Team Project Report

COP 4710 Fall 2018

Application:College Event Website

Project Title and Group Information

Title: College Event Website
Course Information: COP4720-18 Fall 2018
Group Information: Group 7
Group Members: Kimberly Stevens, Ashley Smith, Jonathan Cotto, Jason Taylor

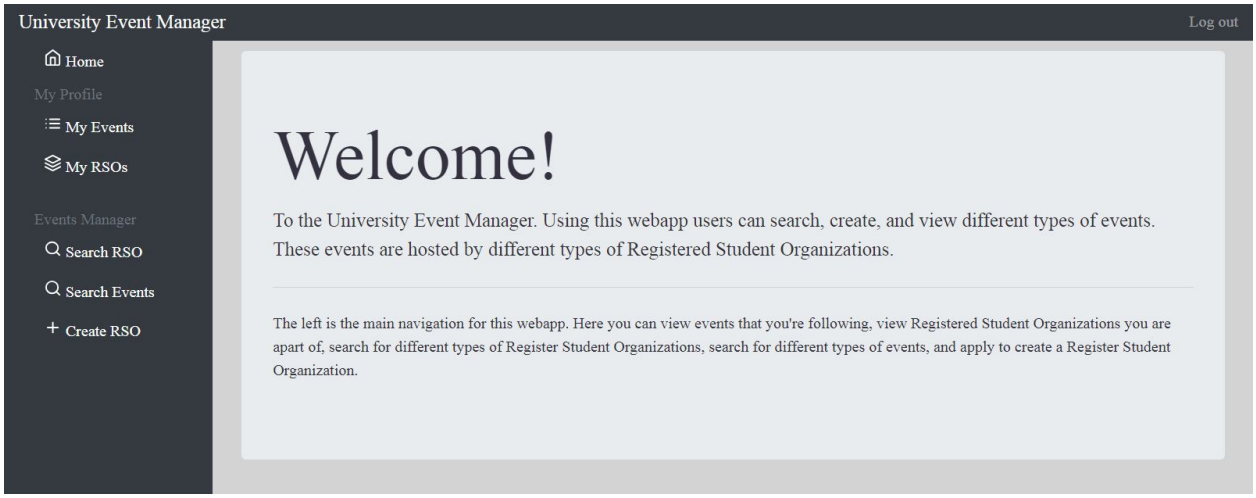
Table of Contents

Gui

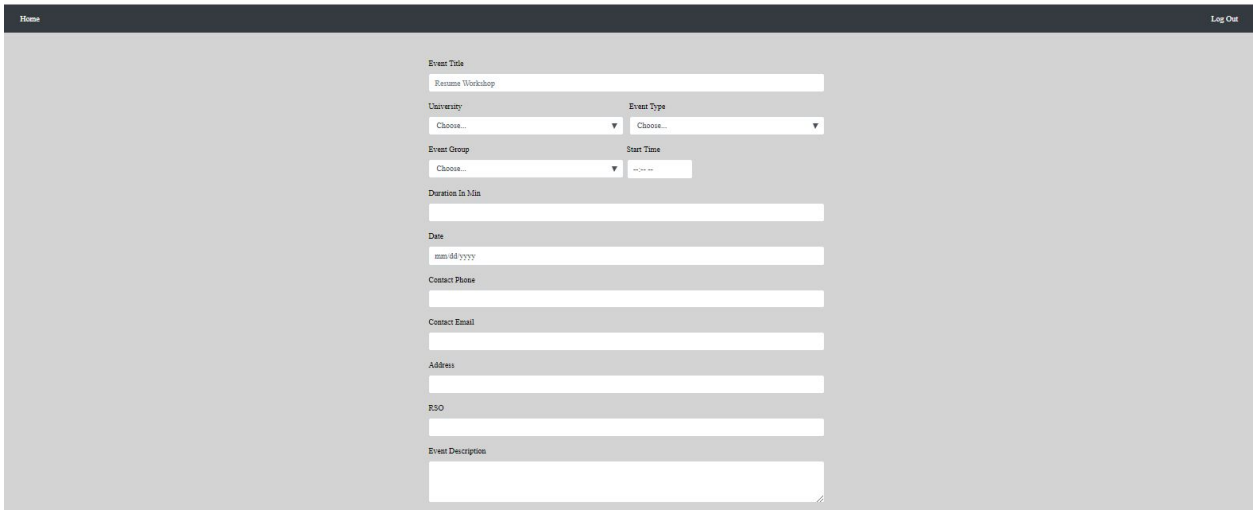
- Platform: Local host, Amazon AWS, Bootstrap
- Languages: HTML, PHP, Javascript, CSS, JSON
- DBMS: MySQL, made remote through Amazon AWS

Screenshots:

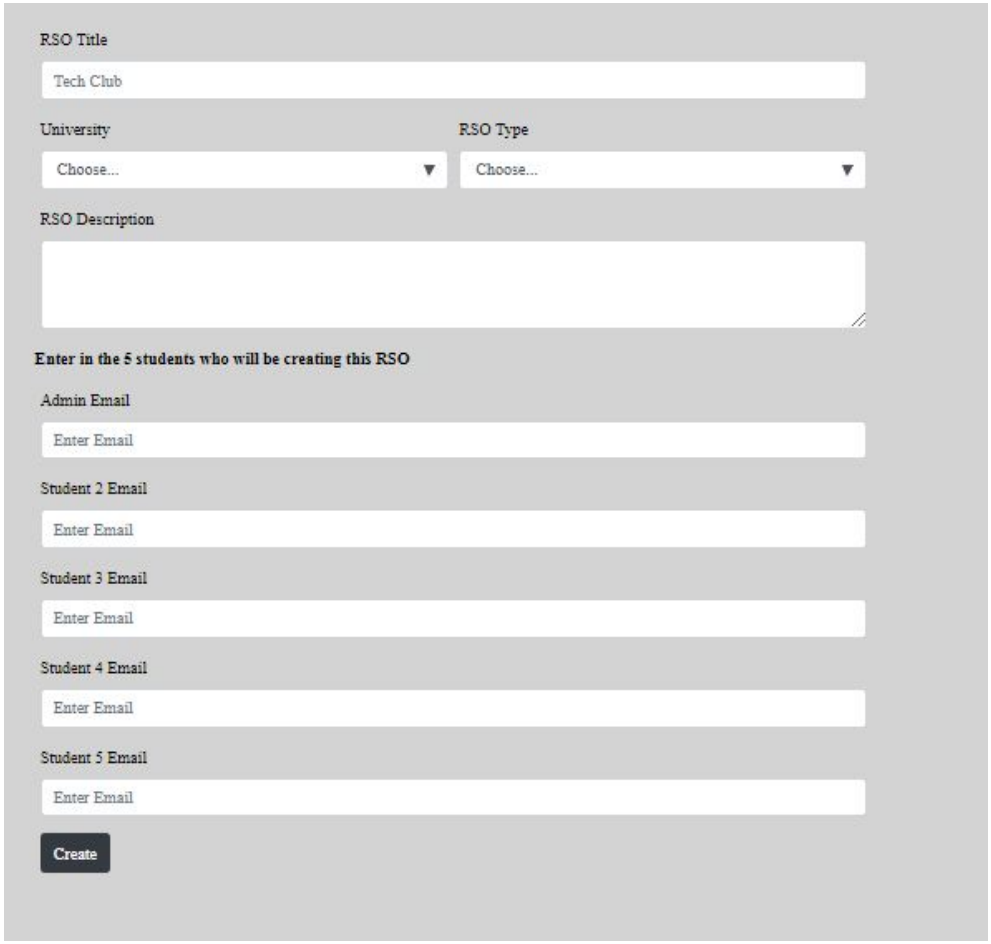
Homepage



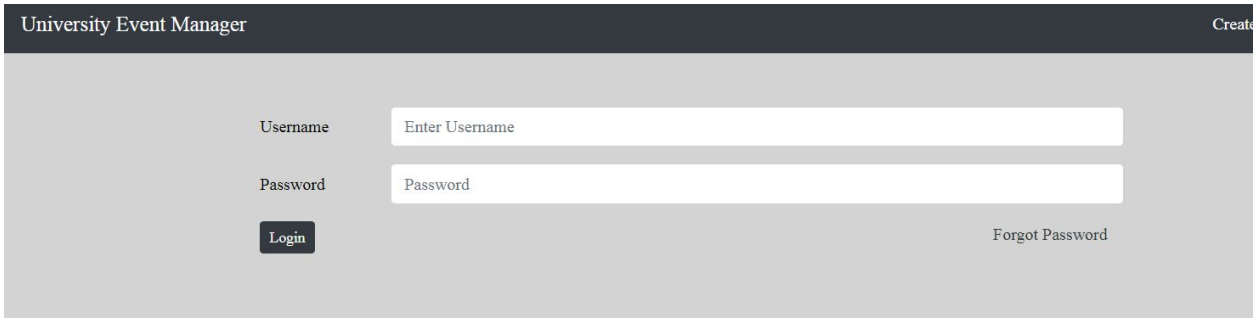
Create Event



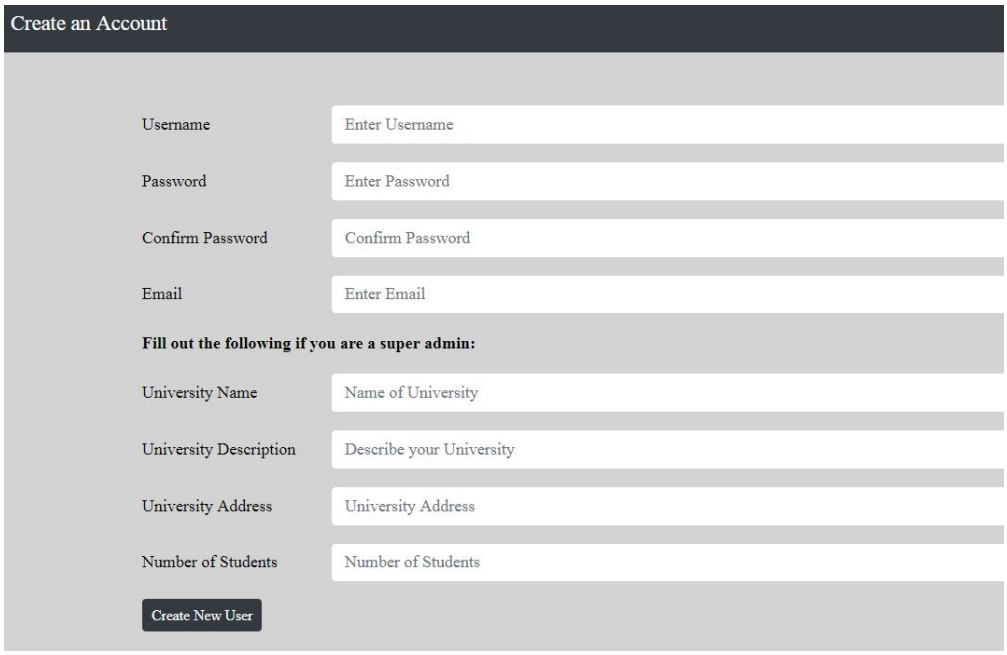
Create RSO



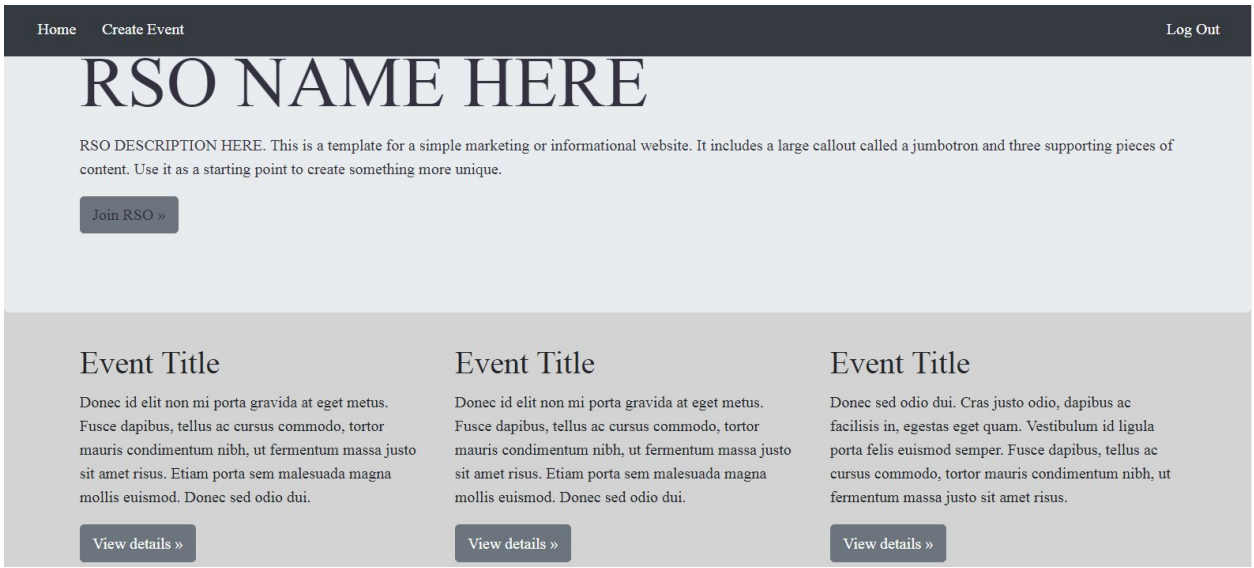
Login



