ICS Website Redesign

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UML Design Final
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REVISION HISTORY

- **11/7/2017**
  - UML Design Draft #1 Document created and formatted
- **11/8/2017**
  - Included and prioritized User Stories
  - Included sections: “UML Sequence Diagrams”, “UML Class Diagram”, “Additional Diagrams”
  - Decided on UML Sequence Diagram: Undergraduate Student
  - Decided on Additional Diagram: State Diagram
  - Added UML Sequence Diagram for Undergraduate Student
- **11/9/2017**
  - Added State Diagram under “Additional Diagrams”
  - Added Class Diagram for Sequence: Undergraduate Student
  - Added UML Class Diagram
- **11/15/2017**
  - Created and formatted UML Design Final Document
  - Included sections for UML Sequence and Class Diagrams: Graduate Student and Prospective Faculty Member
  - Added UML Sequence Diagram: Prospective Faculty Member (Normal and Alternative)
- **11/18/2017**
  - Added UML Sequence Diagram: Graduate Student
  - Updated and explained the UML Summary of Classes Diagram
  - Added a small description for the State Diagram
  - Added a Timing Diagram: Undergraduate
- **11/20/2017**
  - Added Class Diagram for Sequence: Graduate Student
  - Added section for UML Sequence and Class Diagram: Alumni
  - Added Timing Diagrams: Graduate and Prospective Faculty Member
  - Added an Activity Diagram: Sponsor
  - Added and explained Hierarchy Diagram
  - Added and explained Class Diagram for Sequence: Prospective Faculty Member
- **11/21/2017**
  - Added UML Sequence and Class Diagram: Alumni
  - Elaborate on explanations for Class Diagrams

USER STORIES

Must Haves

- As an undergraduate student, I want to look up classes being offered during the academic year so that I can plan out my classes for the year.
- As an undergraduate student, I want to figure out how to get advising on classes and my future career path so that I can make sure I graduate and meet my career goals.
- As a project sponsor, I want to look up research projects so that I sponsor a project with students
- As a graduate student, I want to look up different doctorate degrees being offered so that I can choose the right PhD program that matches my interests.
- As a graduate student, I want to search for possible internships and research opportunities so that I can gain more experience in my field of study.
- As an alumni, I want to look up how to give back to the school so that I can be more involved after graduation.
- As an undergraduate student, I want to look up events such as upcoming career fairs, workshops, meetups, and technical talks, so that I can network with industry professionals and meet my career goals.
- As an undecided undergraduate student who isn't sure of my field of study, I want to be able to easily look up and compare the course requirements of different majors.
- As an undergraduate student, I want to contact the ICS Student Affairs Office so that I can schedule an appointment with an academic counselor or go in for walk-in hours.
- As a prospective faculty member, I want to be able to look into faculty recruitment so that I can learn more about the school,its culture, and what it has to offer.
- As an undergraduate Informatics student, I want to learn about the different fields and specializations and how I can apply what I'm learning in class, to the industry.

Nice To Have

- As a faculty member, I want to easily navigate through the ICS website so that I can maintain the faculty directory and make possible revisions.

Great if We Can Get to It

- As an administrator, I would like to provide feedback to the website developers so that adjustments be made to allow for greater and easier maintainability.

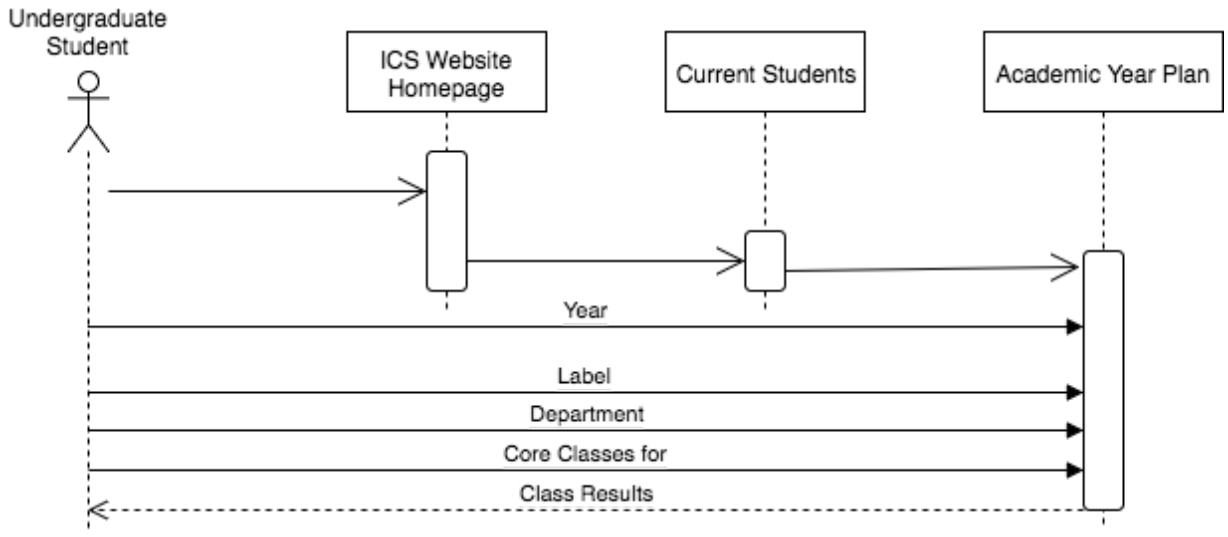
UML Sequence Diagrams

UNDERGRADUATE STUDENT

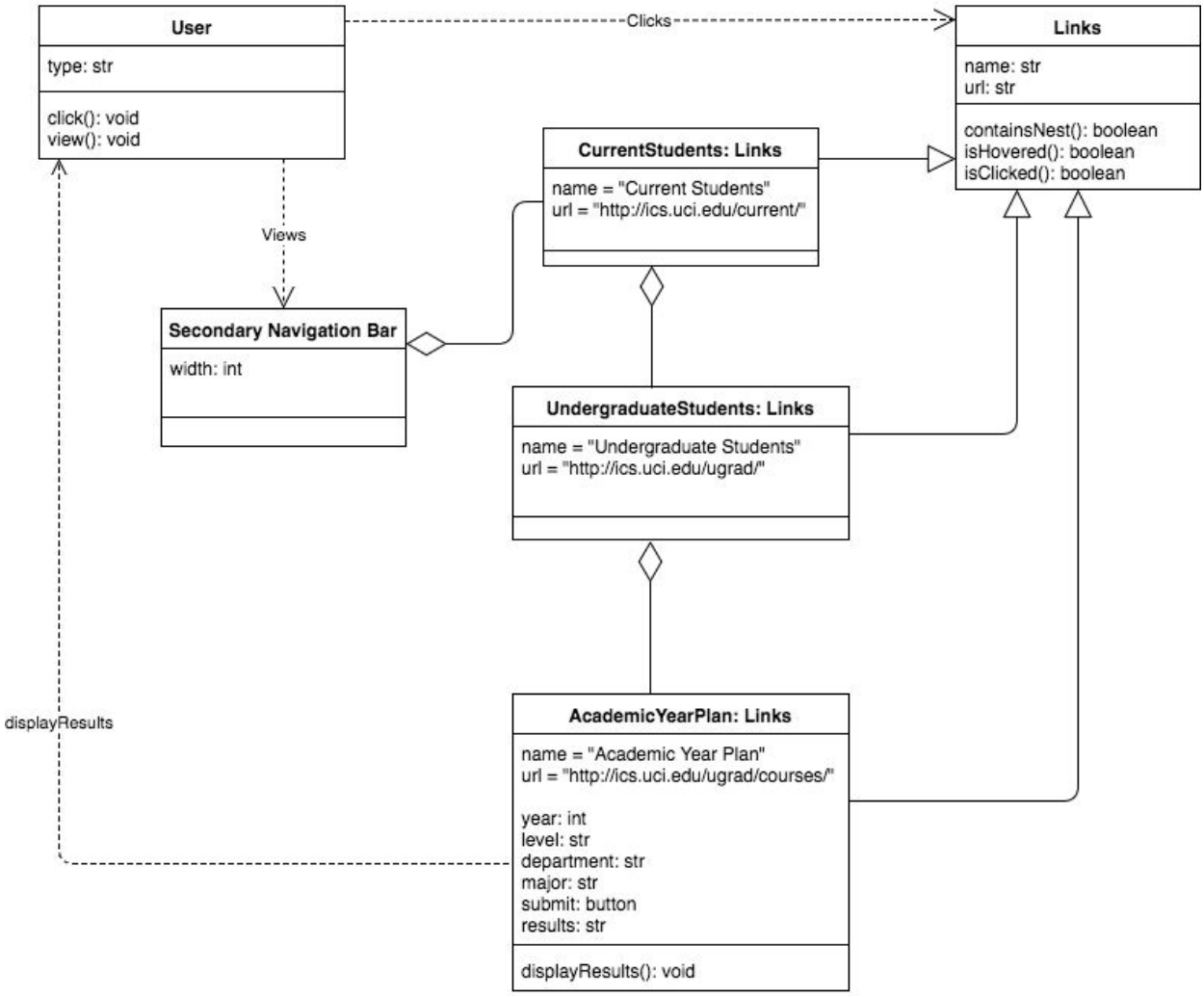
As an **undergraduate student**, I want to look up classes being offered during the academic year so that I can plan out my classes for the year.

