

# **Group Project Report**

## **Application: College Event Website**

COP 4710 Spring 2022

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## Project Description

The purpose of this project is to create a user-friendly application that allows students from different universities to connect with each other to set up and attend various different types of events around and off campus. UCF already has a website dedicated to listing events for UCF students around the campus, but this project aims to streamline the process of creating, hosting, and attending events so that students at this university can more easily find events that they are interested in attending and connect with people who have similar interests. This project also aims to increase the scope of people who are able to look at the events created at UCF, while allowing students and people from any university or otherwise to be able to connect with UCF students and events hosted at UCF.

In most cases, events at universities are organized by students, and to create events, students may group together to form RSOs (Registered Student Organizations) which can be from different student organizations, including but not limited to, clubs and fraternities/sororities. This website and application hopes to provide the accessibility to these events to any student who wishes to attend the events or create one themselves with other like-minded students. Students may use this web application on their web browser to register an account. Once any student or faculty member registers an account on this web application, they will also create a user ID and password. They will be able to browse any event listed on the UCF website, join an RSO, and create events once they have joined an RSO. In order to create events, students will need to be part of an RSO, and one member will be selected as an admin of the RSO which will allow them to host the event. Along with Users and admins, there will be *super admins* which will be certain faculty members who are a part of the university and will be able to create universities for the application and sign approval for certain events that require it.

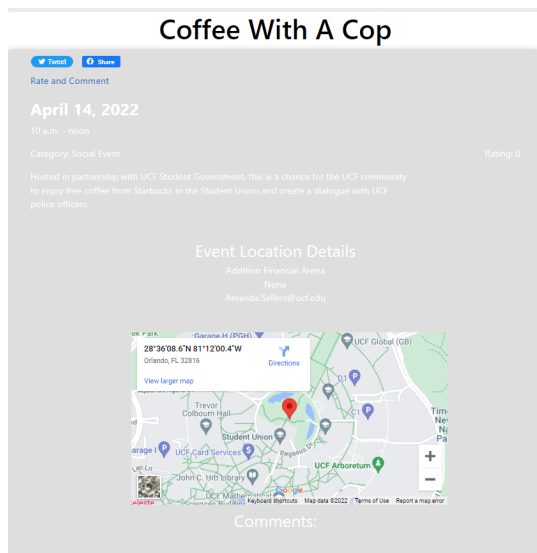
People who join the website will be a part of three different roles, *user*, *admin*, and *super admin*. Users are students, regardless of university, who register an account and are able to view any event on the website and join the university that they belong to. Any user can also request to join an RSO if they would like, which would have to be approved by the admin of the respective RSO. Any user is also allowed to create an event if they wish, however, they will first need to be a part of an existing RSO or create one specific for the event they wish to create. If users wish to create an RSO for hosting an event, the user that creates the RSO to host the event will be promoted to the admin for that RSO, which will allow them to create the event and have other users join/view their event. Lastly, *super admins* are the only ones with the permission to create universities for the website for students belonging to that respective university to join. Super admins can approve events that require permission, such as special events created without an RSO, as well as create the profile for each university, complete with a description, location, number of students attending, as well as upload pictures for the university, etc.

Regardless of the purpose or content of the event, whether it is for fundraising, music, giving speeches, or any other purpose, the event will either be a public, private, or RSO event. A public event allows any User to view the event on the website and attend if they wish. Private events are only able to be viewed by students who belong to the same university that is hosting the private event. Lastly, RSO events are events that are only able to be viewed by users who belong to the RSO that is hosting the event. For every event created, there will be a profile with information all about the event. This includes the name of the event, a description, location of the event, time and date, contact information for the hosting party, such as an email address and phone number, and an indicator for the event that specifies if it is a public, private, or RSO event. Users will be able to create comments on any event they wish and will be allowed to delete or edit their own comments. Additionally, users will also be able to rate any event 1 through 5 stars.

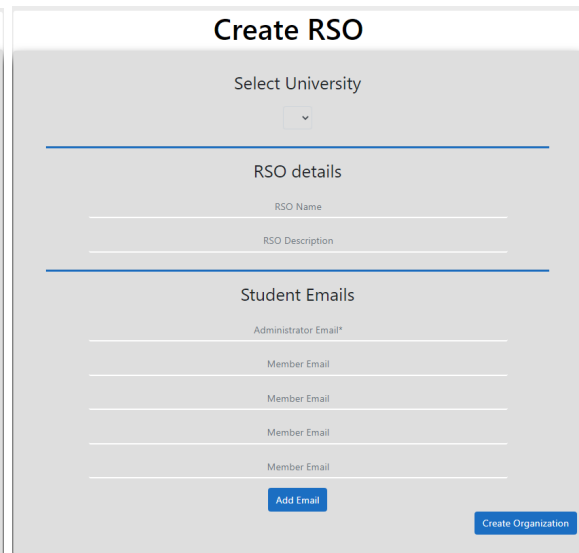
# GUI

The Graphical User Interface used to view the College Events Web Application is a website that users can connect to from their web browsers on their device. When a user first connects to the site, they will be greeted with a page prompting them to register an account or log in to their existing account. Once they log in to the site, they will see the home page listing the events that are available to attend, in order to see events specific to a university, they will have to select their university from the “University” drop down menu. Other pages viewable on the website aside from “View Events” include: Universities, User Profile, RSOs, and more.

The website was created using HTML, as well as the styling of the website, along with CSS. Python was used for the majority of the code to facilitate and join together the website and the database. Some features, for example the integration with Maps, used JavaScript. The Database Management System used for this project was SQLite. We chose to use SQLite over MySQL because it is a database that is serverless and runs as part of the application, and we thought this would make it easier to work with for the purpose of this web application and database.



