## University of British Columbia, Vancouver

**Department of Computer Science** 

# **CPSC 304 Project Cover Page**

Milestone #:	_4
Date:20	23.11.30
Group Number:	132

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia.

## (a) Project Description

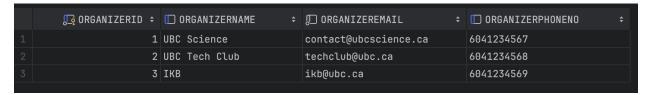
The UBC Event Collection Application is designed to gather the comprehensive information of an event in the UBC community. It aims to simplify the process of tracking the event-related data. To achieve the goals mentioned above, the database will include the following entities: Event, Organizer, Team Member, Event Photo, Participant, Feedback, Sponsor. Each of these entities has crucial information regarding the event, thus ensuring that the application effectively collects and stores all the essential data. The final project has been accomplished by storing the data mentioned above in the database and with various functionality for a web front end. The front end now has the following functionality: insert event, delete existing event, display all events, view attributes of a table in the database, searching and view for specific events/sponsor/organizers by certain criteria.

## (b) Final Schema

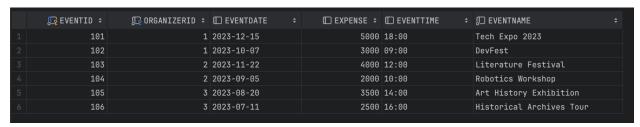
We removed Organizer\_EmailandName, Event\_NameandDescpription from the schema turned in MileStone #2, since the two schemas are not necessary and have redundant information from other schemas. Other than this, we have renamed Organized\_Event to Event, Leaded\_TeamMember to Team\_Member etc for having a better understanding. Finally, we also changed the domain of some features like MemberName in Team\_Member from char(10) to Varchar(255) to make the domain more reasonable.

## (c) Copy of the Schema and Screenshots

Organizer(<u>OrganizerID</u>: integer, OrganizerName:varchar(255), OrganizerEmail: varchar, OrganizerPhoneNo: char(10))



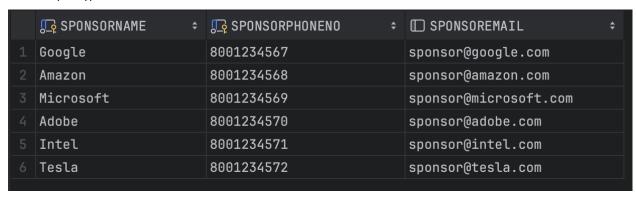
Event(<u>EventID</u>: integer, **OrganizerID**: integer, EventDate: date, Expense: integer, EventTime: char(5), EventName: varchar(255))



Sponsor\_Support(<u>EventID</u>: integer, <u>SponsorName</u>: varchar(255), **SponsorPhoneNo**: char(10), <u>SponsorshipType</u>: varchar(255), EstimatedValue: integer(255))

	ু EVENTID ÷	ুকু SPONSORNAME ÷	SPONSORPHONENO ÷	☐ SPONSORSHIPTYPE ÷	☐ ESTIMATEDVALUE ÷
1	101	Google	8001234567	Financial	10000
2	102	Google	8001234567	In-Kind	12000
3	103	Google	8001234567	Media	15000
4	104	Google	8001234567	Technical	11000
5	105	Amazon	8001234568	Financial	16000
6	102	Microsoft	8001234569	In-Kind	20000
7	102	Microsoft	8001234569	Financial	20000
8	102	Microsoft	8001234569	Technical	20000
9	102	Microsoft	8001234569	Media	20000
10	102	Adobe	8001234570	Media	14000
11	101	Intel	8001234571	Technical	17000

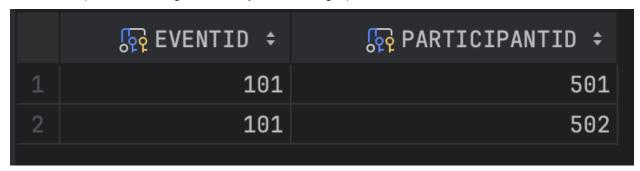
Sponsor(<u>SponsorName:</u> varchar(255), <u>SponsorPhoneNo</u>: char(10), SponsorEmail: varchar(255))



Feedback(FeedbackID: integer, EventID: integer, Rating: integer, Feedback: varchar(255))



Attendance(EventID: integer, ParticipantID: integer)



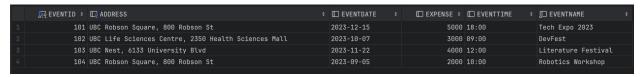
Participant(<u>ParticipantID</u>: integer, ParticipantName: varchar(255), ParticipantEmail: varchar(255))