Undergraduate Student Sequence Diagram

1. Undergraduate student indicates wish to look up ICS Academic Year Plan.
2. Student visits the ICS Website.
3. Student hovers over “Current Students” in the secondary navigation bar.
4. Student clicks on “Academic Year Plan” under the “Undergraduate Students” section.
5. Student selects the desired year in the drop down field labeled “Year”.
6. Student selects the desired course level in the drop down field labeled “Level”.
7. Student selects the desired course department in the drop down field labeled “Department”.
8. Student selects the desired ICS Major in the drop down field labeled “Core Classes for”.
9. Student clicks the “Submit” button.
10. Student is able to view the classes being offered during the year.



Class Diagram for Undergraduate Student Sequence



The User class has two methods that allows it to interact with other classes: click() and view(). “Links” have “name” and “url” attributes; “name” contains the text of the Link visible to the user, while the “url” attribute contains the actual link to the page the object refers to and represents. The User may click on a Link, which calls click() and then the User is redirected to the respective web page.

In the example of the sequence diagram for an Undergraduate Student, the User views the Secondary Navigation Bar, and then clicks on the “Academic Year Plan” link underneath the “Undergraduate Students” section of “Current Students”. The User is redirected to the “Academic Year Plan” page where a form is displayed that requires input. Thus, the User decides on the year, level, department, and major of the class listings they would like to view.

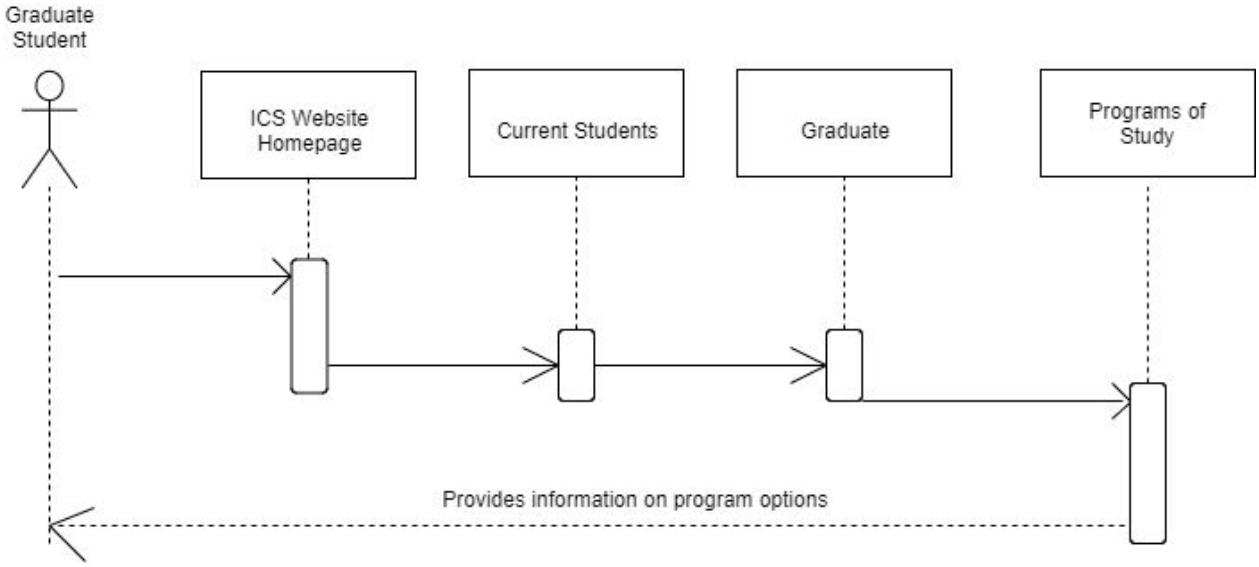
The year refers to the respective academic year that the student would like to view course listings for. The level indicates whether the classes are undergraduate, graduate, lower-division, or upper-division. The department filters courses within the respective ICS department. The major refers to that of the student or a major within the school of ICS that the undergraduate student would like to view course listings for. Once the user provides this required input and clicks on the “Submit” button, the method displayResults() compiles the information stored in the attributes in order to display another page with the respective Academic Year Plan.

GRADUATE STUDENT

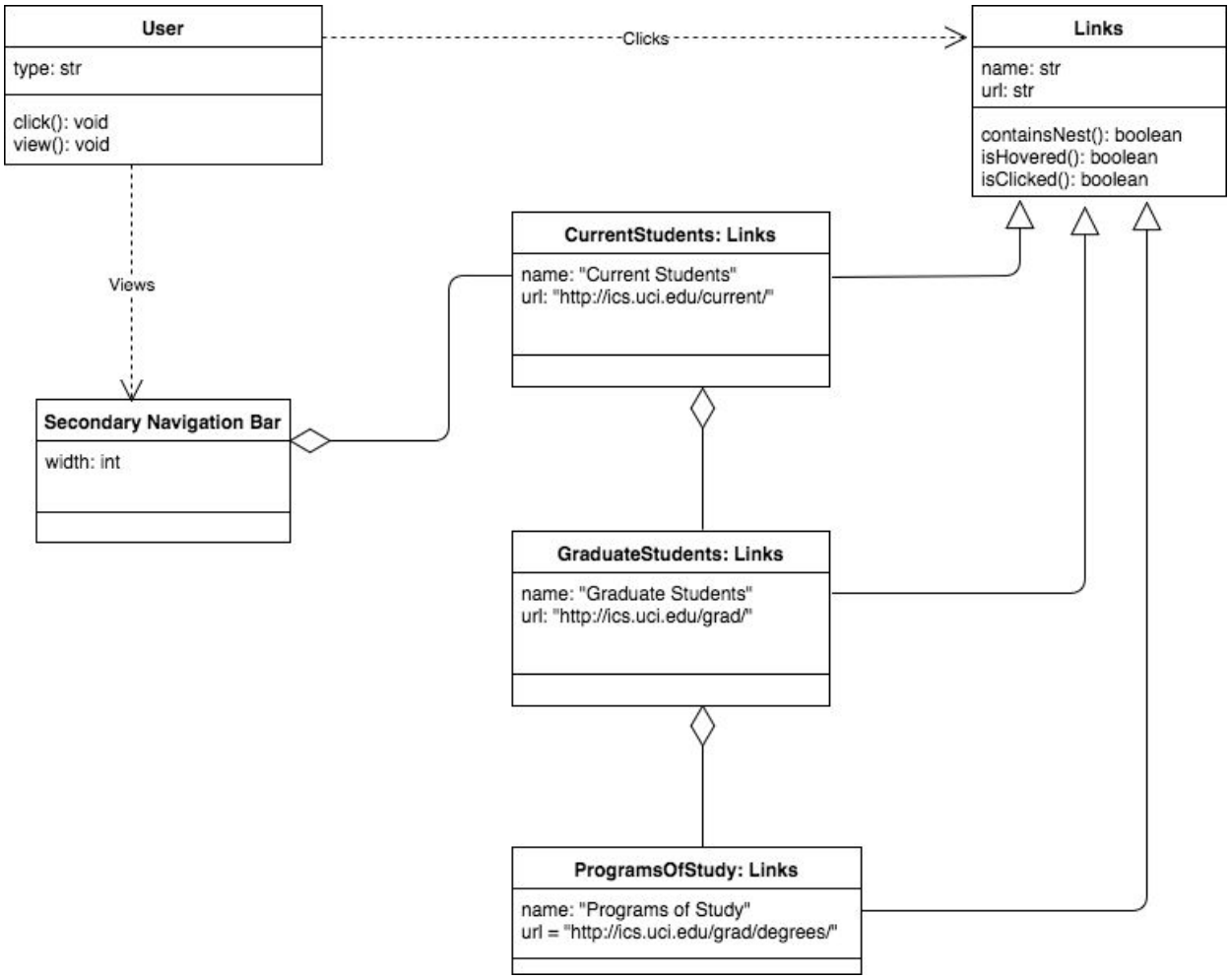
As a **graduate student**, I want to look up different doctorate degrees being offered so that I can choose the right PhD program that matches my interests.

