

FOMD Learning Sciences Interactive Scheduler

Project Overview

Currently, members of the Faculty of Medicine and Dentistry (FoMD) at the University of Alberta use a third-party calendar system that is limited to hosting curriculum content/schedules because it does not support the automation of adding events as they are created. With the system having roughly 1000 daily concurrent users from the FoMD, we have been tasked with building a new interactive scheduler that instructors and students can use as a master database for all their informational needs. The envisioned system's core functionalities still include hosting and linking curriculum content; however, it will also integrate assessment activities onto events through links to link to other systems. As well, it will have the ability to integrate this system's calendar into Google Calendar. Furthermore, the new system will enable creation and querying functionality of detailed curriculum events that hosts meta-information, participants and instructors.

Project Glossary

Admin - individual(s) who create the calendars and assign the students / instructors to breakout groups. They can add, edit or delete events.

Block - a course that must be completed by students, each of which represents a body system. Used interchangeably with Course.

Breakout Group - a group of students and/or instructors, belonging to a single course.

Calendar - a chart that shows the days, weeks, months, and year along with any scheduled event.

Course - a group of events associated with a specific topic that has a definable start and end date which encompasses any length of time. A student is typically only completing events from one course (or block) at a time with the exception of a few courses (i.e. Physicianship, Career Planning, etc.) which are year-round.

Event - an organized time that hosts lectures, small group sessions, skills sessions, exams, and/or seminars, or an assessment that a student can complete on their own time with a specified due date.

Filter - a component that enables students or instructors to search events by date, meta-information, or curriculum content.

Instructor - professor and teaching assistants assigned to a particular event. The instructor view is identical to the student view.

Event Attachment - link or file attachment associated with an event in the calendar.

Meta-information - tags and properties that identify specific information about an event.

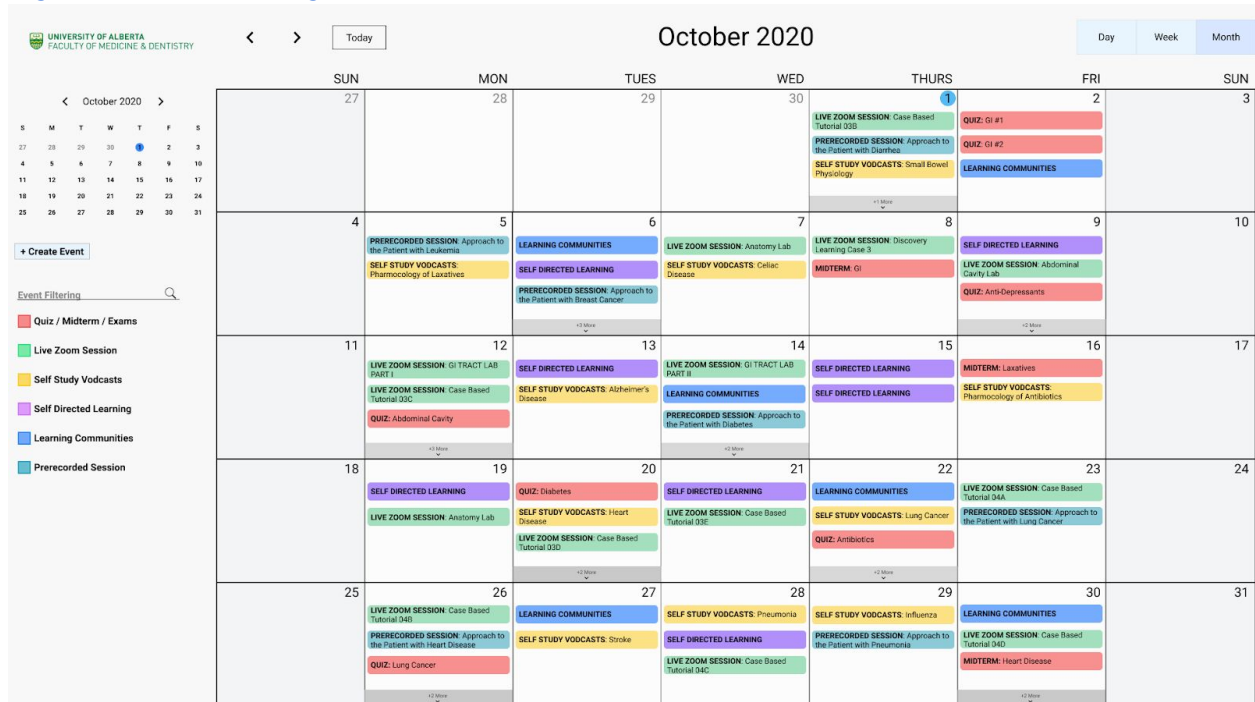
Student - an individual who is enrolled in a FoMD program and can view the events on the calendar that breakout groups they are a part of have been assigned to.

