

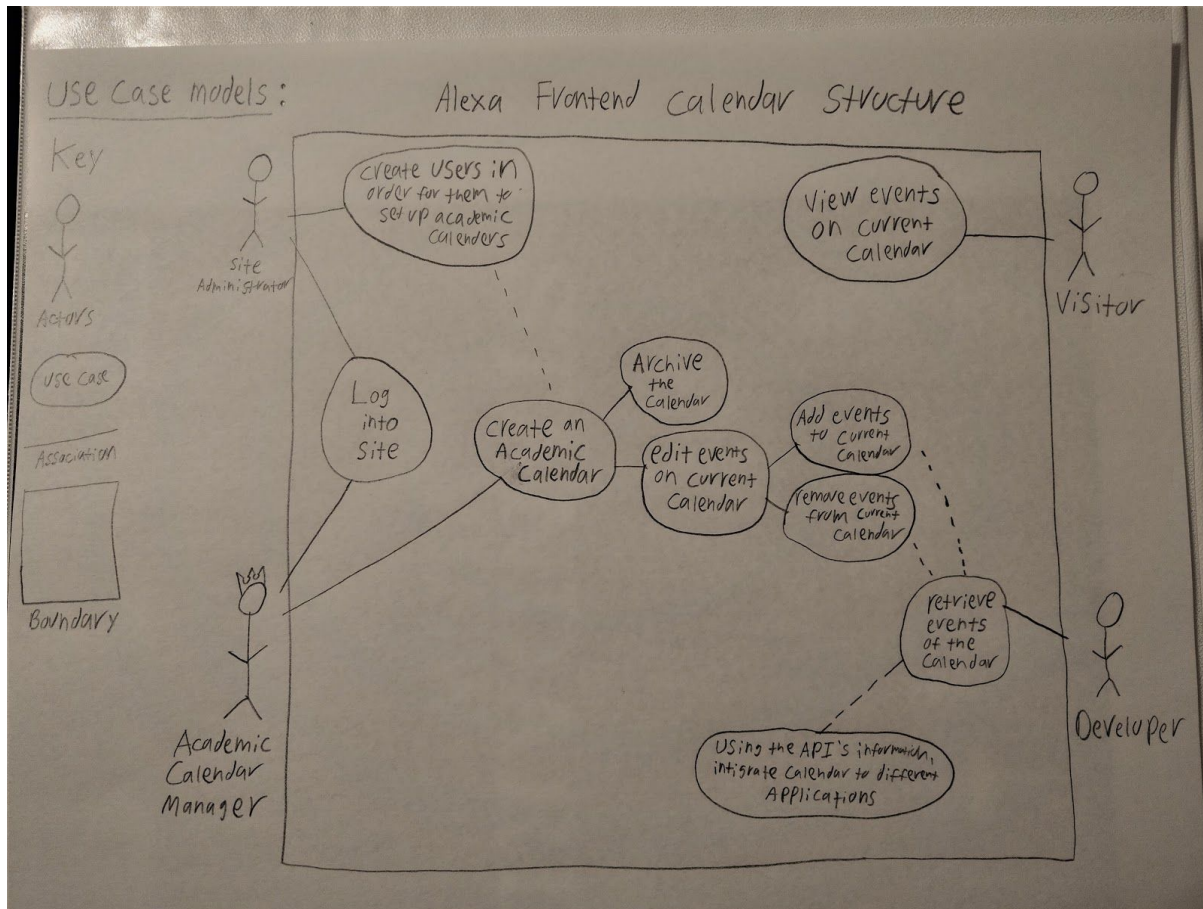
CSC 440-001 - Fall 2019: Software Engineering Group 1
Comprehensive Final Project Documentation
(Includes Pitch, Design, and Testing)
Monday, December 9, 2019

