

Final Project for SW Engineering Class CSC 648-848

Spring 2024

Section 02

Team 05

Product Name: OlymPick™

Team Members	
Team Lead	Johnny Kwon
Database Engineer	Abby Lin
Frontend Engineer	Zabiullah Niemati
Frontend Engineer	Zizo Ezzat
Github Master/Frontend	Ethan Ho
Backend Engineer	Nichan Lama
Backend Engineer	Fadee Ghiragosian

Team Lead email: hkwon4@sfsu.edu

Project URL: [OlymPick](#)

Github Page:

<https://github.com/CSC-648-SFSU/csc-648-02-spring24-team05>

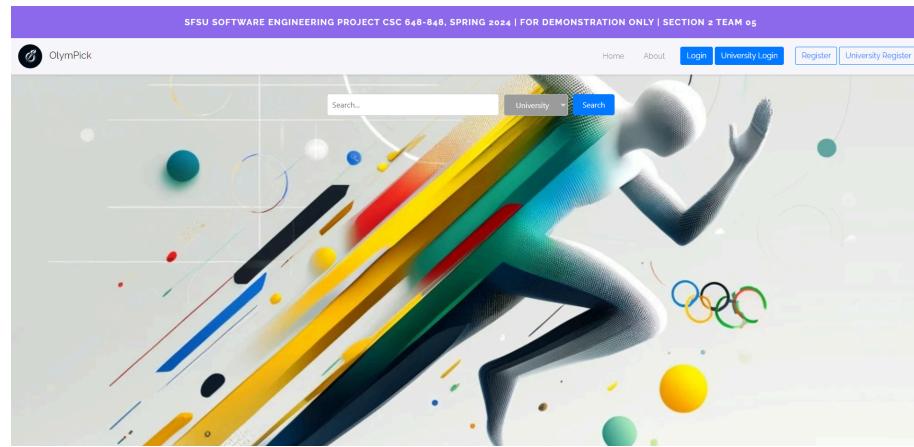
Date: 5/14/2024

1. Product Summary

- 1.1. Name of product: OlymPick™
- 1.2. List of committed functions:
 - 1.2.1. All users shall be able to filter searches based on specific sporting events and relevant athletic accomplishments.
 - 1.2.2. Searches can be done both through keywords and user manual input.
 - 1.2.3. Users shall be able to register for an account using an email address and a secure password.
 - 1.2.4. University Admin shall be able to post and update profiles.
 - 1.2.5. University Admin shall be provided with a reporting feature to generate reports on user engagement, application numbers, and platform usage statistics.
 - 1.2.6. Faculty shall be able to initiate contact with users for recruiting purposes with the option to offer positions.
- 1.3. Product Uniqueness: OlymPick serves as an optimized search platform for Olympic sports up-and-comers planning their collegiate sports futures. With on-site communication and customizable user profiles, OlymPick also serves as a specialized networking platform between users and university recruiters.
- 1.4. Website URL: <http://35.212.255.5/>

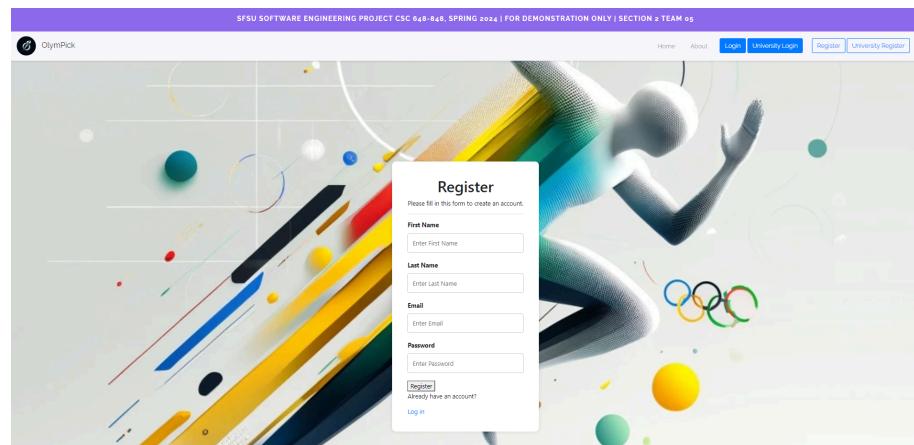
2. Product ScreenShots

- 2.1. Home Page



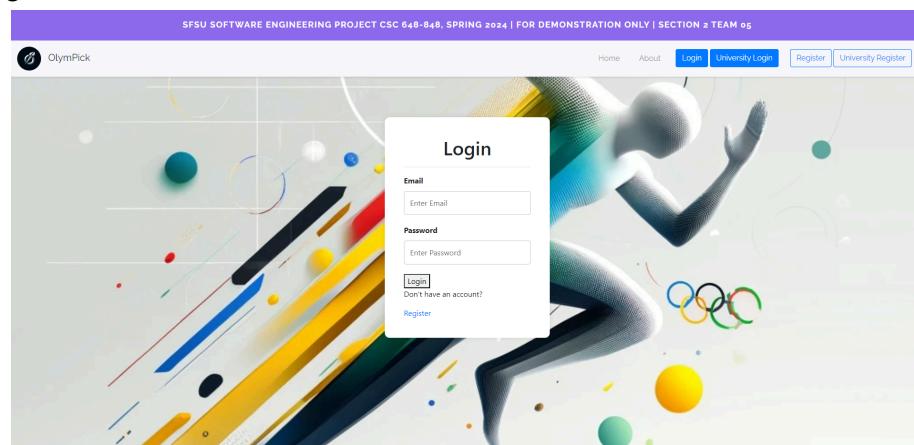
2.1.1.