User - an individual who has logged in and is using the functionality of the application.

[Mockup - Figma diagram link](#)

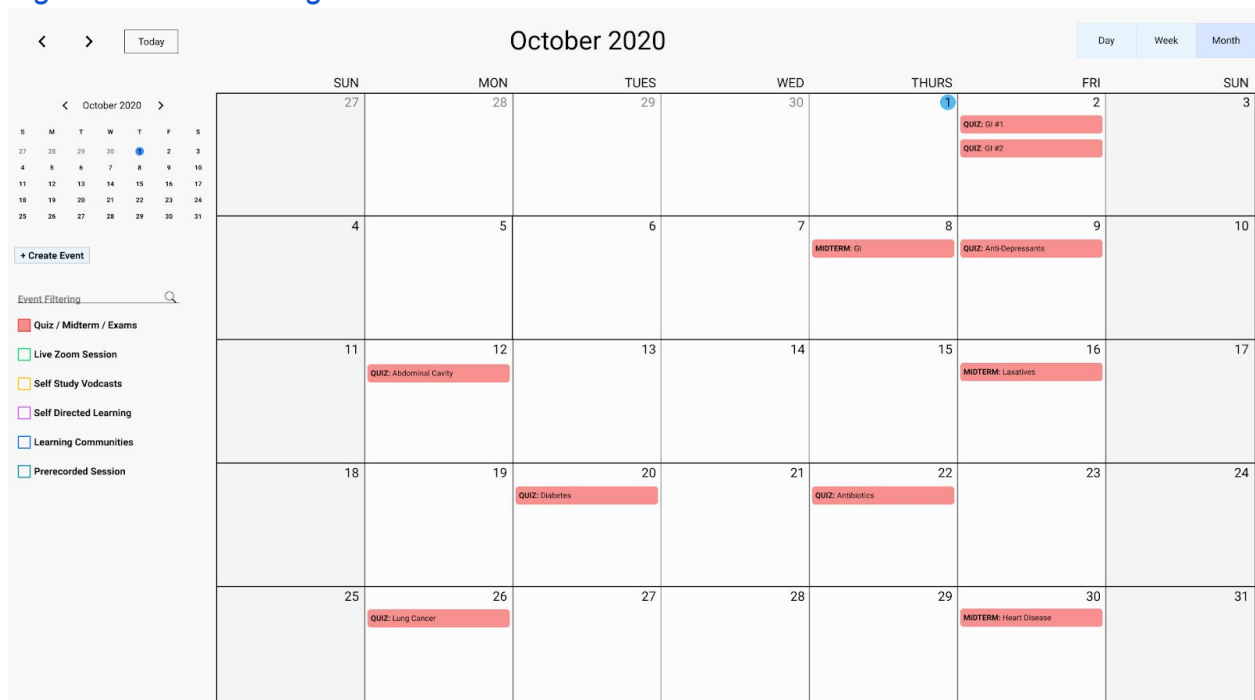
[Monthly View](#)

[Higher resolution image](#)



[Filtered Monthly View](#)

[Higher resolution image](#)



Event Info On Event Click

Higher resolution image

October 2020

Day Week Month

SUN MON TUES WED THURS FRI SUN

27 28 29 30 1 2 3

4 5 6 7 8 9 10

11 12 13 14 15 16 17

18 19 20 21 22 23 24

25 26 27 28 29 30 31

+ Create Event

Event Filtering

Quiz / Midterm / Exams

Live Zoom Session

Self Study Vodcast

Self Directed Learning

Learning Communities

Prerecorded Session

PRERECORDED SESSION: Approach to the Patient with Leukemia

Monday, October 5 • 8:00 AM - 9:30 AM

Online Zoom Meeting @ [zoom.us/link-to-class-zoom-meeting-here](https://zoom.us/j/123456789)

Dr. Elaine Leslie, Dr. Jonathan Martins

Today, we will be discussing how to properly handle and aid a leukemia patient. All material discussed in this lecture is testable.