Graduate Student Sequence Diagram

1. Graduate student wants to view different doctorate programs being offered at UCI to see which one matches their interest.
2. Graduate student visits ICS Website.
3. Graduate student hovers over “Current Students” in the secondary navigation bar.
4. Graduate student hovers over “Graduate Students” under “Current Students” tab.
5. Graduate student clicks on “Programs of Study”.
6. Graduate student is able to view the different PhD programs offered at UCI.



Class Diagram for Graduate Student Sequence



The User class has two methods that allows it to interact with other classes: click() and view(). “Links” have “name” and “url” attributes; “name” contains the text of the Link visible to the user, while the “url” attribute contains the actual link to the page the object refers to and represents. The User may click on a Link, which calls click() and then the User is redirected to the respective web page.

In the example of the sequence diagram for a Graduate Student, the User views the Secondary Navigation Bar, and then clicks on the “Programs of Study” link underneath the “Graduate Students” section of “Current Students”. The User is redirected to the “Programs of Study” page where they can view what levels of graduate degrees are offered as well as for what departments.

PROSPECTIVE FACULTY MEMBER

As a **prospective faculty member**, I want to be able to look into faculty recruitment so that I can learn more about the school, its culture, and what it has to offer.

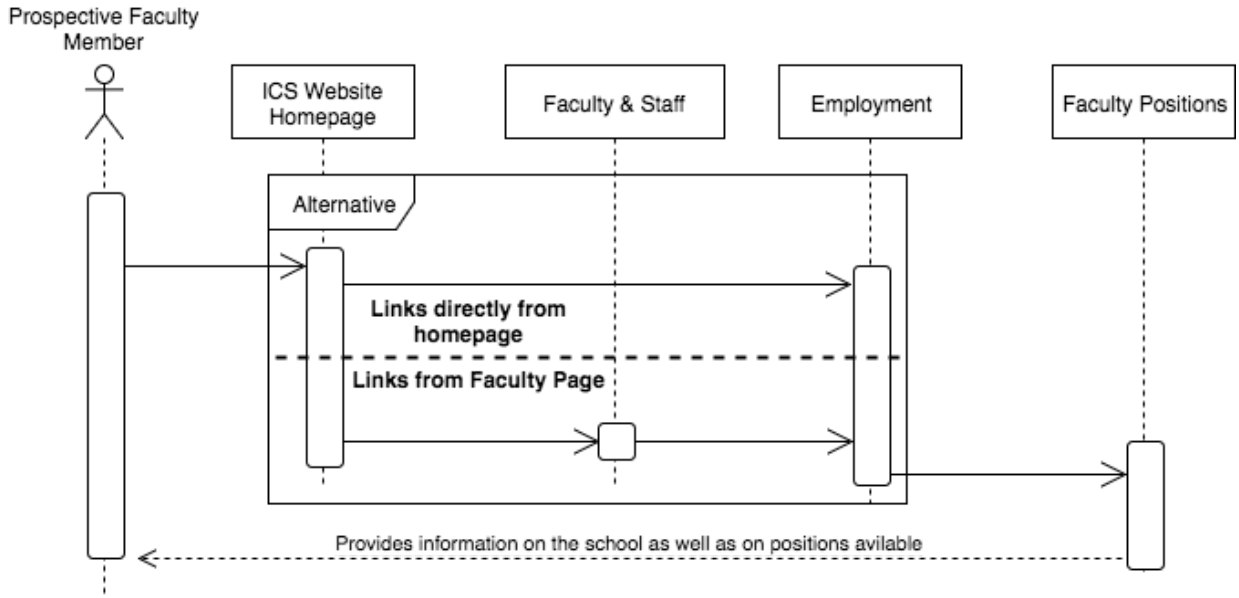
Prospective Faculty Member Sequence Diagram

Normal:

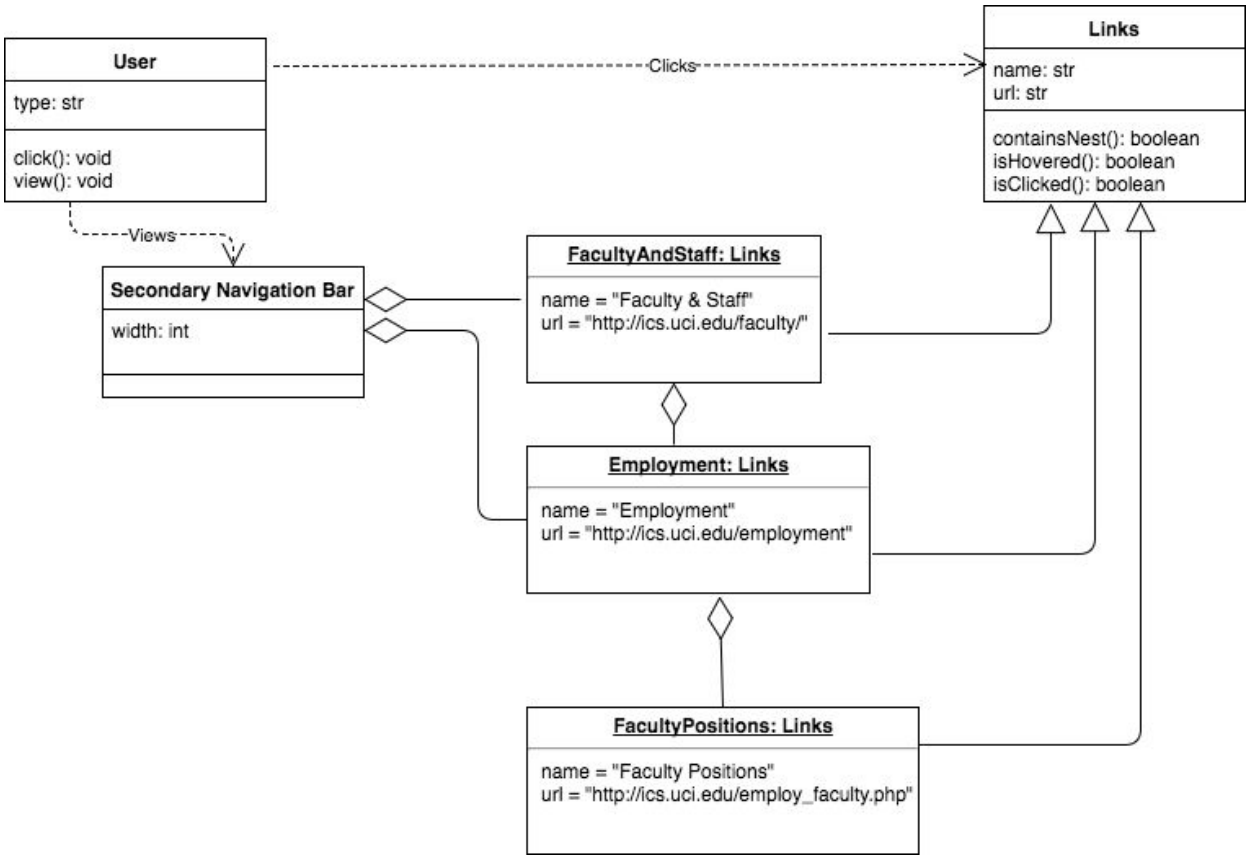
1. Prospective faculty member wants to be able to look into faculty recruitment to learn more about the Donald Bren School of Information and Computer Sciences and what it has to offer.
2. Prospective faculty member visits the ICS website.
3. Prospective faculty member clicks on “Learn More” under the “Faculty Recruiting” section on the home page.
4. Prospective faculty member is linked to the “Employment” page, where they can view different employment opportunities.
5. Prospective faculty member can view links for different types of positions in the side bar and clicks on “Faculty Positions”.
6. Prospective faculty member notes the different positions available and can view information about the Donald Bren School of Information and Computer Sciences.

