

Software Engineering CSC 648/848 Spring 2021

Gator Connection

A One Stop Website for SF state Gators

Team 05

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Milestone 1

Use Cases and High-Level Requirements

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Executive Summary

“SFSU website sucks”. There is hardly any class in San Francisco State University where we have not heard these words. Whether it is coming from a STEM major or an Art major, junior, senior or even a professor, they all have something to complain about on the website. Having to visit ten other websites just to find about an event on the campus, getting lost at the front page, not finding the things you are looking for on a section or finding too many things in one, the list goes on. We think that it is time for a change. Therefore, we dared to create a website that addresses all the issues above and beyond. A single website you could visit that would have all the information about announcements and club events and more, including nearby SFSU restaurant information, items for sale, and nearby housing listings all in one place to look at. **Gator Connection**, a social announcement website exclusively for SFSU students.

Gator Connection was created with SFSU students in mind. The difference between **Gator Connection** and other social sites is that you must have a valid SFSU email address to register. By doing this, you can ensure that all the information posted will be from SFSU students and administrators. That is not to say non SFSU students cannot use **Gator Connection**, far from it. Individuals outside of SFSU can browse through posts made by other SFSU students by just going to the website. With that, they are able to see any upcoming events their friends may be in. The smaller base of members will ensure that all the posts you see online will be from SFSU students, guaranteeing you accurate information. The main thing that **Gator Connection** offers that other SFSU sites do not have is convenience and one stop info. For example, when looking through Facebook for SFSU clubs, students will find that info is scattered everywhere, therefore dissuading them from the task of searching for one that would interest them. On **Gator Connection**, since it is a one stop for all SFSU info, students will easily be able to look through all the many clubs and find one that may interest them. What’s more, they will also be able to see any important info related to that club, such as meeting times, what the club is about, etc. By eliminating unnecessary clutter that other social sites have, **Gator Connection** will be more user friendly for students to use.

On **Gator Connection**, we also connect students on things they may want to sell, whether it be school supplies or possible house listings. What separates **Gator Connection** from other marketing sites is that you can ensure all listings posts are from SFSU students, ensuring a reliable transaction with another student. Furthermore, students can arrange meetups when both parties would be on campus, eliminating hassles such as shipping or travel. This exclusivity for SFSU students also guarantees safety in purchasing a possible new room for sale.

Furthermore, on **Gator Connection**, we know students at SFSU like to go out for food and drinks on campus. With that in mind we want to provide personal SFSU reviews to restaurants students may want to try out. By going to our restaurants section, students can find this information in a place where their fellow students have experienced.

Our team, Team05, is a group of student software engineers dedicated in creating a high-quality website for students and at the same time address the issue at hand. Being the students of the San Francisco State University ourselves, we realized the main problem that students face

when dealing with decentralized and dispersed information from SFSU. With that, we will do our best to make **Gator Connection** the perfect website for all students at SFSU.

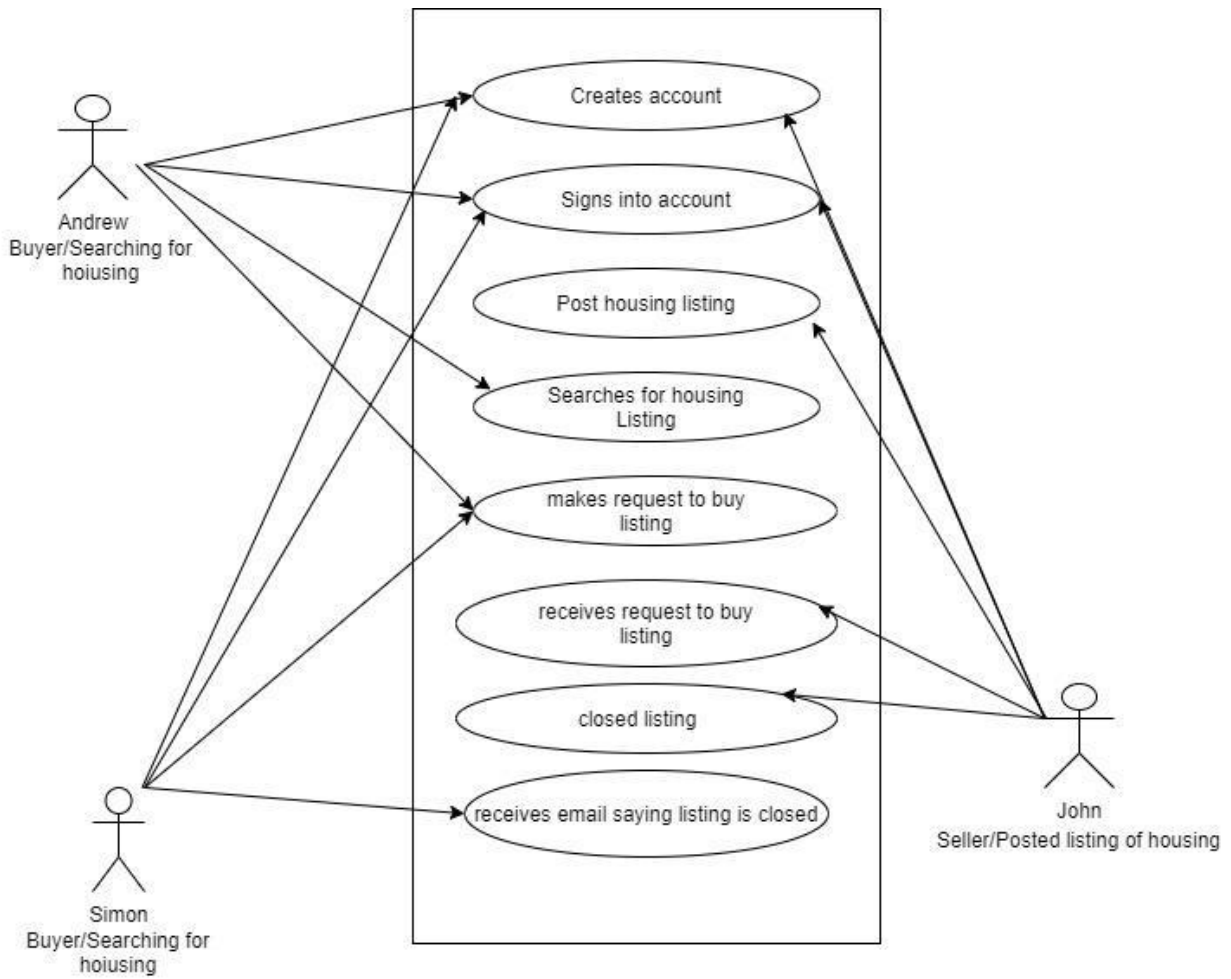
Main Use Cases

Case 1: Freshman Student looking for housing at SFSU

Actors: Andrew (Buyer, Searching for housing), Simon (Buyer, Searching for housing), John(Seller, Posted listing of housing)

Andrew is a recently admitted student who found out he got accepted for Fall 2021 at SFSU. Finding out that campus is going back to in person instruction, he is considering moving to SF for the college experience. If he can avoid it, he does not want to live in the dorms, as he believes it is over-priced. However, he wants to live with students from SFSU to have that experience of rooming with students and make friends much more easily in his first year. Andrew knows he can check online on Facebook for house listings, but he has also heard that these listings were not reliable and did not guarantee he will live with other SFSU students. He wanted to find a more reliable way to filter out housing listings to know that any choice he makes will mean he'll be living with SFSU students. Andrew goes to **Gator Connection** to the housing section because he heard that only SFSU students can post housing listings, so it'll guarantee that he can live with other SFSU students. However, he gets blocked with the website informing him that he must be a registered user to have access to see housing listings. Andrew creates an account with his new SFSU email and logs in. He then had access to view the available housing listings. Andrew notices that many of the listings already have requests from other students wanting to buy. Andrew continues to look, and he finds an ideal housing situation, and he decides to make a request to buy. John is the SFSU student who posted the housing listing on **Gator Connection** that Andrew chose. After Andrew makes the buy request, John receives an email notification from **Gator Connection** that a registered user has made a request. The email informed John of Andrew's name and SFSU email so that they could get into contact with one another. Andrew and John start communicating through email, and after a while, they both believe that they will be a good fit as roommates. So, John goes online to **Gator Connection** and goes to his profile posts section. He finds his housing listing post and he closes the posting. When he goes back to the housing section, he sees that his house listing post had correctly shown that it was now closed. Simon, another SFSU student who made a request for John's housing listing, received an email from **Gator Connection** that the housing listing was now closed.

