

Rams Events

The Future of School Events

Introduction

Section 1

Overview, Parts, DB Relationship, Architect Diagram, Code Structure

What is Rams Events

- New and modern event tracking website
- Engages students
- Clean interface
- Bug-free

- Name: **Rams Events**
 - A Ram is St. Robert's mascot
 - Wanted clear, easy to remember name



Project Architecture Diagram

What did I use to make it?

- **Frontend:** Angular + Angular Material + Angular Fire



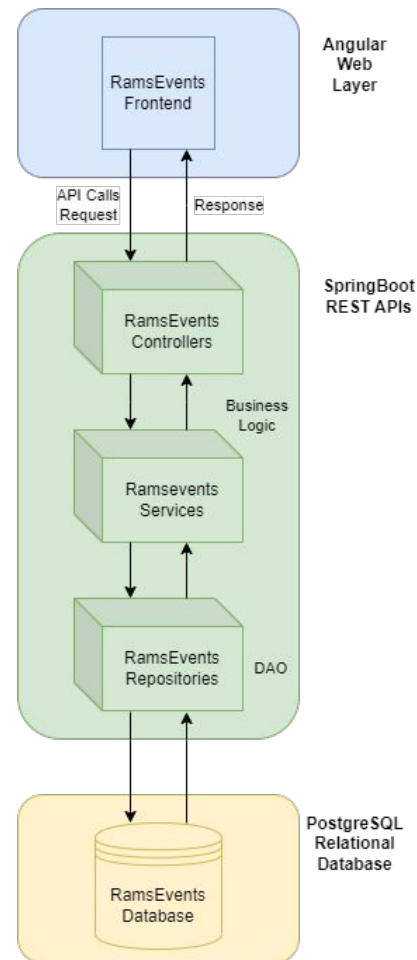
- **Backend:** Spring Boot REST APIs



- **Database:** PostgreSQL



- **Logging:** Logback



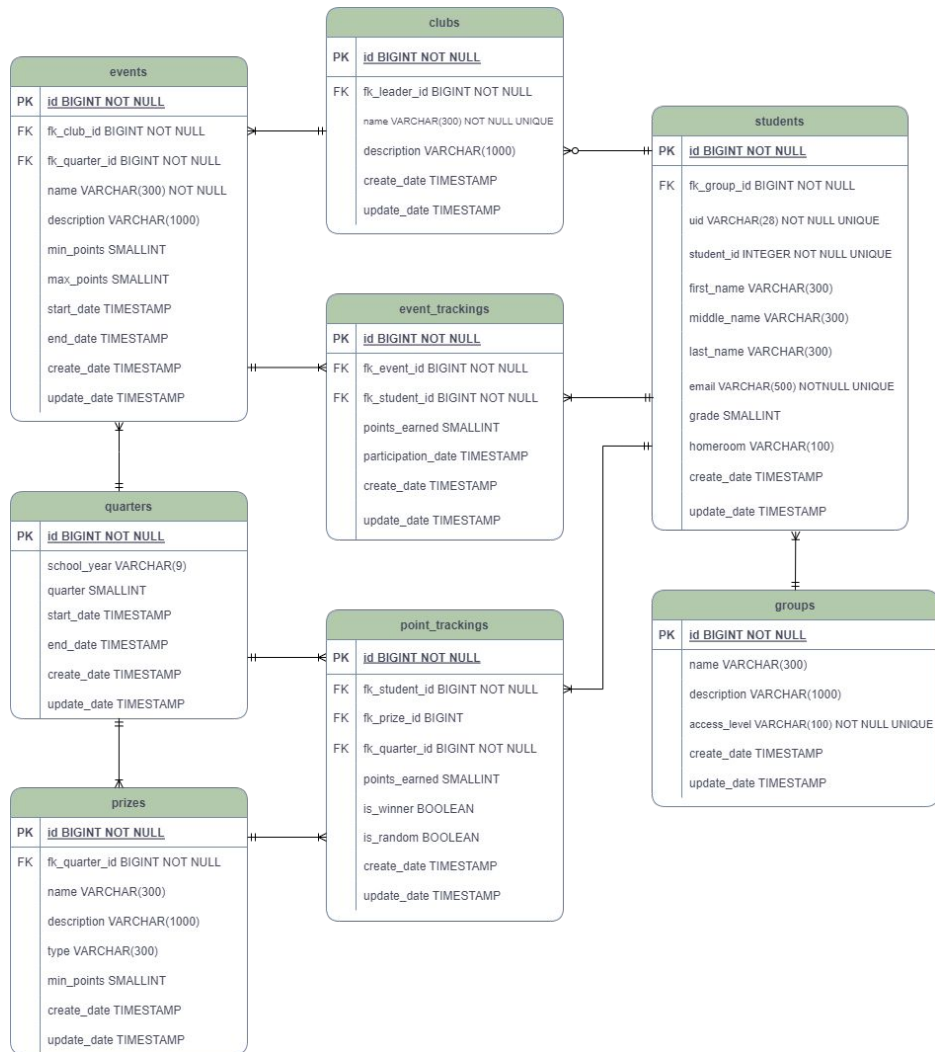
Database Relationship Diagram

1.3 Sequences (8)

- 1.3 club_sequence
- 1.3 event_sequence
- 1.3 event_tracking_sequence
- 1.3 group_sequence
- 1.3 point_tracking_sequence
- 1.3 prize_sequence
- 1.3 quarter_sequence
- 1.3 student_sequence

1.3 Tables (8)

- > clubs
- > event_trackings
- > events
- > groups
- > point_trackings
- > prizes
- > quarters
- > students



Code Structure - Frontend web layer

Organized Main Packages

Components

Detailed Sub-Packages

Interfaces

Services

```

src > app > modules > /* cdk.modules > ...
1 import { NgModule } from '@angular/core';
2 import { CommonModule } from '@angular/common';
3
4 import { CdkAccordionModule } from '@angular/cdk/accordion';
5 import { CdkScrollableModule } from '@angular/cdk/scrolling';
6 import { CdkStepperModule } from '@angular/cdk/stepper';
7 import { CdkTableModule } from '@angular/cdk/table';