2.2. User Registration



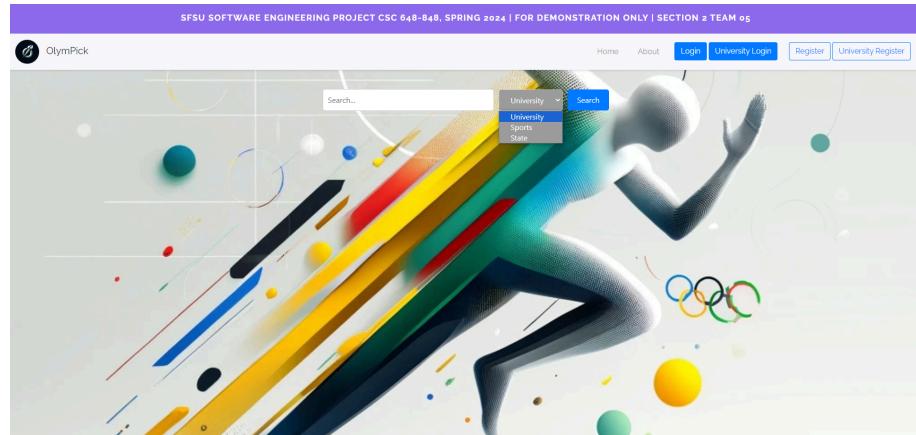
2.2.1.

2.3. User Login



2.3.1.

2.4. Search Filter



2.4.1.

2.5. Search Result Page

2.5.1. Using Filter: University

Search Results for 'San Francisco State University'							
Name of Athlete	Gender	Category	Event Name	Year	Ranking	Medal	
Brandon Green	Male	Gymnastics	Rhythmic Gymnastics	2004	4	None	
Heather Lopez	Female	Cycling	Cycling Road Race	1996	2	Silver	
Lisa Collins	Female	Speed Skating	500m Speed Skating	1980	1	Gold	
Ryan Brooks	Male	Snowboarding	Halfpipe	2000	9	None	
Steven Cooper	Male	Skeleton	Skeleton	1992	8	None	
Steven Robinson	Male	Sailing	Windsurfing	2016	6	None	
Timothy Morris	Male	Athletics	100m Dash	2000	9	None	

2.5.1.1.

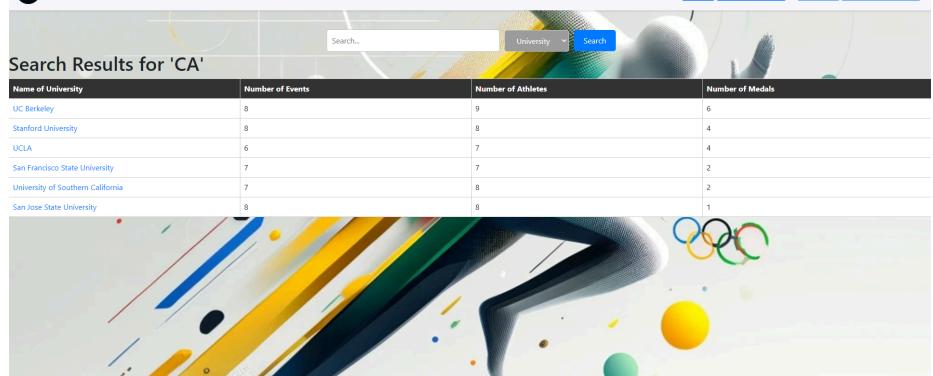
2.5.2. Using Filter: Sport

Search Results for 'aquatics'			
Name of University	Number of Events	Number of Athletes	Number of Medals
Stanford University	1	1	1
UCLA	1	2	1
Harvard University	1	1	0
San Jose State University	1	1	0

2.5.2.1.

2.5.3. Using Filter: State

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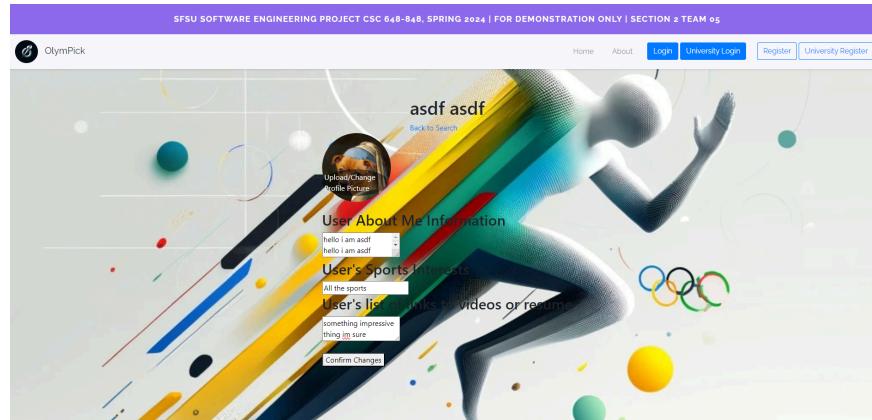
OlymPick

Search Results for 'CA'

Name of University	Number of Events	Number of Athletes	Number of Medals
UC Berkeley	8	9	6
Stanford University	8	8	4
UCLA	6	7	4
San Francisco State University	7	7	2
University of Southern California	7	8	2
San Jose State University	8	8	1