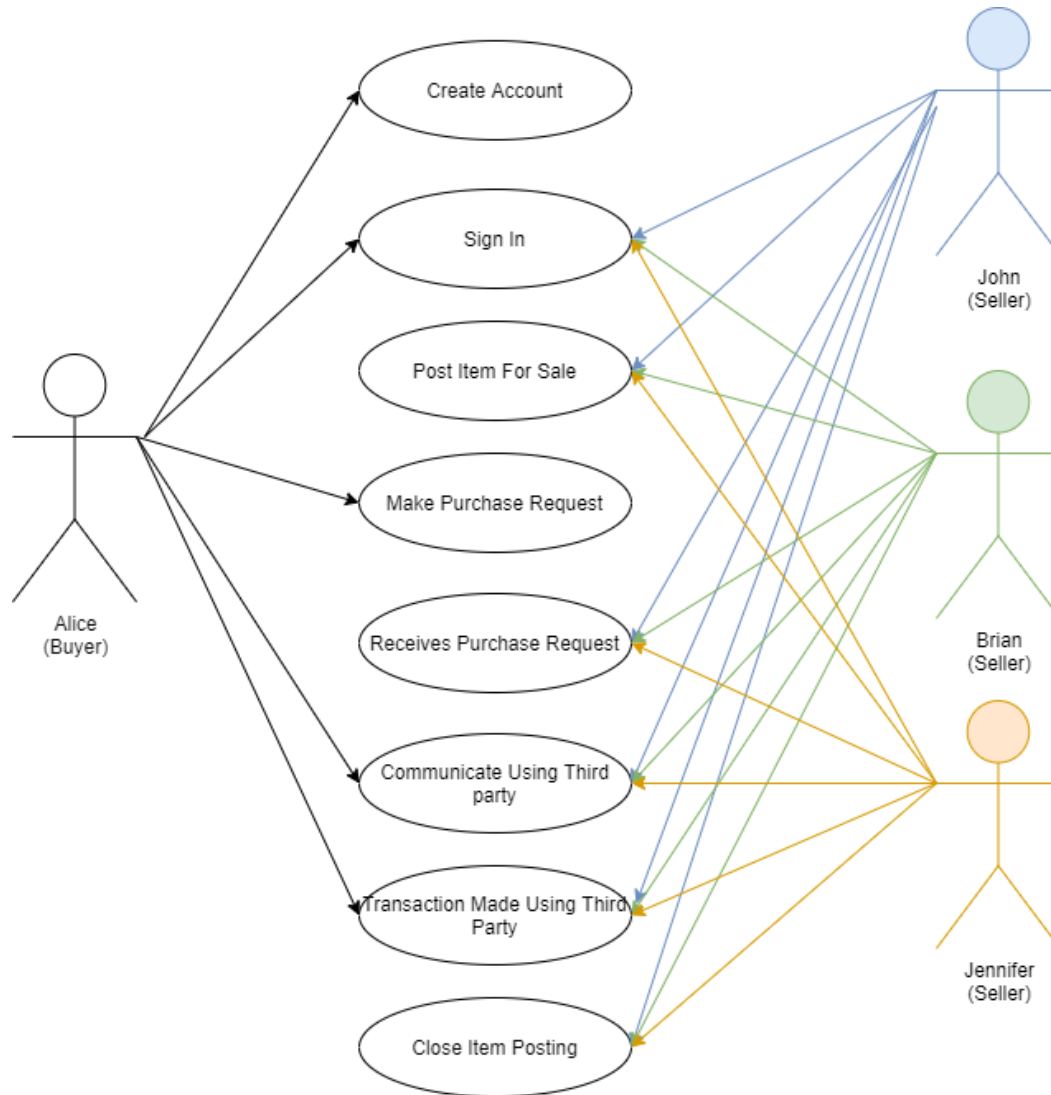
Case 1 Use Case Diagram



Case 2: Student at SFSU looking for cheaper textbooks**Actors: Alice (Buyer), John (Seller), Brian (Seller), Jennifer (Seller)**

Alice is a student at SFSU. She is taking many classes this semester and all her classes require textbooks. Alice did not want to buy brand new textbooks because they would be too expensive for her, so she chose to look on Gator Connection for used, cheaper textbooks. She found one of the textbooks she needed and tried to make a purchase request. However, the website displayed a pop-up error notifying her that she was not logged in and asked her to either log in to an existing account or create a new one. Because Alice did not have an account, she decided to create a new one. She had to enter her SFSU email, name, and password to create an account. After she created an account, she was able to make the purchase request. So, Alice continued to send purchase requests for all the textbooks she needed. Later, Alice checked her SFSU email, and received an email from Gator Connection of the request that was made on her account. John, Brian and Jennifer, all students at SFSU were the ones that posted the used textbooks for sale. After Alice placed her order, John, Brian, and Jennifer received an email from Gator Connection that a user wanted to buy their textbooks. The email informed them of Alice's name and email address and the textbooks that she requested to buy. They all got into contact with Alice through email and talked about their preferred payment methods. Finally, Alice paid each of them using the third-party services they all chose. Then, John, Brian, and Jennifer all packed up the now sold textbooks and mailed them to Alice, and they all closed their item postings.

Case 2 Use Case Diagram



Case 3: Student at SFSU looking for food on campus, with his two friends outside SFSU accompanying him