8 import { CdkTreeModule } from '@angular/cdk/tree';
9
17 @NgModule({
18   declarations: [],
19   imports: [
20     CommonModule,
21     CdkAccordionModule,
22     CdkScrollableModule,
23     CdkStepperModule,
24     CdkTableModule,
25     CdkTreeModule,
26     ScrollingModule
27   ],
28   exports: [
29     CdkAccordionModule,
30   ]
31 })
  
```

runtime.js | runtime | 13.24 kB |

Initial Total | 11.69 MB

Chunk Files	Names	Raw Size
node_modules_firebase_compat_auth_dist_esm_index_esm_js.js	firebase-compat-auth	506.22 kB

** Angular Live Development Server is listening on localhost:4200, open your browser on http://localhost:4200/ **

✓ Compiled successfully.

Code Structure - Backend REST APIs

The screenshot displays the code structure of a Spring Boot application. The Package Explorer on the left shows the project hierarchy, with the following structure:

- src/main/java
 - com.javaramsevents
 - RamseventsApplication.java
 - com.javaramsevents.configuration.datasource
 - com.javaramsevents.configuration.properties
 - com.javaramsevents.model
 - com.javaramsevents.model.entity
 - RankingRepository.java
 - EventsRepository.java
 - LoginRepository.java
 - PrizesRepository.java
 - RankingRepository.java
 - com.javaramsevents.rest.controller
 - EventsController.java
 - LoginController.java
 - PrizesController.java
 - RankingController.java
 - TestController.java
 - com.javaramsevents.service
 - EventsService.java
 - LoginService.java
 - PrizesService.java
 - RankingService.java