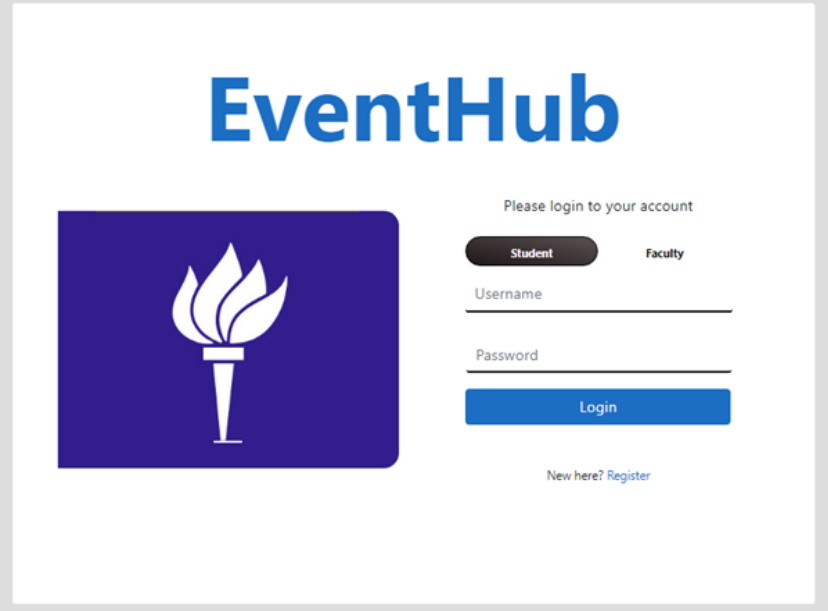
Screenshot showing View Event page



Screenshot showing Create RSO page

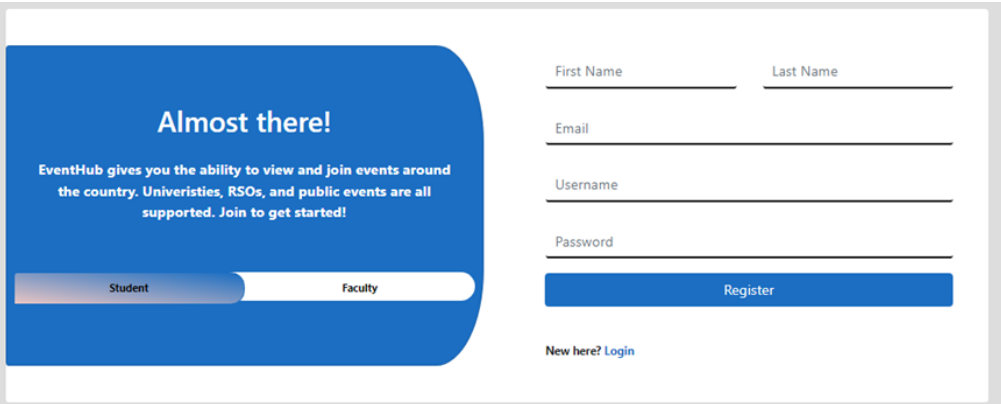
## GUI For Login and Registering an Account

When students go to the website, they will first be met with a page prompting them to sign into their accounts registered with the website, or if they do not have one, they will first register an account to be able to use the website. If the person logging is a member of the faculty of their university, they will have an option on the login/register page that will grant them their respective privileges and allow them to create a page for their university.



The login page features the 'EventHub' logo in blue at the top center. Below the logo is a purple square containing a white torch icon. To the right of the logo, the text 'Please login to your account' is displayed. Below this text are two radio buttons labeled 'Student' and 'Faculty'. Underneath the radio buttons are two input fields for 'Username' and 'Password'. A blue 'Login' button is positioned below the password field. At the bottom right, there is a link that says 'New here? Register'.