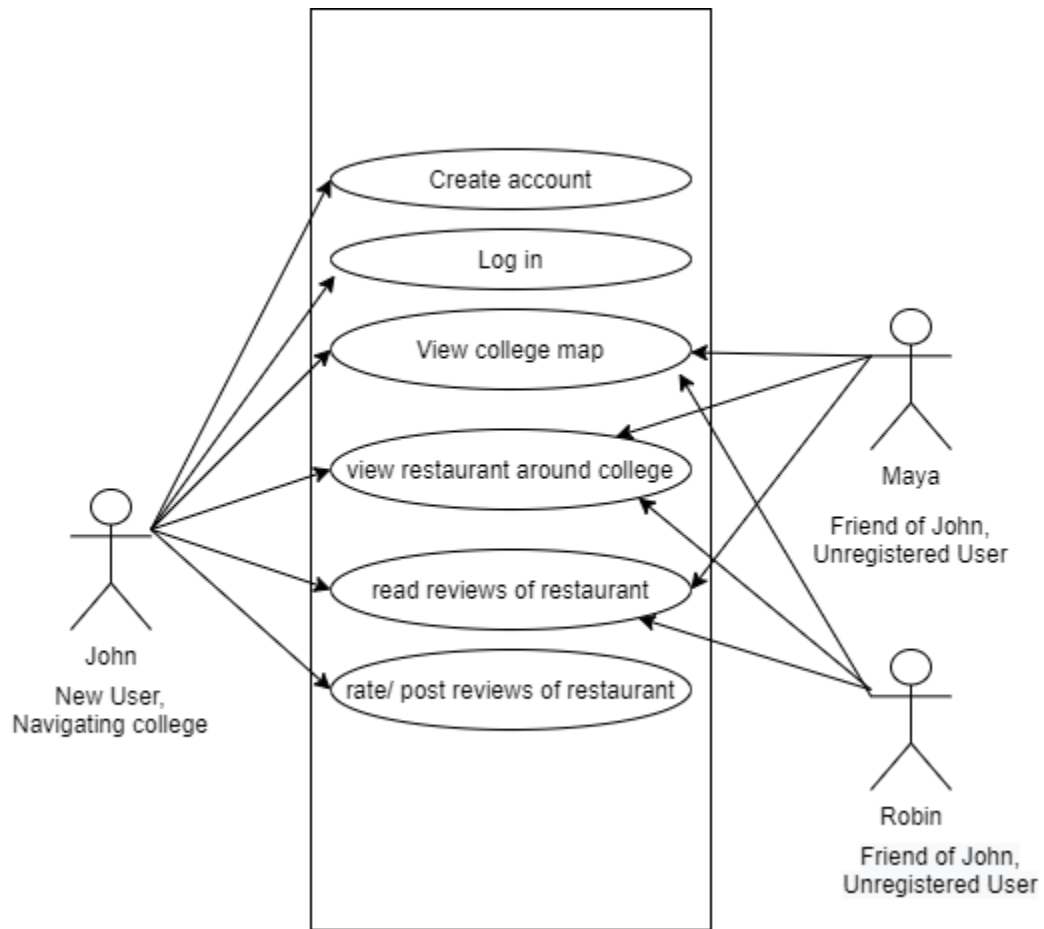
Actors: John (New User), Maya (Unregistered User), Robin (Unregistered User)

John is an incoming freshman, and he visits SFSU. He wants to walk around the entire University to become familiar with the buildings, but he does not know any directions. John goes online to Gator Connection and navigates to the virtual map of the college. He is able to see all buildings located in the college and is able to walk around the campus. During this time, he gets really hungry, but he doesn't want to leave yet since he hasn't explored the entire campus yet. So, he decides he wants to buy lunch at the university. However, he has no idea what kind of food is available or how good it is. He visits Gator Connection and navigates to the restaurant review section. He sorts the restaurants by highest-rated (rated by the students of SFSU) and he decides to go to the highest-rated restaurant on the list. He looks at the map on Gator Connection and he walks over to the restaurant. He bought and ate a sandwich in the restaurant. However, he did not like the sandwich, so he wanted to post a bad review about the restaurant on Gator Connection. When he tried to write a review about the restaurant on Gator Connection, Gator Connection threw an error informing John that he could not post a review without being a registered user. So, John creates an account using his new SFSU email account. Then he tries once again to write a review. Gator Connection allows him to and John posts the negative review on the website for everyone else to see.

Furthermore, two friends of John who go to different schools, Maya and Robin, want to surprise John for his first semester at SFSU. After hearing from him that he got a bad sandwich on campus, they decide to treat him to a restaurant on the SFSU campus and find him something he may like. Maya and Robin visit Gator Connection and navigate to the restaurants review section. After sorting it by the highest-rated, they take care to avoid the restaurant that John picked. They then pick the second highest rated restaurant and read the reviews there. Deciding that John may like something there, they decide that is where they want to treat John to. Maya and Robin then navigate to the virtual map of SFSU from Gator Connection to see where the restaurant is. After finding out the location, they then go to John's dorm. After telling John their plans, Maya and Robin take John to the restaurant that they had decided on and eat there.

After their meal, John decides that he enjoyed the meal at this restaurant a lot. He then decides to write a review for this restaurant. He logs into his Gator Connection account rates them highly, while also giving them a positive review.

Case 3 Use Case Diagram

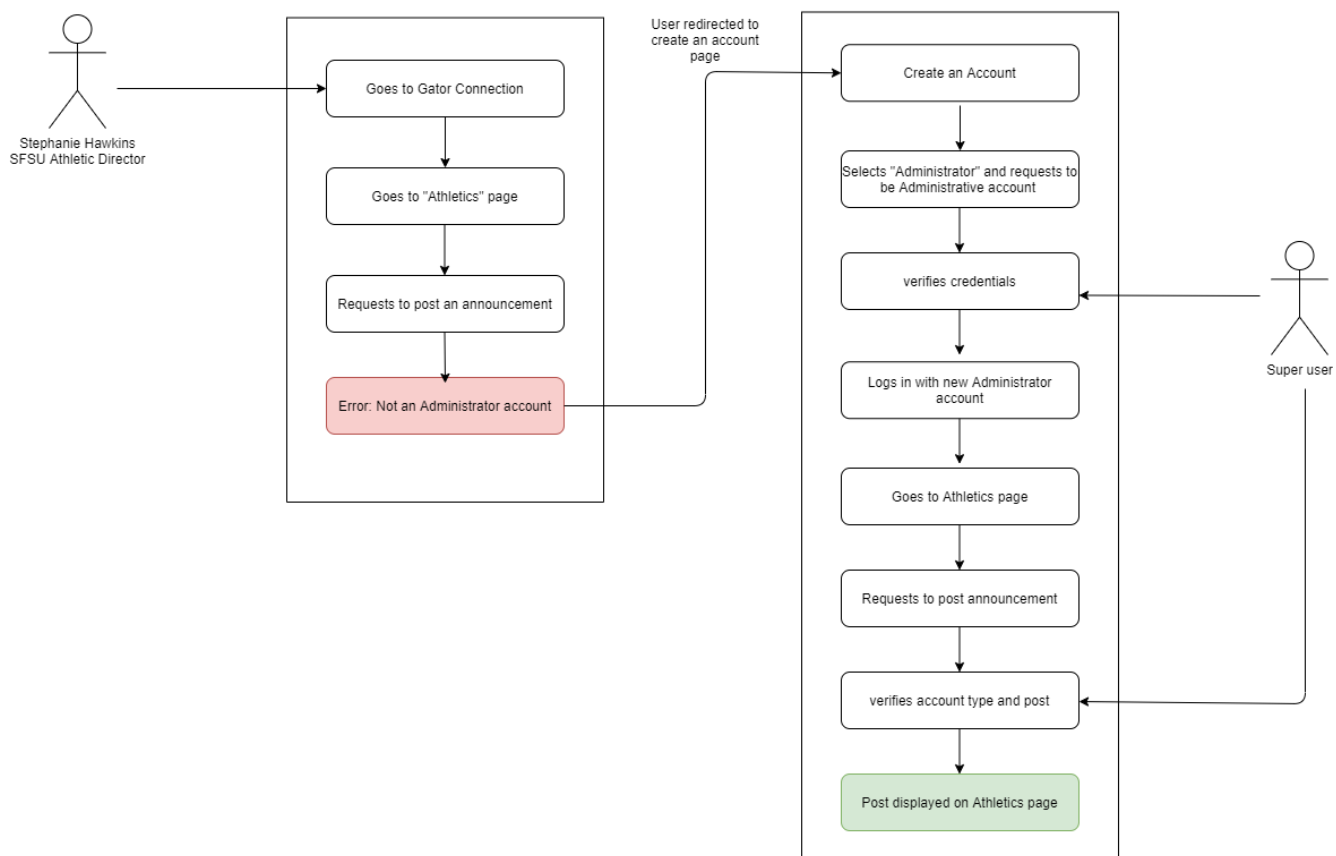


Case 4: Athletic Director at SFSU wants to announce upcoming events

Actors: Stephanie (User, Athletic Director)