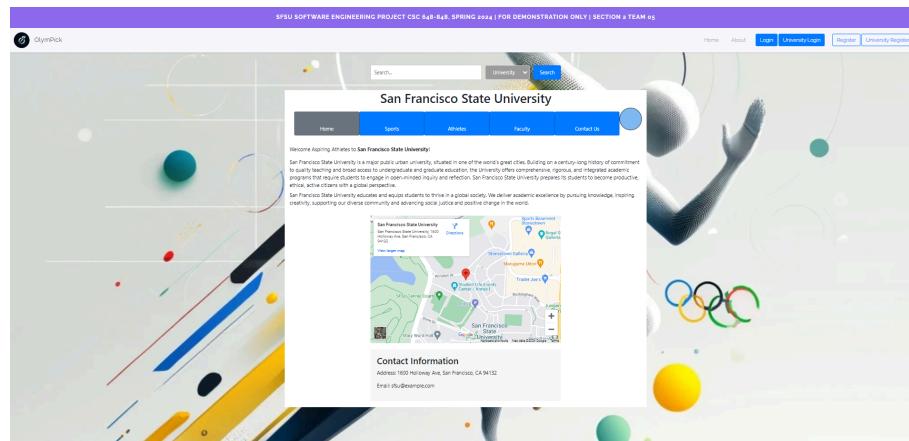
2.5.3.1.

2.6. User Profile Page



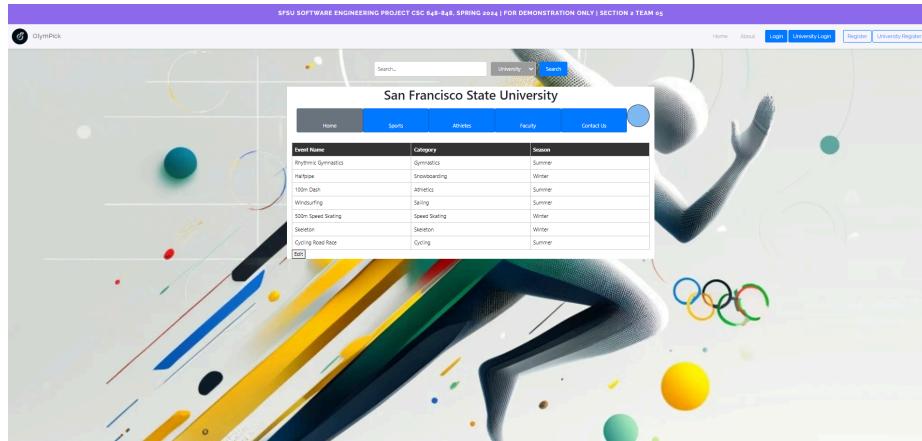
2.6.1.

2.7. University Page: Home



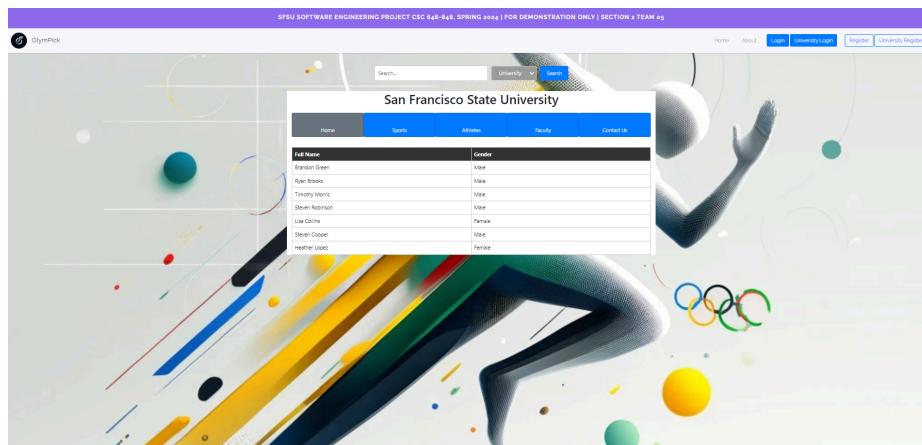
2.7.1.

2.8. University Page: Sports



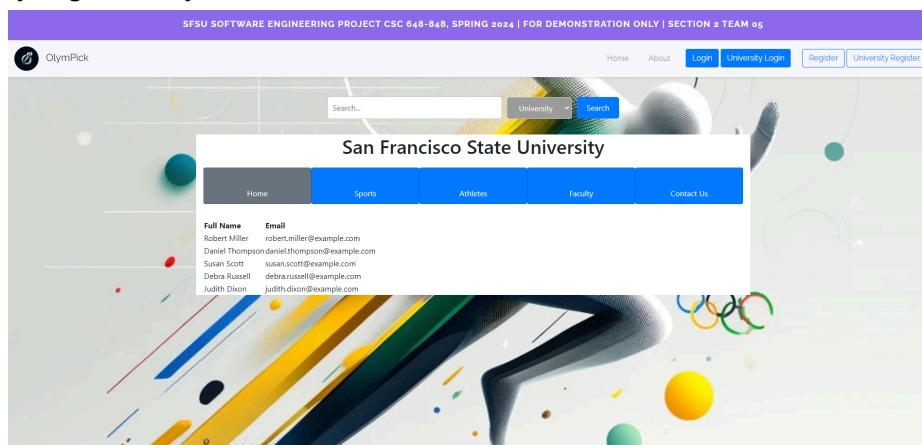
2.8.1.