Screenshot showing login page

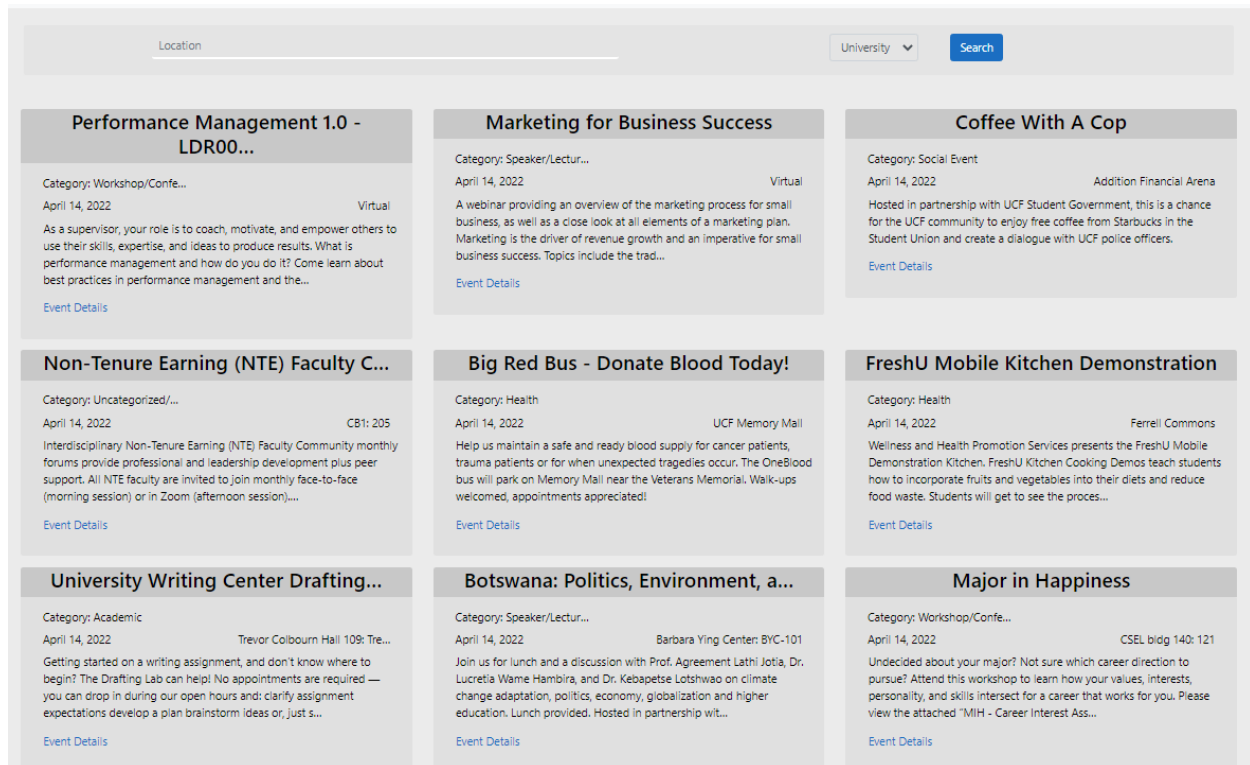


The register page has a blue header with the text 'Almost there!'. Below the header, a message states: 'EventHub gives you the ability to view and join events around the country. Universities, RSOs, and public events are all supported. Join to get started!'. There are two radio buttons labeled 'Student' and 'Faculty'. To the right of these are four input fields: 'First Name', 'Last Name', 'Email', and 'Username'. Below the 'Username' field is a 'Password' field. A blue 'Register' button is located below the password field. At the bottom left, there is a link that says 'New here? Login'.

Screenshot of the register account page

## GUI For Event Page

At the Events page of the website, students, users, or anyone on the website will be able to view the many events listed on the website here. These events on this page are all approved and official events created, and different users will be able to see different events depending on their permission level. Users will also be able to use the search bar to search through the different events listed on the site.



Screenshot showing the Events Page with multiple events listed.

From this page, users will see all the information about any event they select, such as name, location, date and time, and a description of the event. From here they will also be able to write comments on the event, as well as see ratings and comments written by other users.

Super admins will have a slightly different view of the Events Page, as they are allowed to approve or deny certain events, such as when an event is created without an RSO.

# Example Event Page

## Coffee With A Cop

[Tweet](#) [Share](#)

Rate and Comment

**April 14, 2022**

10 a.m. - noon

Category: Social Event

Rating: 0

Hosted in partnership with UCF Student Government, this is a chance for the UCF community to enjoy free coffee from Starbucks in the Student Union and create a dialogue with UCF police officers.

### Event Location Details

Addition Financial Arena

None

Amanda.Sellers@ucf.edu



Comments:

Screenshot showing a full event page, along with all the information about the event.

# Create Event GUI

Through the Create Event page, admins who are a part of an RSO can create an event if they wish, which will either be public, private, or an RSO event. This page will allow the admin to include all the necessary information about the event, such as the event name, category (public, private, RSO event), a description for the event, the RSO involved with the event, location, date and time of the event, and relevant contact information for the people hosting the event.

EventHub View Events Registered Student Organizations Universities Profile Logout

## Create Event

### Event Details

Event Name\*

Event Category\*

Describe the event.\*

☐ University Event

No RSO

---

### Set Location

Location Name\*

Latitude\*

Longitude\*

Adjust Map

Garana, HI (PGH)

UCF Global (GB)

28°36'08.6"N 81°12'00.4"W

Orlando, FL 32816

Directions

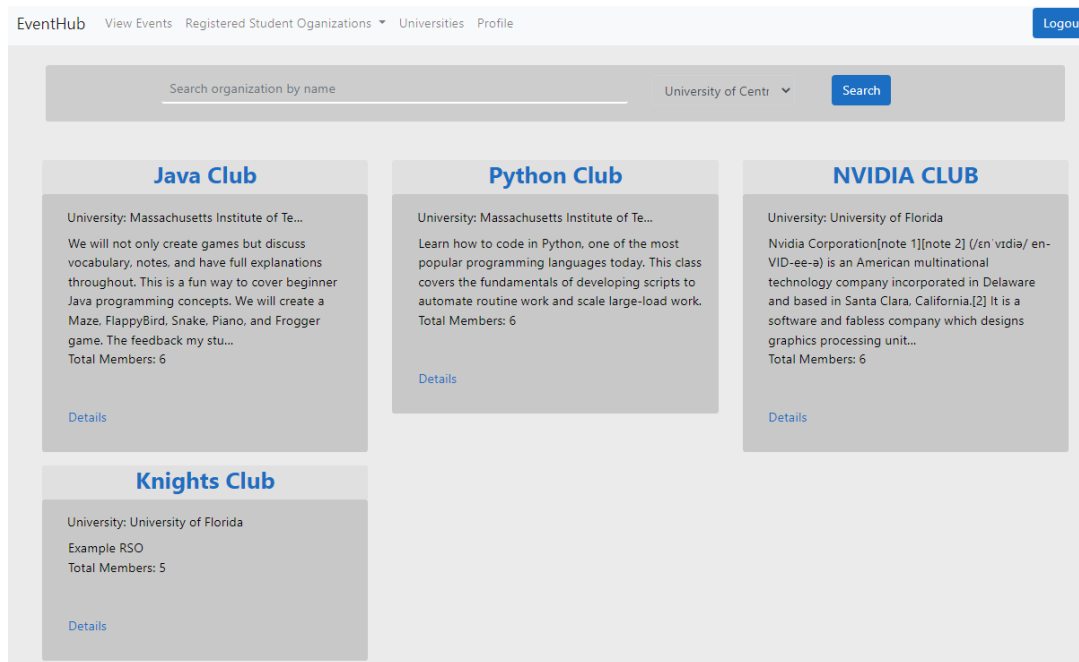
View larger map

Screenshot of the Create Event Page.



# GUI for RSOs

The website will hold a page dedicated to RSOs so that any user may see any and all RSOs already registered to the site. From here, they can search for RSOs by name, or by university they belong to. Users will also be able to request to join an RSO of their choosing.



Screenshot showing the RSO page and search function to find RSOs.