Stephanie Hawkins is SFSU's athletic director and wants to announce to the students about an upcoming home basketball game. She heard about Gator Connection and realized that many students use Gator Connection as a hub for news and announcements about SFSU. She goes online to Gator Connection to the "Athletics" section and tries to post an announcement about the basketball game. However, Gator Connection throws an error informing Stephanie that only administrative users can post announcements on Gator Connection. So, Stephanie created an administrative account using her SFSU email and her position. After Stephanie created an administrative account, she then tried to post an announcement on the "Athletics" section once again and was given access. Once Stephanie finished writing her announcement about the event, she submitted the post. After Stephanie refreshed the "Athletics" section page, her announcement about the basketball game showed up for everyone to see.

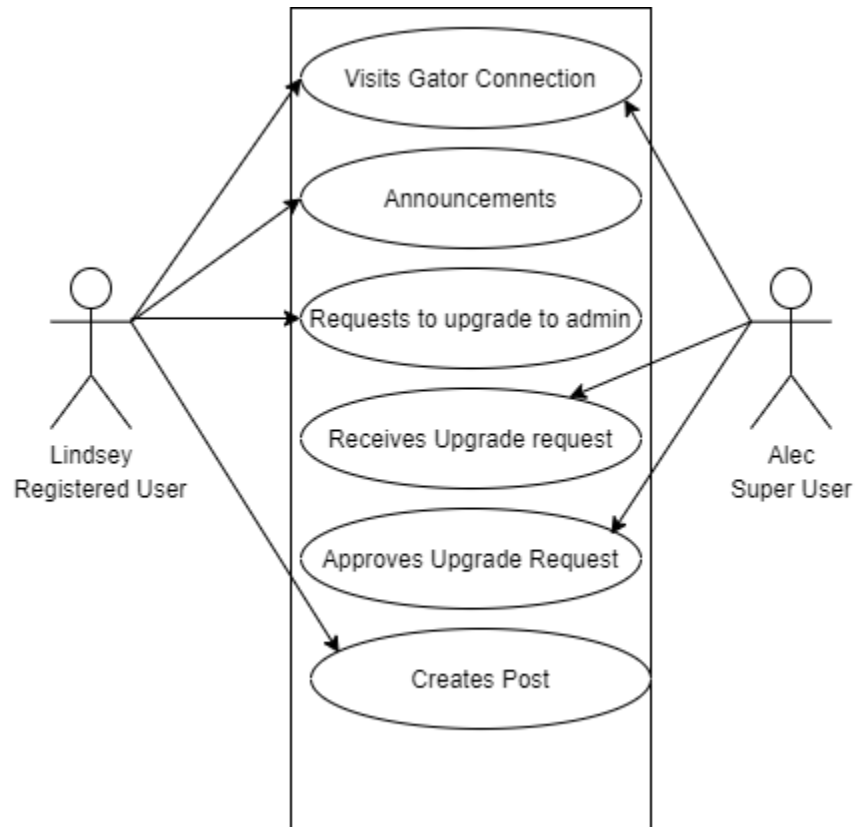
Case 4 Use Case Diagram



Case 5: President of SF Hacks wants to post about her upcoming events**Actors: Lindsey (Registered User), Alec (Super User)**

Lindsey is the new president of SF Hacks and wants to post about her organization's social media, announcements, and future events coming up. She always sees other organizations posting announcements on Gator Connection, so she decides she wants to do the same. She logs into her Gator Connection account, and she tries to post an announcement. However, Gator Connection gives her a pending post, making her realize she does not have full access to the announcements feature as only administrative users can post without having it be pending. She decides to upgrade her account to become an administrative user. She inputs the organization she is a part of the role she has, how long she would be president, and her organization's email. However, she must wait to get official confirmation from Gator Connection that her account upgrade request was successful. Alec, a super user at Gator Connection, received an email that an account upgrade request had been made by Lindsey. Alec verified that Lindsey's provided information was correct and approved Lindsey's upgrade request. Lindsey gets an email from Gator Connection that her request was successful, and her account has been upgraded to have administrator privileges until her role as president is over. So, Lindsey created a post announcing an upcoming SF Hackathon with the event details and submitted her post. Lindsey went to the "Organizations" section of Gator Connection and saw her announcement right away for everyone else to see.

Case 5 Use Case Diagram:

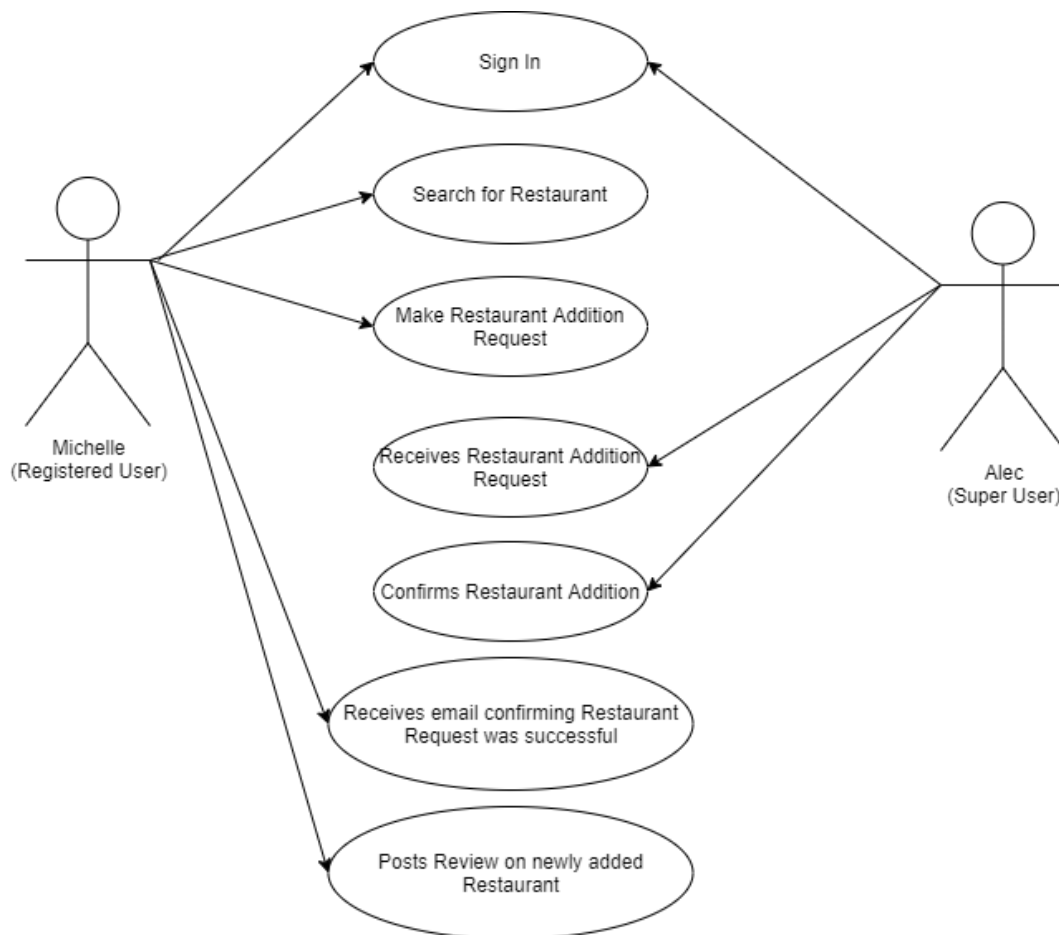


Case 6: Student at SFSU wants to write a review about a restaurant she liked

Actors: Michelle (Registered User), Alec (Super User)

