# **Group Report**

Application: College Event Website COP4710-19 FALL 2019 Group #52 Jason Dhillon

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## **Project Description:**

Create a web application which displays event information for student created RSO's or Registered Student Organizations. There should be three different tiers of users: students, admins, and superadmins. Students should be able to join RSO's and create them, in addition to making comments and rating the events. Admins are able to create events for their RSO's. Superadmins are able to create new universities as well as approve or deny public events from students.

Student RSO's require at least 5 students before becoming active, in which case events can then be made for the organization and displayed on the site. Events may not overlap if they occur on the same day, same time, and same location as another event. Events should include a name, date, time, description, and whether the event is public, private, or club members only.

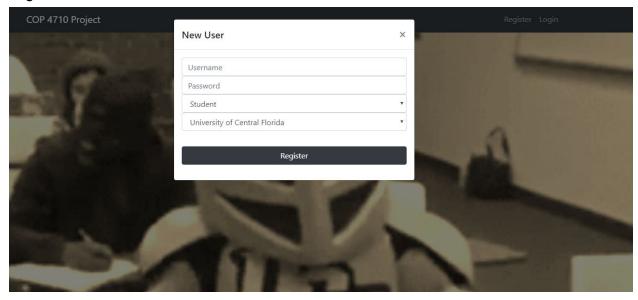
The application should be a full stack, utilizing a frontend, backend, and a database (MySQL).