There will also be an option on this page for users to create their own RSOs, this will promote the user who goes to create an RSO to admin, so that they will be able to take charge of that RSO and create an event. The admin will also have the ability to delete any RSOs that they are admin of.



Screenshot showing an RSO description in the RSO Page.

## Create RSO GUI

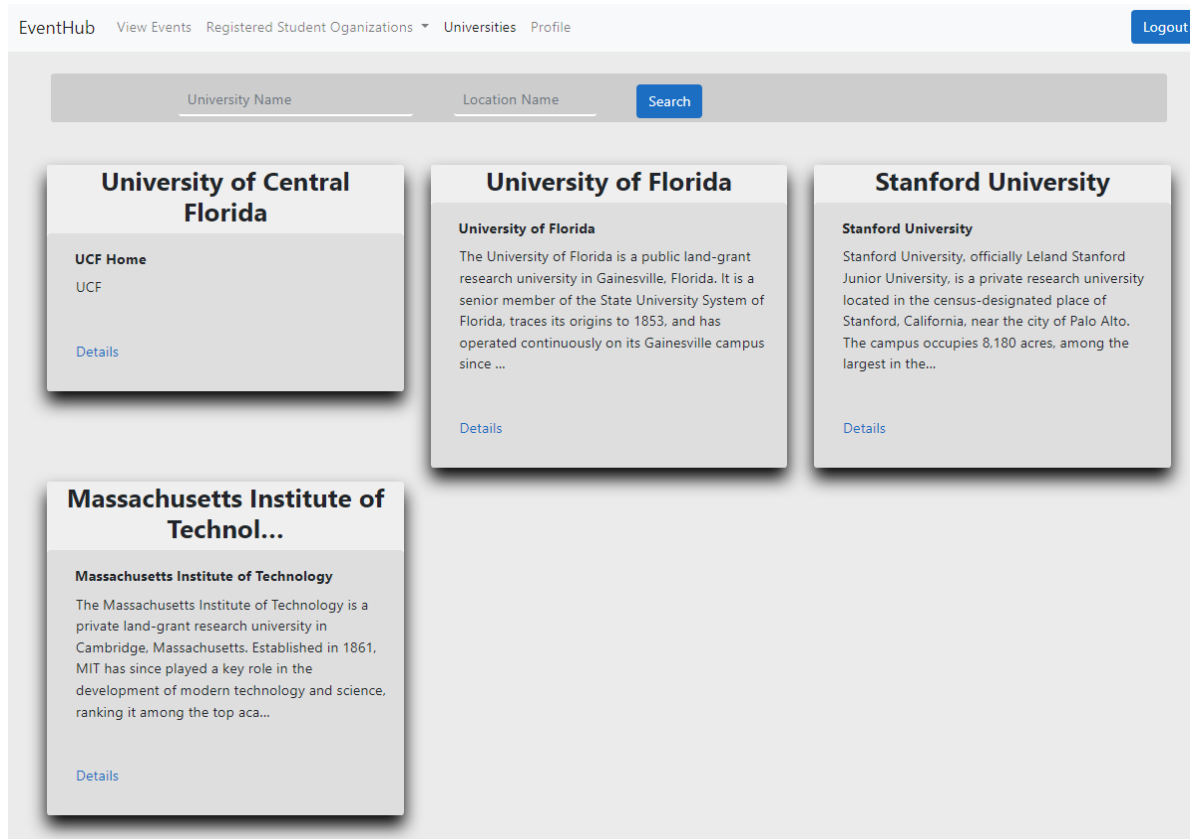
Similar to the Create Events page, users who are admins will be allowed to create an RSO to be able to host events. This page will allow users to include details about the RSO they are creating, such as an RSO name, and description, as well as identify which university the RSO belongs to. Additionally, they will be able to list their admin name and email, as well all the members' name and email addresses that are apart of the RSO. All of the members of an RSO must have the same email domain as the admin.

The screenshot displays a web form titled "Create RSO". At the top, there is a "Select University" label above a dropdown menu. Below this, a horizontal blue line separates the header from the "RSO details" section. This section contains two input fields: "RSO Name" and "RSO Description". Another horizontal blue line follows. The "Student Emails" section contains five input fields: "Administrator Email\*" and four "Member Email" fields. Below these fields is a blue "Add Email" button. At the bottom right of the form is a blue "Create Organization" button.

Screenshot showing the page where Users will create their own RSOs.

# GUI for Universities

From the Universities page, all Users of the website will be able to view the available universities that have accounts set up by super admins of their respective university. From here, they can use the search bar to find any university they choose, provided they have an account with the website.



Screenshot showing various universities with profiles set up on the website.

# University of Florida

## University of Florida

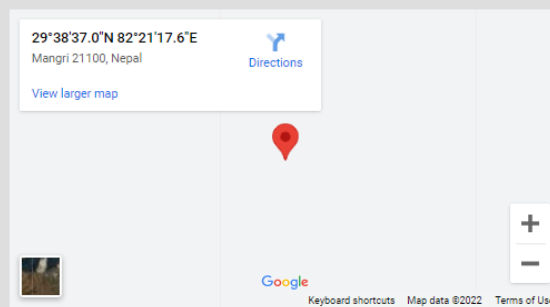
29.6436,82.3549

Students: 10

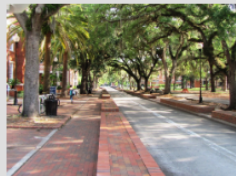
The University of Florida is a public land-grant research university in Gainesville, Florida. It is a senior member of the State University System of Florida, traces its origins to 1853, and has operated continuously on its Gainesville campus since September 1906

[Join University](#)

## University Map



## Photos



Screenshot showing the example university profile for UF.

Additionally, each available university will have another page dedicated to it with a description, number of students, pictures of the university, etc. Users who are students and or admins will be able to join the university that they attend, and super admins will create this page for their respective university, as well as edit/delete the page if they wish.