A new restaurant opened at Stonestown, and Michelle, a SFSU student and registered user, tried it out. Michelle absolutely loved the food and wanted to write a raving review about it on Gator Connection. However, when she went online and searched for the restaurant on Gator Connection, she could not find it. So, she made a request to Gator Connection to add the new restaurant to the restaurant section so that more people can find it and so she can post a review. She inputted the name of the restaurant and the location. Alec, a super user, received an email from Gator Connection that a restaurant addition request was made. He verified the information that Michelle provided and approved the addition of the restaurant. Michelle received an email informing her that her request had been approved. Michelle immediately went online and posted her raving review of the restaurant along with a picture she had taken of the food.

Case 6 Use Case Diagram:



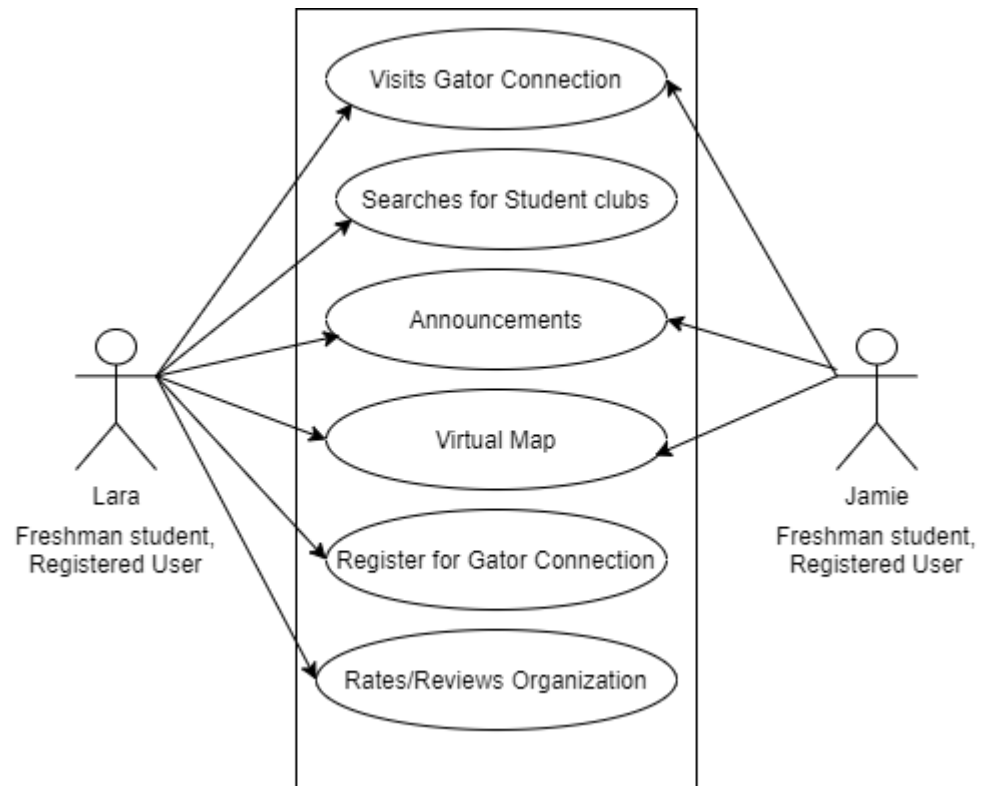
Case 7: Two Freshman at SFSU want to join a club but want more information

Actors: Lara (Registered User), Jamie (Registered User)

Lara is a freshmen student at SFSU who is not sure about what clubs to join to network with people around her. While coming to campus, she heard people in her class mention about a new application called Gator Connection that helps students connect with one another. She decides to go to Gator connection to check if there might be any club announcements that may interest her. She finds one and decides to attend their upcoming event. Lara's high school friend Jamie got into SFSU as well. Lara introduces the new event happening to Jamie so they could both make new friends together. Lara gave Jamie all the details verbally to Jamie, such as that the event would start at 11 am. Jamie eventually forgot due to school commitments, but she remembered about Gator Connection, where Lara said she got the information from. Jamie navigated to the application, specifically to the announcements section and found when the event would start. Jamie then noted down the details of the event so she would not forget again. Jamie and Lara then set out to the event.

However, the two realize they don't know where the location of the event is. With that, they realize that they saw a virtual map function on Gator Connection the last time that they were there. After visiting the virtual map section of Gator Connection, they then set out to where the event is. They both successfully attended their first event on campus. After attending the event, Lara randomly decided to checkout gator connection for other future events lined up. Surprisingly, when she went to the application again, event images and information about the next event was already underway. Lara then tries to make a post on the event announcement page, saying how they both had such a great time at the event. However, Gator Connection stops this, as only members of Gator Connection can post on the announcements section. Realizing she still has not signed up for Gator Connection, she then created an account. After this, Gator Connection then allows her to post her review of the event. This made her think about how efficient the club members would be. So, Lara went over to the "Organizations" section of Gator Connection, found the club and rated them the highest for others to know!

Case 7 Use Case Diagram:

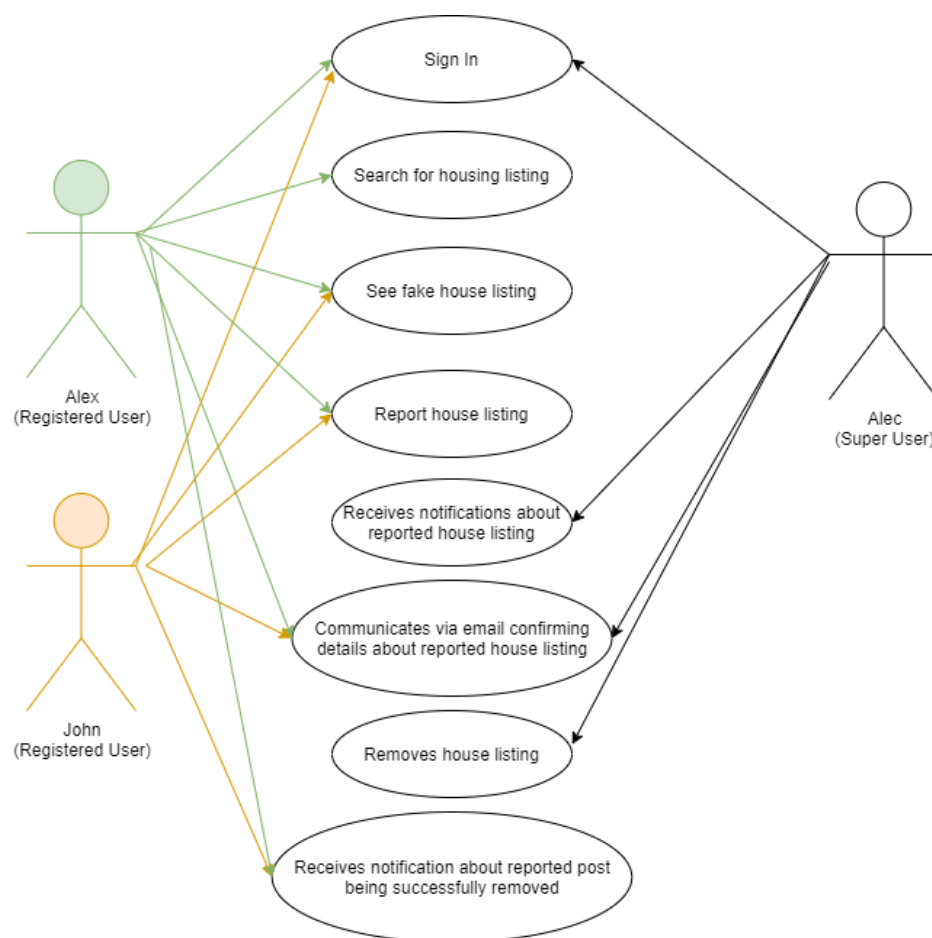


Case 8: A registered user reports a false housing listing

Actors: John (Registered User), Alex (Registered User), Alec (Super User)