2.9. University Page: Athletes



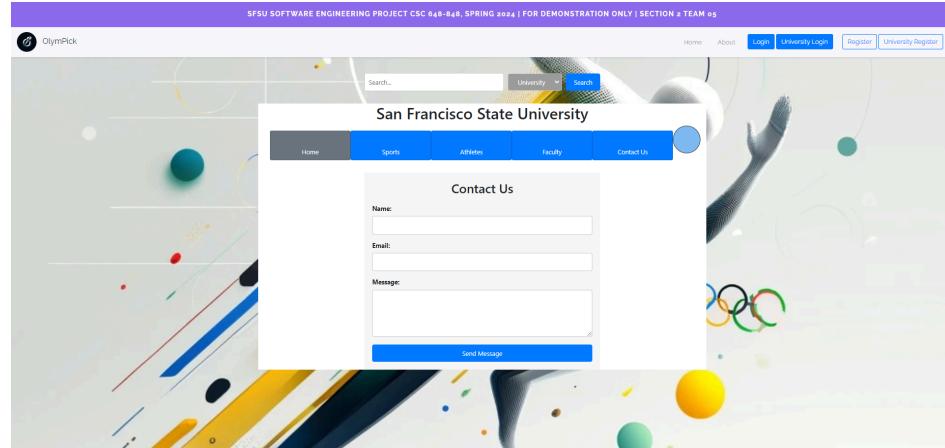
2.9.1.

2.10. University Page: Faculty



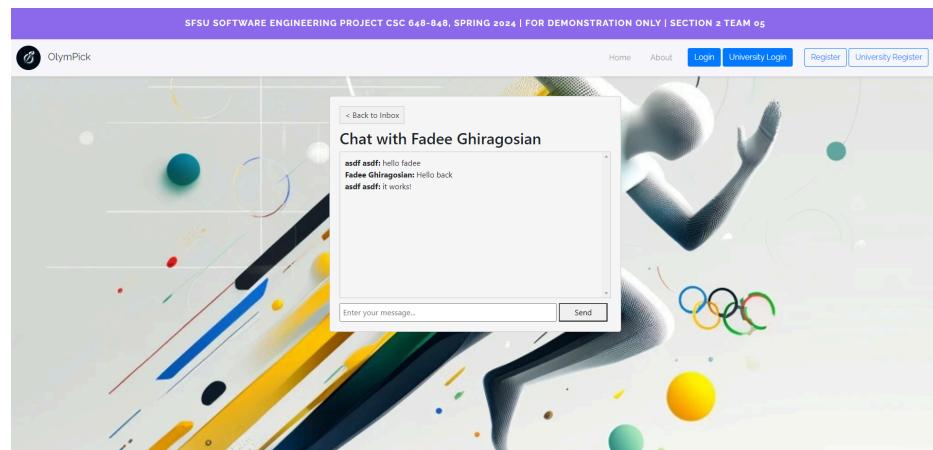
2.10.1.

2.11. University Page: Contact



2.11.1.

2.12. Chat Messenger



2.12.1.

3. Database Key Tables

3.1. University

	university_id	uni_name	email	phone	password	address
▶	1	San Francisco State University	sfsu@example.com	1234567890	sfsu_password	1600 Holloway Ave
	2	San Jose State University	sjsu@example.com	4567890123	sjsu_password	One Washington Square
	3	University of Southern California	usc@example.com	7890123456	usc_password	University Park Campus Los Angeles
	4	Stanford University	stanford@example.com	9876543210	stanford_password	450 Serra Mall
	5	UCLA	ucla@example.com	6543210987	ucla_password	405 Hilgard Ave
	6	UC Berkeley	ucb@example.com	3210987654	ucb_password	200 California Hall
	7	University of Texas at Austin	utexas@example.com	2109876543	utexas_password	110 Inner Campus Dr
	8	University of Michigan	umich@example.com	5432109876	umich_password	500 S State St
	9	University of Florida	uf@example.com	8765432109	uf_password	121 Grinter Hall
	10	Ohio State University	osu@example.com	1098765432	osu_password	190 N. Oval Mall
	11	Yale University	yale@example.com	4321098765	yale_password	149 Elm St
*	HULL	HULL	HULL	HULL	harvard_password	1350 Massachusetts Ave

3.1.1.

3.2. User

	user_id	email	password	firstName	lastName	fullName
▶	1	ethanh14@gmail.com	\$2b\$12\$OkQsk8lWQzui2U2eQyxEuuoZHWWJ5...	Ethan	Ho	Ethan Ho
	2	ghiragosian@gmail.com	\$2b\$12\$MAXMOrnbx79Wv0mRIUmjA.rUzm9IKZ...	Fadee	Ghiragosian	Fadee Ghiragosian
	3	rin@gmail.com	\$2b\$12\$OKh2v47oz9w53Q831xfKeT5vSbSoiHi...	rin	r	rin r
	4	abby@mail.com	\$2b\$12\$dcmtIQ.0VY5y2L/vErdBupwoJsFjG70...	abby	lin	abby lin
	5	asdfasdf@asdf.com	\$2b\$12\$OvDE.tMzLN1/Lkd9tN/YebtfwwZEAU...	asdf	asdf	asdf asdf
	6	ASF@ASF.COM	\$2b\$12\$S679MCdfn4ApM7p.s.YwXOpzMxnaq...	Ethan	Ho	Ethan Ho
	7	ziezzat2002@gmail.com	\$2b\$12\$p20y0TxETGYGNuEsobkBenacyXoZf5...	Zizo	E	Zizo E
	8	aas@aas.com	\$2b\$12\$GZvgn16T14etrRxYJZTse4R01tQ1TId...	Ethan	Ho	Ethan Ho
	9	yu942u@gmail.com	\$2b\$12\$Et48PhdP45i7Ovx30al57exWVdkn84K...	abby	lin	abby lin
	10	tlin18@fsu.edu	\$2b\$12\$ReWhTJB3W9h60kT02uple.YdAmQmc...	abby1	asd	abby1 asd
	11	chi.yang@sjtu.edu	\$2b\$12\$QIML1cuuEbjsiyj2Pot.Kde1OU10Ub2cy...	add	DDD	add DDD
	12	123@mail.com	\$2b\$12\$36qB.ByBjZMuIqN7L7/DS.e.kDj12ZVRq...	a	dd	a dd
	13	abc@ sdf.com	\$2b\$12\$Vd598JDVSPsP0D6NhpxeoJ23yFuh...	abc	abcd	abc abcd
	14	abcd@abc.com	\$2b\$12\$gq51uAvBoU07Cr6k0Pwlwua.OquS0FZ...	abcd	abcf	abcd abcf
	15	123@fsu.edu	\$2b\$12\$83NXCaAHEQJYKU6xRlhdepj31fSpHM...	111	23	111 23
	16	aa@gmail.com	\$2b\$12\$WrVnPaxJ05EzxHiAn7qJuUten5A0E...	aa	aa	aa aa
	17	ya@fsu.edu	\$2b\$12\$LmC1f5JOju50Ti8e0di/i.iHyETJNtpAqV...	ay	ya	ay ya
	18	asdfasdf2@asdf.com	\$2b\$12\$EbnPyC1eBlx2amOfoQjT7.cSG3qKJOH...	asdfa	asdfa	asdfa asdfa
*	NULL	NULL	NULL	NULL	NULL	NULL