The central editor shows the `RankingRepository.java` file, which contains the following code:

```

50 private static final String UPDATE_STUDENT_PRIZE_QUERY = "UPDATE ramsevents.point_trackings SET fk_prize_id = :pid, is_w
51
52 private static final String ERROR_MESSAGE_SEARCH_RANKINGS = "Error encountered in RankingRepository(searchRankings(Ranki
53 private static final String ERROR_MESSAGE_GRANT_PRIZES = "Error encountered in RankingRepository(grantPrizes(GrantPrizes
54
55 private static final String MISSING_MESSAGE = " Missing search criteria: ";
56 private static final String COULDNOTRETRIEVE_MESSAGE = ", could not retrieve Rankings";
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```

The right sidebar shows the Outline view, which lists the following classes and methods:

- com.javaramsevents.repository
 - RankingRepository
 - LOG: Logger
 - RANKINGS_QUERY: String
 - AND_QUERY: String
 - BY_FIRSTNAME_QUERY: String
 - BY_LASTNAME_QUERY: String
 - BY_STUDENTID_QUERY: String
 - BY_GRADE_QUERY: String
 - BY_POINTS_QUERY: String
 - ORDER_BY_QUERY: String
 - CLEAR_PRIZES_QUERY: String
 - TOP_STUDENT_QUERY: String
 - TOP_ID_QUERY: String
 - LIST_BY_GRADE_QUERY: String
 - UPDATE_STUDENT_PRIZE_QUERY: String
 - ERROR_MESSAGE_SEARCH_RANKINGS: String
 - ERROR_MESSAGE_GRANT_PRIZES: String
 - MISSING_MESSAGE: String
 - COULDNOTRETRIEVE_MESSAGE: String
 - rankingEM: EntityManager
 - prizesRepository: PrizesRepository
 - searchRanking(RankingSearchVO): List<RankingBase
 - grantPrizes(GrantPrizesVO): Integer
 - getPrizeList<PrizesBaseInfoVO>(): PrizesBase
 - populateRankingInfoVO(Object): RankingBaseInfoVO

The bottom of the screenshot shows the console output, which includes the following log messages:

```

2023-02-27 22:41:31.251-05:00 [main] INFO SQL dialect - HHH000400: Using dialect: org.hibernate.dialect.PostgreSQLDialect
2023-02-27 22:41:31.264-05:00 [main] INFO o.h.e.t.jta.platform.internal.JtaPlatformInitiator - HHH000490: Using JtaPlatform implementation: [org.hibernate.engine.transaction.jta.pla
2023-02-27 22:41:31.395-05:00 [main] INFO o.s.orm.jpa.LocalContainerEntityManagerFactoryBean - Initialized JPA EntityManagerFactory for persistence unit 'postgres'
2023-02-27 22:41:31.395-05:00 [main] WARN o.s.b.a.o.j.JpaBaseConfigurationJpaWebConfiguration - spring.jpa.open-in-view is enabled by default. Therefore, database queries may be pe
Feb. 27, 2023 10:41:32 P.M. org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["http-nio-8080"]
2023-02-27 22:41:32.054-05:00 [main] INFO o.s.boot.web.embedded.tomcat.TomcatWebServer - Tomcat started on port(s): 8080 (http) with context path '/ramseventsApi'
2023-02-27 22:41:32.062-05:00 [main] INFO com.javaramsevents.RamseventsApplication - Started RamseventsApplication in 4.021 seconds (process running for 5.015)

```

Logic

Section 2

Main Objectives, Unique Features

Main Objectives

- To procure a website that fulfills all requirements



Point tracking services



Ability to join events and earn points



Ability to grant/win prizes at the end of each quarter



Generate a report

Unique Features

- Access control for different groups of users



Admin

- Can grant prizes by the end of quarter
- Can create, update, and delete any event
- Monitoring abilities for the entire website
- Don't allow to join any event



Club Leaders

- Can create, update, and delete events that are pertaining to their owned clubs
- Monitoring abilities for their club's events
- Cannot join their own club hosted events, but can join and leave other club's events



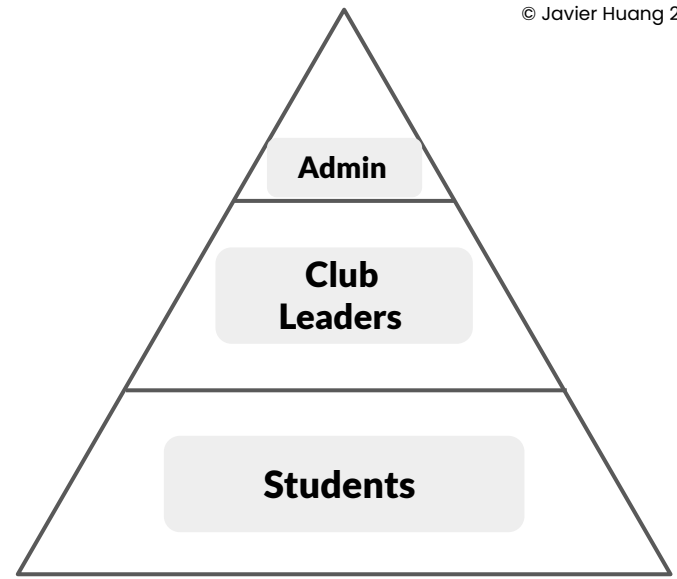
Students

- Can join and leave events, but they don't have rights to manage events



All users

- Can search and view detailed info of events, search rankings, generate ranking reports, view prize information, search and view details info of clubs, and view user profiles



Features

Section 3

Showcase of the project

Google Sign In

Choose an account

to continue to rams-events.firebaseio.com



Christina

christina.lu@gmail.com

Dark Mode

☰

RE Rams Events

☀ Welcome, Christina

Logout

Home

Events

Clubs

Rankings

Profile

Rankings

Student rankings

Select school year

2022-2023

Select school year quarter

Quarter 3

Select search criteria

All

Search

Filter results

Prizes

Generate Report

Name	Grade	Points Earned	Earned Prize	Prize Description	Top Winner	Random Winner
John Hua	9	56	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!	🏆	
Leo Ning	10	55	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!		🏆
Ray Stone	9	46				
David Ming	12	40	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!		🏆