Whole Class

Prerecorded Session Dr. Elaine Leslie Dr. Jonathan Martins

Leukemia

Search view

Higher resolution image

October 2020

Day Week Month

SUN MON TUES WED THURS FRI SUN

27 28 29 30 1 2 3

4 5 6 7 8 9 10

11 12 13 14 15 16 17

18 19 20 21 22 23 24

25 26 27 28 29 30 31

+ Create Event

Event Filtering

Enter Keywords

START DD/MM/YYYY to End Time

Enter a Location

Enter Instructor(s)

Description

Enter Group(s)

Search

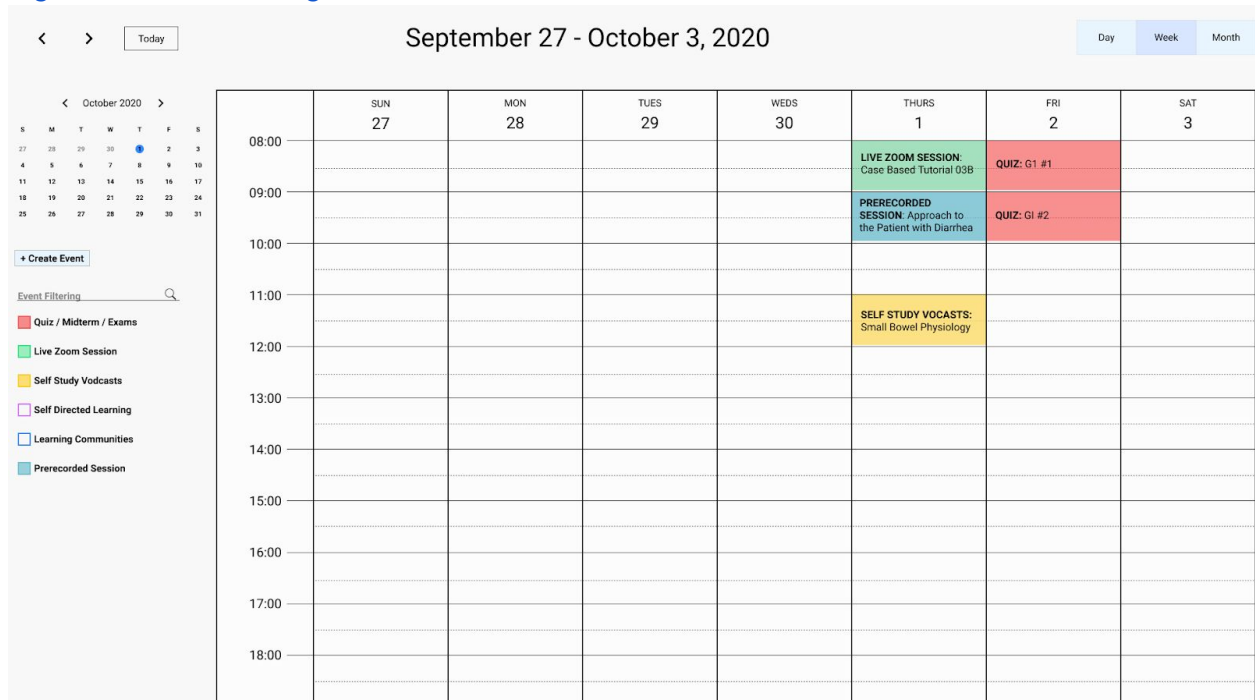
Week view

[Higher resolution image](#)