3.2.1.

3.3. Faculty

faculty_id	university_id	email	password	firstName	lastName	fullName
11	12	jessica.taylor@example.com	asdf1234	Jessica	Taylor	Jessica Taylor
12	6	christopher.jackson@example...	asdf1234	Christop...	Jackson	Christopher ...
13	10	amanda.white@example.com	asdf1234	Amanda	White	Amanda White
14	1	daniel.thompson@example.c...	asdf1234	Daniel	Thompson	Daniel Thom...
15	10	elizabeth.harris@example.com	asdf1234	Elizabeth	Harris	Elizabeth Harris
16	8	richard.thomas@example.com	asdf1234	Richard	Thomas	Richard Thomas
17	5	margaret.clark@example.com	asdf1234	Margaret	Clark	Margaret Clark
18	4	mary.lewis@example.com	asdf1234	Mary	Lewis	Mary Lewis
19	9	james.lewis@example.com	asdf1234	James	Lewis	James Lewis
20	7	jennifer.lee@example.com	asdf1234	Jennifer	Lee	Jennifer Lee
21	2	johnson.walker@example.com	asdf1234	Johnson	Walker	Johnson Walker
22	6	emma.hall@example.com	asdf1234	Emma	Hall	Emma Hall
23	11	daniel.hill@example.com	asdf1234	Daniel	Hill	Daniel Hill
24	1	susan.scott@example.com	asdf1234	Susan	Scott	Susan Scott
25	9	brian.green@example.com	asdf1234	Brian	Green	Brian Green
26	4	barbara.adams@example.com	asdf1234	Barbara	Adams	Barbara Adams
27	7	joseph.baker@example.com	asdf1234	Joseph	Baker	Joseph Baker
28	2	maria.gonzalez@example.com	asdf1234	Maria	Gonzalez	Maria Gonzalez
29	10	donald.roberts@example.com	asdf1234	Donald	Roberts	Donald Roberts
30	12	ruth.carter@example.com	asdf1234	Ruth	Carter	Ruth Carter
31	3	nancy.kelly@example.com	asdf1234	Nancy	Kelly	Nancy Kelly
32	5	justin.phillips@example.com	asdf1234	Justin	Phillips	Justin Phillips
33	8	laura.murphy@example.com	asdf1234	Laura	Murphy	Laura Murphy
34	4	donald.rodriguez@example....	asdf1234	Donald	Rodriguez	Donald Rodri...
35	10	karen.foster@example.com	asdf1234	Karen	Foster	Karen Foster
36	8	kenneth.long@example.com	asdf1234	Kenneth	Long	Kenneth Long
37	1	debra.russell@example.com	asdf1234	Debra	Russell	Debra Russell
38	7	jason.sanchez@example.com	asdf1234	Jason	Sanchez	Jason Sanchez
39	11	cynthia.hughes@example.com	asdf1234	Cynthia	Hughes	Cynthia Hughes
40	6	nicholas.price@example.com	asdf1234	Nicholas	Price	Nicholas Price
41	3	sandra.myers@example.com	asdf1234	Sandra	Myers	Sandra Myers
42	2	kathleen.ford@example.com	asdf1234	Kathleen	Ford	Kathleen Ford
43	9	wayne.hernandez@example...	asdf1234	Wayne	Hernandez	Wayne Herna...
44	5	donna.watson@example.com	asdf1234	Donna	Watson	Donna Watson
45	12	roy.sullivan@example.com	asdf1234	Roy	Sullivan	Roy Sullivan
46	6	carolyn.murray@example.com	asdf1234	Carolyn	Murray	Carolyn Murray
47	1	judith.dixon@example.com	asdf1234	Judith	Dixon	Judith Dixon
48	10	todd.harrison@example.com	asdf1234	Todd	Harrison	Todd Harrison
49	11	albert.fowler@example.com	asdf1234	Albert	Fowler	Albert Fowler
50	2	terry.pierce@example.com	asdf1234	Terry	Pierce	Terry Pierce
51	9	alice.martin@example.com	asdf1234	Alice	Martin	Alice Martin
*	NULL	NULL	NULL	NULL	NULL	NULL

3.3.1.