Alternative:

3. If the prospective faculty member does not see the “Faculty Recruiting” section on the home page:
    3.1. Prospective faculty member clicks on “Faculty & Staff” in the secondary navigation bar.
    3.2. Prospective faculty member clicks on “Visit the employment page” under the description on the “Faculty” page.
    3.3. Return to step 4.



Class Diagram for Prospective Faculty Member Sequence



The User class has two methods that allows it to interact with other classes: click() and view(). “Links” have “name” and “url” attributes; “name” contains the text of the Link visible to the user, while the “url” attribute contains the actual link to the page the object refers to and represents. The User may click on a Link, which calls click() and then the User is redirected to the respective web page.

In the example of the sequence diagram for a Prospective Faculty Member, the User visits the ICS Website. On the home page, the User can view the “Faculty Recruiting” content module and click on “Learn More” to be redirected to the “Employment” page. Thus in this case, the “Learn More” link acts as the “Employment” link. When viewing different employment opportunities, the User may see different types of positions offered in the sidebar. The User then clicks on the link for and is redirected to the “Faculty Positions” page. Here the User can take note of different positions available as well as information about the school.

In the alternate course, for the sequence diagram for a Prospective Faculty Member, the User may not read the content of the home page, but use the Secondary Navigation Bar instead. In this case, the User will visit the ICS Website just as in the normal course, but then instead of scrolling down the home page, they directly view the Secondary Navigation Bar. The User then clicks on “Faculty & Staff”, so they are redirected to that page where they can click on “Visit the employment page”. This link acts as the “Employment” link, redirecting the User to the respective page. The User can thus see potential positions in the sidebar and click on “Faculty Positions”. When redirected, the User can view information on faculty recruitment.

ALUMNI

As an **alumni**, I want to look up how to give back to the school so that I can be more involved after graduation.

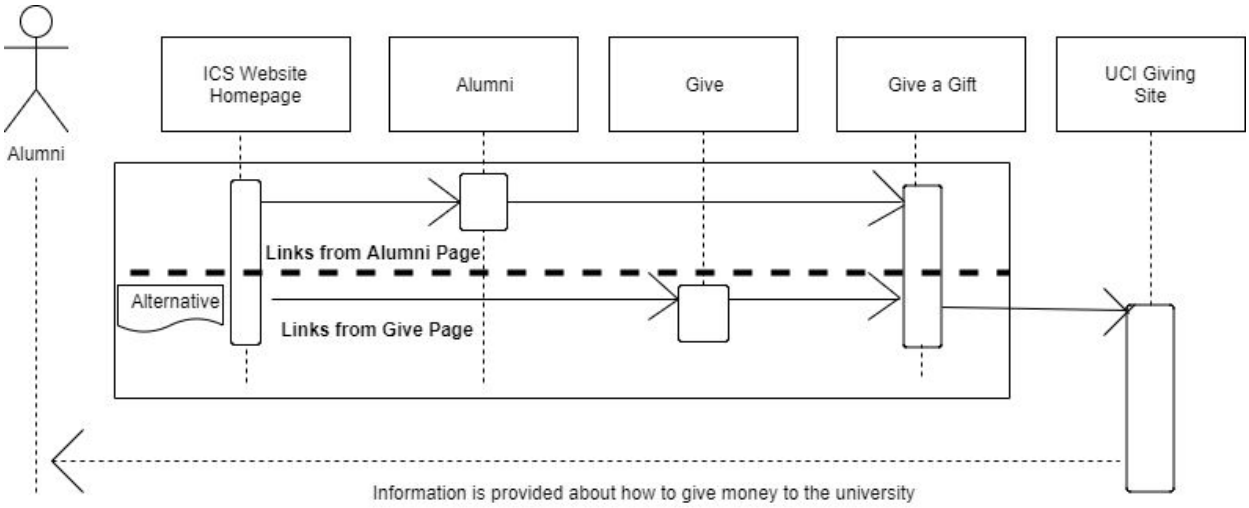
Alumni Sequence Diagram

Normal:

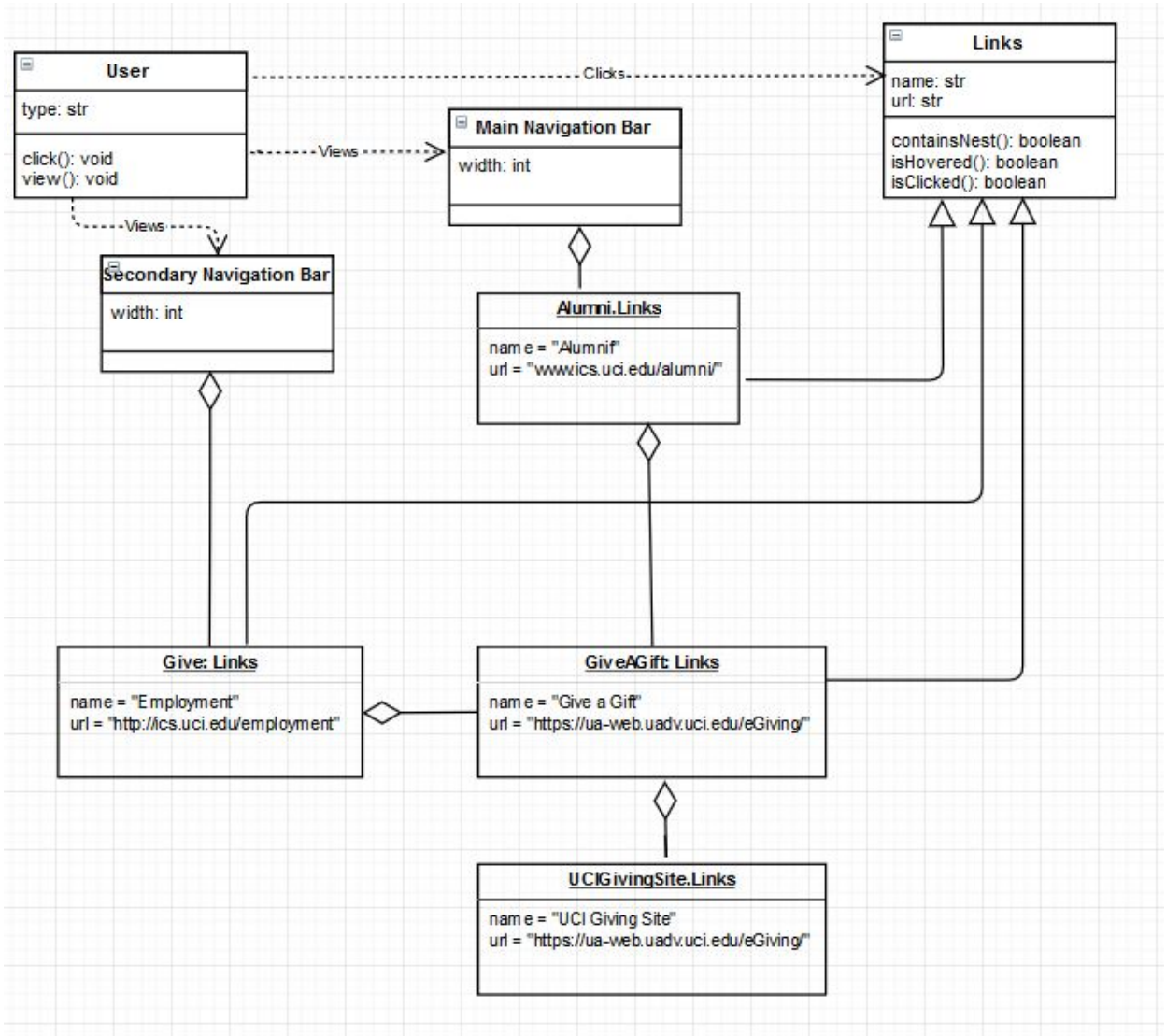
1. Alumni wants to look up ways to get involved at UCI in regards to giving back after graduation.
2. Alumni visits the ICS Website.
3. Alumni hovers over the “Alumni” tab in the main navigation bar.
4. Alumni clicks on the “Give a Gift” link in the drop down navigation menu.
5. Alumni is then redirected to the UCI Giving Site.
6. Alumni is now able to make a donation to the Donald Bren School of Information and Computer Sciences.