Retractable Sidebar

The screenshot shows the Rams Events application with the sidebar expanded. The sidebar is highlighted with a red border and contains the following items: Home, Events, Clubs, Rankings (selected), and Profile. The main content area displays a search interface with a dropdown menu for search criteria (set to 'All'), a search button, and a table of results.

Header: Rams Events | Welcome, Christina | Logout

Navigation: Home, Events, Clubs, **Rankings**, Profile

Select search criteria: All

Search

Filter results | Prizes | Generate Report

Name	Grade	Points Earned	Earned Prize
John Hua	9	56	Host a Schoolw
Leo Ning	10	55	Host a Schoolw
Ray Stone	9	46	
David Ming	12	40	Host a Schoolw

The screenshot shows the Rams Events application with the sidebar retracted. The sidebar is now a thin vertical bar on the left side of the screen. The main content area displays the same search interface and table of results as the previous screenshot.

Header: Rams Events | Welcome, Christina | Logout

Navigation: Home, Events, Clubs, **Rankings**, Profile

Select search criteria: All

Search

Filter results | Prizes | Generate Report

Name	Grade	Points Earned	Earned Prize
John Hua	9	56	Host a Schoolw
Leo Ning	10	55	Host a Schoolw
Ray Stone	9	46	
David Ming	12	40	Host a Schoolw

Profile - User Christina is a Club Leader

☰

RE Rams Events

Welcome, Christina

Logout

Home

Events

Clubs

Rankings

Profile

Profile

Your Account Profile

Christina Lu

Student Id: 1459867

Student Info

Email

christina.lu@gmail.com

Grade

11

Homeroom

11L

Group Info

Group Name

club leader

Group Description

Club leaders have medium access

Access Level

medium

Filterable Rankings List (Search by Name, Grade, Points Earned)

☰

Rams Events

🌙 Welcome, Christina

Logout

🏠 Home

🎯 Events

👥 Clubs

🏆 Rankings

👤 Profile

Rankings

Student rankings

Select school year

2022-2023

▼

Select school year quarter

Quarter 3

▼

Select search criteria

All

▼

Search

Filter results

Prizes

📄 Generate Report

Name	Grade	Points Earned	Earned Prize	Prize Description	Top Winner	Random Winner
John Hua	9	56	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!	🏆	
Leo Ning	10	55	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!		🏆
Ray Stone	9	46				
David Ming	12	40	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!		🏆

Searching / Filtering Menu

☰

RE Rams Events

Welcome, Christina

Logout

Home

Events

Clubs

Rankings

Profile

Rankings

Student rankings

Select school year

2022-2023

Select school year quarter

Quarter 3

Select search criteria

Grade

All

Name

Grade


Points Earned


Prizes

Generate Report

Name	Grade	Points Earned	Earned Prize	Prize Description	Top Winner	Random Winner
John Hua	9	56	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!	🏆	
Ray Stone	9	46				

Helpful Error Messages

 Rankings

 Profile

Select search criteria