# **GUI:**

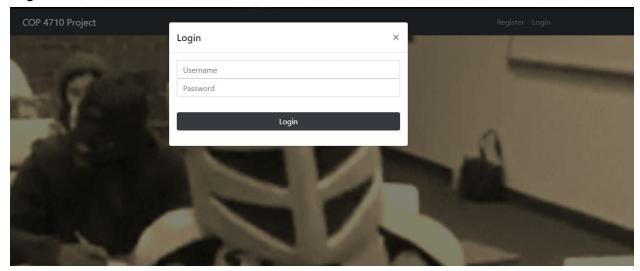
## Not Logged in -> base site



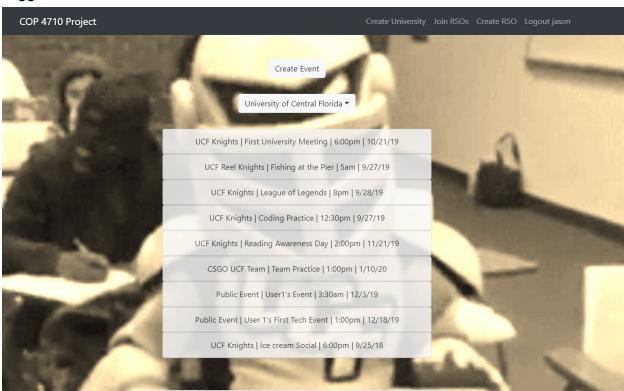
## Register modal



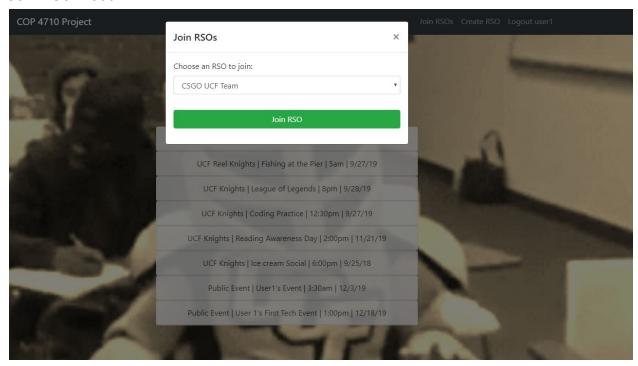
### Login modal



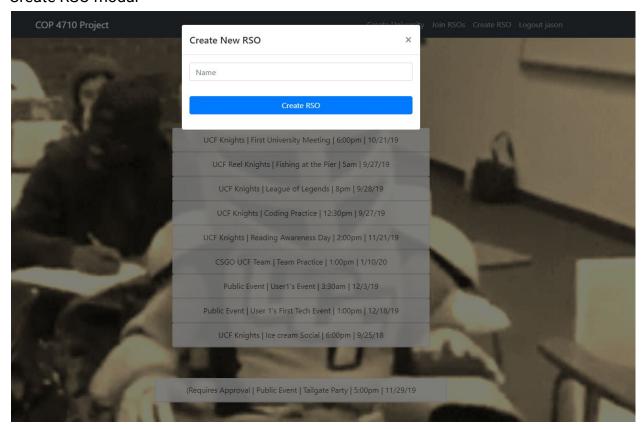
### Logged in -> view events



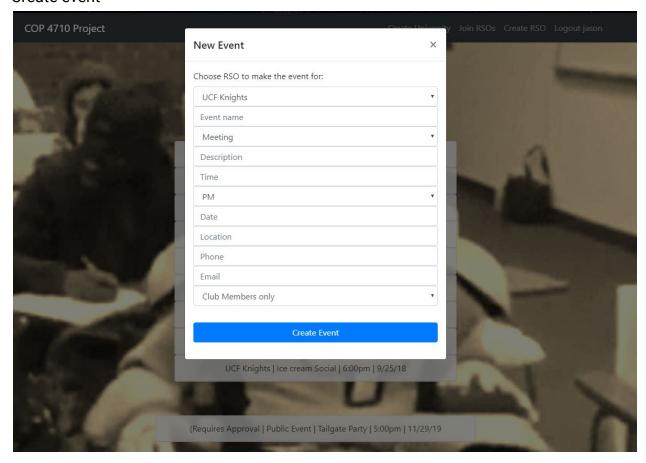
### Join RSO modal



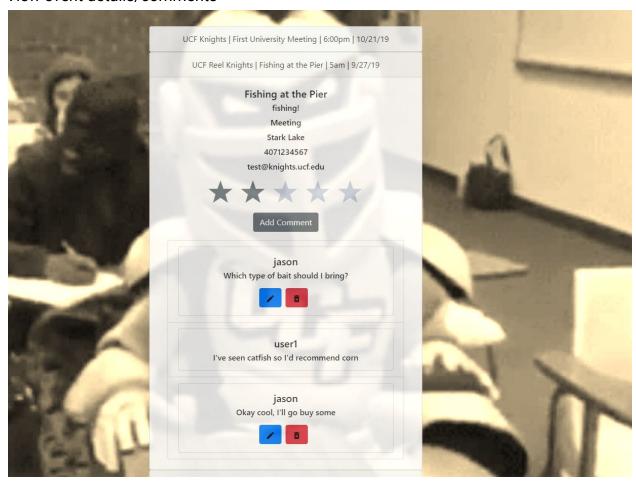
### Create RSO modal



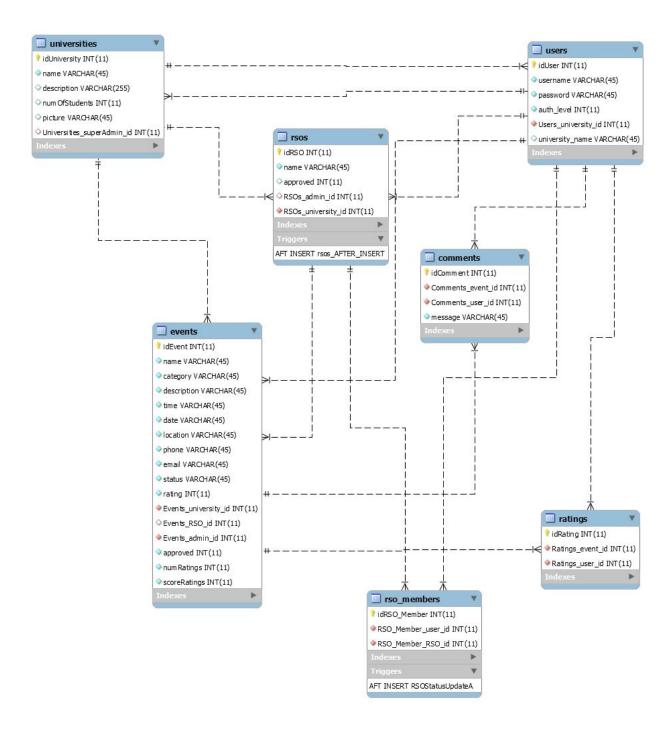
### Create event



### View event details/comments



# **ER-Model**



# **Relational Data Model Script**

-- MySQL Script generated by MySQL Workbench -- Wed Nov 20 14:57:49 2019 -- Model: New Model Version: 1.0 -- MySQL Workbench Forward Engineering SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0; SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0; SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='ONLY\_FULL\_GROUP\_BY,STRICT\_TRANS\_TABLES,NO\_ZERO\_IN\_DATE,NO\_ ZERO\_DATE,ERROR\_FOR\_DIVISION\_BY\_ZERO,NO\_ENGINE\_SUBSTITUTION'; -- Schema mydb -- Schema heroku\_8a8e9bdedc4afce -- Schema heroku\_8a8e9bdedc4afce CREATE SCHEMA IF NOT EXISTS 'heroku\_8a8e9bdedc4afce' DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4\_0900\_ai\_ci; USE `heroku\_8a8e9bdedc4afce`; -- Table `heroku\_8a8e9bdedc4afce`.`universities` CREATE TABLE IF NOT EXISTS 'heroku\_8a8e9bdedc4afce'.'universities' ( `idUniversity` INT(11) NOT NULL AUTO\_INCREMENT, 'name' VARCHAR(45) NOT NULL, `description` VARCHAR(255) NULL DEFAULT NULL, `numOfStudents` INT(11) NULL DEFAULT NULL,

```
`picture` VARCHAR(45) NULL DEFAULT NULL,
 `Universities_superAdmin_id` INT(11) NULL DEFAULT NULL,
 PRIMARY KEY ('idUniversity'),
 UNIQUE INDEX `name_UNIQUE` (`name` ASC) VISIBLE,
 INDEX `superAdmin_id_idx` (`Universities_superAdmin_id` ASC) VISIBLE,
 CONSTRAINT `Universities_superAdmin_id`
  FOREIGN KEY (`Universities_superAdmin_id`)
  REFERENCES `heroku_8a8e9bdedc4afce`.`users` (`idUser`))
ENGINE = InnoDB
AUTO INCREMENT = 26
DEFAULT CHARACTER SET = utf8;
-- Table `heroku 8a8e9bdedc4afce`.`users`
CREATE TABLE IF NOT EXISTS 'heroku_8a8e9bdedc4afce'.'users' (
 `idUser` INT(11) NOT NULL AUTO_INCREMENT,
 `username` VARCHAR(45) NOT NULL,
 `password` VARCHAR(45) NOT NULL,
 `auth_level` INT(11) NOT NULL DEFAULT '1',
 `Users_university_id` INT(11) NOT NULL,
 `university_name` VARCHAR(45) NULL DEFAULT NULL,