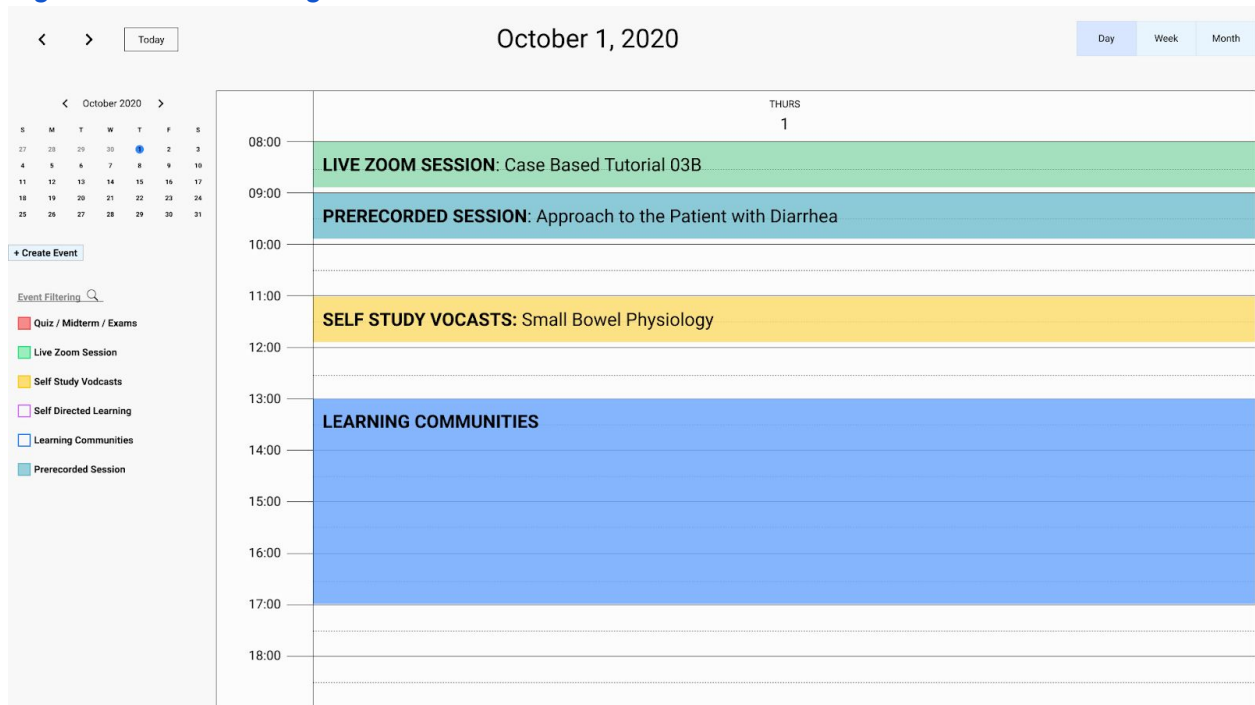
Filtered Week View

[Higher resolution image](#)



Day View

Higher resolution image



Admin Create Event View

Higher resolution image

The image shows the 'Admin Create Event View' form. It has a left sidebar with a 'Create Event Title' field, a date and time selector (October 1, 2020, 00:00 to 00:00), and a 'Select a Format' dropdown. Below these are 'Select an Assignment Type' and 'Select an Assignment Academy' dropdowns, and a large text area for 'Enter Class Detail Here'. At the bottom left is an 'Evaluation Not Required' checkbox. The right sidebar is titled 'Attendees / Instructors' and has a table with columns: Groups, Add, Students, Date & Time, Instructor, Location, Group Type, and Academy. The table is currently empty. At the bottom right of the table is a '+' button. At the bottom right of the form are 'Save' and 'Cancel' buttons.