Grade ▼

Grade (Numeric, Exactly Matched)

a

1 / 2

Search

Grade can only be from **9 - 12**

Grade can only be a **numeric**

Searching / Filtering

Rams Events

Welcome, Christina

Logout

Home

Events

Clubs

Rankings

Profile

Rankings

Student rankings

Select school year

2022-2023

Select school year quarter

Quarter 3

Select search criteria

Grade

Grade (Numeric, Exactly Matched)

9

1 / 2

Search

Filter results

Prizes

Generate Report

Name	Grade	Points Earned	Earned Prize	Prize Description	Top Winner	Random Winner
John Hua	9	56	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!		
Ray Stone	9	46				

20

Generating a Downloadable Report

RamsEvents Rankings Report

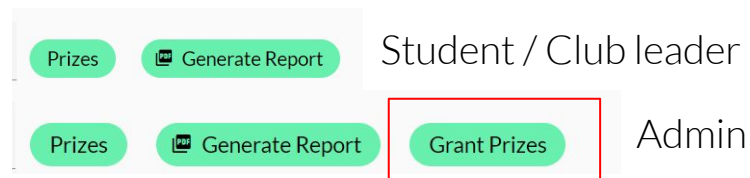
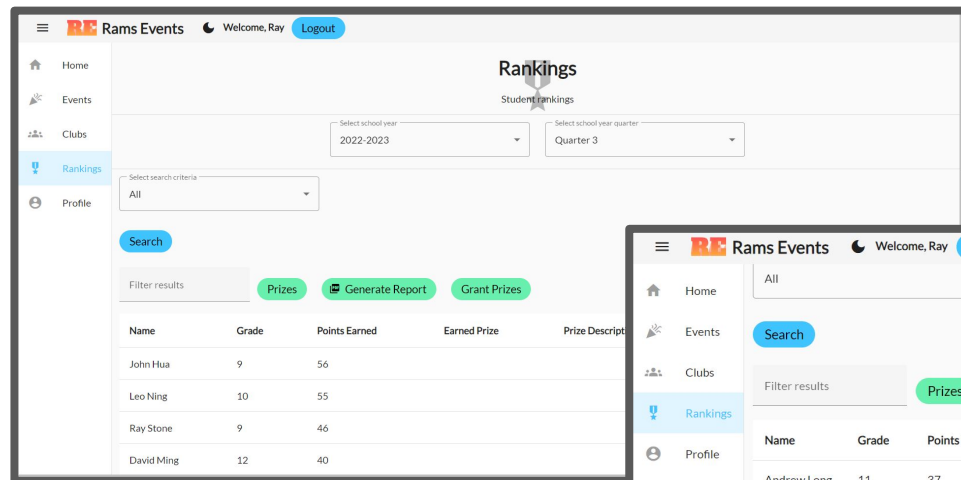
2 / 5 | - 56% + | [+] [↶]

[Download] [Print] [Menu]

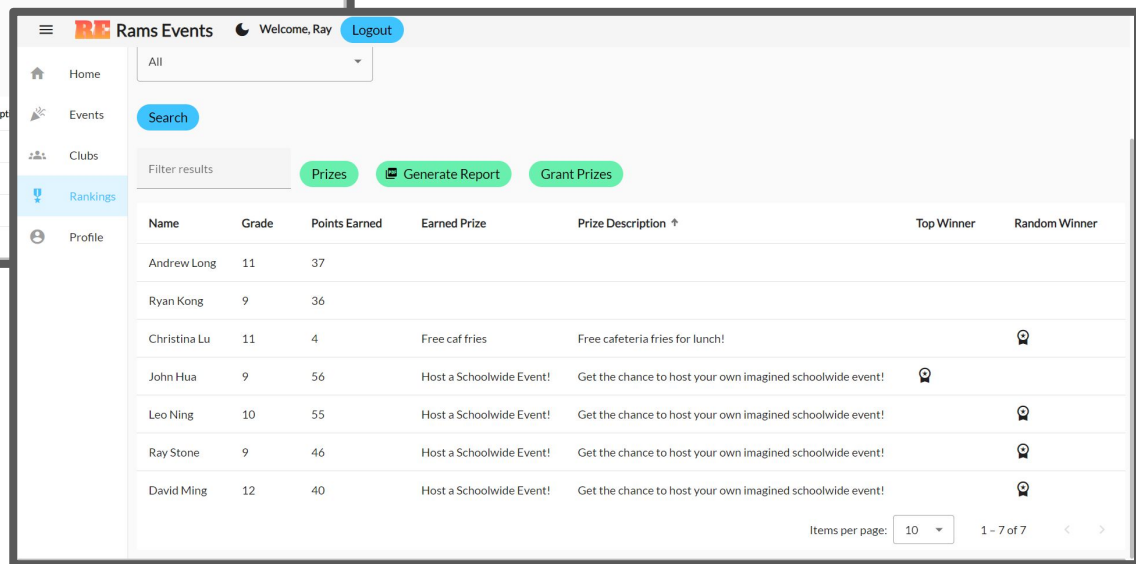
First Name	Last Name	Grade	Points Earned	Top Winner	Random Winner	Earned Prize	Prize Description
John	Hua	9	56	true	false	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!
Ray	Stone	9	46	false	false		
Ryan	Kong	9	36	false	true	Free Cafeteria Meal for One Week!	Get one free week of any 5 cafeteria items!

First Name	Last Name	Grade	Points Earned	Top Winner	Random Winner	Earned Prize	Prize Description
Leo	Ning	10	55	false	true	Host a Schoolwide Event!	Get the chance to host your own imagined schoolwide event!

Only Admins can grant prizes



Ray is logged in as an Admin



Filterable Clubs List (Search by Club Name, Description, Leader Name)

☰

RE Rams Events

🌙 Welcome, Christina

Logout

🏠 Home

📅 Events

👥 Clubs

🏆 Rankings

👤 Profile

Clubs

Student Clubs

Select search criteria

All

Search

Filter results

Club Name	Description	Name	Email	Actions	Owned
Coding Club	A club for coders of any skill!	Leo Ning	leo.ning25@ycdsbk12.ca	⋮	✗
Environmental Council	Your most eco-friendly council!	Christina Lu	christinajxu@gmail.com	⋮	✓
Mural Club	A club for art people! You can paint the murals in our school...	Albert Lonard	albert.lonard23@ycdsbk12.ca	⋮	✗
STUCO	Your finest student council!	Javier Huang	javier.huang25@ycdsbk12.ca	⋮	✗
Student Athletic Council	Your best sports council!	Javier Huang	javier.huang25@ycdsbk12.ca	⋮	✗

Items per page: 5 1 - 5 of 5 < >

Club Filters

☰

RE Rams Events

Welcome, Ray

Logout

Home

Events

Clubs

Rankings

Profile

Clubs

Student Clubs

Select search criteria

All

All

Club Name


Description

Leader Name

		Name	Email	Actions	Owned
Coding Club	A club for coders of any skill!	Leo Ning	leo.ning25@ycdsbk12.ca	⋮	×
Environmental Council	Your most eco-friendly council!	Christina Lu	christinajxu@gmail.com	⋮	×
Mural Club	A club for art people! You can paint the murals in our school...	Albert Lonard	albert.lonard23@ycdsbk12.ca	⋮	×
STUCO	Your finest student council!	Javier Huang	javier.huang25@ycdsbk12.ca	⋮	×
Student Athletic Council	Your best sports council!	Javier Huang	javier.huang25@ycdsbk12.ca	⋮	×