Alternative:

3. If Alumni does not want to link directly from, or if they do not see, the “Alumni” tab in the main navigation bar:
    3.1. Alumni clicks on “Give” in the secondary navigation bar.
    3.2. Alumni clicks on “Give a Gift” on the “Give” page.
    3.3. Return to Step 5.



Class Diagram for Alumni Sequence



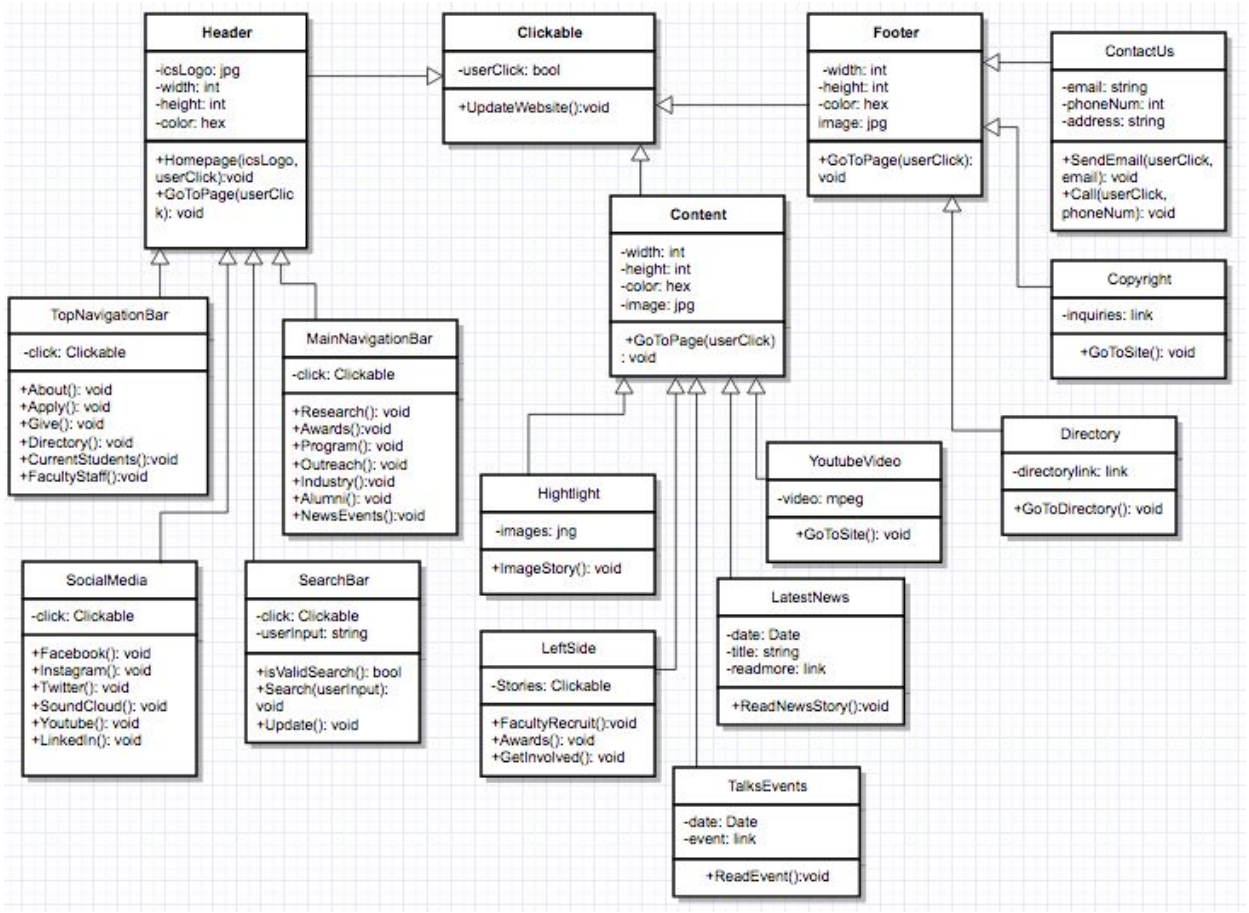
The User class has two methods that allows it to interact with other classes: click() and view(). “Links” have “name” and “url” attributes; “name” contains the text of the Link visible to the user, while the “url” attribute contains the actual link to the page the object refers to and represents. The User may click on a Link, which calls click() and then the User is redirected to the respective web page.

In the example of the sequence diagram for an Alumni finding out ways to give back to UCI, the User visits the ICS Website homepage and views the Main Navigation Bar. Within the Main Navigation Bar lies the “Alumni” section, under which the User can click on “Give a Gift”. The

User will then be redirected to the UCI Giving Site, where they can make a donation to the Donald Bren School of Information and Computer Sciences.

In the alternate course for the sequence diagram for an Alumni, the User may not immediately see the Main Navigation Bar, or they may choose not to link directly through the Main Navigation Bar. As with the normal course, the User would visit the ICS Website homepage. Instead of viewing the Main Navigation Bar, however, the User would view the Secondary Navigation Bar. Within the Secondary Navigation Bar, the User would click on “Give”. The User would be redirected to the “Give” page and then they can click on “Give a Gift”. The User would be redirected again but to the UCI Giving Site, where they can make a donation to the Donald Bren School of Information and Computer Sciences.