 PRIMARY KEY ('idUser'),
 UNIQUE INDEX `username_UNIQUE` (`username` ASC) VISIBLE,
 INDEX `university_id_idx` (`Users_university_id` ASC) VISIBLE,
 CONSTRAINT `Users_university_id`
  FOREIGN KEY (`Users_university_id`)
  REFERENCES 'heroku_8a8e9bdedc4afce'.'universities' ('idUniversity'))
ENGINE = InnoDB
AUTO_INCREMENT = 394
DEFAULT CHARACTER SET = utf8;
-- Table `heroku 8a8e9bdedc4afce`.`rsos`
CREATE TABLE IF NOT EXISTS 'heroku_8a8e9bdedc4afce'.'rsos' (
 'idRSO' INT(11) NOT NULL AUTO_INCREMENT,
```

```
`name` VARCHAR(45) NOT NULL,
 `approved` INT(11) NULL DEFAULT '0',
 `RSOs_admin_id` INT(11) NULL DEFAULT NULL,
 `RSOs_university_id` INT(11) NOT NULL,
 PRIMARY KEY ('idRSO'),
 UNIQUE INDEX `name_UNIQUE` (`name` ASC) VISIBLE,
 INDEX `admin_id_idx` (`RSOs_admin_id` ASC) VISIBLE,
 INDEX `university_id_idx` (`RSOs_university_id` ASC) VISIBLE,
 CONSTRAINT `RSOs_admin_id`
  FOREIGN KEY (`RSOs_admin_id`)
  REFERENCES `heroku_8a8e9bdedc4afce`.`users` (`idUser`),
 CONSTRAINT `RSOs_university_id`
  FOREIGN KEY (`RSOs_university_id`)
  REFERENCES 'heroku_8a8e9bdedc4afce'.'universities' ('idUniversity'))
ENGINE = InnoDB
AUTO INCREMENT = 554
DEFAULT CHARACTER SET = utf8:
-- Table `heroku_8a8e9bdedc4afce`.`events`
CREATE TABLE IF NOT EXISTS 'heroku_8a8e9bdedc4afce'.'events' (
 `idEvent` INT(11) NOT NULL AUTO_INCREMENT,
 'name' VARCHAR(45) NOT NULL,
 `category` VARCHAR(45) NOT NULL DEFAULT 'Meeting',
 `description` VARCHAR(45) NOT NULL,
 `time` VARCHAR(45) NOT NULL,
 `date` VARCHAR(45) NOT NULL,
 `location` VARCHAR(45) NOT NULL,
 `phone` VARCHAR(45) NOT NULL,
 `email` VARCHAR(45) NOT NULL,
 `status` VARCHAR(45) NOT NULL DEFAULT 'public',
 `rating` INT(11) NOT NULL DEFAULT '0',
 `Events_university_id` INT(11) NOT NULL,
 `Events_RSO_id` INT(11) NULL DEFAULT NULL,
 `Events_admin_id` INT(11) NOT NULL,
 `approved` INT(11) NOT NULL DEFAULT '0',
 `numRatings` INT(11) NOT NULL DEFAULT '0',
```

```
`scoreRatings` INT(11) NOT NULL DEFAULT '0',
 PRIMARY KEY ('idEvent'),
 INDEX `university_id_idx` (`Events_university_id` ASC) VISIBLE,
 INDEX `RSO_id_idx` (`Events_RSO_id` ASC) VISIBLE,
 INDEX `admin_id_idx` (`Events_admin_id` ASC) VISIBLE,
 CONSTRAINT `Events_RSO_id`
  FOREIGN KEY (`Events_RSO_id`)
  REFERENCES 'heroku_8a8e9bdedc4afce'.'rsos' ('idRSO'),
 CONSTRAINT `Events_admin_id`