## Create University

### Details

University Name

University Description

Number of Students: 99

### Location

Location Name\*

Latitude\* Longitude\*

Set Map to Coordinates

### Photos

Add Photo

Create

Screenshot of the Create University Page for UCF (super admin only)

## GUI For User Profile

When Users register an account or login to the website, they will be able to see their account details, as well as edit/include details about themselves, such as their account name, real name, email, RSOs they are a part of, as well as the university that they attend.

The screenshot displays a user profile interface. At the top, a box titled 'User Information' contains the following details: Name: Jacob Parrish, Email: jacpar1999@gmail.com, and Username: Jacpar1. Below this, a horizontal blue line separates the header from the main content area. The main content area is titled 'University'. On the left side of this area, there is a card for 'University of Central Florida'. This card has a header with the university name and two buttons: 'UCF' and 'Details'.

User Information	
Name:	Jacob Parrish
Email:	jacpar1999@gmail.com
Username:	Jacpar1

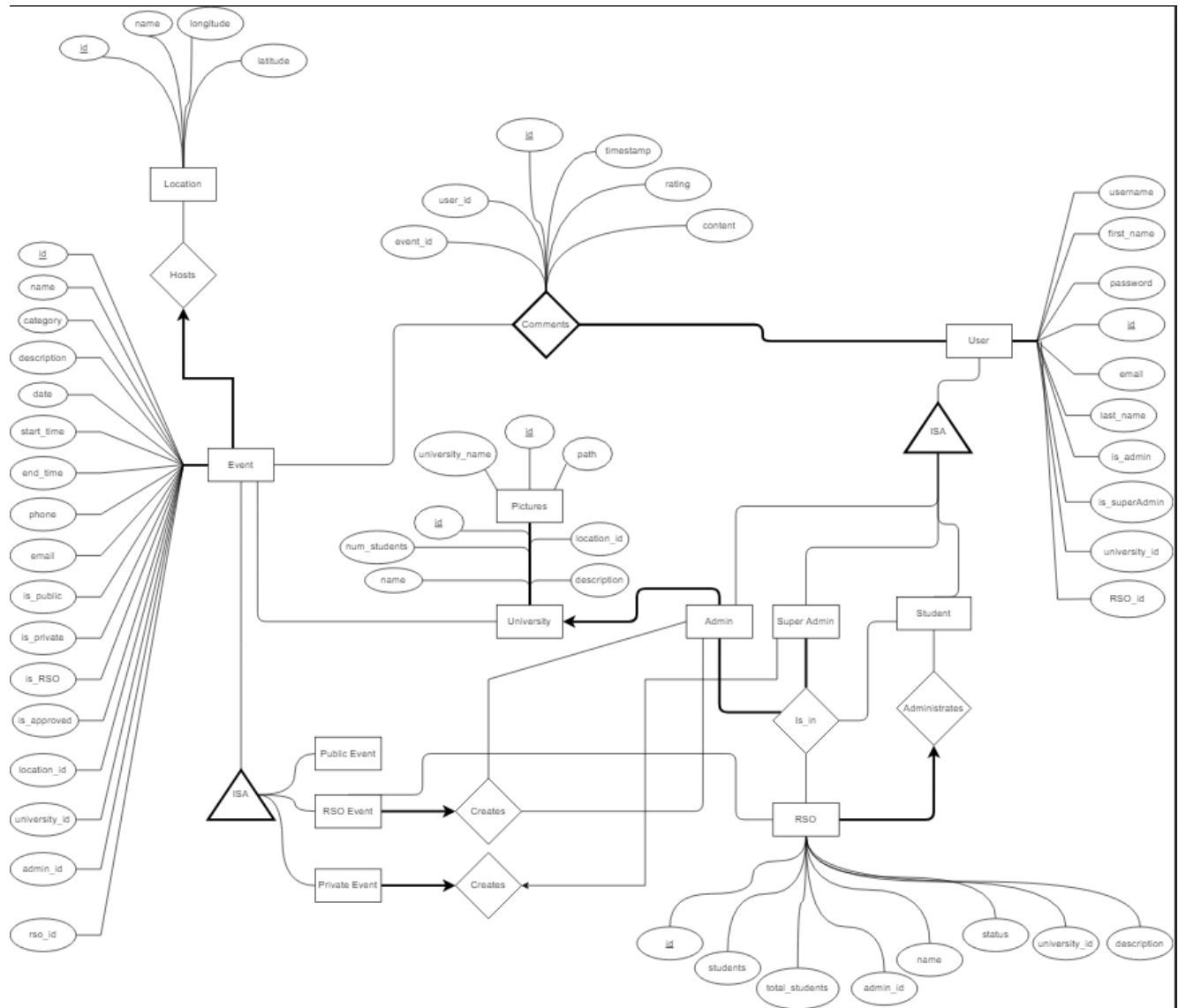
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### University