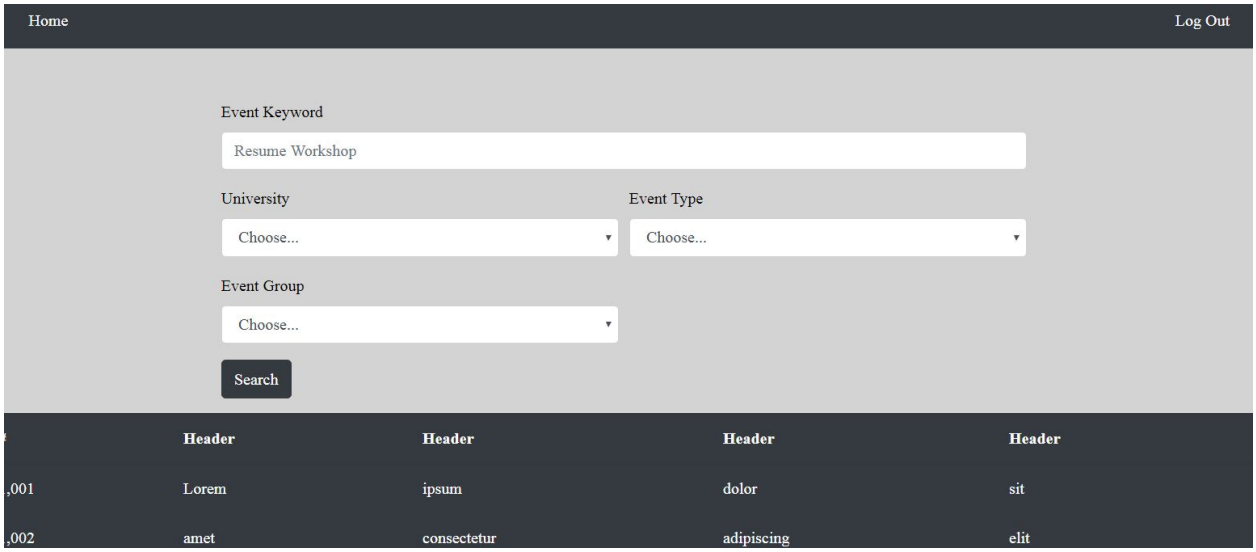
Create Account



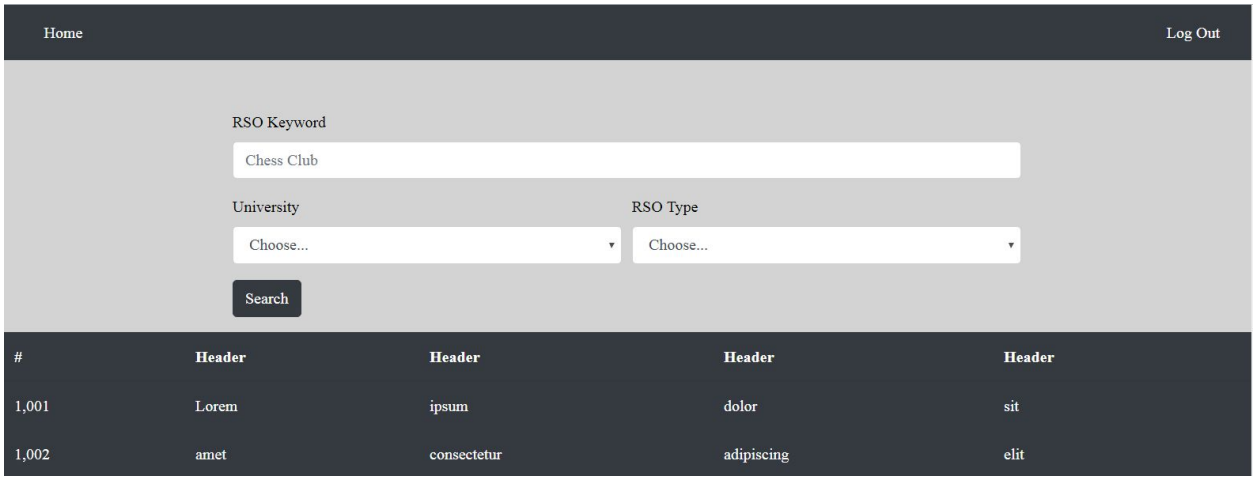
RSO Page



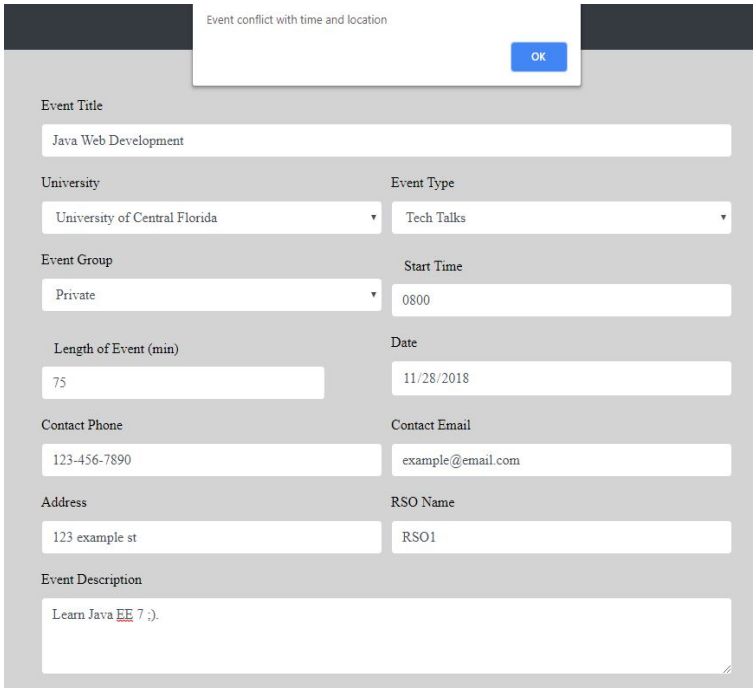
Search Event



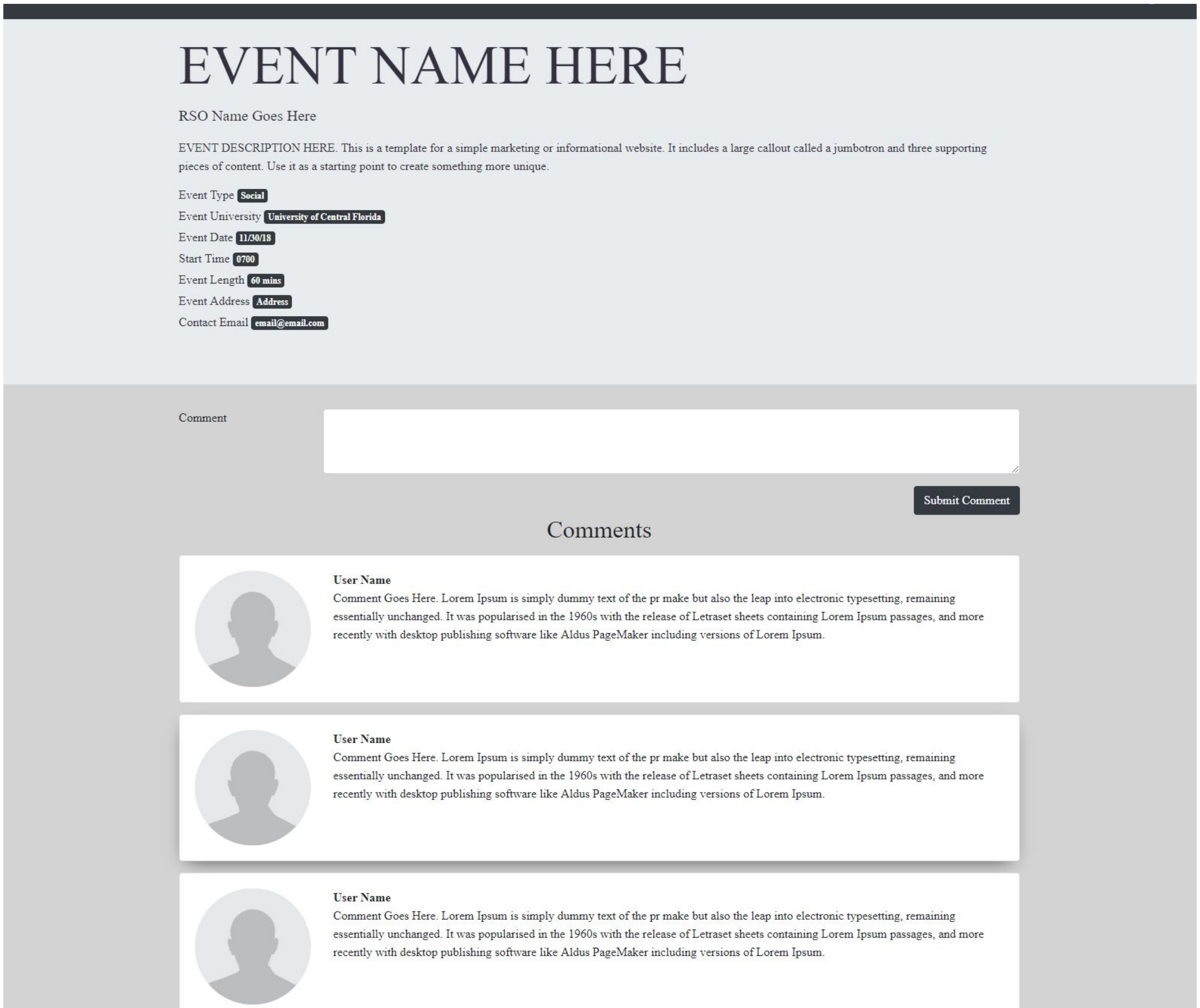
Search RSO