  FOREIGN KEY (`Events_admin_id`)
  REFERENCES `heroku_8a8e9bdedc4afce`.`users` (`idUser`),
 CONSTRAINT `Events_university_id`
  FOREIGN KEY (`Events_university_id`)
  REFERENCES 'heroku_8a8e9bdedc4afce'.'universities' ('idUniversity'))
ENGINE = InnoDB
AUTO INCREMENT = 531
DEFAULT CHARACTER SET = utf8:
-- Table `heroku_8a8e9bdedc4afce`.`comments`
CREATE TABLE IF NOT EXISTS 'heroku_8a8e9bdedc4afce'.'comments' (
 `idComment` INT(11) NOT NULL AUTO_INCREMENT,
 `Comments_event_id` INT(11) NOT NULL,
 `Comments_user_id` INT(11) NOT NULL,
 `message` VARCHAR(45) NOT NULL,
 PRIMARY KEY ('idComment'),
 INDEX `event_id_idx` (`Comments_event_id` ASC) VISIBLE,
 INDEX `user_id_idx` (`Comments_user_id` ASC) VISIBLE,
 CONSTRAINT `Comments_event_id`
  FOREIGN KEY (`Comments_event_id`)
  REFERENCES 'heroku_8a8e9bdedc4afce'.'events' ('idEvent'),
 CONSTRAINT `Comments_user_id`
  FOREIGN KEY (`Comments_user_id`)
  REFERENCES 'heroku_8a8e9bdedc4afce'.'users' ('idUser'))
ENGINE = InnoDB
AUTO_INCREMENT = 245
DEFAULT CHARACTER SET = utf8;
```

```
-- Table `heroku_8a8e9bdedc4afce`.`ratings`
CREATE TABLE IF NOT EXISTS `heroku_8a8e9bdedc4afce`.`ratings` (
 `idRating` INT(11) NOT NULL,
 `Ratings_event_id` INT(11) NOT NULL,
 `Ratings_user_id` INT(11) NOT NULL,
 PRIMARY KEY ('idRating'),
 INDEX 'event_id_idx' ('Ratings_event_id' ASC) VISIBLE,
 INDEX `user_id_idx` (`Ratings_user_id` ASC) VISIBLE,
 CONSTRAINT `Ratings_event_id`
  FOREIGN KEY (`Ratings_event_id`)
  REFERENCES `heroku_8a8e9bdedc4afce`.`events` (`idEvent`),
 CONSTRAINT `Ratings_user_id`
  FOREIGN KEY (`Ratings_user_id`)
  REFERENCES 'heroku_8a8e9bdedc4afce'.'users' ('idUser'))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8;
Table `heroku 8a8e9bdedc4afce`.`rso members`
CREATE TABLE IF NOT EXISTS `heroku_8a8e9bdedc4afce`.`rso_members` (
 `idRSO_Member` INT(11) NOT NULL AUTO_INCREMENT,
 `RSO_Member_user_id` INT(11) NOT NULL,
 `RSO_Member_RSO_id` INT(11) NOT NULL,
 PRIMARY KEY ('idRSO_Member'),
 INDEX `user_id_idx` (`RSO_Member_user_id` ASC) VISIBLE,
 INDEX `RSO_id_idx` (`RSO_Member_RSO_id` ASC) VISIBLE,
 CONSTRAINT `RSO_Member_RSO_id`
  FOREIGN KEY (`RSO_Member_RSO_id`)
  REFERENCES `heroku_8a8e9bdedc4afce`.`rsos` (`idRSO`),
 CONSTRAINT 'user id'
  FOREIGN KEY (`RSO_Member_user_id`)
  REFERENCES `heroku_8a8e9bdedc4afce`.`users` (`idUser`))
ENGINE = InnoDB
```

