system.

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Edit an Event

Event Name: Informative Grant Seminar @ Belknap

Event URL: <https://events.louisville.edu/event/infor...>

[Submit](#)

[Delete](#)

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This prototype describes how admin can edit an event within the ULRI system.

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[Login](#)

About

Support

Centers & Institutes

Innovation & Engagement

News & Events

Contact

Research Centers and Institutes



The University of Louisville supports research centers and institutes that bring together faculty members from different disciplines and focus on a particular area of research. Centers and institutes are established in order to promote the development of new knowledge and enhance the research productivity of individual faculty.

- ▼ AMIST: Additive Manufacturing Institute of Science & Technology
- ▼ BCC: Brown Cancer Center
- ▼ CEGIB: Center for Environmental Genomics and Integrative Biology
- ▼ CHHP: Center for Health Hazards Preparedness
- ▼ CII: Cardiovascular Innovation Institute
- ▼ CIK: Commonwealth Institute of Kentucky
- ▼ Conn: Conn Center for Renewable Energy Research
- ▼ CPM: Center for Predictive Medicine for Bio-Defense and Emerging Infectious Diseases
- ▼ CREAM: Center for Regulatory and Environmental Analytical Metabolomics
- ▼ CTSI-CTSA: Clinical and Translational Sciences Institute
- ▼ Envirome: Envirome Institute
- ▼ ERINC: Electro-Optics Research Institute and Nanotechnology Center
- ▼ ICT: Institute for Cellular Therapeutics
- ▼ IMC: Institute for Molecular Cardiology
- ▼ KRSIRC: Kentucky Spinal Cord Injury Research Center
- ▼ LoDI: Logistics and Distribution Institute
- ▼ Price: Price Institute of Surgical Research
- ▼ Trager: Trager Institute
- ▼ Links to other information pertaining to centers and institutes

This prototype describes how users can find ULRI affiliated Research Centers and Institutes.

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Grant/Contract Proposal Guides

[Proposal Instructions ►](#)

[Proposal Clearance Form \(PCF\) Instructions ►](#)

[Budget Section ►](#)

[Reminders ►](#)

This prototype
describes
instructions on
how to create
and submit a
proposal.

OFFICE SUBMISSION GUIDELINES:

Submit to

Clinical Contracts Division:

- Clinical projects funded **directly** by industry or private nonprofit organizations, including projects with flow-through funding when ULRF's direct payer is nonfederal, even if the primary sponsor is federal

Submit to

Office of Industry Engagement:

- Projects funded by industry and for-profit organizations
- Projects involving small businesses or for-profit entities with governmental flow-through (e.g., federal SBIR/STTR programs, or certain KSTC programs) in which a business applies for and receives an award, and the business – not the governmental funding

Submit to

Sponsored Programs

Administration:

- Projects funded by governmental agencies or private nonprofit organizations
- Clinical projects of any type funded **directly** by the federal government

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Surveys

[Researcher Surveys ►](#)

[Research and Innovation Surveys ►](#)

[Industry Surveys ►](#)

[How to Create a Survey ►](#)

Important Surveys to Take:

- > (example) from Research and Innovation office
- > (example) from a researcher
- > (example) from Research and Innovation office

This prototype describes how users can find surveys to take and how to create a survey.

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

(Survey Title)

Question 1) Example of a multiple choice question?

- A: potential response
- B: potential response
- C: potential response
- D: potential response

Question 2) Example of a fill in the blank question?

This is an answer to question 2

This prototype
describes an
example survey.

Question 3) Example of a multiple choice question with multiple responses?

- A: potential response
- B: potential response
- C: potential response
- D: potential response

Submit

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

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Guest Login

User ID

Password

[Forgot Password?](#)

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This prototype
describes how
Guests and
administrators
can login into
ULRI.

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About

Support

Centers &
Institutes

Innovation &
Engagement

News &
Events

Contact

Admin Login

User ID

Password

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