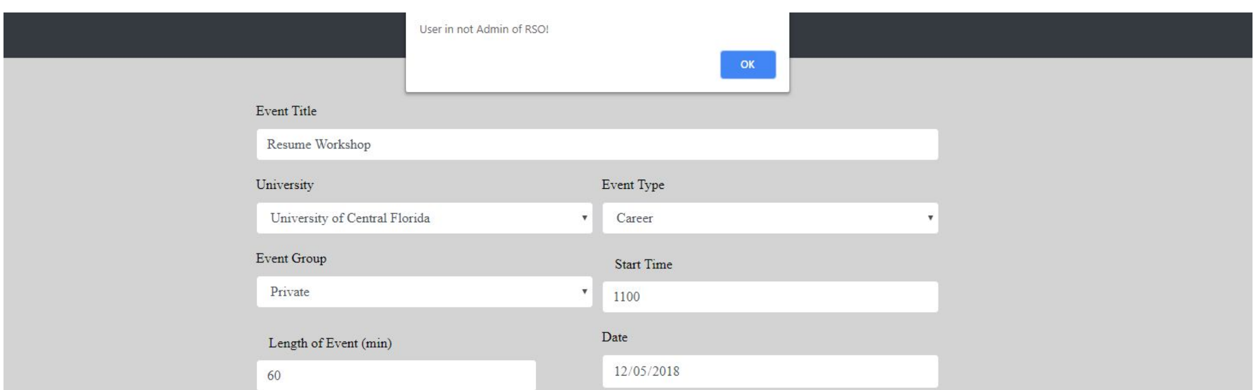
Conflicting Event Error



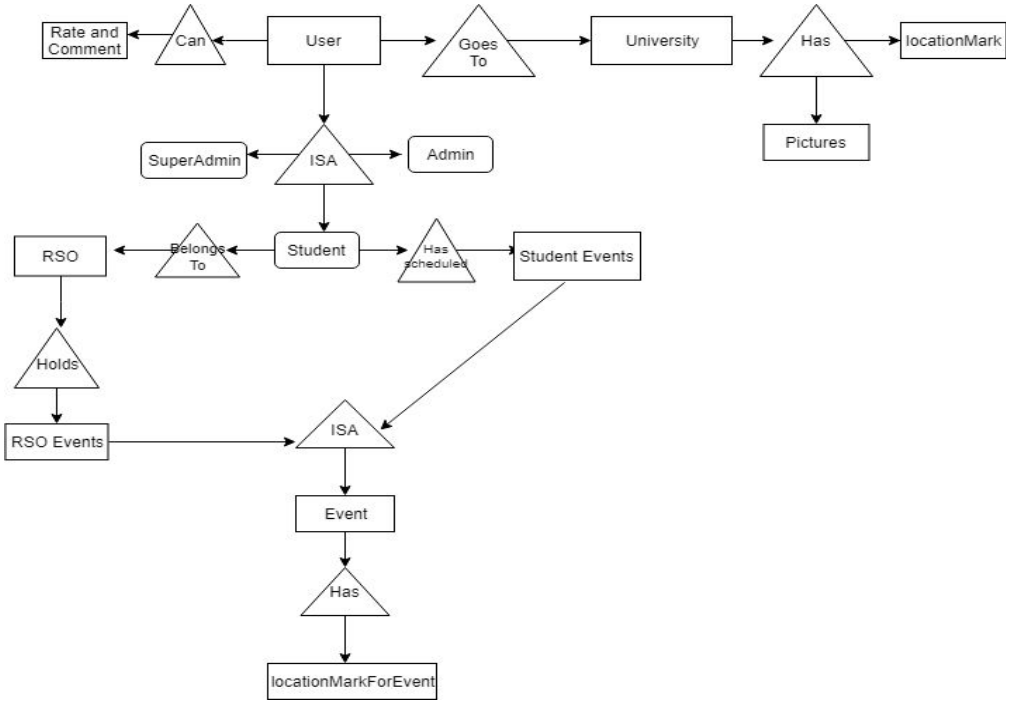
Events Page With Comments



User Not Admin Error



ER Model



Triggers

Rso becomes inactive with less than 5 students

```