John lives in an apartment near San Francisco State University. His friend, Alex, who also goes to SFSU is looking for a place to live for the new semester. Alex is a registered user, and he goes online to Gator Connection to look for housing listings. However, while Alex was scrolling through the listings, he noticed that John's apartment was listed as available. Alex texted John asking John if John was looking for a roommate. John said no, so Alex warned John about this fake house listing. Both Alex and John report the housing listing on Gator Connection indicating that the listing is fake with the reason that the owner of the apartment did not post the listing. Alec, a super user, received two report notifications about the housing listing that Alex and John reported. Alec emailed Alex and John about the report, and John informed Alec that John was the owner of the apartment and was not the one who posted the housing listing. So, Alec removed the housing listing from Gator Connection. Alex and John both received an email that a housing listing post that they had reported had successfully been dealt with and removed.

Case 8 Use Case Diagram:



Main Data Items & Entities

1. Unregistered User/ Guest

These are the people who aren't registered with the school system yet. They will be treated as guests and would not be eligible for any of our student/staff services. This is an administrative task.

2. Registered User

A person who is registered with us using their email would have an account with us. He/She will follow the Create Account path. His/Her data is already registered with us, he/she will have the authority to create their password here. He/she shall have the ability to search housing listings, post restaurant reviews, and make purchase requests for posted items and housing listings.

3. Admin User

A person who is an administrative user has the power to approve and deny pending posts, whether they be from announcements or items for sale.

4. Super User

A person who is a super user has the power to approve restaurant additions, administrative account creation requests, and registered user account upgrade requests.

5. Notifications

Receiving notifications about housing, messages, announcements, submissions, etc.

6. Rate

This gives users the ability to rate various student organizations, restaurants, professors or even departments we have on campus. It'll prove to be a useful tool for fellow users.

7. Review

A written message often goes along with a rating. Users have an option to give these to a restaurant to describe any concerns they have with it.

8. Email

Being able to send emails to all of the users that are registered. This would be students and administration.

9. Announcements

Section designated to announcements that different departments make, along with the health centers, athletics, and organizations/clubs. These announcements are directly related to SFSU campus and only administrative users can post announcements.

10. Restaurants

Section dedicated to restaurants around campus. Users can view, rate, and write reviews for that specific restaurant. Unregistered users can view these, but they cannot rate or review.

11. Restaurant Reviews

Posts shown under restaurants made by registered users and above. Unregistered users can view these, but they cannot rate or review.

12. Ecommerce/Listing

The main section where users can view the selected items for sale or housing available and make purchase requests for them. Registered users can post things for sale. Unregistered guests cannot view these items.

13. Items

The item(s) listed for sale in the Ecommerce/Listing by a registered seller or for purchase by a registered buyer. Users can message the seller if they are interested in the item.

List of Functional Requirements

- **Guest User**

1. A guest user shall be able to search for restaurants/food.
2. A guest user shall be able to sort restaurant listings by rating.
3. A guest user shall be able to search/navigate through announcements.
4. A guest user shall be able to create an account using his/her SFSU email account.
5. A guest user shall be able to navigate to a map of SFSU.
6. A guest user shall be able to search for items on sale by category, price, etc.

- **Registered User**

7. A registered user shall have all of the same permissions as guest users.
8. A registered user shall be able to log in to his/her account using his/her SFSU email using many different devices.
9. A registered user shall be able to log out of the website.
10. A registered user shall be able to stay logged in if they have not logged out.
11. A registered user shall be able to post reviews of restaurants/food with a picture.
12. A registered user shall be able to rate organizations.
13. A registered user shall be able to change their rating of the organization.
14. A registered user shall be able to post reviews under event announcements.
15. A registered user shall be able change any reviews they have under event announcements.
16. A registered user shall be able to make purchase requests for items.
17. A registered user shall be able to search for items by category, price, etc.
18. A registered user shall be able to sort and search for restaurants by ratings/reviews.
19. A registered user shall be able to see and search housing listings.
20. A registered user shall be able to make a request for a housing listing.
21. A registered user shall be able to rate a housing listing.
22. A registered user shall be able to post many pending housing listings with pictures.
23. A registered user shall receive a notification if their housing post has been approved.
24. A registered user shall receive a notification if their housing post has been denied.
25. A registered user shall be able to edit a housing listing he/she posted.
26. A registered user shall be able to close a housing listing that he/she posted.
27. A registered user shall be able to post many pending items for sale with pictures.
28. A registered user shall receive a notification if their post has been approved.
29. A registered user shall receive a notification if their post has been denied.
30. A registered user shall be able to rate any of the item listings on sale.

31. A registered user shall be able to change their rating of the item.
32. A registered user shall be able to edit a post about an item for sale that he/she posted.
33. A registered user shall be able to take down an item that he/she put up for sale.
34. A registered user shall be able to report housing listings and provide reasoning for the report.
35. A registered user shall be able to request to upgrade his/her account to an administrative account with a valid organization, role, and organization email.
36. A registered user shall be able to create a restaurant request to add a restaurant to the restaurants listing by providing the name of the restaurant and location.
37. A registered user shall be notified if their restaurant location has been approved or denied, with a message explaining why
38. A registered user shall receive a notification about purchase requests made on his/her account that includes information about items requested to purchase, the price of each item, and the email of the registered users who posted the items.
39. A registered user shall receive a notification about purchase requests made on items he/she posted for sale. The notification includes information about the items requested, the price that he/she wrote on the post, and the email address of the possible buyer.
40. A registered user shall receive a notification about a house listing request for a house listing that he/she posted that includes information about the person who requested, such as his/her name and email address.
41. A registered user shall receive a notification when a post he/she reported is successfully removed or unsuccessfully denied.
42. A registered user shall receive a notification about a house listing being closed if he/she had made a request to the house lister.
43. A registered user who requested an account upgrade shall receive a notification when the request has been approved and the date of when their administration privileges will be taken away.
44. A registered user who requested an account upgrade shall receive a notification when the request has been denied.
45. An upgraded registered user shall receive a notification when their administration privileges are taken away and why.
46. A registered user shall have a unique registered id.
- **Administrative User**
 47. An administrative user shall have all of the same permissions as registered users.
 48. An administrative user shall be able to post announcements.
 49. An administrative user shall be able to remove an announcement he/she had posted.
 50. An administrative user shall have a unique admin id.