Objective

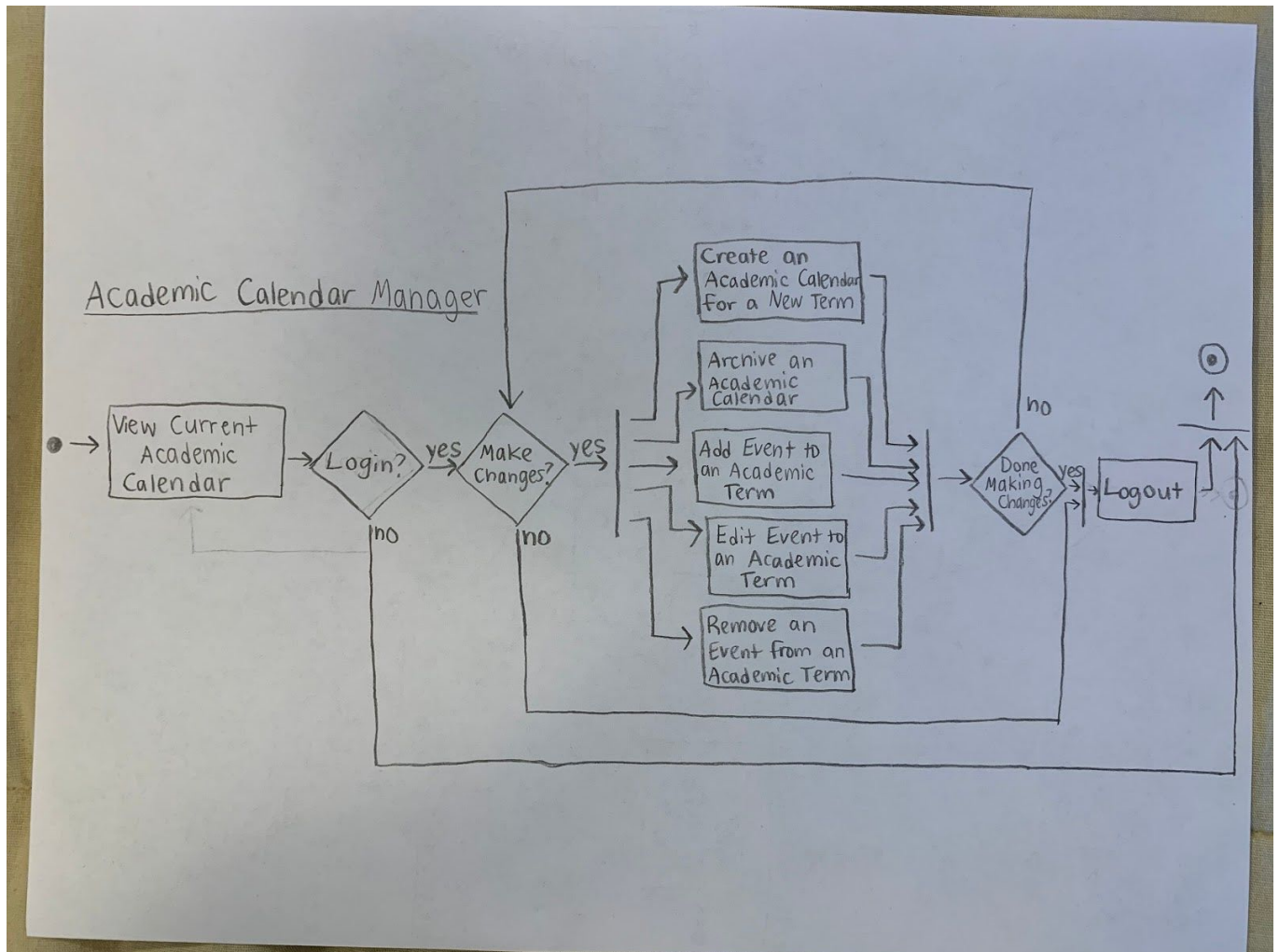
Our objective was to create a web-based application that maintains the Adelphi Academic Calendar. This calendar will be queried using a front end calendar interface as well as the Amazon Alexa skill. We utilized a web calendar using HTML and CSS that through PHP and JavaScript would connect to our SQL database.