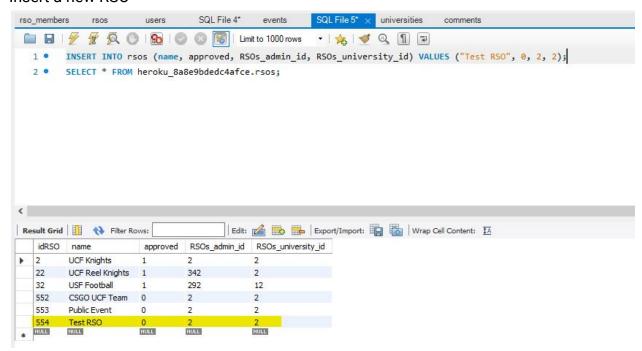
```
AUTO INCREMENT = 170
DEFAULT CHARACTER SET = utf8;
USE `heroku_8a8e9bdedc4afce`;
DELIMITER $$
USE `heroku_8a8e9bdedc4afce`$$
CREATE
DEFINER=`root`@`localhost`
TRIGGER `heroku_8a8e9bdedc4afce`.`rsos_AFTER_INSERT`
AFTER INSERT ON 'heroku 8a8e9bdedc4afce'.'rsos'
FOR EACH ROW
BEGIN
INSERT INTO 'heroku_8a8e9bdedc4afce'.'rso_members'
`RSO_Member_user_id`,
`RSO_Member_RSO_id`)
VALUES
NEW.RSOs_admin_id,
NEW.idRSO);
END$$
USE `heroku_8a8e9bdedc4afce`$$
CREATE
DEFINER=`root`@`localhost`
TRIGGER 'heroku_8a8e9bdedc4afce'.'RSOStatusUpdateA'
AFTER INSERT ON 'heroku 8a8e9bdedc4afce'.'rso members'
FOR EACH ROW
BEGIN
IF ((SELECT COUNT(*) FROM rso_members M WHERE M.RSO_Member_RSO_id =
NEW.RSO_Member_RSO_id) > 4)
THEN
UPDATE rsos r
SET approved = 1
WHERE r.idRSO = NEW.RSO_Member_RSO_id;
END IF;
END$$
```