Items per page: 5 1 - 5 of 5

Different Menus for Different Permissions

Name	Email	Actions	Owned
Leo Ning	leo.ning25@ycdsbk12.ca	⋮	✕
Christina Lu	christinajxu@gmail.com	 View	✓
Albert Lonard	albert.lonard23@ycdsbk12.ca	⋮	✕
Javier Huang	javier.huang25@ycdsbk12.ca	⋮	✕
Javier Huang	javier.huang25@ycdsbk12.ca	⋮	✕

Items per page: 5 1 - 5 of 5

Student

Name	Email	Actions	Owned
Leo Ning	leo.ning25@ycdsbk12.ca	⋮	✕
Christina Lu	christinajxu@gmail.com	⋮	✓
Albert Lonard	albert.lonard23@ycdsbk12.ca	 Add Event	
Javier Huang	javier.huang25@ycdsbk12.ca	 View	
Javier Huang	javier.huang25@ycdsbk12.ca	⋮	✕

Items per page: 5 1 - 5 of 5

Club leader

Student can only view club information, but club leaders can add an event along with viewing their own club information.

Club Leaders can create Events

The screenshot displays the 'Rams Events' web application interface. A modal window titled 'Add Event' is open, allowing users to create a new event. The background shows the 'Clubs' section with a list of clubs and their details.

Add Event Modal:

- Event Name:** Tree Planting Event!
- Event Description:** (Empty text area)
- Minimum Points <= 4 (Numeric):** 0 / 1
- Maximum Points <= 9 (Numeric):** 0 / 1
- Start Date:** (Calendar icon)
- Buttons:** Add Event (Green), Close (Grey)

Clubs List (Background):

Club Name	Actions	Owned
Coding Club	⋮	✗
Environmental Council	⋮	✓
Mural Club	⋮	✗
STUCO	⋮	✗
Student Athletic Council	⋮	✗

Additional details visible in the background include a search bar, a 'Logout' button, and a footer with pagination information: 'Items per page: 5' and '1 - 5 of 5'.

Filterable Events List (Search by Event Name, Minimum Points, Club Name, End Date)

☰

RE Rams Events

Welcome, Christina

Logout

Home

Events

Clubs

Rankings

Profile

Events

Student Events

Select school year

2022-2023

Select school year quarter

Quarter 3

Select search criteria

All

Search

Filter results

All

Joined

Not Joined

All

Host

Not Host

Event Name	Description	Min Points	Max Points	Start Date	End Date	Club Name	Actions	Joined	Host
Golf Team Tourn...	Attention all s...	3	9	2/8/23	2/9/23	Student Athleti...	⋮	✓	✗
Schoolwide Skat...	Hey Rams! Our y...	1	2	1/20/23	1/22/23	STUCO	⋮	✓	✗
Senior Tennis T...	There will be T...	1	3	1/16/23	1/17/23	Student Athleti...	⋮	✗	✗
Christmas Card ...	Make a Christma...	2	10	12/1/22	12/22/22	STUCO	⋮	✗	✗

Event Filters

☰

RE Rams Events

Welcome, Ray

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Student Events

Select school year

2022-2023

Select school year quarter

Quarter 3

Select search criteria

All

		Min Points	Max Points	Start Date	End Date	Club Name	Actions
		3	9	2/8/23	2/9/23	Student Athleti...	⋮
Schoolwide Skat...	Hey Rams! Our y...	1	2	1/20/23	1/22/23	STUCO	⋮
Senior Tennis T...	There will be T...	1	3	1/16/23	1/17/23	Student Athleti...	⋮