3.4. Sports

	sport_id	event_name	category	season	gender
	2	200m Freestyle	Aquatics	Summer	Female
	3	100m Dash	Athletics	Summer	Male
	4	200m Dash	Athletics	Summer	Female
	5	Artistic Gymnastics	Gymnastics	Summer	Male
	6	Rhythmic Gymnastics	Gymnastics	Summer	Female
	7	Basketball	Team Sports	Summer	Male
	8	Basketball	Team Sports	Summer	Female
	9	Judo	Combat Sports	Summer	Male
	10	Judo	Combat Sports	Summer	Female
	11	Cycling Road Race	Cycling	Summer	Male
	12	Cycling Road Race	Cycling	Summer	Female
	13	10m Air Pistol	Shooting	Summer	Male
	14	10m Air Pistol	Shooting	Summer	Female
	15	Rowing Coxless Pairs	Rowing	Summer	Male
	16	Rowing Coxless Pairs	Rowing	Summer	Female
	17	Windsurfing	Sailing	Summer	Male
	18	Windsurfing	Sailing	Summer	Female
	19	Archery Target Round	Archery	Summer	Male
	20	Archery Target Round	Archery	Summer	Female
	21	Triathlon Individual	Triathlon	Summer	Male
	22	Triathlon Individual	Triathlon	Summer	Female
	23	Downhill Skiing	Alpine Skiing	Winter	Male
	24	Downhill Skiing	Alpine Skiing	Winter	Female
	25	Halfpipe	Snowboarding	Winter	Male
	26	Halfpipe	Snowboarding	Winter	Female
	27	500m Speed Skating	Speed Skating	Winter	Male
	28	500m Speed Skating	Speed Skating	Winter	Female
	29	Single Skating	Figure Skating	Winter	Male
	30	Single Skating	Figure Skating	Winter	Female
	31	Ice Hockey	Ice Hockey	Winter	Male
	32	Ice Hockey	Ice Hockey	Winter	Female
	33	15km Cross-Country...	Cross-Countr...	Winter	Male
	34	15km Cross-Country...	Cross-Countr...	Winter	Female
	35	Individual Gundersen	Nordic Combined	Winter	Male
	36	10km Sprint	Biathlon	Winter	Male
	37	10km Sprint	Biathlon	Winter	Female
	38	Two-man Bobsleigh	Bobsleigh	Winter	Male
	39	Two-man Bobsleigh	Bobsleigh	Winter	Female
	40	Skeleton	Skeleton	Winter	Male
	41	Skeleton	Skeleton	Winter	Female
	43	Individual Ski Jumping	Ski Jumping	Winter	Male
*	NULL	NULL	NULL	NULL	NULL

3.4.1.

3.5. Athlete

	athlete_id	firstName	lastName	fullName	gender
▶	1	Richard	Reed	Richard Reed	Male
	2	Paul	Douglas	Paul Douglas	Male
	3	Jessica	Baker	Jessica Baker	Female
	4	Joshua	Johnson	Joshua Johnson	Male
	5	Kelly	Wilson	Kelly Wilson	Female
	6	Brandon	Green	Brandon Green	Male
	7	Megan	Ross	Megan Ross	Female
	8	Christopher	Lopez	Christopher Lopez	Male
	9	Heather	Howard	Heather Howard	Female
	10	Tyler	Ward	Tyler Ward	Male
	11	Justin	Richardson	Justin Richardson	Male
	12	Melissa	Hernandez	Melissa Hernandez	Female
	13	Matthew	Campbell	Matthew Campbell	Male
	14	Stephanie	Young	Stephanie Young	Female
	15	Daniel	Wright	Daniel Wright	Male
	16	Samantha	Morales	Samantha Morales	Female
	17	Adam	Thompson	Adam Thompson	Male
	18	Amanda	Roberts	Amanda Roberts	Female
	19	David	Mitchell	David Mitchell	Male
	20	Amy	Anderson	Amy Anderson	Female
	21	James	Perez	James Perez	Male
	22	Laura	Wood	Laura Wood	Female
	23	Robert	Garcia	Robert Garcia	Male
	24	Jennifer	Evans	Jennifer Evans	Female
	25	Ryan	Brooks	Ryan Brooks	Male
	26	Lauren	Hall	Lauren Hall	Female
	27	John	Martin	John Martin	Male
	28	Ashley	King	Ashley King	Female
	29	William	Scott	William Scott	Male
	30	Sarah	Ramirez	Sarah Ramirez	Female
	31	Michael	Hill	Michael Hill	Male
	32	Brittany	Taylor	Brittany Taylor	Female
	33	Jonathan	Lee	Jonathan Lee	Male
	34	Elizabeth	Clark	Elizabeth Clark	Female
	35	Joseph	White	Joseph White	Male
	36	Rachel	Lewis	Rachel Lewis	Female
	37	Nicholas	Jackson	Nicholas Jackson	Male
	38	Stephanie	Harris	Stephanie Harris	Female
	39	Jeffrey	Davis	Jeffrey Davis	Male
	40	Emily	Thomas	Emily Thomas	Female
	41	Kevin	Lewis	Kevin Lewis	Male
	43	Brian	Murphy	Brian Murphy	Male

3.5.1.