UML Class Diagram

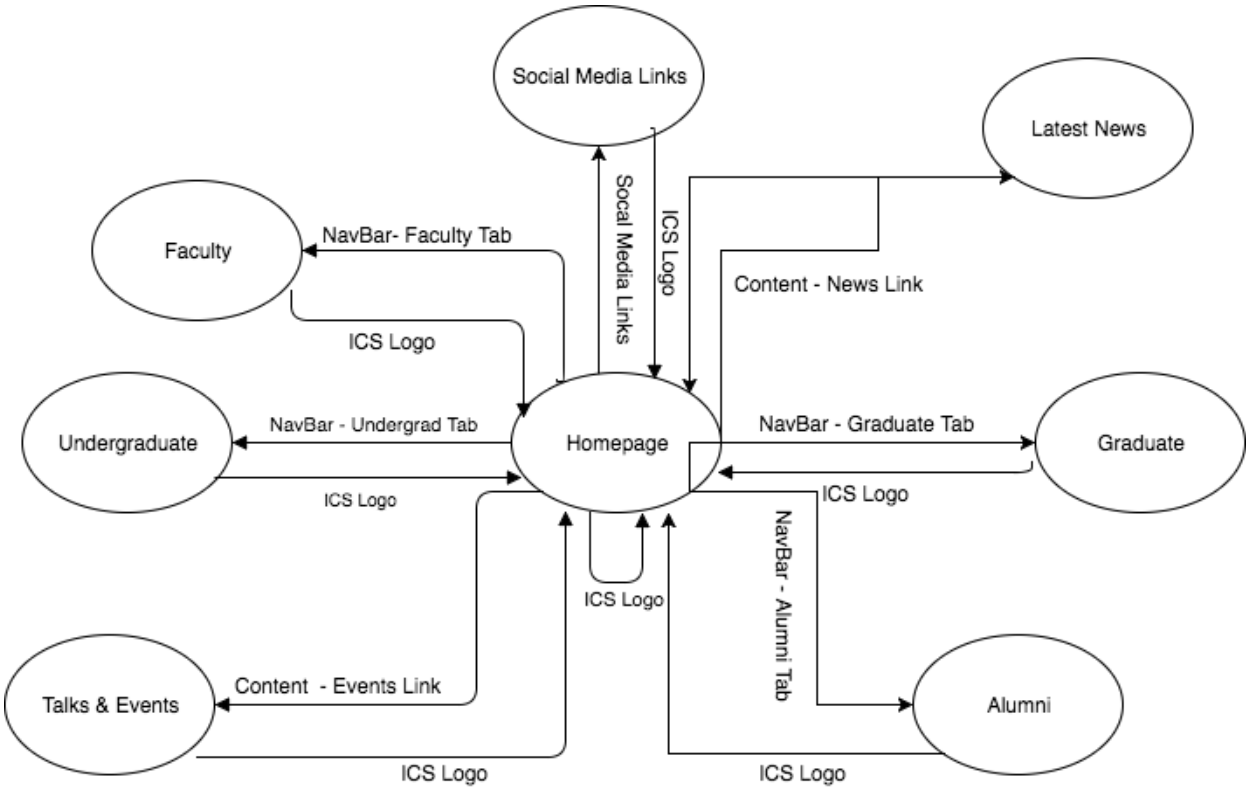


The UML Class Diagram represents the content as modules of the ICS Website, where each module is displayed as a class. Each link is a Clickable object, so userClick will return true when the user clicks on it, thus calling the method UpdateWebsite(), which loads the respective page. In regards to the layout of the website, there are three main sections: the Header, Content, and Footer. Each section contains a module(s) of content. For example, the Header contains the TopNavigationBar, the MainNavigationBar, the SearchBar, and SocialMedia. The Highlight module, LeftSide, TalksEvents, LatestNews, and YoutubeVideo all make up the Content portion of the home page.The Directory, Copyright, and ContactUs are all within the Footer. Each content module then contains methods which link to the page of which the method is named. Thus, The TopNavigationBar provides links to the “About”, “Apply”, “Give”, “Directory”, “Current Students”, “Faculty & Staff” pages. The user can click on these links and UpdateWebsite() will load the respective page.

Additional Diagrams

STATE DIAGRAM

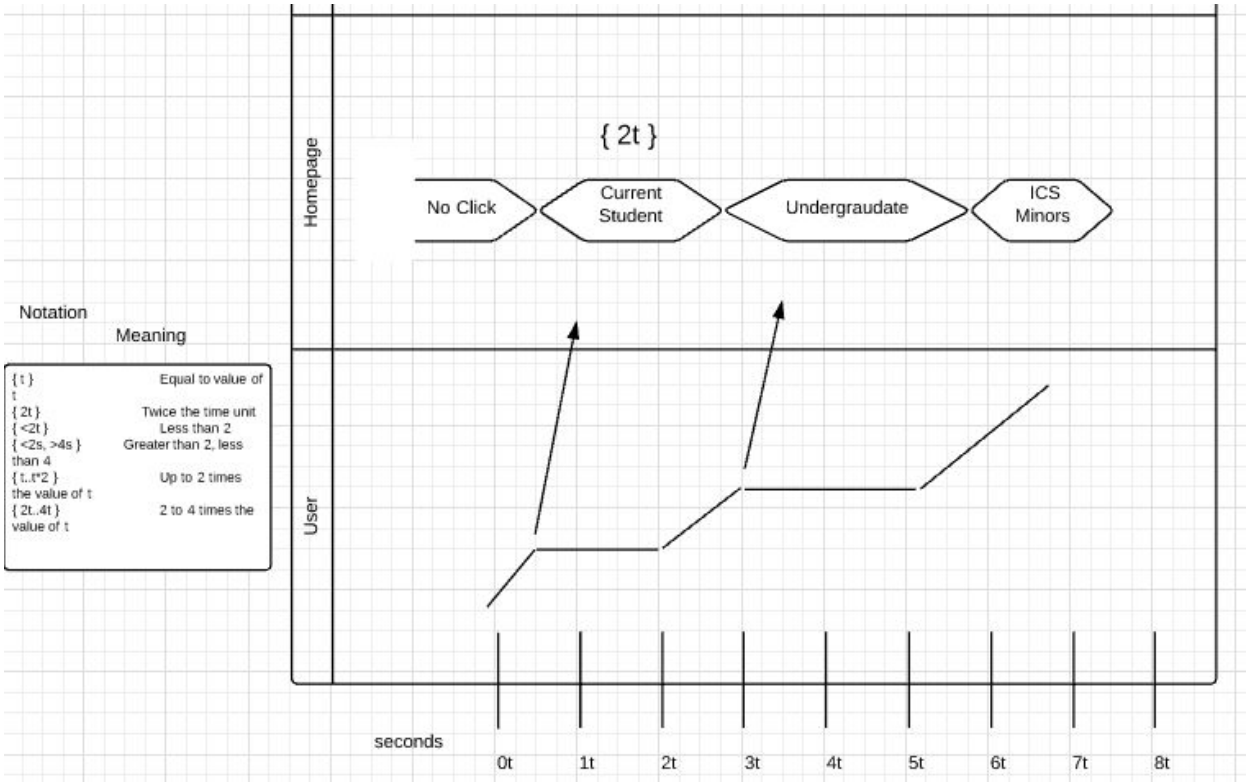
This state diagram represents the different pages a user can get to and from using the navigation menus. From the home page the user can click the ICS logo, and it will stay on the home page. From any other page that the user is on, clicking the ICS logo will always revert back to the home page. From the home page, clicking any other tab will redirect the user to a new page.



TIMING DIAGRAM

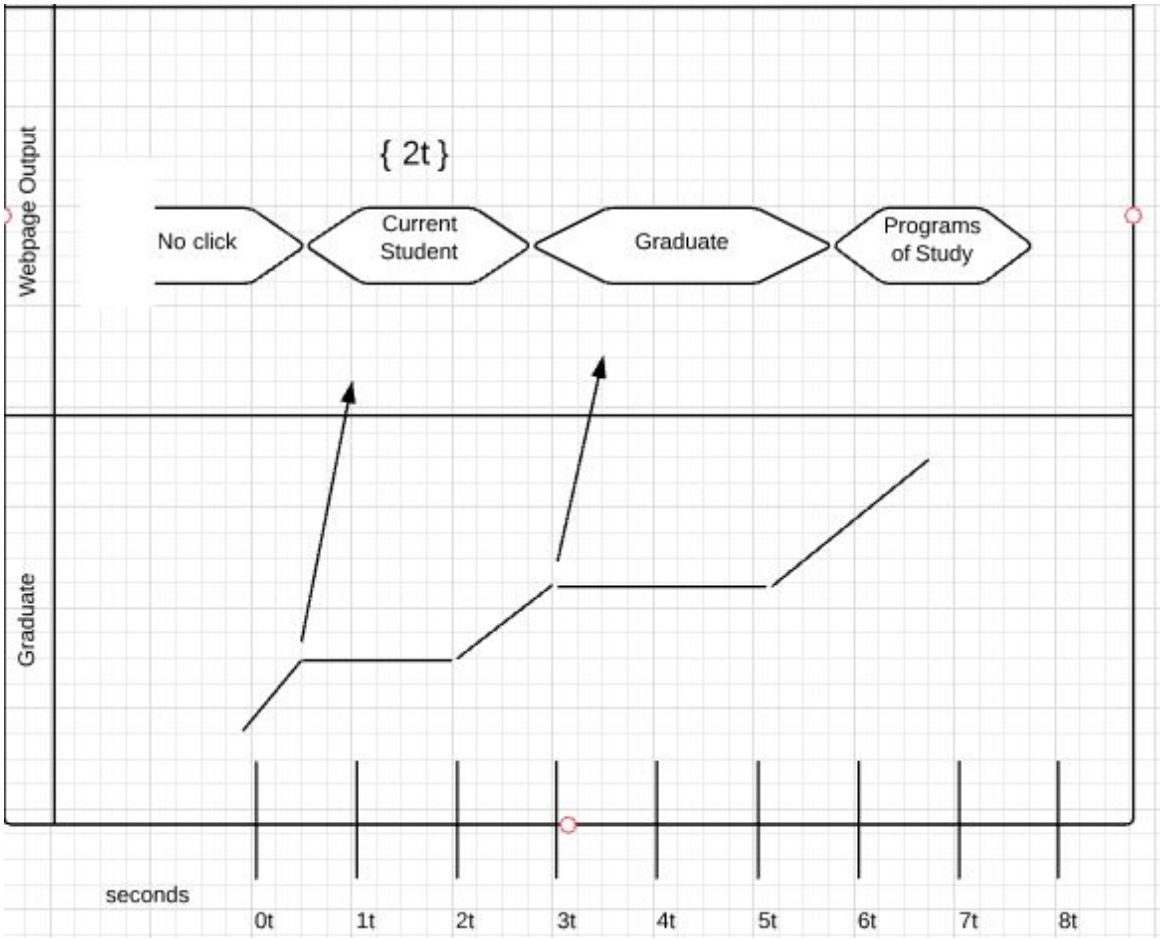
The timing diagrams below represent an undergraduate student, a graduate student, and a prospective faculty member each clicking through the necessary menus to get to the page they want to read and learn about in a timely manner. The focus for this diagram is on timing constraints. We wanted to see the behavior of each object, in this case each menu or page the user wants to see and read through, throughout a given period of time. In each diagram, there is a legend to show the symbols used in the diagram as well as the meaning of them.