- **Super User**

51. A super user shall be able to log into the website.
52. A super user shall be able to log out of the website.
53. A super user shall have all of the same permissions as administrative users.
54. A super user shall be able to approve/deny and close account upgrade requests,
55. A super user shall be able to approve/deny and close administrative account creation requests.
56. A super user shall be able to approve/deny and close restaurant addition requests.
57. A super user shall receive a notification about account upgrade requests, administrative account creation requests, restaurant requests, and reported posts.
58. A super user shall be able to remove administrative privileges from an upgraded registered user and must give a reason.
59. A super user shall be able to remove posts from item sales and housing listings.
60. A super user shall be able to approve pending posts for restaurant reviews.
61. A super user shall be able to reject pending posts for restaurant reviews.
62. A super user shall be able to approve pending posts for items for sale.
63. A super user shall be able to reject pending posts for items for sale.
64. A super user shall be able to approve pending housing listings for sale.
65. A super user shall be able to reject pending housing listings for sale.

- **Sale Item**

66. A sale item shall be posted by a registered user.
67. A sale item shall have a unique item id.
68. A sale item shall have a title for the item.
69. A sale item shall have a message describing the item.
70. A sale item has the option to have a picture(s) attached to it.
71. A sale item shall be purchased by a registered user.
72. A sale item shall be taken down by the registered user that posted it for sale.
73. A sale item shall be able to be approved by a super user.
74. A sale item shall be able to be rejected by a super user.
75. When a sale item is taken down, all registered users who made a request for the item shall be notified of the closure.

- **Housing Listing**

76. A housing listing shall be posted by a registered user.
77. A housing listing shall have a unique housing id.
78. A housing listing shall have a title.
79. A housing listing shall have a message describing the item.
80. A housing listing shall have picture(s) attached to it.
81. A housing listing shall be taken down by the registered user that posted it.
82. A housing listing shall be requested by many registered users.
83. A housing listing shall be able to be approved by a super user.

- 84. A housing listing shall be able to be rejected by a super user.
- 85. When a housing listing is taken down, all registered users who made a request shall be notified of the closure.
- **Restaurant**
 - 86. A restaurant shall have a rating.
 - 87. A restaurant shall be able to have their rating changed.
 - 88. A restaurant shall have many reviews written by registered users.
 - 89. A restaurant shall have a name.
 - 90. A restaurant shall have a location.
 - 91. A restaurant shall have a unique restaurant id.
- **Restaurant Request**
 - 92. A restaurant request shall be created by one and only one registered user and above.
 - 93. A restaurant request shall have the name of the restaurant.
 - 94. A restaurant request shall have the location of the restaurant.
 - 95. A restaurant request shall be confirmed/denied and closed by one and only one super user.
 - 96. When a restaurant request is confirmed/denied the registered user who made the request will be notified.
- **Organization**
 - 97. An organization shall be able to be rated by many registered users.
 - 98. An organization shall be able to have their ratings changed.
 - 99. An organization shall be able to post announcements.
- **Announcement**
 - 100. An announcement shall be posted by one and only one administrative user or organization.
 - 101. An announcement shall be able to be viewed by one or many users.
 - 102. An announcement shall be able to be reviewed.
 - 103. An announcement shall be able to be taken down by the one who posted it.
 - 104. An announcement shall be able to be rated.

List of Non-Functional Requirements

- **Performance:**
 1. The website should have a load time of no more than 4 seconds.
 2. Notifications to users shall be sent within 30 seconds of purchase requests to allow users to connect more quickly.
- **Marketing:**
 3. All pages shall have the company logo in the upper left-hand corner.
 4. Major announcements shall be located on the landing page with an option to go to the “Announcements” section of the website.
- **Content:**
 5. A navbar shall be at the top of all website pages.
 6. Restaurant reviews shall have the user that posted, optional images, rating, and comments.
 7. Posted items shall have the user that posted, one required image and more optional images, and details about the item.
 8. Housing listings shall have the user that posted, many required images, and details about the housing.
- **Scalability:**
 9. The website shall be scalable and adapt optimally when the number of users and workloads increase.
 10. The website shall be scalable and maintainable as more features are added.
- **Recoverability:**
 11. In times where the website faces problems or failure, components shall be easy to navigate and fixed by the administrator to recover the website.
- **Functionality:**
 12. The website shall be developed and deployed using the tech stack approved by the class CTO.
 13. The website shall have UX/UI that is clear and helpful for users so they can navigate to other pages and find resources easily.
- **Security:**
 14. A registered user’s email shall be verified by the system to be an SFSU email account and unique in order to sign up.
 15. A verification email shall be sent to a registered user’s email.
 16. A user shall be verified by a super user in order to sign up for an administrative account or receive a registered user account upgrade.
 17. A restaurant from a restaurant request shall be verified by a super user in order to be added to the restaurant catalog.

18. A registered user shall be notified when a new device has logged into their account.
 19. An administrative user shall be notified when a new device has logged into his/her account.
 20. A super user shall be notified when a new device has logged into his/her account.
 21. Only administrative users shall be allowed to post announcements.
 22. Only registered users shall be allowed to post items for sale.
 23. Only registered users shall be allowed to post housing listings.
 24. Only registered users shall be allowed to view housing listings.
 25. Only registered users shall be allowed to make a purchase request for items that are on sale.
 26. Only registered users shall be allowed to make a purchase request for housing listings.
 27. Only registered users and above shall be allowed to post restaurant reviews.
- **Privacy:**
 28. A registered user's password shall be encrypted and saved in the database.
 29. A registered user's name shall be saved in the database.
 30. A registered user's email shall be saved in the database.
 31. A registered user's name shall be passed around with purchase requests and restaurant reviews.
 32. A registered user's email shall be passed around with only purchase requests.
 - **System Requirements:**
 33. The website shall work up to Version 88.0.4324.182 of Google Chrome.
 34. The website shall work up to Version 86 of Mozilla Firefox.
 35. The website shall work up to Version 14.0.3 of Safari.
 36. The website shall be compatible for both Windows 10 and MacOS.
 - **Availability:**
 37. The website shall be fully functional at any time of the day whenever there is no maintenance.
 - **Expected Load:**
 38. The website shall support as many users as the AWS EC2 Instance can support.
 - **Legal:**
 39. A link to the terms and conditions shall be present at the bottom of all website pages.
 40. A link to the privacy notice shall be present at the bottom of all website pages.
 - **Coding Requirements:**
 41. All code shall be well documented.
 42. All code shall have relevant variable and function names.
 43. All code shall be well organized and have the same code style.

- **Environmental:**

- 44. Local environments on developer machines shall mirror the AWS EC2 Instance environment.
- 45. All development shall be done on the development branch or lower.
- 46. The development branch shall be approved by Team Lead before being merged into the master branch.
- 47. All GitHub commits shall have extensive details about code added and changed.
- 48. All code shall be extensively tested locally before being deployed on the AWS server.