## DELIMITER;

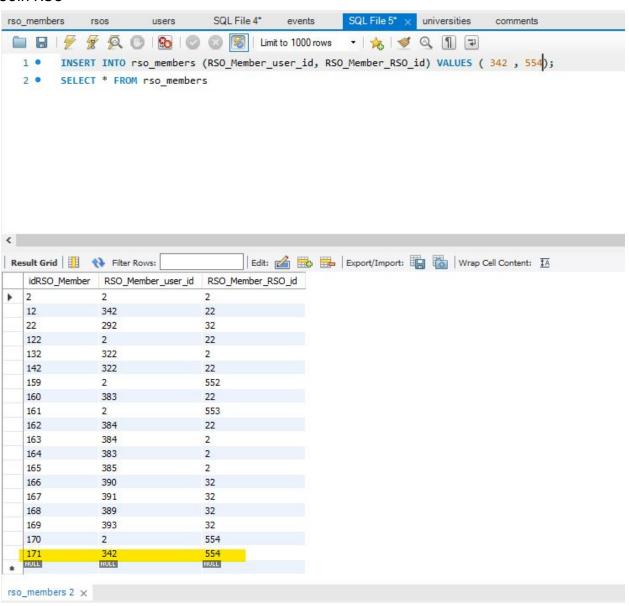
SET SQL\_MODE=@OLD\_SQL\_MODE; SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS; SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS;