Undergraduate



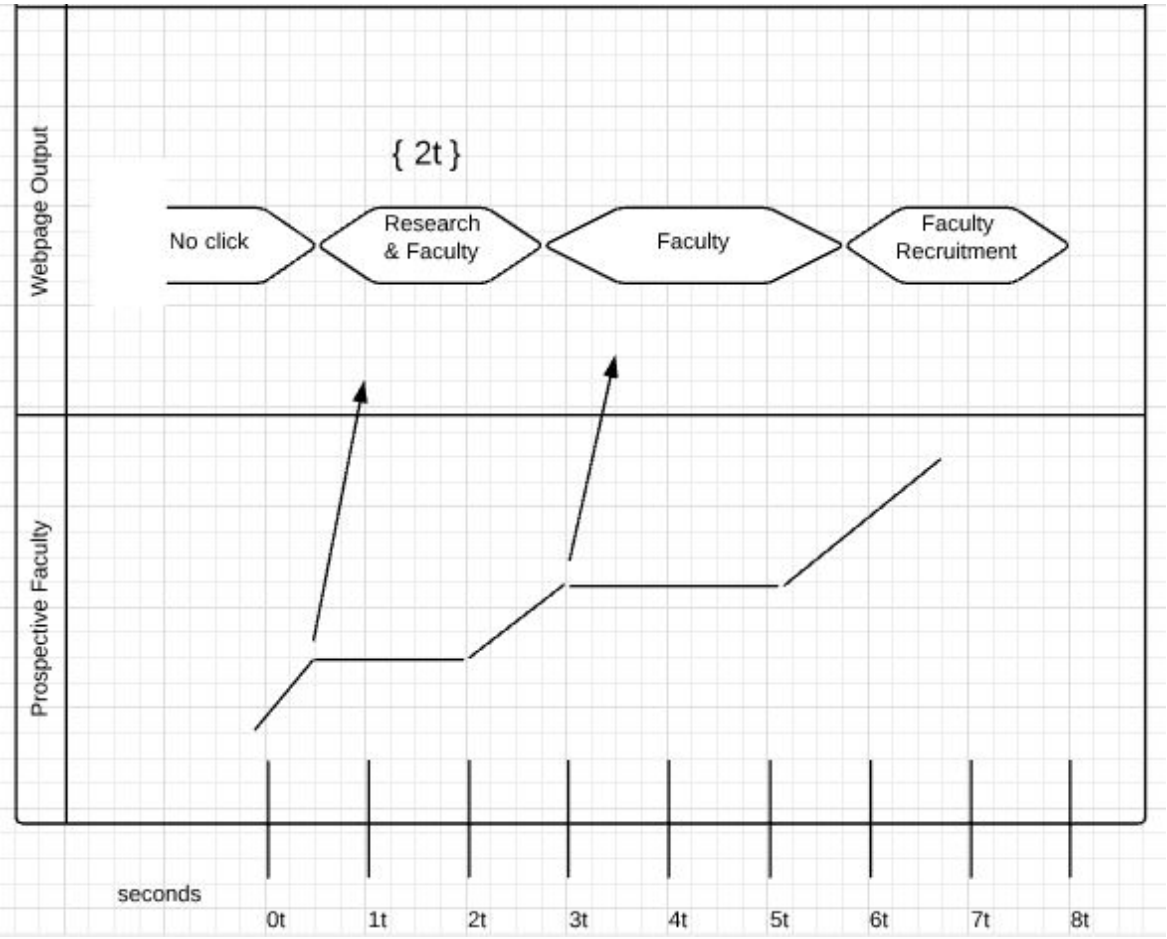
The timing diagram for the undergraduate student is shown above. Here the student will click through the “Current Student” page to find the link to “Undergraduate” page. Once they get to the “Undergraduate” page, the undergraduate student will then finally arrive on the “ICS Minors” page within 8 seconds if t represents 1 second. 8 seconds should be enough time for the undergraduate student to find the right information without losing attention on the website.

Graduate



The timing diagram for the graduate student is shown above. Here the student will click through the “Current Student” page to find the link to the “Graduate” page. Once they get to the “Graduate” page, the graduate student will then finally arrive on the “Programs of Study” page within 8 seconds if t represents 1 second. 8 seconds should be enough time for the graduate student to find the right information without losing attention on the website.