use Scheduler;

DELIMITER $$
CREATE TRIGGER makeInactive
    AFTER UPDATE ON rso
FOR EACH ROW
begin
update rso
set isActive =0
where numStudents <5;
       end;
```

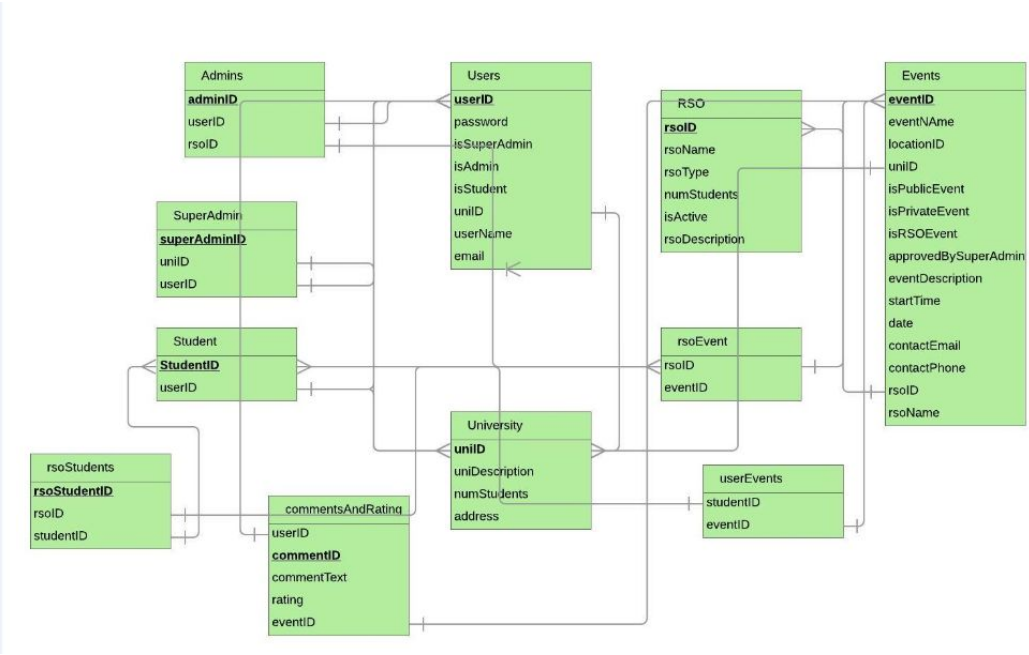
Rso becomes active with at least 5 students

```
use Scheduler;

DELIMITER $$
CREATE TRIGGER makeActive
    AFTER UPDATE ON rso
FOR EACH ROW
begin
update rso
set isActive =1
where numStudents >=5;
       end;
```

Code to remove a student from an RSO.