# **SQL Examples/Results**

### Insert a new RSO

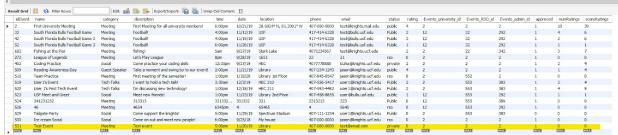


### Join RSO

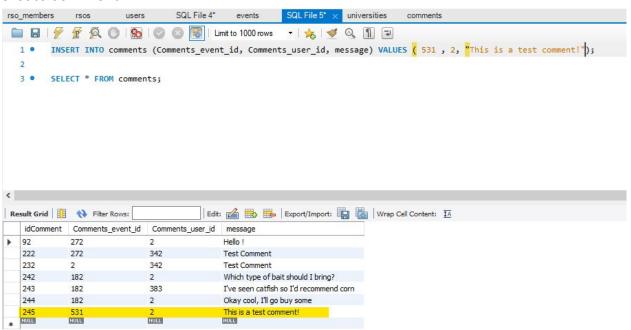


#### Create an event

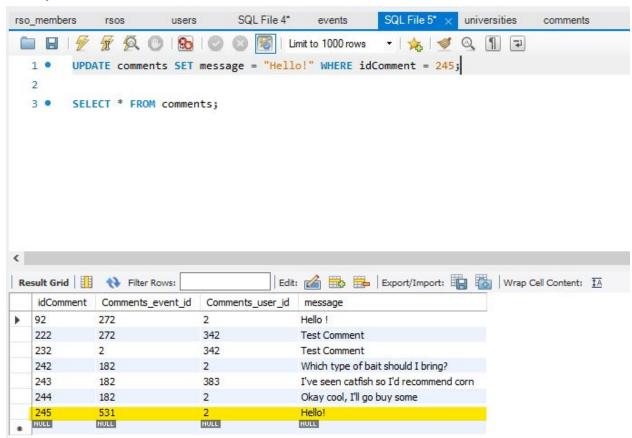




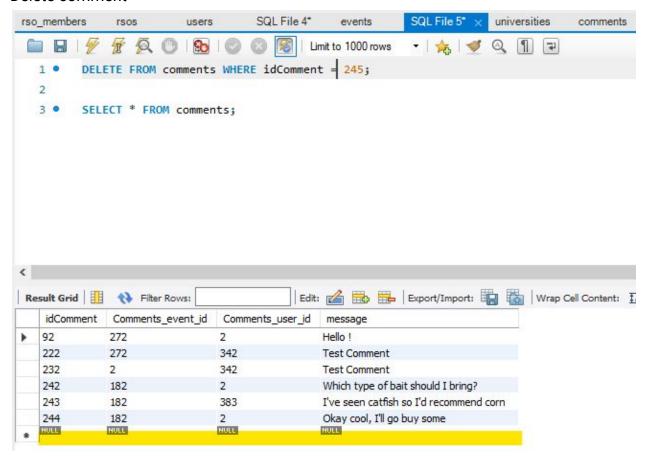
#### Create comment



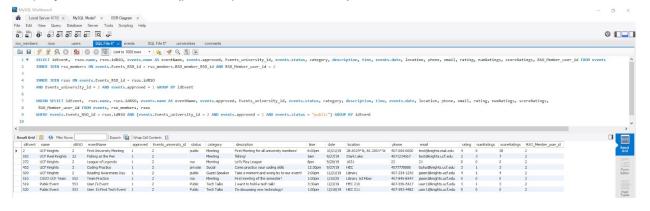
### Modify comment



### Delete comment

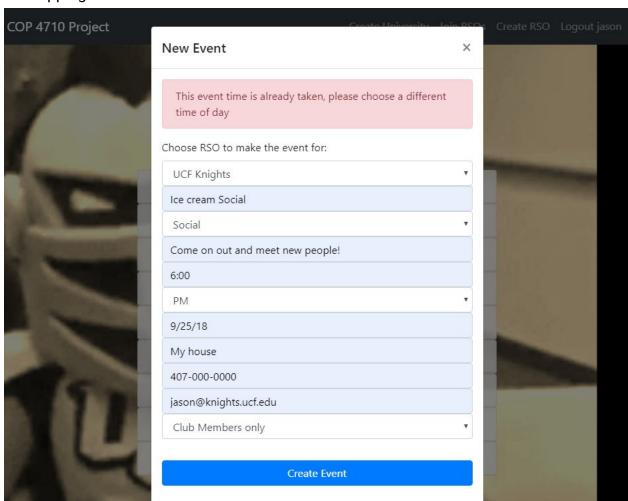


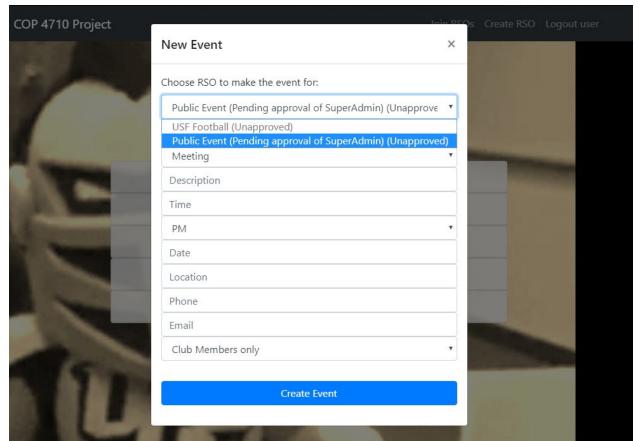
### Display events for user (public, private, and RSO)



# **Constraint Enforcement**

### Overlapping events:





## Admin who is not the admin of a different RSO creating an event:

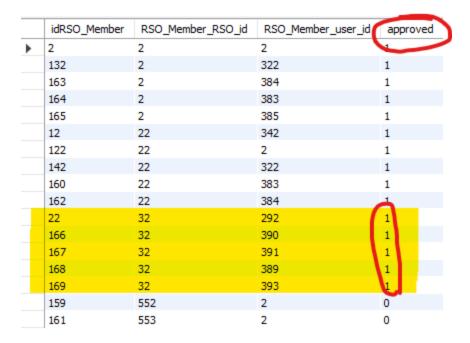
- Admins can only see the RSO's for which they are an admin for, no way for this error to occur

## Student joining an RSO with 4 members (going from unapproved to approved status)

	idRSO	name	approved	RSOs_admin_id	RSOs_university_id
	2	UCF Knights	1	2	2
	22	UCF Reel Knights	1	342	2
	32	USF Football	0	292	12
	552	CSGO UCF Team	0	2	2
•	553	Public Event	0	2	2
	NULL	NULL	NULL	NULL	NULL