Christmas Card ...	Make a Christma...	2	10	12/1/22	12/22/22	STUCO	⋮

Event Details & Joining / Leaving Them

RE Rams Events Welcome, Christina Logout

Select school year: 2022-2023 Select school year quarter: Quarter 3

Home Events Clubs Rankings Profile

Select search criteria: All Search Filter results

Event Details
Detailed View of an Event

Golf Team Tourney
Hosted by: Student Athletic Council

Event Info

- Event Description**
Attention all students, there will be a schoolwide play against many schools in the large gym!
- Minimum Points (Earned for Participation)**
3
- Maximum Points (Decided by Hosters)**
9
- Start Date**
2/8/23, 1:00 PM

[Leave Event](#) [Close](#)

Event Name	Actions	Joined	Host
Golf Team Tourn...	⋮	✓	✗
Schoolwide Skat...	⋮	✓	✗
Senior Tennis T...	⋮	✗	✗
Christmas Card ...	⋮	✗	✗
Mural Painting ...	⋮	✗	✗

Items per page: 5 1 - 5 of 6

Different Menus for Events

Club Name	Actions	Joined	Host
Student Athleti...	⋮	✓	×
STUCO	⋮	✓	×
Student Athleti...	⋮	×	×
STUCO	⋮	×	×
Mural Club	⋮	×	×

Items per page: 5 1 – 5 of 6 < >

Student

Club Name	Actions	Joined
Student Athleti...	⋮	✓
STUCO	⋮	✓
Student Athleti...	⋮	×
STUCO	⋮	×
Mural Club	⋮	×

Club Name	Actions	Joined	Host
Student Athleti...	⋮	✓	
STUCO	⋮	✓	
Student Athleti...	⋮	×	
STUCO	⋮	×	
Mural Club	⋮	×	

Items per page: 5 6 – 6 of 6 < >

Club leader

Student can only join, leave, and view events, but club leaders can update, delete, and view their own club events, except they cannot join or leave their own club events.

Final Remarks

Section 4

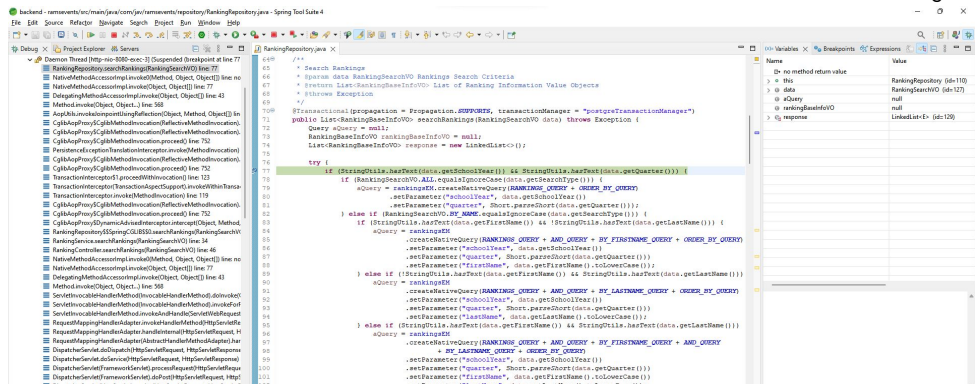
Some end remarks

Debug Strategies

Backend

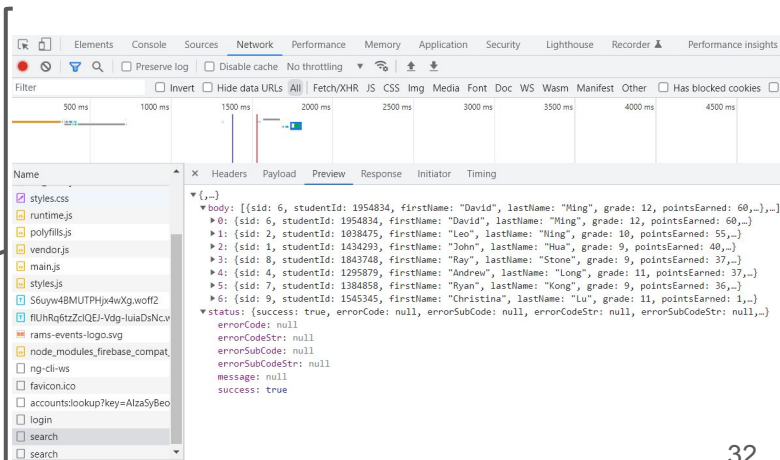


- Using “Debug Mode” in Spring Tool Suite
- Add breakpoints and go step by step
 - Check value in each step to find the error cause
- Set logback logger level to debug to log detailed information
 - Log underlying SQL statement details
 - Exception throwing
- If these methods don't work
 - Use inline print statements to further visualize each step



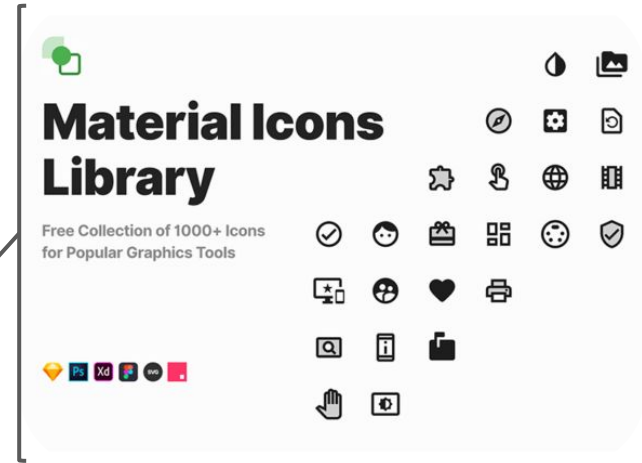
Frontend

- Add `console.log` print statements on key areas
 - Use chrome developer tools to check the console output.
- Network tab in chrome developer tools to check the details of the *request/response* for the API calls



References

- **Material Design:** <https://material.angular.io/>
- **Material Icons:** <https://fonts.google.com/icons>
- **Firebase:** <https://firebase.google.com/>
- **PDFMake Tutorial Code:**
<https://github.com/pandeysoni/pdfmake/blob/master/src/App.js>
[\[https://pandeysoni.medium.com/how-to-generate-pdf-file-using-pdfmake-module-660509799461\]](https://pandeysoni.medium.com/how-to-generate-pdf-file-using-pdfmake-module-660509799461)



 **bpampuch / pdfmake**

***Note:** All libraries and plugins used are listed in the `package.json` (frontend) and the `pom.xml` (backend) files, which are indicated in the `README.md` file submitted.