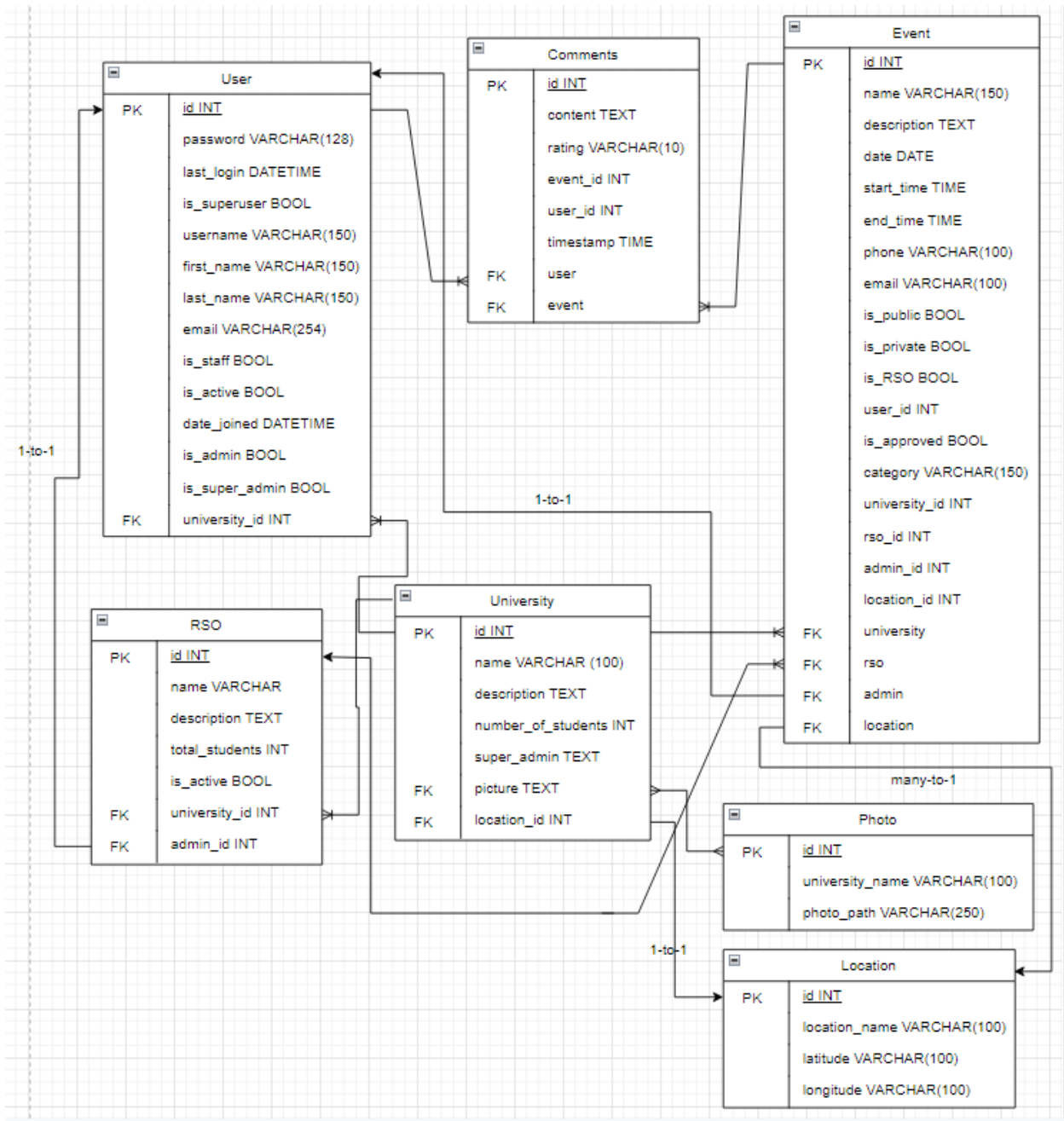
University of Central Florida	
UCF	
Details	

Screenshot of the User's profile upon logging in and information about them.

## ER-Model



# Relational Data Model



The Relational Model Diagram showing the different tables required for the database, and the relationships between them.



# SQL

## User Tables

SQL to create User table

```
CREATE TABLE Users_user (  
    id INT PRIMARY KEY NOTNULL,  
    password VARCHAR(128) NOTNULL,  
    last_login DATETIME,  
    is_superuser BOOL NOTNULL,  
    username VARCHAR(150) NOTNULL,  
    first_name VARCHAR(150) NOTNULL,  
    last_name VARCHAR(150) NOTNULL,  
    email VARCHAR(254) NOTNULL,  
    is_staff BOOL NOTNULL,  
    is_active BOOL NOTNULL,  
    data_joined DATETIME,  
    is_admin BOOL NOTNULL,  
    is_super_admin BOOL NOTNULL,  
    university_id INT  
);
```

SQL to join RSO to User table

```
CREATE TABLE Users_rsonumber(  
    id INT PRIMARY KEY NOTNULL,  
    username VARCHAR(100) NOTNULL,  
    rso INT NOT NULL  
);
```

## RSO Tables

SQL to create RSO table

```
CREATE TABLE RSO_rso(  
    id INT PRIMARY KEY NOTNULL,  
    name VARCHAR(255) NOTNULL,  
    description TEXT,  
    total_students INT NOTNULL,  
    admin_id INT NOTNULL,  
    university_id INT NOTNULL,  
);
```

SQL to create RSO table to hold students

```
CREATE TABLE RSO_rso_students(  
    id INTEGER PRIMARY KEY NOTNULL,  
    rso_id INTEGER NOTNULL,  
    user_id INTEGER NOTNULL  
);
```

RSO Trigger to add a member and set status as active

```
CREATE TRIGGER RSOSTatusUpdateA  
    AFTER INNER ON RSO_rso_students  
    REFERENCING NEW AS NewMember  
    WHEN ((SELECT COUNT(*)  
        FROM RSO_rso_students M  
        WHERE M.rso_id = NewMember.rso_id) > 4)  
    FOR EACH ROW  
    UPDATE RSOs  
    SET Status = 'active'  
    WHERE RSO_ID = NewMember.RSO_ID
```

## University Tables

SQL to create table for Universities

```
CREATE TABLE Universities_university(  
  id INT PRIMARY KEY NOTNULL,  
  name VARCHAR(100) NOTNULL,  
  description TEXT NOTNULL,  
  number_of_students INT NOT NULL,  
  location_id INT NOTNULL,  
  super_admin  
);
```

University Trigger to update university status and RSOs

```
CREATE TRIGGER UniversityChecker  
  AFTER INNER ON Universities_locations  
  REFERENCING NEW AS NEW Universities_university  
  WHEN ((SELECT COUNT(*)  
    FROM RSO_rso_students M  
    WHERE M.rso_id = NewMember.rso_id) > 4)  
  FOR EACH ROW  
  UPDATE RSOs  
  SET Status = 'active'  
  WHERE RSO_ID = NewMember.RSO_ID
```