Relational Data Model



Populating tables with sample data

SQL Examples and Results

Insert a new RSO

SQL Statement:

```
// Create RSO by adding it to the rso table and making it act
$title = $_POST['rsoTitle'];
$university = $_POST['rsoUniversity'];
$description = $_POST['rsoDescription'];

$sql = "INSERT INTO rso(rsoName, numStudents, isActive)
        VALUES(?, ?, ?)";

$stmt = mysqli_prepare($connect, $sql);
$stmt->bind_param('sii', $title, 5, 1);
$stmt->execute();

$stmt->free_result();
$stmt->close();
```

Results:

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

rsoID	rsoName	rsoType	numStudents	isActive	rsoDescription	durationOfEvent
0	rso1	public	80	NULL	NULL	NULL
1	rso2	public	80	NULL	NULL	NULL
2	rso3	public	5	1	NULL	NULL
3		Social	5	1	This is a test	NULL
4	1	Choose...	5	1	22	NULL
5	jasonRSO	Fundraising	5	1	jason test	NULL
6	JTest	Fundraising	5	1	s	NULL
7	w	Tech Talks	5	1	w	NULL
8	more	Career	5	1	s	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Insert a new student into an existing RSO

```php
require_once 'session.php';
require('connect.php');

// Receive rsoID from front end.
$rso = json_decode(GET["rsoId"]);

// Insert into rsoStudents table
$sql = "INSERT INTO rsoStudents(rsoID, StudentID)
        VALUES($rso, $_SESSION['logged-in-user'])";

$result = mysqli_query($connect, $sql);

// Update numstudents in rso.
$updateNumStudents = "UPDATE rso
                      SET numStudents = numStudents + 1
                      WHERE rsoID = $rso";

$update = mysqli_query($connect, $sql);
```

SQL Statement:

Results:

rsoStudentID	rsoID	StudentID
0	0	35
1	1	35
2	0	27
NULL	NULL	NULL

Insert a new event

Sql statement:

```php
$query = "INSERT INTO events('eventName', 'uniID', 'eventDescription')
          VALUES (?, ?, ?)";

$stmt = mysqli_prepare($connect, $query);
$stmt->bind_param('sis', $title, $uid, $description);
$stmt->execute();

$stmt->free_result();
$stmt->close();
```

Result:

eventDescription	timeOfEvent	dateOfEvent	contactEmailAddress	contactPhone	rsoID	rsoName	durationOfEvent	address
NULL	00:00:12	NULL	contact@email.com	NULL	NULL	NULL	NULL	NULL
q	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
an event	08:00:00	2018-11-28	contact@email.com	9998887777	7	w	120	NULL
example public c...	08:00:00	2018-11-28	conflict@example.com	1234567890	2	rso 2	60	123 Ex...
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

New comment being added to the database

Sql statement:

```
// put into table
$sql = "INSERT INTO commentsAndRating(userID, commentText, eventID, rating)
        VALUES(?, ?, ?, ?)";

$query = mysqli_prepare($connect, $sql);
$query->bind_param('isii', $_SESSION['logged-in-user'], $comment, $event, $rating);
$query->execute();

$query->free_result();
$query->close();
```

Result:

commentID	commentText	rating	eventID
12	This event was amazing!	5	1
14	This event was uneventful.	2	1
15	This event was uneventful.	2	1

SQL statements of interest

Make rso inactive

```
use Scheduler;

DELIMITER $$
CREATE TRIGGER makeInactive
    AFTER UPDATE ON rso
FOR EACH ROW
begin
update rso
set isActive =0
where numStudents <5;
       end;
```