Planning

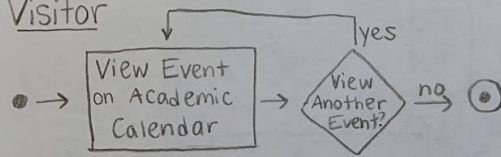
Use case model:



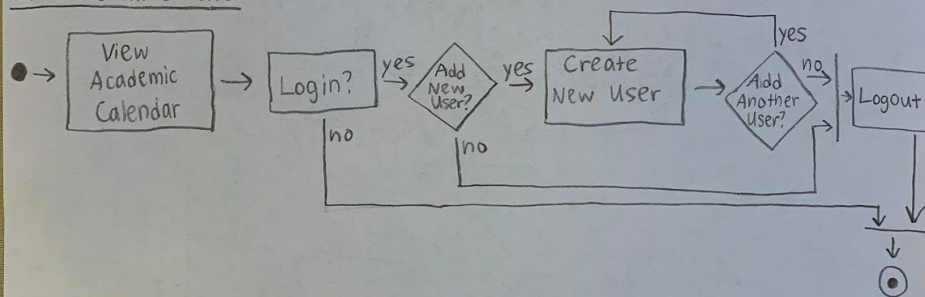
Activity Diagrams:



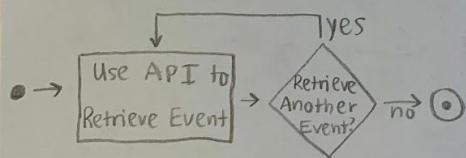
Visitor



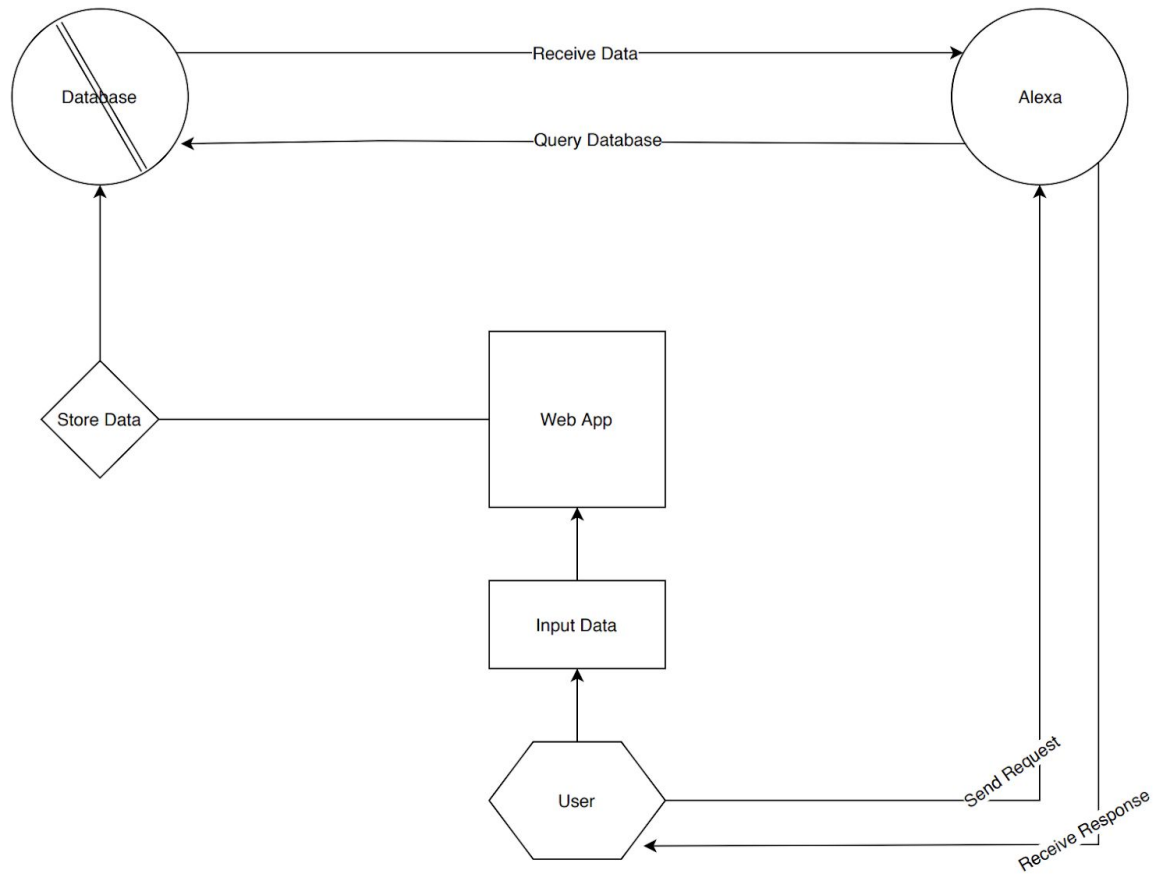
Site Administrator



Developer



Basic Workflow:



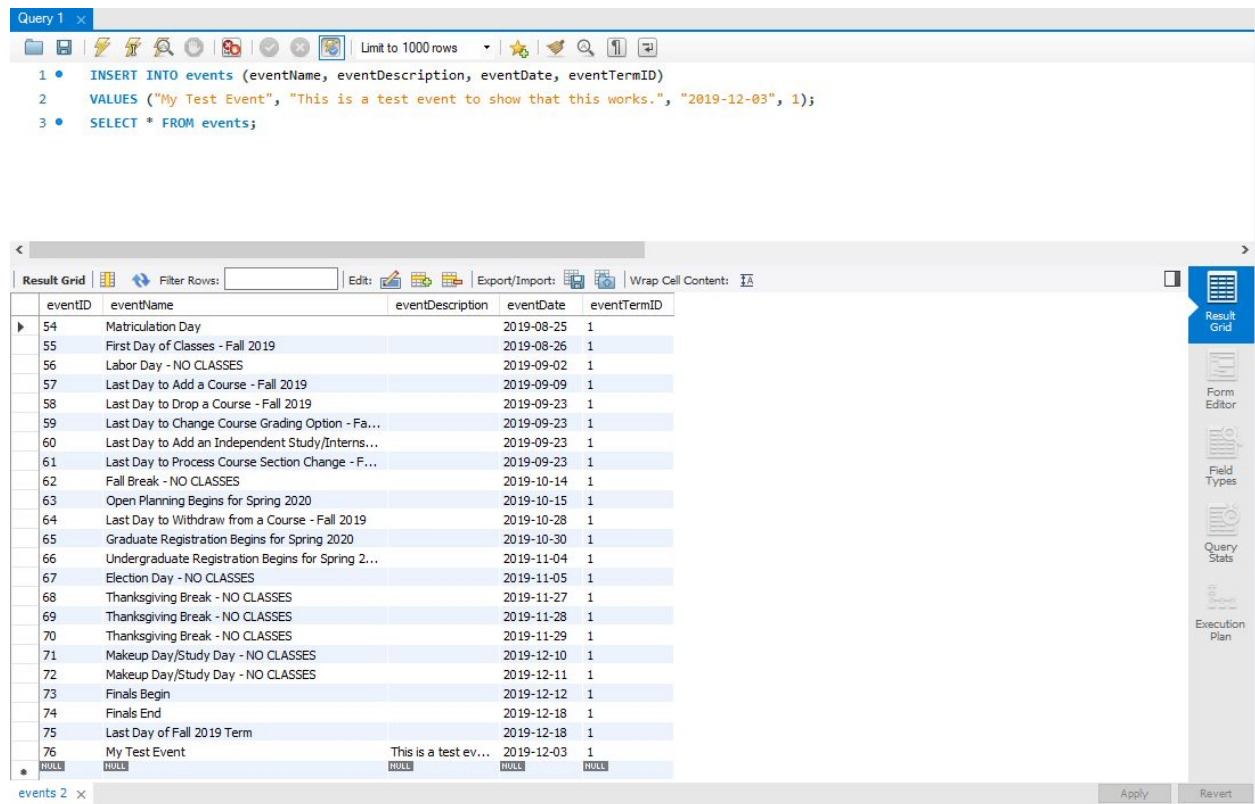
Frontend and Backend Testing

To ensure the correctness of our database, we began by using SQL commands directly in MySQL Workbench to ensure our mock data is present. Selecting all items from the events table correctly displays our data:

The screenshot displays the MySQL Workbench interface. At the top, a query editor window titled 'Query 1' contains the SQL command: `select * from events;`. Below the query editor, the 'Result Grid' tab is active, showing a table of 26 rows and 5 columns. The columns are labeled: eventID, eventName, eventDescription, eventDate, and eventTermID. The data includes various academic events such as 'Matriculation Day', 'First Day of Classes - Fall 2019', and 'Last Day of Fall 2019 Term'. The last row shows NULL values for all columns. The interface also includes a toolbar with icons for file operations, a 'Limit to 1000 rows' dropdown, and a sidebar on the right with options like 'Form Editor', 'Field Types', 'Query Stats', and 'Execution Plan'.

eventID	eventName	eventDescription	eventDate	eventTermID
54	Matriculation Day		2019-08-25	1
55	First Day of Classes - Fall 2019		2019-08-26	1
56	Labor Day - NO CLASSES		2019-09-02	1