## Event Tables

SQL to create Event Table

```
CREATE TABLE Events_event(  
  id INT PRIMARY KEY NOTNULL,  
  name VARCHAR(150) NOTNULL,  
  description TEXT NOTNULL,  
  date DATE NOTNULL,  
  start_time TIME NOTNULL,  
  end_time TIME NOTNULL,  
  phone VARCHAR(31) NOTNULL,  
  email VARCHAR(254) NOTNULL,  
  is_public BOOL NOTNULL,  
  is_private BOOL NOTNULL,  
  is_RSO BOOL NOTNULL,  
  user_id INT,  
  is_approved BOOL NOTNULL,  
  location_id INT,  
  university_id INT,  
  category VARCHAR(150)  
  rso_id  
);
```

SQL to create comments table for events

```
CREATE TABLE Events_comment(  
  id INT PRIMARY KEY NOTNULL,  
  content TEXT NOTNULL,  
  rating INT NOTNULL,  
  event_id INT NOTNULL,  
  user_id INT NOTNULL,  
  timestamp TIME NOTNULL  
);
```

SQL to create table to hold locations of events

```
CREATE TABLE Events_locations(  
    id INT PRIMARY KEY NOTNULL,  
    location_name VARCHAR(100) NOTNULL,  
    latitude VARCHAR(100) NOTNULL,  
    longitude VARCHAR(100) NOTNULL  
);
```

Event Triggers SQL















```
CREATE TRIGGER Event_check  
    AFTER INNER ON Events_event  
    REFERENCING NEW AS NEW Events_event  
    WHEN ((SELECT COUNT(*)  
        FROM Events_event M  
        WHERE M.start_time = NewEvent.start_time  
        WHERE M.endt_time = NewEvent.end_time  
        WHERE M.location_id = NewEvent.location_id  
    ))  
  
CREATE TRIGGER Event_admin_checker  
    AFTER INNER ON Events_event  
    REFERENCING NEW AS NEW Events_event  
    WHEN ((SELECT COUNT(*)  
        FROM Users_user M  
        WHERE M.rso_id = NewEvent.admin_id.rso_id  
    ))  
    FOR EACH ROW  
    UPDATE Events_event
```

# Sample Data

## Sample: 2 Universities

	id		name	description	number_of_stu...	location_id
			Search column...	Search column...	Search column...	Search column...
1	1	1	University of Central ...	UCF	5	1
2	2	2	University of Florida	The University of Flor...	10	2
3	3	3	Stanford University	Stanford University, o...	15	3
4	4	4	Massachusetts Institu...	The Massachusetts In...	55	4

## Sample: 20 Students

	<div><div>id</div><div> </div></div>	<div><div>last_login</div><div> </div></div>	<div><div>is_superuser</div><div> </div></div>	<div><div>username</div><div> </div></div>	<div><div>first_name</div><div> </div></div>	<div><div>last_name</div><div> </div></div>	<div><div>email</div><div> </div></div>	<div><div>is_staff</div><div> </div></div>	<div><div>is_active</div><div> </div></div>
	<div>Search column...</div>	<div>Search column...</div>	<div>Search column...</div>	<div>Search column...</div>	<div>Search column...</div>	<div>Search column...</div>	<div>Search column...</div>	<div>Search column...</div>	<div>Search column...</div>
1	1	2022-04-15 23:00:14....	0	ebates	Erik	Bates	erik.bates@knights.u...	0	1
2	2	2022-04-16 01:57:31....	0	erik1	Erik	Bates	erik.bates1@gmail.co...	0	1
3	3	NULL	0	erik2	Erik	Bates	erik.bates2@gmail.co...	0	1
4	4	2022-04-15 19:07:24....	0	erik3	Erik	Bates	erik.bates3@gmail.co...	0	1
5	5	NULL	0	erik4	Erik	Bates	erik.bates4@gmail.co...	0	1
6	6	NULL	0	erik5	Erik	Bates	erik.bates5@gmail.co...	0	1
7	7	2022-04-15 23:49:09....	0	jdoe	John	Doe	jdoe@gmail.com	0	1
8	8	2022-04-15 23:49:32....	0	janeDoe	Jane	Doe	jane.doe@gmail.com	0	1
9	9	2022-04-16 01:23:23....	0	sia	Sia	Voi	sia@gmail.com	0	1
10	10	2022-04-16 01:56:25....	0	bill	Bill	Bradsky	bill@gmail.com	0	1
11	11	2022-04-15 23:33:01....	0	rudd	Glenn	Rudd	rudd@knights.ucf.edu	0	1
12	12	2022-04-16 00:17:14....	0	vic	Vic	Summer	vic@knights.ucf.edu	0	1
13	13	2022-04-15 23:41:54....	0	kim	Kim	Darling	kdar@gamil.com	0	1
14	14	2022-04-15 23:50:58....	0	jake	Jake	Grelp	jake@gmail.com	0	1
15	15	2022-04-16 00:47:43....	0	donny	Donny	Trumpski	donny@gmail.com	0	1
16	16	2022-04-16 01:15:03....	0	ajones	Alex	Jones	bones@gmail.com	0	1
17	17	2022-04-16 01:22:43....	0	bob	Bob	Spicer	bob@gmail.com	0	1
18	18	2022-04-15 23:51:37....	0	kelsey	Kelsey	McDaniel	kelsey@gmail.com	0	1
19	19	2022-04-15 23:51:55....	0	justin	Justin	Moscotto	justin@gmail.com	0	1
20	20	2022-04-16 02:05:11....	0	conner	Conner	McDonald	conner@gmail.com	0	1

## Sample: 3 RSOs

id	name	description	total_students	admin_id	status	university_id
Search column...	Search column...	Search column...	Search column...	Search column...	Search column...	Search column...
1	1 Java Club	We will not only crea...	6	16	1	4
2	2 Python Club	Learn how to code in...	6	15	1	4
3	3 NVIDIA CLUB	Nvidia Corporation[n...	6	9	1	2
4	4 Knights Club	Example RSO	5	47	1	2