Make rso active trigger

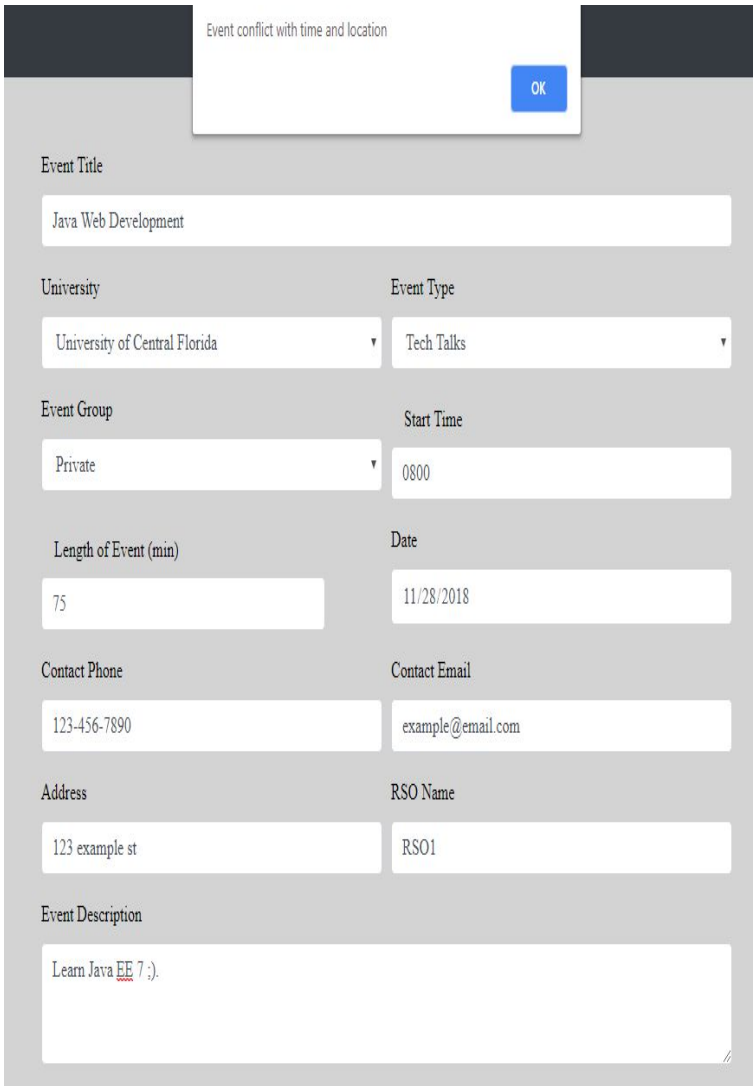
```
use Scheduler;

DELIMITER $$
CREATE TRIGGER makeActive
    AFTER UPDATE ON rso
FOR EACH ROW
begin
update rso
set isActive =1
where numStudents >=5;
       end;
```

Result in database
Result is shown below

Constraint Enforcement:

Overlapping location and time error



It's conflicting with:

eventDescription	timeOfEvent	dateOfEvent	contactEmailAddress	contactPhone	rsoID	rsoName	durationOfEvent	address
NULL	00:00:12	NULL	contact@email.com	NULL	NULL	NULL	NULL	NULL
q	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
an event	08:00:00	2018-11-28	contact@email.com	9998887777	7	w	120	NULL
example public c...	08:00:00	2018-11-28	conflict@example.com	1234567890	2	rso 2	60	123 Ex...
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

An admin who is not the admin of the rso attempts to create an event for that r

Trigger functions to make an rso inactive/active was shown above
Here is the delete query:

```php
<?php
    require_once 'session.php';
    require('connect.php');

    // Get rsoID from frontend
    $rsoId = json_decode(GET["rsoId"]);

    // upon button press, numStudents-- in rso
    $sql = "UPDATE rso
            SET numStudents = numStudents - 1
            WHERE rsoID = $rsoId";

    $result = mysqli_query($connect, $sql);

    // delete row from rsoStudents table
    $query = "DELETE FROM rsoStudents
              WHERE rsoID = $rsoId
                AND StudentID = $_SESSION['logged-in-user']";

    $delete = mysqli_query($connect, $query);
    mysqli_close($connect);
?>
```

Here is a rso with at least 5 students:

rsoID	rsoName	rsoType	numStudents	isActive	rsoDescription	durationOfEvent
0	rso1	public	80	NULL	NULL	NULL
1	rso2	public	80	NULL	NULL	NULL
2	rso3	public	5	1	NULL	NULL
3		Social	5	1	This is a test	NULL
4	1	Choose...	5	1	22	NULL
5	jasonRSO	Fundraising	5	1	jason test	NULL
6	JTest	Fundraising	5	1	s	NULL

Here is what happens when a student is removed, it becomes inactive

5	jasonRSO	Fundraising	5	1	jason test	
6	JTest	Fundraising	4	0	s	NULL
7	...	Tech Talks	5	1	...	NULL

Advanced Features

-It has a responsive design, is formatted on any device.
-The database is remote, can be accessed remotely from any computer

Conclusion/Observation

-A variety of different queries were run on a variety of tables and the query timing has a range of 0.032-0.048 seconds. Most queries tend to run around 0.046 seconds.

-For suggested index:

Currently we have clustered indexes but nonclustered would work as well if it is done alphabetically by the name of things such as eventName, rsoName, studentName

For the tables that involve range selection queries we would use B-Trees, and the tables that involve equality selection we would use hash data structure.

Desired features/functionality

-The passwords are hashed

Problems encountered

-Delegating tasks better. If we planned everything out properly in the beginning it would have been easier to get everything done on time.
-Had trouble setting up database at first
-Most of us were also inexperienced with using PHP