CPSC 304 Project Cover Page

Milestone #: 4

Date: <u>04/05/2024</u>

Group Number: 67

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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

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Project Collaboration Web App

Brief Summary

Our project is a project collaboration and management platform with features like task assignment, progress tracking, and communication tools. It utilizes a database to efficiently manage user authentication, project details, and real-time collaboration, to enhance productivity and coordination within teams. The database will provide functionality for storing, retrieving, and managing data related to project collaboration and management.

Our Accomplishment

In this project, we have successfully integrated SQL queries into our frontend GUI application to create, update, and display tables according to our functionality. We are also able to update each table with cascading changes, and guard empty values in the GUI and SQL queries. Lastly, we are able to implement things we learned in class such as aggregation with group-by and other operations.

Final Schema

We made a minor change in our final schema, where we rename our table from 'User' to 'appUser' since the general term of 'User' is restricted and cannot be made as a table name. In addition, we rename our 'Date' attribute to 'dateGenerated' due to the naming convention restriction. We have also decided to remove the 'SubTask' attribute in our project. MeetupEvent will no longer need a PermissionID since this is unnecessary towards the general logic purpose.

- Notification(NotificationID: Char(50), Text: Char(255), dateGenerated: TimeStamp)
 - CK: NotificationID
 - dateGenerated: not null



- appUser(<u>UserID</u>: Char(50), Email: Char(50))
 - CK: UserID
 - Email: not null and unique



- appUser1(Email: Char(50), Password: Char(50))
 - CK: Email
 - Password: not null
 - ON DELETE CASCADE

- appUser2(Email: Char(50), firstName: Char(50))
 - CK: Email
 - firstName: not null
 - ON DELETE CASCADE



- appUser3(**Email**: Char(50), lastName: Char(50))
 - CK: Email
 - lastName: not null
 - ON DELETE CASCADE

```
SQL> SELECT * FROM appUser3;

EMAIL

LASTNAME

user1@example.com
White

user2@example.com
Lin

user3@example.com
Henderson

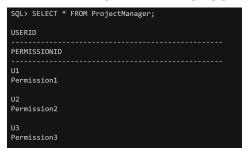
EMAIL

LASTNAME

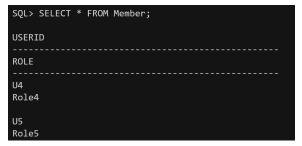
user4@example.com
Tanner

user5@example.com
Farley
```

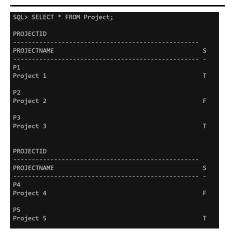
- Project Manager(<u>UserID</u>: Char(50), PermissionID: Char(50))
 - CK: UserID
 - PermissionID: not null
 - ON DELETE CASCADE



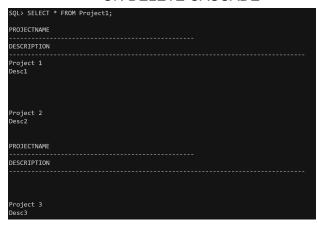
- Member(<u>UserID</u>: Char(50), Role: Char(50))
 - CK: UserID
 - ON DELETE CASCADE



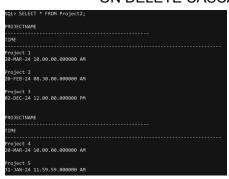
- Project(ProjectID: Char(50), ProjectName: Char(50), Status: Char(25))
 - CK: ProjectID
 - ProjectName: not null and unique



- Project1(ProjectName: Char(50), Description: Char(255))
 - CK: ProjectName
 - ON DELETE CASCADE



- Project2(<u>ProjectName</u>: Char(50), Time: TimeStamp)
 - CK: ProjectNameTime: not null
 - ON DELETE CASCADE



- Collaboration Request(<u>RequestID</u>: Char(50), **UserID**: Char(50), **ProjectID**: Char(50), Status: Boolean)
 - CK: RequestIDUserID: not nullProjectID: not null

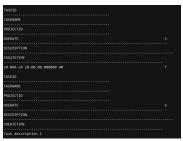
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ON DELETE CASCADE