57	Last Day to Add a Course - Fall 2019		2019-09-09	1
58	Last Day to Drop a Course - Fall 2019		2019-09-23	1
59	Last Day to Change Course Grading Option - Fa...		2019-09-23	1
60	Last Day to Add an Independent Study/Interns...		2019-09-23	1
61	Last Day to Process Course Section Change - F...		2019-09-23	1
62	Fall Break - NO CLASSES		2019-10-14	1
63	Open Planning Begins for Spring 2020		2019-10-15	1
64	Last Day to Withdraw from a Course - Fall 2019		2019-10-28	1
65	Graduate Registration Begins for Spring 2020		2019-10-30	1
66	Undergraduate Registration Begins for Spring 2...		2019-11-04	1
67	Election Day - NO CLASSES		2019-11-05	1
68	Thanksgiving Break - NO CLASSES		2019-11-27	1
69	Thanksgiving Break - NO CLASSES		2019-11-28	1
70	Thanksgiving Break - NO CLASSES		2019-11-29	1
71	Makeup Day/Study Day - NO CLASSES		2019-12-10	1
72	Makeup Day/Study Day - NO CLASSES		2019-12-11	1
73	Finals Begin		2019-12-12	1
74	Finals End		2019-12-18	1
75	Last Day of Fall 2019 Term		2019-12-18	1
NULL	NULL	NULL	NULL	NULL

To test that events can be correctly added, we added a test event using the insert command and the event was successfully added to our database:



The screenshot shows a database query editor with a query window and a result grid.