Prospective Faculty

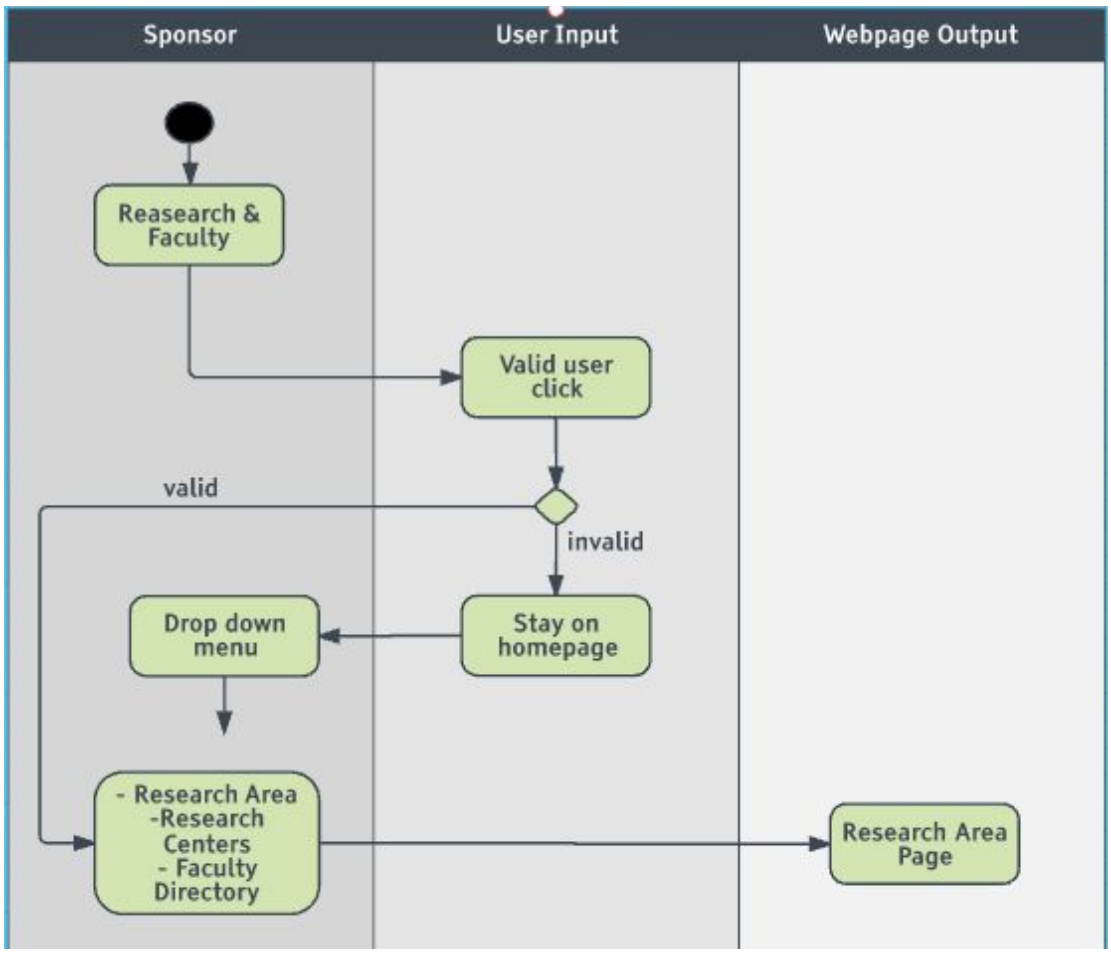


The timing diagram for prospective faculty member is shown above. Here the prospective faculty member will click through the “Research & Faculty” page to find the link to the “Faculty” page. Once they get to the “Faculty” page, the prospective faculty member will then finally arrive on the “Faculty Recruitment” page within 8 seconds if t represents 1 second. 8 seconds should be enough time for the prospective faculty to find the right information without losing attention on the website.

ACTIVITY DIAGRAM

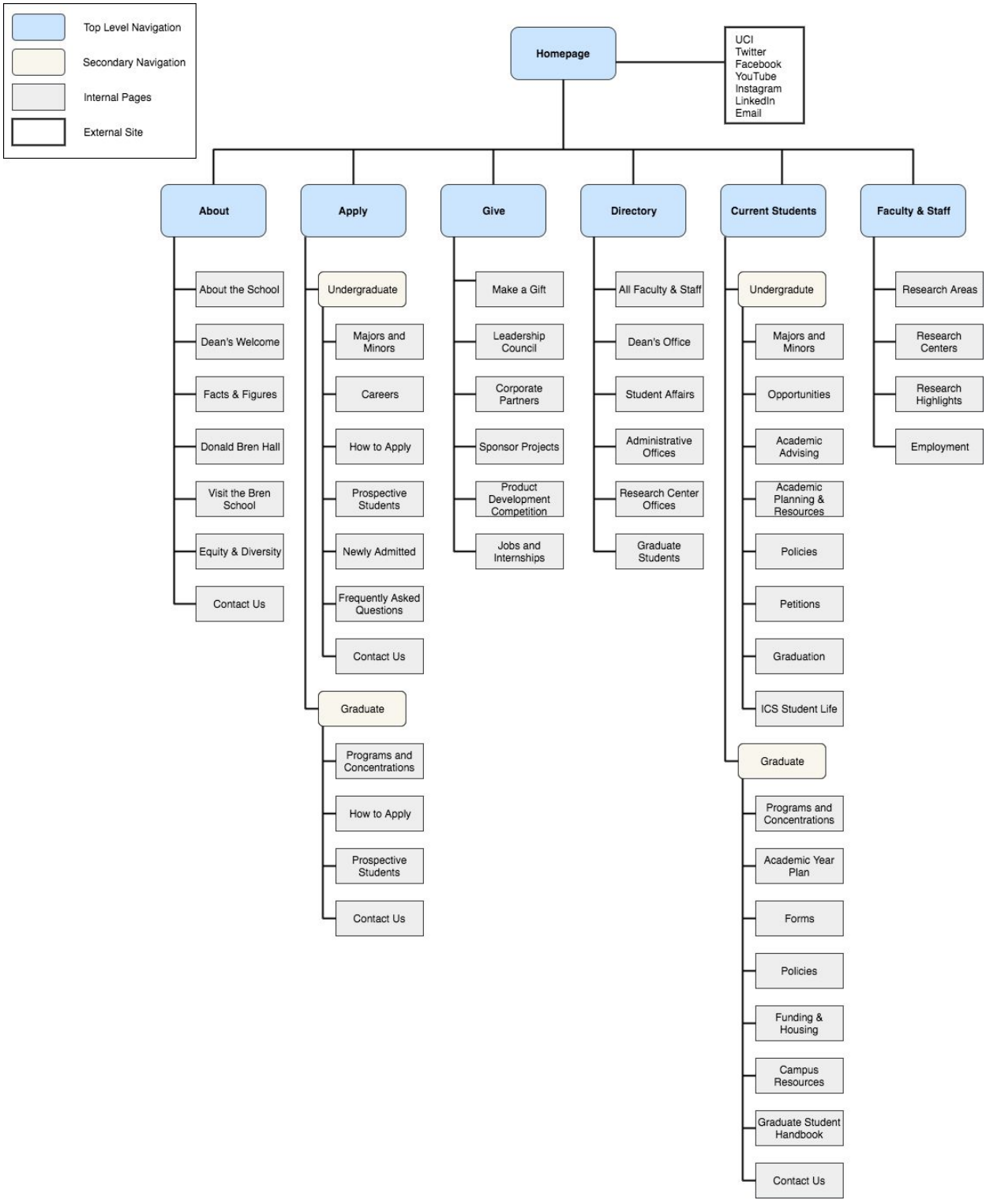
The activity diagram represents step by step activities and actions with the support of choices and iterations. The diagram below represents the interaction flow of the website for a potential project sponsor, thus showing what a sponsor would click through to get to information on different research projects that they can choose from. If they click on something invalid or nothing at all, the website will stay on the homepage. If the user inputs a valid user click and they see the drop down menu, it will then ask which tab or page they want to go to. In this case, the options include either research areas, research centers, etc. The output will be the page they want to see. In the end, this diagram is showing the overall flow of control.

Sponsor



HIERARCHY DIAGRAM

The hierarchy diagram visualizes the website navigation flow. As indicated by the key, the light blue rounded rectangles represent top level navigation, the peach rounded rectangles represent secondary or nested navigation, the light grey rectangles represent pages within the ICS website, and the white rectangles represent external websites. The first level contains the ICS Website homepage, which links to the external social media sites and contains the top navigation bar. The top navigation bar includes the rest of the top level navigation, which are “About”, “Apply”, “Give”, “Directory”, “Current Students”, and “Faculty & Staff”. When hovering over these sections, the user can then see and click on the next level of internal pages. For example, when visiting the ICS Website homepage, the user may hover over “Faculty & Staff” in the top navigation bar, and click on “Research Areas” if they are interested in looking up different research opportunities or ideas. The website will then redirect the user to the “Research Areas” page within the ICS Website. However, secondary navigation does not have to be hovered over to view the respective internal pages. If a user is a current undergraduate student looking up graduation information, they may visit the ICS Website homepage, hover over “Current Students”, and click on “Graduation”. The “Current Students” section of the navigation bar will display a drop down navigation menu that will actively include both of the “Undergraduate” and “Graduate” sections along with their respective links.


Top Level Navigation
Secondary Navigation
Internal Pages
External Site
Homepage
UCI
Twitter
Facebook
YouTube
Instagram
LinkedIn
Email
About
About the School
Dean's Welcome
Facts & Figures
Donald Bren Hall
Visit the Bren School
Equity & Diversity
Contact Us
Apply
Undergraduate
Majors and Minors
Careers
How to Apply
Prospective Students
Newly Admitted
Frequently Asked Questions
Contact Us
Graduate
Programs and Concentrations
How to Apply
Prospective Students
Contact Us
Give
Make a Gift
Leadership Council
Corporate Partners
Sponsor Projects
Product Development Competition
Jobs and Internships
Directory
All Faculty & Staff
Dean's Office
Student Affairs
Administrative Offices
Research Center Offices
Graduate Students
Current Students
Undergradute
Majors and Minors
Opportunities
Academic Advising
Academic Planning & Resources
Policies
Petitions
Graduation
ICS Student Life
Graduate
Programs and Concentrations
Academic Year Plan
Forms
Policies
Funding & Housing
Campus Resources
Graduate Student Handbook
Contact Us
Faculty & Staff
Research Areas
Research Centers
Research Highlights
Employment