- Task(<u>TaskID</u>: Char(50), TaskName: Char(50), **ProjectID**: Char(50), DueDate: TimeStamp, Status: Boolean, Description: Char(255), CreateTime: TimeStamp)
 - CK: TaskID
 - TaskName: not nullProjectID: not null
 - ON DELETE CASCADE





- MeetupEvent(<u>MeetupEventID</u>: Char(50), **ProjectID**: Char(50), Location: Char(50), Time:
 TimeStamp, **UserID**: Char(50))
 - CK: MeetingEventID
 - ProjectID: not null
 - UserID: not null

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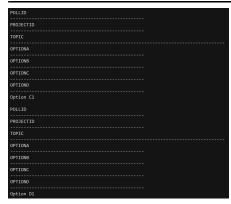
ON DELETE CASCADE



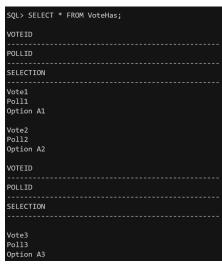
- Poll(PollID: Char(50), **ProjectID**: Char(50), Topic: Char(255), Option A: Char(50), Option B: Char(50), Option C: Char(50), Option D: Char(50))
 - CK: PolIID
 - ProjectID: not null
 - Topic: not null
 - ON DELETE CASCADE







- VoteHas(<u>VoteID</u>: Char(50), <u>PolIID</u>: Char(50), Selection: Char(50))
 - CK: the combination of VoteID and PolIID
 - Selection: not null
 - ON DELETE CASCADE

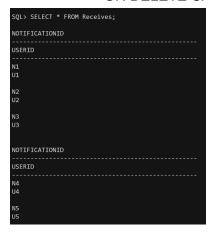


- TaskComment_Contains(<u>CommentID</u>: Char(50), <u>TaskID</u>: Char(50), DateGenerated: TimeStamp, Text: Char(255), **UserID**: Char(50))
 - CK: the combination of CommentID and TaskID
 - UserID: not null
 - ON DELETE CASCADE

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- Receives(NotificationID: Char(50), UserID: Char(50))
 - CK: the combination of NotificationID and UserID
 - ON DELETE CASCADE



- Acquires(<u>UserID</u>: Char(50), <u>RequestID</u>: Char(50))
 - CK: the combination UserID and RequestID
 - ON DELETE CASCADE



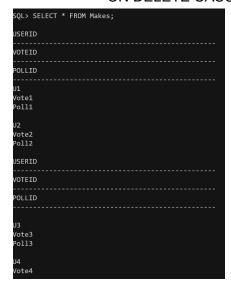
- WorksOn(<u>ProjectID</u>: Char(50), <u>UserID</u>: Char(50))

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- CK: the combination of ProjectID and UserID
- ON DELETE CASCADE



- Makes(<u>UserID</u>: Char(50), <u>VoteID</u>: Char(50), <u>PolIID</u>: CHAR(50))
 - CK: the combination of UserID and VoteID
 - ON DELETE CASCADE



SQL Queries (with some short snippets)

- INSERT Operation: index.php, Line 698-736
 \$statement = oci_parse(\$db_conn, "INSERT into CollaborationRequest
 values (:bind1, :bind2, :bind3, :bind4)");
- DELETE Operation: index.php, Line 652-671
 executePlainSQL("DELETE FROM appUSER WHERE email = '" . \$email .
 "'");
- UPDATE Operation: index.php, Line 562-600
 executePlainSQL("UPDATE Poll SET ProjectID='" . \$ProjectID . "'
 WHERE PollID='" . \$PollID . "'");

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• Selection: index.php, Line 482-535

Projection: index.php, Line 435-458

```
$projectionQuery = "SELECT $selectedColumns FROM $tableName";
```