Admin Edit Event View

Higher resolution image

Case Based Tutorial 03B

October 1, 2020

 •

8:00 AM

 to

9:00 AM

Live Zoom Session

 ▼

Non Academy Specific

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N/A

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Whole Class: ☐

Groups: ☒

Individual: ☐

Groups	Add	Students	Date & Time	Instructor	Location	Group Type	Academy
Group 1	+		1-Oct-2020 8:00 -9:00	Dr. Zheng, Bin	Live Zoom	Live Zoom Session	N/A
Group 2	+		1-Oct-2020 8:00 -9:00	Ms. Buckingham, Jeannette	Live Zoom	Live Zoom Session	N/A
Group 3	+		1-Oct-2020 8:00 -9:00	Dr. Buttenschoen, Klaus	Live Zoom	Live Zoom Session	N/A
Group 4	+		1-Oct-2020 8:00 -9:00	Dr. Wong, Gane Ka Shu	Live Zoom	Live Zoom Session	N/A
Group 5	+		1-Oct-2020 8:00 -9:00	Dr. He, Wenjin	Live Zoom	Live Zoom Session	N/A
Group 6	+		1-Oct-2020 8:00 -9:00	Dr. Clark, Brenda	Live Zoom	Live Zoom Session	N/A
Group 7	+		1-Oct-2020 8:00 -9:00	Dr. Tateno, Toru	Live Zoom	Live Zoom Session	N/A
Group 8	+		1-Oct-2020 8:00 -9:00	Dr. Doroshenko, Alexander	Live Zoom	Live Zoom Session	N/A

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Evaluation Not Required: ☒

Save Cancel

Admin Edit Event Add Group

Higher resolution image

Case Based Tutorial 03B

October 1, 2020

 •

8:00 AM

 to

9:00 AM

Live Zoom Session

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Non Academy Specific

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N/A

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Group 7	+		1-Oct-2020 8:00 -9:00	Dr. Tateno, Toru	Live Zoom	Live Zoom Session	N/A
Group 8	+		1-Oct-2020 8:00 -9:00	Dr. Doroshenko, Alexander	Live Zoom	Live Zoom Session	N/A
Group 9	+		1-Oct-2020 8:00 -9:00	Assign Instructor	Live Zoom	Live Zoom Session	N/A
Group 10	+		1-Oct-2020 8:00 -9:00	Assign Instructor	Live Zoom	Live Zoom Session	N/A

Number of Groups: 10

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Evaluation Not Required: ☒

Save Cancel

List View

Higher resolution image

Keywords:

Enter Keywords

Location:

Live zoom, Via zoom: see details

Instructor:

Dr. Elaine Leslie, Dr. Jonathan Martins

Date Range:

DD/MM/YYYY

to

DD/MM/YYYY

Time Range:

Start time

to

End time

<October 2020>

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+ Create Event

Event Filtering

Quiz / Midterm / Exams

Live Zoom Session

Self Study Podcasts

Self Directed Learning

Learning Communities

Pre-recorded Session

Date	Time	Event Name	Location	Instructor
October 2, 2020	08:00 - 09:00 AM	LIVE ZOOM SESSION Case Based Tutorial 03A	Live Zoom	Dr. Elaine Leslie,
October 2, 2020	11:00 - 01:00 PM	QUIZ GI #1	Via Zoom: see details	Dr. Jonathan Martins
October 2, 2020	01:00 - 03:30 PM	LIVE ZOOM SESSION Case Based Tutorial 03B	Live Zoom	Dr. Elaine Leslie,
October 5, 2020	10:30 - 12:00 PM	LIVE ZOOM SESSION Case Based Tutorial 03C	Live Zoom	Dr. Elaine Leslie,
October 7, 2020	08:00 - 10:00 AM	QUIZ GI #2	Via Zoom: see details	Dr. Jonathan Martins
October 7, 2020	11:00 - 12:00 PM	LEARNING COMMUNITIES Description	Live Zoom	Dr. Jonathan Martins
October 15, 2020	10:30 - 12:00 PM	LIVE ZOOM SESSION Case Based Tutorial 03D	Live Zoom	Dr. Elaine Leslie,
October 25, 2020	09:30 - 10:30 AM	LEARNING COMMUNITIES Approach to the Patient with Pneumonia	Live Zoom	Dr. Elaine Leslie,
October 31, 2020	10:30 - 12:00 PM	LIVE ZOOM SESSION Case Based Tutorial 04A	Live zoom	Dr. Elaine Leslie,
October 31, 2020	10:30 - 12:00 PM	MIDTERM Heart Disease	Via Zoom: see details	Dr. Jonathan Martins

Use Case / User Stories

As an Admin ...