Event\_Photo(**EventID**: integer, <u>PhotoID</u>: integer, Description: varchar(255))



Event\_And\_Location(<u>EventID</u>: integer, **Address**: varchar, EventDate: date, Expense: integer, EventTime:char(5), EventName:varchar(255)



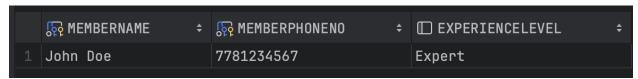
Location(Address: varchar(255), Capacity: integer)



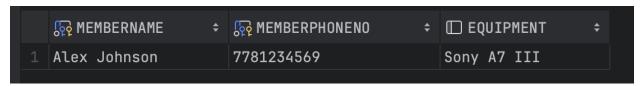
Team\_Member(<u>MemberName</u>: varchar(255), <u>MemberPhoneNo</u>: char(10), **OrganizerID**: integer, StaffEmail: varchar(255), PayRate: integer)



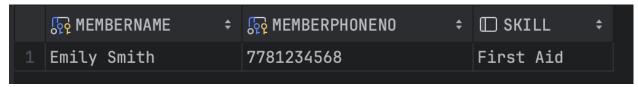
Speaker(<u>MemberName</u>: varchar(255), <u>MemberPhoneNo</u>: char(10), ExpericenceLevel: varchar(255))



Photographer(<u>MemberName</u>: varchar(255), <u>MemberPhoneNo</u>: char(10), Equipment: varchar(255))



Volunteer(MemberName: varchar(255), MemberPhoneNo: char(10), Skill: varchar(255))



## (d) Queries:

Insert Operation - /server/models/eventModel.js line 238

```
`INSERT INTO EVENT (EventID, OrganizerID, EventDate, Expense, EventTime, EventName)

VALUES (:EventID, :OrganizerID, TO_TIMESTAMP(:EventDate, 'YYYY-MM-DD"T"HH24:MI:SS.FF3"Z"'), :Expense, :EventTime, :EventName)`,
```

**Delete Operation** - /server/models/eventModel.js line 321

```
const sqlQuery = 'DELETE FROM EVENT WHERE EventID = :EventID';
```

Update Operation - /server/models/eventModel.js line 306

```
UPDATE EVENT SET EventName = :EventName, EventDate = TO_TIMESTAMP(:EventDate, 'Y
YYY-MM-DD"T"HH24:MI:SS.FF3"Z"'), EventTime = :EventTime, OrganizerID = :Organize
rID, Expense = :Expense WHERE EventID = :EventID
```

Selection - /server/models/eventModel.js line 157

```
SELECT * FROM EVENT WHERE 1=1 AND OrganizerID = :organizerId AND UPPER(EventName) LIKE UPPER(:eventName)
```

Projection - /server/models/databaseModel.is line 27-57

Random example query:

## SELECT EVENTID, ORGANIZERID, EVENTDATE FROM EVENT

Join - /server/models/eventModel.js line 80

```
SELECT E.EventID, E.EventName, E.EventDate, E.EventTime, O.OrganizerNam
e, AVG(F.Rating) AS AverageRating
FROM EVENT E
LEFT JOIN ORGANIZER O ON E.OrganizerID = O.OrganizerID
LEFT JOIN FEEDBACK F ON E.EventID = F.EventID
GROUP BY E.EventID, E.EventName, E.EventDate, E.EventTime, O.OrganizerName
```

#### Aggregation with Group By - /server/models/organizerModel is line 49

```
const query = `
    SELECT 0.0rganizerID, 0.0rganizerName, COUNT(E.EventID) AS TotalEventsHosted
    FROM ORGANIZER 0
    LEFT JOIN EVENT E ON 0.0rganizerID = E.OrganizerID
    GROUP BY 0.0rganizerID, 0.0rganizerName
`;
```

#### **Aggregation with Having** - /server/models/eventModel.js line 133

```
const query = `
    SELECT E.*, AVG(F.Rating) AS AverageRating
    FROM EVENT E
    JOIN FEEDBACK F ON E.EventID = F.EventID
    GROUP BY E.EventID, E.OrganizerID, E.EventDate, E.Expense, E.EventTime, E.EventName
    HAVING AVG(F.Rating) > :ratingThreshold
`;
```

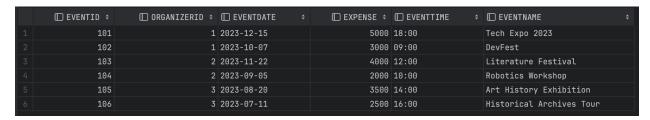
#### Nested Aggregation with Group By - /server/models/organizerModel.js line 65