## Sample: 5 events

1	1	Performance Manage...	As a supervisor, your ...	2022-04-14	09:00:00	11:30:00	+14078230440	HRLearning@ucf.edu	1
2	2	Marketing for Busine...	A webinar providing ...	2022-04-14	10:00:00	12:00:00	+14074204430	Jean.Hill@ucf.edu	1
3	3	Coffee With A Cop	Hosted in partnershi...	2022-04-14	10:00:00	12:00:00		Amanda.Sellers@ucf....	1
4	4	Non-Tenure Earning (...)	Interdisciplinary Non...	2022-04-14	10:30:00	11:45:00	+14078231113	facultyexcellence@uc...	1
5	5	Big Red Bus - Donate...	Help us maintain a sa...	2022-04-14	11:00:00	18:00:00		BloodDrives@ucf.edu	1
6	6	Emphat Mobile Health...	Wellness and Health...	2022-04-14	11:00:00	12:30:00	+14078235840	Megan.Grant@ucf.edu	1

## Sample: 3 comments

	Search column...	Search column...	Search column...	Search column...	Search column...	Search column...
1	1	Great event!	3	1	10	2022-04-15 19:32:31....
2	2	Can't wait to come b...	5	26	2	2022-04-15 19:32:31....
3	3	Well organized event	3	26	2	2022-04-15 19:32:31....
4	4	Four STARS! Great jo...	4	26	33	2022-04-15 19:32:31....

# SQL Examples and Results

SQL to insert new RSO

```
INSERT INTO RSO_rso (
  id,
  name,
  description,
  total_students,
  admin_id,
  status,
  university_id
)
VALUES(
  4,
  "Knights Club",
  "Example RSO",
  5,
  47,
  1,
  2
)
```

database result:

id	name	description	total_students	admin_id	status	university_id
1	Java Club	We will not only crea...	6	16	1	4
2	Python Club	Learn how to code in...	6	15	1	4
3	NVIDIA CLUB	Nvidia Corporation[n...	6	9	1	2
4	Knights Club	Example RSO	5	47	1	2

SQL to insert a new student to an existing RSO

```
INSERT INTO RSO_rso_students(
  id,
  rso_id,
  user_id
)
VALUES(
  1,
  1,
  17
)
```

database result:

id	rso_id	user_id
1	1	17

## SQL to insert a new event

```
INSERT INTO Events_event (  
  id,  
  name,  
  description,  
  date,  
  start_time,  
  end_time,  
  phone,  
  email,  
  is_public,  
  is_private,  
  is_RSO,  
  is_approved,  
  location_id,  
  university_id,  
  category,  
  admin_id,  
  rso_id  
)  
VALUES(  
  3,  
  "Coffee With A Cop",  
  "talk about star wars",  
  "2022-04-14",  
  "10:00:00",  
  "12:00:00",  
  "14078235841",  
  "Amanda.Sellers@ucf.edu",  
  1,  
  0,  
  0,  
  1,  
  3,  
  NULL,  
  "Social Event",  
  NULL,  
  NULL
```

## database result

3	Coffee With A Cop	Hosted in partnershi...	2022-04-14	10:00:00	12:00:00	A
Amanda.Sellers@ucf....	1	0	0	1	3	

SQL to insert/update a comment on an Event

```
INSERT INTO Events_comment(  
    id,  
    content,  
    rating,  
    event_id,  
    user_id,  
    timestamp  
)  
VALUES (  
    1,  
    "Great event!",  
    3,  
    1,  
    10,  
    "2022-04-15 19:32:31"  
)
```

database results

id	content	rating	event_id	user_id	timestamp
1	Great event!	3	1	10	2022-04-15 19:32:31...
2	Can't wait to come b...	5	26	2	2022-04-15 19:32:31...

SQL to display events (public, private, RSO)

```
SELECT DISTINCT*FROM 'Events_event' e  
WHERE e.is_public = 1  
  
SELECT DISTINCT*FROM 'Events_event' e, 'Users_user' m  
WHERE e.is_private = 1 And m.university_id = e.university_id  
  
SELECT DISTINCT*FROM 'Events_event' e, 'Users_rsonumber' u 'Users_user' m  
WHERE e.is_RSO = 1 And u.rso_id = e.rso_id AND m.username = u.username
```

database results

id	name	description	date	start_time	end_time	phone	email
1	Performance Manage...	As a supervisor, your ...	2022-04-14	09:00:00	11:30:00	+14078230440	HRLearning@u
2	Marketing for Busine...	A webinar providing ...	2022-04-14	10:00:00	12:00:00	+14074204430	Jean.Hill@ucf.e
3	Coffee With A Cop	Hosted in partnershi...	2022-04-14	10:00:00	12:00:00		Amanda.Sellers
4	Non-Tenure Earning (...)	Interdisciplinary Non...	2022-04-14	10:30:00	11:45:00	+14078231113	facultyexcellen



## Conclusion

The database and website works as intended to create a user-friendly environment for students and people across any university in the country to connect with other students and people from any other university to view and attend university-affiliated events ranging from club meetings, fraternity activities, social gatherings, speeches, and many more. The website also serves to encourage and make it easier for students to find activities, clubs, and events that they might be interested in, and allows them to meet and connect with other students who are interested in the same things. One feature of the website to facilitate connecting with other students with ease is the ability to share any event listed on the website to the students' FaceBook or Twitter account. This allows more options and visibility to reach more students from different universities who may be interested in attending different events. Another useful feature included in the website is the integration of google maps to show the exact location of universities and events so that students looking to attend an event of their choosing will have little to no trouble finding the event. In conclusion, the aim of the project was to create a platform to list events at any university and allow students from any university to be able to view and attend these events, and this website successfully serves this purpose.