- 0.1.* **I want** to create and add an event to the calendar **so that** students and other instructors can view the events.
 - System displays "Create Event" button on the left-hand side of the calendar
 - Clicking on "Create Event" button will lead to a page for Admin to fill in required parameters for new event
 - Fill in parameter "Event Title"
 - Fill in parameter "Course ID"
 - Fill in parameter "Year Level"
 - Fill in parameter "Event Type"
 - Fill in parameter "Event Description"
 - Fill in parameter "Event Date"
 - Fill in parameter "Start Time"
 - Fill in parameter "End Time"
 - Fill in parameter "Total Duration"
- 0.2.* **I want** to add metainformation, students, instructor team and location **so that** people know who are involved and where the event is held.
 - When creating a group, the system provides a parameter for "Add Students"
 - System provides a parameter for "Instructor Team"
 - System provides a parameter for "Location"
- 0.3. **I want** to add curriculum content and vodcast information to the event **so that** students can access the information directly from the calendar event.
 - When creating or editing an event, the system provides parameter to link "Curriculum Content"
 - System provides a parameter to link "Vodcast" information
- 0.4. **I want** to add and link assessment from other systems to events **so that** information will be synchronized in all systems.
- 0.5. **I want** to delete an event with confirmation **so that** I can ensure error prevention.
 - When clicking on an existing event, display "Delete" button
 - Clicking "Delete" button, display a confirmation message "Do you want to delete this event?"
 - Confirm deletion with "Yes" button
 - Prevent deletion with "No" button
- 0.6. **I want** to copy an event and content from one time or location to different events **so that** I can efficiently reuse information.
- 0.7. **I want** to have the ability to clone an event to a set of child events **so that** I can reduce monotonous work.

- 0.8. **I want** to search events by date, meta information and curriculum content **so that** I am able to filter by desired category type.
 - Display a "Search" bar on left-hand side of calendar
 - After user input, display all information related to specified search criteria
- 0.9. **I want** to edit events and update meta information **so that** I can ensure event information is accurate and up to date.
 - Clicking on an existing event will display an "Edit" button to update information
 - Display confirmation button "Save" when done editing
 - Display "Cancel" button to exit editing process
- 0.10. **I want** to create, edit and delete breakout groups consisting of students and instructors **so that** I don't need to individually add each student and instructor to an event.

As a Student Or Instructor ...

- 1.1. **I want** to view events individually **so that** I can see the fine details of an upcoming event.
 - When clicking on an existing event, display "popup" of event details and information
- 1.2. **I want** to view events in calendar form **so that** I can see my schedule in a high overview of that specific month.
 - Display all events when clicking on "Month" view
- 1.3. **I want** to view events in query form **so that** I filter events by desired meta-information.

As a developer ...

- 2.1. **I want** to ensure that the back-end servers can handle 1000 concurrent users **so that** user experience stays high even at peak hours.
- 2.2. **I want** to add detailed documentation to relevant code **so that** future developers can adapt our system.
- 2.3. **I want** to have Intuitive User Interface **so that** the client doesn't have to train users on how to use the program.
- 2.4. **I want** to run the application on Windows Server 2016 **so that** the program conforms to the client's current tech stack.

Nice to Have User Stories

- 1.4. As a student, **I want** to apply themes to change my calendar colours **so that** the calendar is accessible and customizable.
- 1.5. As an instructor, **I want** to send email notifications to all participants when an event is added, deleted, or modified.
- 1.6. As an instructor, **I want** to use google maps to select a location **so that** the location format is consistent and the location is easy for event participants to find.

Notes

- " * " Denotes: Required task requested by the client

Technical Resources

Technical Resources

- **Back-end:** Django, MySQL
- **Front-end:** React
- **Deployment:** Docker, Github Actions (for CI)
- **Project Management:** Github Projects, Github Issues
- **Third-Party Integrations:** TechSmith, Google Calendar

Similar Projects

- **Google Calendar**
 - Client requires custom functionality related to events.
 - Client wants to integrate the calendar to their own system and have it be actively adapted overtime.
- **Bryntum**
 - Client prefers not to use any paid services

Open-Source Projects

- [Nextcloud](#)
 - Visually appealing and functionally simple User interface.
- [Thunderbird](#)
 - Good built in functions in regards to Event Organization.

Authors

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