Query Window:

```

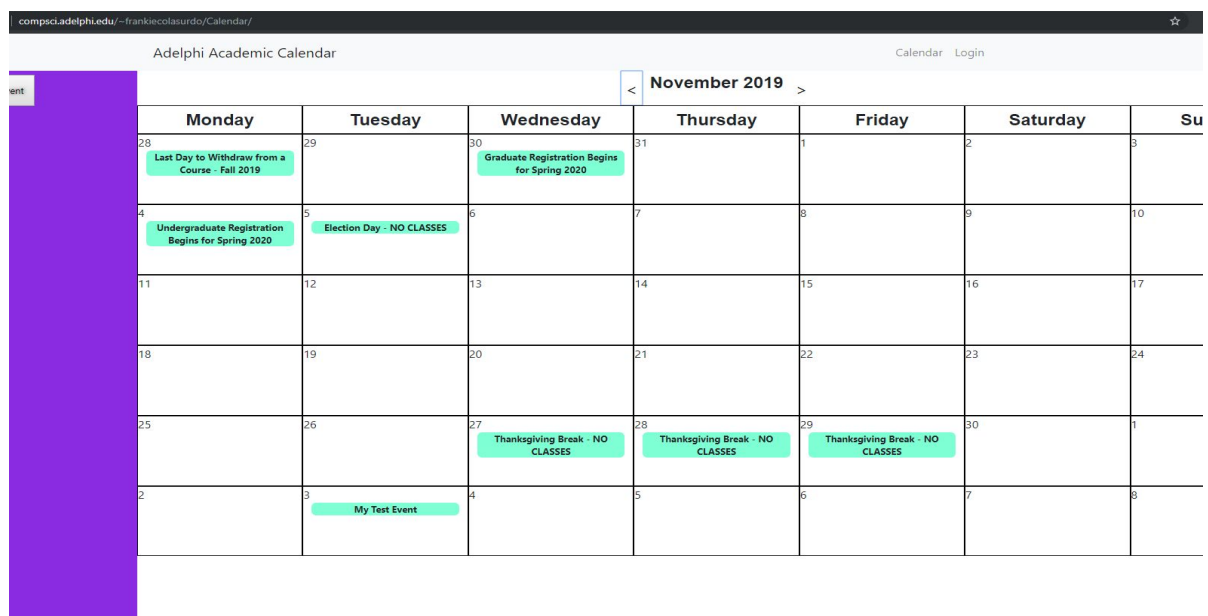
1 • INSERT INTO events (eventName, eventDescription, eventDate, eventTermID)
2 • VALUES ("My Test Event", "This is a test event to show that this works.", "2019-12-03", 1);
3 • SELECT * FROM events;

```

Result Grid:

eventID	eventName	eventDescription	eventDate	eventTermID
54	Matriculation Day		2019-08-25	1
55	First Day of Classes - Fall 2019		2019-08-26	1
56	Labor Day - NO CLASSES		2019-09-02	1
57	Last Day to Add a Course - Fall 2019		2019-09-09	1
58	Last Day to Drop a Course - Fall 2019		2019-09-23	1
59	Last Day to Change Course Grading Option - Fa...		2019-09-23	1
60	Last Day to Add an Independent Study/Interns...		2019-09-23	1
61	Last Day to Process Course Section Change - F...		2019-09-23	1
62	Fall Break - NO CLASSES		2019-10-14	1
63	Open Planning Begins for Spring 2020		2019-10-15	1
64	Last Day to Withdraw from a Course - Fall 2019		2019-10-28	1
65	Graduate Registration Begins for Spring 2020		2019-10-30	1
66	Undergraduate Registration Begins for Spring 2...		2019-11-04	1
67	Election Day - NO CLASSES		2019-11-05	1
68	Thanksgiving Break - NO CLASSES		2019-11-27	1
69	Thanksgiving Break - NO CLASSES		2019-11-28	1
70	Thanksgiving Break - NO CLASSES		2019-11-29	1
71	Makeup Day/Study Day - NO CLASSES		2019-12-10	1
72	Makeup Day/Study Day - NO CLASSES		2019-12-11	1
73	Finals Begin		2019-12-12	1
74	Finals End		2019-12-18	1
75	Last Day of Fall 2019 Term		2019-12-18	1
76	My Test Event	This is a test ev...	2019-12-03	1

To ensure that our website interface was properly connected to our database, we periodically checked the website (accessible through files hosted on the compsci.adelphi.edu server) and checked that the events were present and correct:



The screenshot shows the Adelphi Academic Calendar website for November 2019. The calendar is a grid with days of the week as columns and dates as rows. Events are highlighted in green boxes.