3.6. Athlete-University (many to many)

	athlete_id	uni_id
▶	6	1
	25	1
	45	1
	59	1
	70	1
	83	1
	94	1
	12	2
	22	2
	33	2
	43	2
	53	2
	66	2
	77	2
	88	2
	9	3
	21	3
	35	3
	46	3
	52	3
	63	3
	74	3
	86	3
	1	4
	18	4
	28	4
	41	4
	55	4
	69	4
	81	4
	93	4
	7	5
	14	5
	24	5
	44	5
	60	5
	72	5
	85	5
	5	6
	20	6
	32	6
	38	6

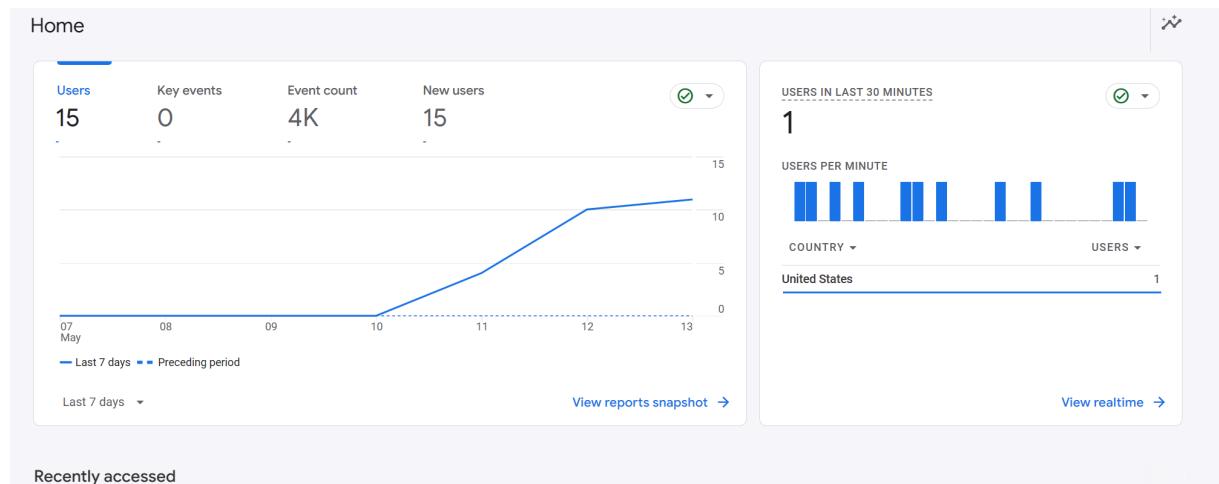
3.6.1.

3.7. Athlete-Sport (many to many)

	athlete_id	sport_id	year	ranking
1	1	1984	3	
2	2	1988	7	
3	3	1992	5	
4	4	1996	1	
5	5	2000	9	
6	6	2004	4	
7	7	2008	8	
8	8	2012	2	
9	9	2016	6	
10	10	2020	3	
11	11	1984	2	
12	12	1988	5	
13	13	1992	8	
14	14	1996	1	
15	15	2000	9	
16	16	2004	4	
17	17	2008	7	
18	18	2012	3	
19	19	2016	6	
20	20	1980	1	
21	21	1984	3	
22	22	1988	5	
23	23	1992	7	
24	24	1996	2	
25	25	2000	9	
26	26	2004	4	
27	27	2008	8	
28	28	2012	3	
29	29	2016	6	
30	30	1980	2	
31	31	1984	4	
32	32	1988	6	
33	33	1992	8	
34	34	1996	3	
35	35	2000	9	
36	36	2004	4	
37	37	2008	8	
38	38	2012	3	
39	39	2016	6	
40	40	1980	2	
41	41	1984	4	
42	1	1992	8	
43	1	1992	8	

3.7.1.

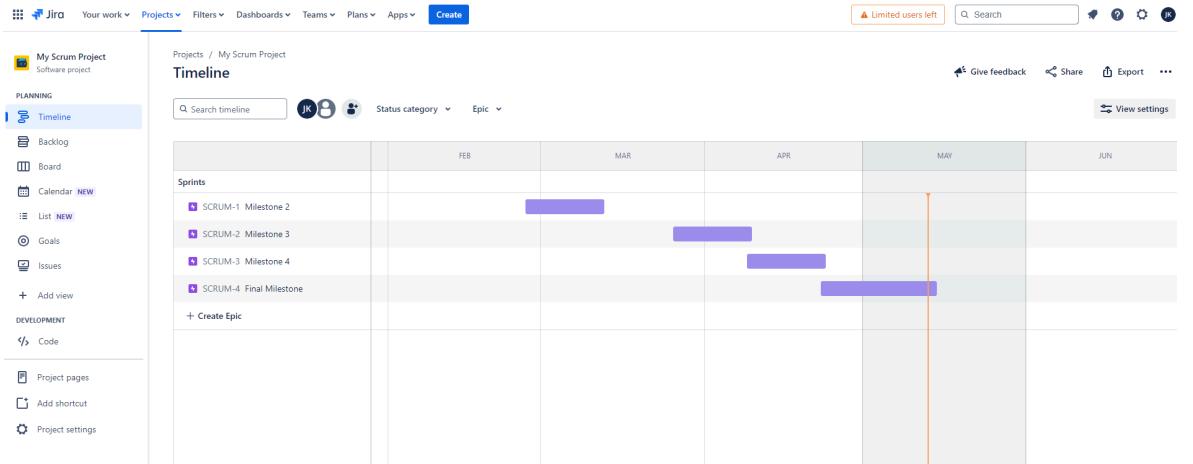
4. Google Analytics



4.1.

5. Task Management

- 5.1. Jira Atlassian was used to manage a SCRUM development schedule



5.2.

6. Team Member Contributions

6.1. Team Lead

From: Johnny Kwon <hkwon4@sfsu.edu>
Sent: Sunday, May 12, 2024 9:54 PM
To: Zabiullah Niemati <fzabiullah@mail.sfsu.edu>; Fadee Ghiragosian <ghiragosian@gmail.com>; Nican Lama <nlama@mail.sfsu.edu>; Abby Lin <tlin18@sfsu.edu>; Zizo Ezzat <ezzat@mail.sfsu.edu>; Ethan Ho <eho4@sfsu.edu>
Subject: CSC648 M5 Team Member Contribution

Hey Team,

Please reply below in bullet points what contributions you have made in this project.
I will use mine as an example:

Johnny Kwon (Team Lead)

- Created plans and set tasks for each member
- Created diagrams and resource material for development aid
- Coordinated meeting schedules for team members
- Primary QA tester
- Created and managed team Google Compute server
- Primary document writer and editor
- Creator of helper programs for database insertions
- Troubleshooter for any technical or communication issues

- Commits authored in GitHub repository: 20

Thank You,
Johnny Kwon (Team Lead)

6.1.1.