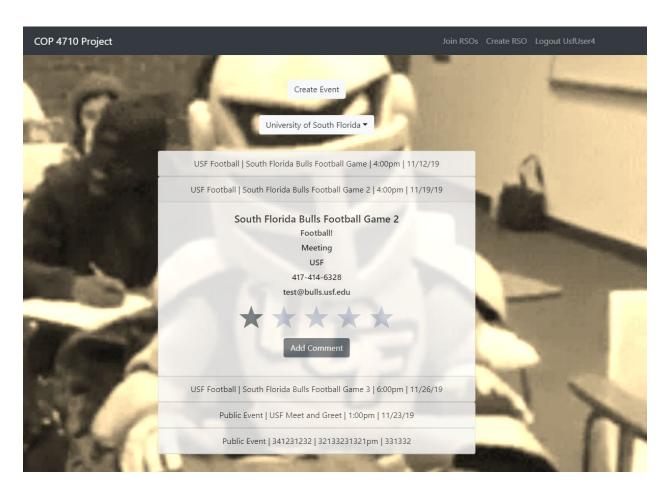
- Note we are adding the student to USF Football #32, unapproved

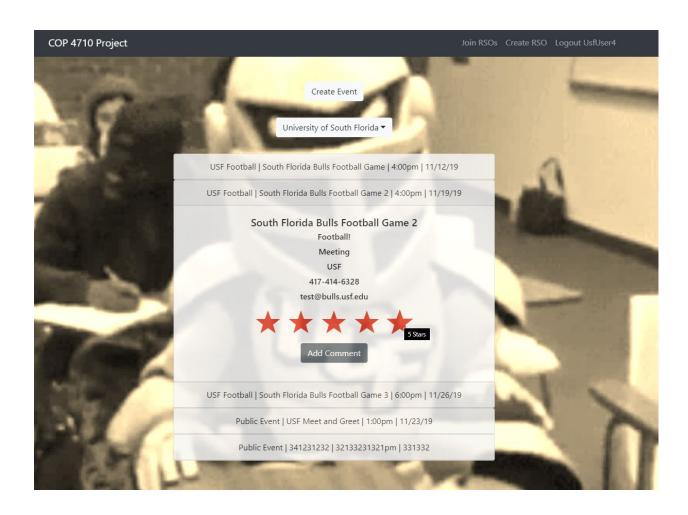
	idRSO_Member	RSO_Member_RSO_id	RSO_Member_user_id	approved
•	2	2	2	1
	132	2	322	1
	163	2	384	1
	164	2	383	1
	165	2	385	1
	12	22	342	1
	122	22	2	1
	142	22	322	1
	160	22	383	1
	162	22	384	
	22	32	292	0
	166	32	390	0
	167	32	391	0
	168	32	389	0
	159	552	2	
	161	553	2	0

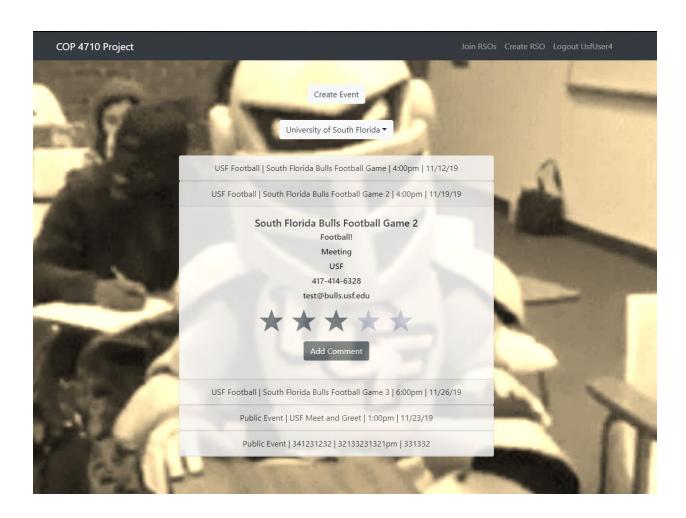


## **Advanced Features**

- I have used JSON Web Tokens to keep the user logged in for an hour before expiring. This allows users to close and reopen the site without having to login again.
- Rating System:







## Conclusion

Overall, all requested features have been implemented using a full stack. Users are able to create events, rate them, and add comments. User's from different schools have restricted access to foreign universities, and can only view the public events. One feature that would be beneficial is to delete events after they have passed, or implementing manual deletion/editing to existing events.

The main and really only problem that occured when developing this application was the database system I originally used did not offer support for triggers. This caused me to change the provider I was using from ClearDB to a localhost server of MySQL. Otherwise, I already had some background in creating fullstack websites from other classes, and was able to chip away at this project fairly quickly.