Calendar Header: compsci.adelphi.edu/~frankiecolasurdo/Calendar/ | Calendar | Login

Calendar Grid:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
28 Last Day to Withdraw from a Course - Fall 2019	29	30 Graduate Registration Begins for Spring 2020	31	1	2	3
4 Undergraduate Registration Begins for Spring 2020	5 Election Day - NO CLASSES	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27 Thanksgiving Break - NO CLASSES	28 Thanksgiving Break - NO CLASSES	29 Thanksgiving Break - NO CLASSES	30	1
2	3 My Test Event	4	5	6	7	8

Upon removing the test event utilizing direct SQL commands...

Query 1 x

Limit to 1000 rows

```
1 • DELETE FROM events WHERE eventName = "My Test Event";
2 • SELECT * FROM events;
```

Result Grid

eventID	eventName	eventDescription	eventDate	eventTermID
54	Matriculation Day		2019-08-25	1
55	First Day of Classes - Fall 2019		2019-08-26	1
56	Labor Day - NO CLASSES		2019-09-02	1
57	Last Day to Add a Course - Fall 2019		2019-09-09	1
58	Last Day to Drop a Course - Fall 2019		2019-09-23	1
59	Last Day to Change Course Grading Option - Fa...		2019-09-23	1
60	Last Day to Add an Independent Study/Interns...		2019-09-23	1
61	Last Day to Process Course Section Change - F...		2019-09-23	1
62	Fall Break - NO CLASSES		2019-10-14	1
63	Open Planning Begins for Spring 2020		2019-10-15	1
64	Last Day to Withdraw from a Course - Fall 2019		2019-10-28	1
65	Graduate Registration Begins for Spring 2020		2019-10-30	1
66	Undergraduate Registration Begins for Spring 2...		2019-11-04	1
67	Election Day - NO CLASSES		2019-11-05	1
68	Thanksgiving Break - NO CLASSES		2019-11-27	1
69	Thanksgiving Break - NO CLASSES		2019-11-28	1
70	Thanksgiving Break - NO CLASSES		2019-11-29	1
71	Makeup Day/Study Day - NO CLASSES		2019-12-10	1
72	Makeup Day/Study Day - NO CLASSES		2019-12-11	1
73	Finals Begin		2019-12-12	1
74	Finals End		2019-12-18	1
75	Last Day of Fall 2019 Term		2019-12-18	1
* NULL	NULL	NULL	NULL	NULL

events 1 x

Apply Revert

The event was removed from both our database and front end calendar interface connected to our database, as can be seen through the above and below screenshots.

re compso.adelphi.edu/~frankiecolasurdo/Calendar/

Adelphi Academic Calendar

Calendar Login

< November 2019 >

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28 Last Day to Withdraw from a Course - Fall 2019	29	30 Graduate Registration Begins for Spring 2020	31	1	2
4 Undergraduate Registration Begins for Spring 2020	5 Election Day - NO CLASSES	6	7	8	9
11	12	13	14	15	16
18	19	20	21	22	23
25	26	27 Thanksgiving Break - NO CLASSES	28 Thanksgiving Break - NO CLASSES	29 Thanksgiving Break - NO CLASSES	30
2	3	4	5	6	7

We also wanted to be able to add events utilizing the calendar interface. While removing and editing were planned, we used our available time to optimize and fully test only the add functionality. Pressing create event creates the chance to enter relevant information to an event:

Create Event

Title:

Test Event, New Year's Day

Date:

01/01/2020

Description:

Testing purposes

Close

Create

Upon pressing the create button, the event is successfully added to our calendar.