6.2. Frontend

From: Zizo Ezzat <eezzat@mail.sfsu.edu>
Sent: Monday, May 13, 2024 9:58:45 PM (UTC-08:00) Pacific Time (US & Canada)
To: Johnny Kwon <hkwon4@sfsu.edu>
Subject: Re: CSC648 M5 Team Member Contribution

Zizo Ezzat (Front-end):
- Created initial website wireframes with drawings
- Front-end development

- o Created Navbar
- o Updated designs
- o Implemented bootstrap

- Reformatted code to be reusable and follow jinja templates
- Created logo designs

6.2.1.

From: Zabiullah Niemati <fzabiullah@mail.sfsu.edu>
Sent: Tuesday, May 14, 2024 1:39:02 PM (UTC-08:00) Pacific Time (US & Canada)
To: Johnny Kwon <hkwon4@sfsu.edu>
Subject: Re: CSC648 M5 Team Member Contribution

Zabiullah Niemati (Frontend Engineer)

Created CSS and HTML for landing and register pages. Created/updated logos and page banners.
Updated user profile pages. Managed team meetings with frontend engineers and followed up.
Supported the documentation for milestones.

6.2.2. Commits authored in GitHub repository: 05"

6.3. Backend

From: Fadee Ghiragosian <ghiragosian@gmail.com>
Sent: Sunday, May 12, 2024 10:22:17 PM (UTC-08:00) Pacific Time (US & Canada)
To: Johnny Kwon <hkwon4@sfsu.edu>
Subject: Re: CSC648 M5 Team Member Contribution

Here is my list of contributions:

Fadee Ghiragosian (Backend Dev)

- Assisted with setting up the server
- Developed server-side logic
- Assisted with testing and QA
- Secondary document writer and editor
- Commits in Github: 6

6.3.1.

From: Nichan Lama <nlama@mail.sfsu.edu>
Sent: Sunday, May 12, 2024 11:57:06 PM (UTC-08:00) Pacific Time (US & Canada)
To: Johnny Kwon <hkwon4@sfsu.edu>
Subject: Re: CSC648 M5 Team Member Contribution

Nichan Lama(Backend)

- Developed backend functionalities for registration and login systems catering to both regular users and university admin.
- Implemented database interactions to ensure data integrity within the platform.
- Engineered user profile management features, allowing users to update and enhance their information upon initial login.
- Designed an intuitive and interactive university page, facilitating easy navigation and management of information for administrators.
- Enabled university administrators to effortlessly manage and edit various aspects such as sports programs, athlete profiles, and faculty details.
- Integrated Google Analytics reporting feature to provide valuable insights into platform usage and engagement.
- Commits: 10

6.3.2.

6.4. Database Admin/Backend

From: Abby Lin <tlin18@sfsu.edu>
Sent: Monday, May 13, 2024 7:22:36 PM (UTC-08:00) Pacific Time (US & Canada)
To: Johnny Kwon <hkwon4@sfsu.edu>
Subject: Re: CSC648 M5 Team Member Contribution

Abby Lin (Database Engineer)

- Build database
 - Create search and filter function
 - Create user profile page
 - Create function that allows user to upload profile picture
 - Create result page
 - Implement Google Map in university page
 - Create University home page
 - Help with route refactors
- Commits authored in GitHub repository: 14

Thank you,
Abby Lin (Database Engineer)

6.4.1.

6.5. Github Lead/Frontend

From: Ethan Ho <eho4@sfsu.edu>
Sent: Monday, May 13, 2024 9:00:35 PM (UTC-08:00) Pacific Time (US & Canada)
To: Johnny Kwon <hkwon4@sfsu.edu>
Subject: Re: CSC648 M5 Team Member Contribution

Ethan Ho (Github Lead)

- Made search bar
- Developed initial landing page / navbar
- Dropdown menu for users
- Manage Profile
- Styled website
- Managed / Troubleshoot GitHub
- 11 Commits authored in GitHub repo

6.5.1.

7. Post Analysis

7.1. Workflow

7.1.1. As each team member had their own busy schedule, it was often very difficult to maintain a consistent development schedule and thus difficult to practice the software engineering methodology, Agile. However, all members were generally able to maintain consistent correspondence through Discord, and smaller group meetings were often done to address any conflicts or aid the development of certain functions and features.

7.2. Common Mistakes

7.2.1. There were several instances where technical difficulties arose but were not addressed quickly. This caused many delays and, in some cases, caused changes in tasks between members. There were also difficulties working with Flask Python, as it was for most members, their first time working with Python as a backend language. Our initial Google Compute Engine also caused some problems in the form of bottlenecking issues as new features were added to our web application. The storage quickly grew to maximum capacity but also frequent server crashes occurred as the server's CPU was not well equipped to handle certain functions.

7.3. Lessons Learned

7.3.1. While it can be a great experience to dive right into unfamiliar software stacks, it often comes with many unexpected challenges. Being prepared by thoroughly reading the different benefits and challenges each aspect of the software stack poses can greatly avoid headaches. One of the most important lessons from this project was the importance of transparency and communication. While a good lead can make facilitating tasks faster, it is incredibly important for every member to be clear of any shortcomings or problems they are facing when they are facing them. Dragging on problems not only causes problems for the individual but for the rest of the team as well.