Competitive Analysis

Websites with similar services	sfsu.edu	hunter.cuny.edu/students	SFSU Apartment roommate group on fb	sfstategators.com	craigslist.com
Strengths	<ul style="list-style-type: none"> -Officially supported by SFSU -Firsthand information directly from SFSU - Connects to multiple services and SFSU departments 	<ul style="list-style-type: none"> -UI is simple, organized, and easy to navigate -Officially supported by Hunter College - Connects to multiple services 	<ul style="list-style-type: none"> - Specifically made for SFSU students, so can guarantee all listings are from SFSU - Very easy to use for someone whos has fb 	<ul style="list-style-type: none"> -provides firsthand information from SFSU about sports and evens -Covers all the athletics department that is available in the SFSU. 	<ul style="list-style-type: none"> -wide range of products to search for - you can search based on location -
Weaknesses	Very hard to navigate around UI, UI very cluttered	-Info not For SFSU students.	<ul style="list-style-type: none"> - Have to have a Facebook account - Have to be invited by someone who is already there - Possibility that posts that may be there is a scam 	<ul style="list-style-type: none"> -Unorganized Nav-bar, cluttered -Social media icon on desktop version doesn't redirect the user to the corresponding site. 	<ul style="list-style-type: none"> Really bad UI -Possible Scams
Pricing	Free	Free	Free to use	Free	-Free

Social Media	<ul style="list-style-type: none"> - Twitter - Facebook - Instagram - LinkedIn - Flickr - YouTube 	<ul style="list-style-type: none"> - Twitter - Facebook - Instagram - Flickr 	<ul style="list-style-type: none"> - Facebook 	<ul style="list-style-type: none"> -Twitter -Instagram -Facebook 	None worth mentioning
Onboarding	<ul style="list-style-type: none"> - Not required to create an account for general usage 	<ul style="list-style-type: none"> - Not required to create an account for general usage 	<ul style="list-style-type: none"> - Have to have a fb account 	<ul style="list-style-type: none"> -Account not required to use the services. 	<ul style="list-style-type: none"> -Account required to create a post

Features	sfsu.edu	hunter.cuny.edu/students	https://www.facebook.com/groups/223625011079774	sfstategators.com	craigslist.com	Gator Connection
UI Simplicity	-	+	-	+	-	++
Market	-	-	+	-	++	+
Search	+	+	++	+	+	+

Post and Request for Housing Listings	-	-	-	-	+	++
Restaurant Ratings/ Reviews	-	-	-	-	-	++

+: Feature exists

++: Feature is superior

-: Feature does not exist

Summary of Competitive Analysis

While there are many competitors in the market that provide SFSU students with lots of markets and announcement information, none of them can compare to Gator Connections simplicity of the UI for those said features.

Take for example a popular marketing site, Craigslist. While it has a lot of business, if you talk to any users of them about their UX, chances are they will tell you it took a while to get used to, with listings scattered everywhere and too much info being thrown at you at one time. Additionally, there are things on Craigslist that do not belong on a marketing site, such as a discussion forum with topics such as pets, jokes, etc. With features such as this, one would be hard pressed to make sure that their Craigslist UX would be anything but pleasant. To counteract those features, Gator Connections UI will be kept simple as can be, to make sure the SFSU user will be able to find what they need. We will be doing that by allowing users to filter for types of items that they want, to search for items that they want all in a simple UI that contains all the necessary info that users would need to purchase or sell an item. Furthermore, our listing feature will not contain anything unrelated to listings, such as a discussion forum.

Another example our website can compare to would be the main SFSU website itself. While you can technically find any source of information SFSU related on there, you'd be hard

pressed to navigate through all the links they throw at you. Furthermore, with links not organized in any coherent manner, you would not find any announcements from clubs about events that SFSU may have. To counteract these features, once again Gator Connections UI for announcements will be kept as simple as possible, so users don't have to navigate through many unnecessary links just to get the info from announcements that they need. We will be doing that in our announcements section, users will be able to navigate through the main schools' announcements, or by organization through organization, either by dropdown or by search bar. Once they have selected the organization that they want to know more about, they will be able to see any important announcements that they have, such as when the organization meets, requirements for the organization, etc. Furthermore, compared to SFSU's website's multitude of many unnecessary links that hide announcement info from you, Gator Connections announcement feature will contain none of that. When a SFSU user navigates to the announcements section, they will easily be able to find any announcements from any organization that they want to know more about.

To SFSU students, they have access to many different marketing and announcement features, through Craigslist or the actual SFSU website. While those websites have a large active user base, their UI for UX is incredibly hard to understand. With that, Gator Connection will provide a simple but effective UI for our marketing features, announcement features and much more to SFSU students, ensuring that SFSU students will be able to find without much trouble what they are looking for.

High Level System Architecture and Technologies Used

Server Host:

Amazon AWS 1vCpus 1 gib ram not ebs optimized

Operating System:

Ubuntu 20.04

DataBase:

MySQL 8.0

Web Server:

NGINX 1.18

Server side Language (Back end):

Python 3.8

Additional Technologies:

- a) Web Framework: Django 3.1
- b) IDE: VS code, PyCharm
- c) Gunicorn: 20.0.4
- d) Supervisor
- e) Bootstrap 4

Team Contributions

1) Executive Summary:

Alec wrote the first rough draft of the executive summary. During a team meeting, Angelo and Benjamin helped provide feedback and revise parts of it to ensure the message of centralizing all SFSU info was clear.

2) Use Cases:

After discussing Use Cases, everyone on the team was tasked to complete their own Use Cases. After Benjamin revised and provided feedback on each of our Use Cases to extract Data Items, Functional Requirements and Non-Functional Requirements, all of us then proceeded to create Use Case Diagrams for them.

3) List of Main Data Items and Entities:

Lakshita and Carmen were tasked to complete this part. After looking through this point during the main team meeting, the team, most notably Benjamin, helped provide feedback on the items that we should and should not keep.

4) Initial list of Functional requirements:

Jiaxin was tasked to complete this part. During the time that Jiaxin was working on this, Benjamin also helped and added his own points for Functional requirements. Furthermore, during the main team meeting, the team looked over the list to make sure everything was accounted for.

5) List of Non-Functional requirements:

Angelo was tasked to complete this part. During the time that he was working on this, the team, most notably Benjamin, helped Angelo by providing feedback to the points that he had listed. Furthermore, during the main team meeting, the team looked over to make sure everything was accounted for.

6) Competitive Analysis:

Benjamin and Bikram were tasked to complete this part. During the main team meeting, the team looked over the competitors that they had chosen to see if they each represent something our product could compare to. Furthermore, the team also decided on a new competitor to add to account for one of the services that we have on our App.

7) Tech Stack:

Alec reviewed the tech stack that he had used and sent to the Professor and checked if all of them were still in use. During the main team meeting, the team agreed that the tech stack that we had would be the one we would be using.

8) Contributions:

Alec filled out this part. After assigning the tasks to everyone, Alec looked over what everyone did to accurately fill out this part.

9) Checklist:

Alec filled out this part. During the main team meeting, Alec made sure to confirm that all the points in the checklist would have an answer to them, whether they be DONE, ON TRACK, and ISSUE

10) Formatting the project:

Bikram was tasked with compiling all the points that we have into one document. After he was finished with the document, the team, most notably Alec and Benjamin helped provide feedback and revise certain parts of the final document.

Team Members

- 1) Alec Tenefrancia (Team Lead, Github Master)
- 2) Angelo Reyes (Back End Lead, Github Admin)
- 3) Lakshita Chugh (Front End Lead, Github Admin)
- 4) Bikram Tamang (Front End team member, M1 Editor)
- 5) Carmen Paisonao(Front End team member)
- 6) Benjamin Kao(Back End team member)
- 7) Jiaxin Yu (Back End team member)

Team CheckList

- Team found a time slot to meet outside of the class
(DONE)
- GitHub master chosen
(DONE)
- Team decided and agreed together on using the listed SW tools and deployment server
(DONE)
- Team ready and able to use the chosen back and front-end frameworks and those who need to learn are working on learning and practicing
(ON TRACK)
- Team lead ensured that all team members read the final M1 and agree/ understand it before submission
(DONE)
- GitHub organized as discussed in class (e.g., master branch, development branch, folder for milestone documents etc.)
(DONE)