#### **Division** - /server/models/sponsorModel.js/ line 45

## (e) Functionality

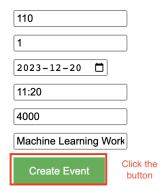
### Insert

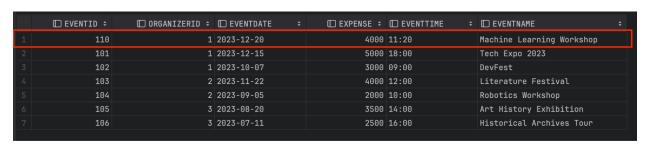
#### Before:



#### During:

#### **Add Event**





## **Delete**

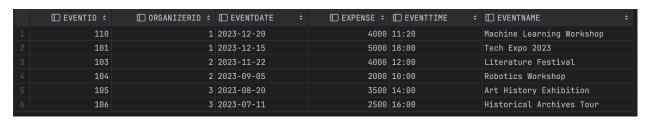
#### Before:

	☐ EVENTID ÷	☐ ORGANIZERID ÷	■ EVENTDATE		■ EVENTTIME	■ EVENTNAME
1	110	1	2023-12-20	4000	11:20	Machine Learning Workshop
2	101	1	2023-12-15	5000	18:00	Tech Expo 2023
3	102	1	2023-10-07	3000	09:00	DevFest
4	103	2	2023-11-22	4000	12:00	Literature Festival
5	104	2	2023-09-05	2000	10:00	Robotics Workshop
6	105	3	2023-08-20	3500	14:00	Art History Exhibition
7	106	3	2023-07-11	2500	16:00	Historical Archives Tour

## During:

Name: DevFest
Date: October 7, 2023
Time: 09:00
Average Rating: 4.0
Organizer Name: UBC Science

Delete < — Click
Update



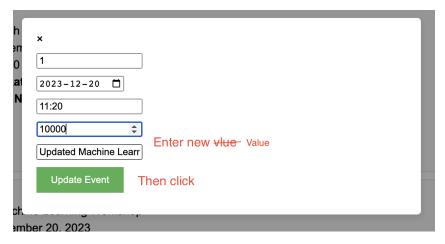
## **Update**

#### Before:

	□ EVENTID ÷	☐ ORGANIZERID ÷	□ EVENTDATE		□ EVENTTIME	□ EVENTNAME	<b>\$</b>
1	110	1	2023-12-20	4000	11:20	Machine Learning Workshop	
2	101	1	2023-12-15	5000	18:00	Tech Expo 2023	
3	103	2	2023-11-22	4000	12:00	Literature Festival	
4	104	2	2023-09-05	2000	10:00	Robotics Workshop	
5	105	3	2023-08-20	3500	14:00	Art History Exhibition	
6	106	3	2023-07-11	2500	16:00	Historical Archives Tour	

#### During:

ID: 110
Name: Machine Learning Workshop
Date: December 20, 2023
Time: 11:20
Average Rating: null
Organizer Name: UBC Science

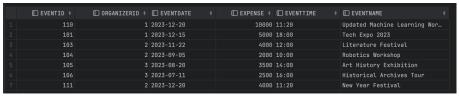


<- Click



### **Selection**

#### Before:



Get events by Organizer ID and partial match on **Event Name:** Organizer ID Partial Event Name All events are returned without inputs • Event ID: 110 Event Name: Updated Machine Learning Workshop • Event ID: 101 Event Name: Tech Expo 2023 • Event ID: 103 **Event Name:** Literature Festival • Event ID: 104 Event Name: Robotics Workshop • Event ID: 105 Event Name: Art History Exhibition • Event ID: 106 Event Name: Historical Archives Tour Event ID: 111 Event Name: New Year Festival

#### During:



#### After:

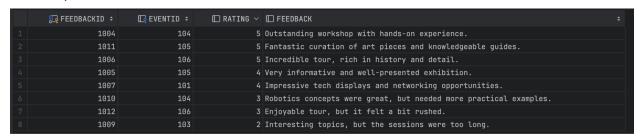
Get events by Organizer ID and partial match on Event Name:



## **Projection**

#### Before:

For example we want to view table Feedback, with attributes EVENTID, RATING, and FEEDBACK



#### During:

#### **Projection**

Select a table and attributes to view:



#### After:

#### **Projection**

Select a table and attributes to view:



## Join

#### Before:

#### Event table

	□ EVENTID ÷	☐ ORGANIZERID ÷	■ EVENTDATE ÷		□ EVENTTIME	□ EVENTNAME
1	110		2023-12-20	10000	11:20	Updated Machine Learning Wor…
2	101		2023-12-15	5000	18:00	Tech Expo 2023
3	103		2023-11-22	4000	12:00	Literature Festival
4	104		2023-09-05	2000	10:00	Robotics Workshop
5	105		2023-08-20	3500	14:00	Art History Exhibition
6	106		2023-07-11	2500	16:00	Historical Archives Tour
7	111		2023-12-20	4000	11:20	New Year Festival

#### Organizer table

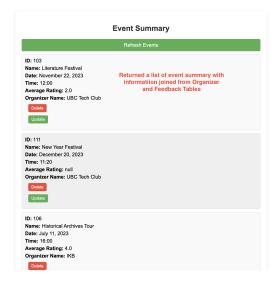
	☐ ORGANIZERID ÷	ORGANIZERNAME ÷	□ ORGANIZEREMAIL ÷	☐ ORGANIZERPHONENO ÷
1		UBC Science	contact@ubcscience.ca	6041234567
2		UBC Tech Club	techclub@ubc.ca	6041234568
3		IKB	ikb@ubc.ca	6041234569

#### Feedback table



## During:





## **Aggregation with Group By**

#### Before:

#### Event table

_							
	<b>□</b> EVENTID ÷	<b>∏</b> ORGANIZERID ‡	■ EVENTDATE	□ EXPENSE	■ EVENTTIME	□ EVENTNAME	<b>‡</b>
	110		2023-12-20	10000	11:20	Updated Machine Learning Workshop	
	101		2023-12-15	5000	18:00	Tech Expo 2023	
	103		2023-11-22	4000	12:00	Literature Festival	
	104		2023-09-05	2000	10:00	Robotics Workshop	
	105		2023-08-20	3500	14:00	Art History Exhibition	
	106		2023-07-11	2500	16:00	Historical Archives Tour	
	111		2023-12-20	4000	11:20	New Year Festival	

#### During:

Calculate the total number of events hosted by each organizer

Calculate

<- Click to calculate

#### After:

Calculate the total number of events hosted by each organizer

## Calculate

• Organizer ID: 3

**Organizer Name: IKB** 

Count: 2

• Organizer ID: 2

Organizer Name: UBC Tech Club

Count: 3

• Organizer ID: 1

Organizer Name: UBC Science

Count: 2

## **Aggregation with Having**

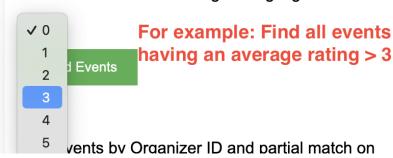
#### Before:

Feedback table

	<u> </u>	☐ EVENTID ÷	☐ RATING ÷	☐ FEEDBACK	<b>\$</b>
1	1004	104		Outstanding workshop with hands-on experience.	
2	1005	105		Very informative and well-presented exhibition.	
3	1006	106		Incredible tour, rich in history and detail.	
4	1007	101		Impressive tech displays and networking opportunities.	
5	1009	103		Interesting topics, but the sessions were too long.	
6	1010	104		Robotics concepts were great, but needed more practical examples.	
7	1011	105		Fantastic curation of art pieces and knowledgeable guides.	
8	1012	106		Enjoyable tour, but it felt a bit rushed.	

### During:

Find events with an average rating higher than:



#### After:

Find events with an average rating higher than:



• Event ID: 101

Event Name: Tech Expo 2023

Average Rating: 4.0

• Event ID: 104

Event Name: Robotics Workshop

Average Rating: 4.0

• Event ID: 105

Event Name: Art History Exhibition

Average Rating: 4.5

• Event ID: 106

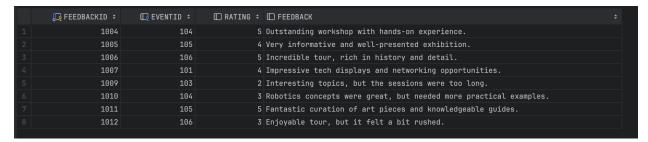
Event Name: Historical Archives Tour

Average Rating: 4.0

## **Nested Aggregation with Group By**

Before:

Feedback table



#### Event table



#### During:

Find the highest average rating among all organizers



After:

Find the highest average rating among all organizers

Calculate

4.25

Value returned

#### **Division**

Before:

Sponsor\_Support table



#### During:

List of sponsors who have supported every type of sponsorship

View Sponsors

#### After:

List of sponsors who have supported every type of sponsorship

**View Sponsors** 

- Google
- Microsoft

Google and Microsoft are returned because they have supported all four types of sponsorship(Financial, Media, Technical, and In-Kind)