Not secure | compsci.adelphi.edu/~frankiecolasurdo/Calendar/

Adelphi Academic Calendar

Calendar Login

Create Event

< January 2020 >

Monday	Tuesday	Wednesday	Thursday	Friday	Sa
30	31	1 Test Event, New Year's Day	2	3	4

As well as our database:

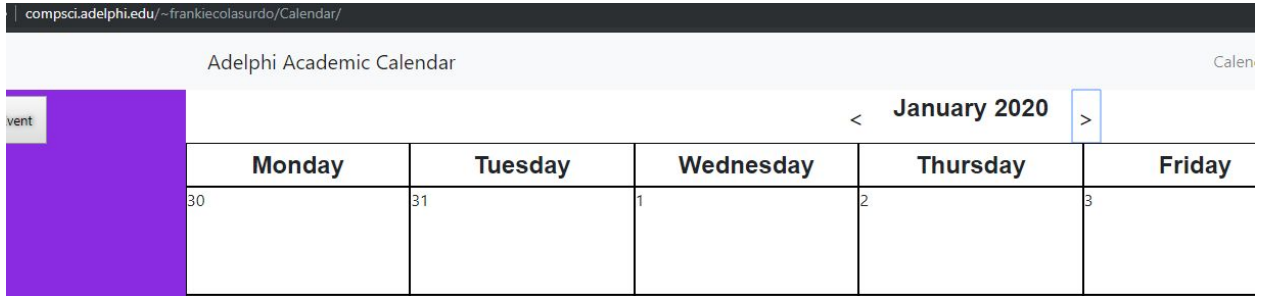
```
mysql> select * from events;
+-----+-----+-----+
| eventID | eventName                                     | eventD
escription | eventDate | eventTermID |
+-----+-----+-----+
| 54 | Matriculation Day |
| 55 | First Day of Classes - Fall 2019 |
| 56 | Labor Day - NO CLASSES |
| 57 | Last Day to Add a Course - Fall 2019 |
| 58 | Last Day to Drop a Course - Fall 2019 |
| 59 | Last Day to Change Course Grading Option - Fall 2019 |
| 60 | Last Day to Add an Independent Study/Internship - Fall 2019 |
| 61 | Last Day to Process Course Section Change - Fall 2019 |
| 62 | Fall Break - NO CLASSES |
| 63 | Open Planning Begins for Spring 2020 |
| 64 | Last Day to Withdraw from a Course - Fall 2019 |
| 65 | Graduate Registration Begins for Spring 2020 |
| 66 | Undergraduate Registration Begins for Spring 2020 |
| 67 | Election Day - NO CLASSES |
| 68 | Thanksgiving Break - NO CLASSES |
| 69 | Thanksgiving Break - NO CLASSES |
| 70 | Thanksgiving Break - NO CLASSES |
| 71 | Makeup Day/Study Day - NO CLASSES |
| 72 | Makeup Day/Study Day - NO CLASSES |
| 73 | Finals Begin |
| 74 | Finals End |
| 75 | Last Day of Fall 2019 Term |
| 77 | Test Event, New Year's Day | Testin
g purposes | 2020-01-01 | 1 |
+-----+-----+-----+
23 rows in set (0.00 sec)

mysql>
```

Upon a deletion command on the test event:

```
mysql> DELETE FROM events mysql> DELETE FROM events WHERE eventName Day";  
Query OK, 1 row affected (0.03 sec)
```

The calendar is also successfully affected:



comp sci.adelphi.edu/~frankiecolasurdo/Calendar/

Adelphi Academic Calendar

< January 2020 >

Monday	Tuesday	Wednesday	Thursday	Friday
30	31	1	2	3

Links

Link to website:

<https://comp sci.adelphi.edu:8842/~frankiecolasurdo/Calendar/>

Link to Jira:

<https://csc-jira.adelphi.edu/projects/SEF19P2G1/summary>

Link to repo:

<https://csc-bitbucket.adelphi.edu/projects/SEF19FP1/repos/se-f19-final-project-group-1/browse>