• Join: index.php, Line 673-681

Aggregation with Group By: index.php, Line 738-744

Aggregation with Having: index.php, Line 746-754

Nested Aggregation with Group By: index.php, Line 756-764

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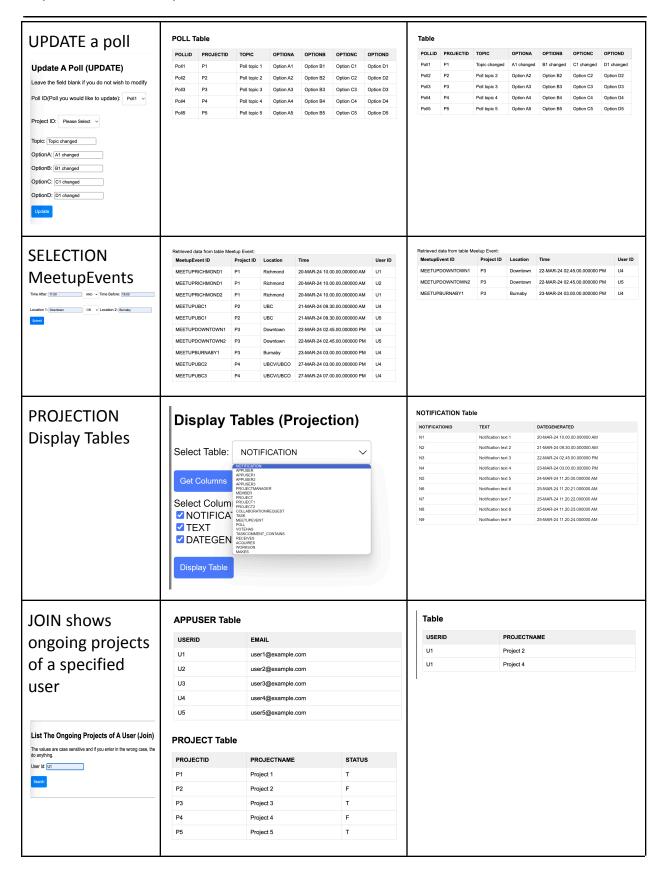
GROUP BY Location";

• Division: index.php, Line 683-696

```
$result = executePlainSQL("SELECT A.userID, A1.firstName,
A2.lastname
FROM appUser A, appUser2 A1, appUser3 A2
WHERE A.email = A1.email AND A1.email =A2.email AND A.email =
A2.email AND NOT EXISTS
((SELECT P.projectID
FROM Project P)
MINUS
(SELECT W.projectID
FROM WorksOn W
WHERE W.userID=A.userID))");
```

GUI Operations

Operation/inputs	Before				After	After			
INSERT new	COLLABORATI	ONREQUEST T	able		COLLABORAT	IONREQUEST T	able		
aallah avatias	REQUESTID	USERID	PROJECTID	STATUS	REQUESTID	USERID	PROJECTID	STATUS	
collaboration	CR1	U1	P1	Т	CR1	U1	P1	Т	
request	CR2	U2	P2	F	CR2	U2	P2	F	
	CR3	U3 U4	P3	T F	CR3	U3	P3	Т	
Insert a new Collaboration Request (INSERT)	CR5	U5	P5	T	CR4 CR5	U4 U5	P4 P5	F T	
Fill in the text boxes below to create a new Collaboration Request. The UserID and ProjectID must already exist; otherwise, an error message	CR100	U1	P3	т	CR5	U5 U1	P5	т	
added to the Database, a success message will be displayed. Request ID: CR123					CR100	U1	P3	т	
DELETE a user	APPUSE	R Table			Table				
Delete A User (DELETE)	USERID	USERID			USERID	USERID		EMAIL	
The values are case sensitive and if you do anything.	U1		user1@	example.com	U1	U1		user1@example.com	
User Email: user3@example.com	U2	U2		example.com	U2	U2		user2@example.com	
Delete	U3		user3@	example.com	U4	U4		user4@example.com	
	U4		user4@	example.com	U5		user5@exa	mple.com	
	U5		user5@	example.com					



							1			
	WORKSON T	able								
	PROJECTID		USERID							
	P1		U1							
	P1		U2	U2						
	P1			U3						
	P2			U1						
	P2			U2						
	P2		U3							
	P3	P3		U1						
	P3			U2	U2					
	P3			U3						
	P4			U1						
	P4			U2						
	P4			U3						
	P4			U4						
	P5			U1						
	P5			U2						
	P5			U3						
	P5			U5						
Aggregation with	NOTIFICATION Tal						Retrieved data from table Notificat Date Generated	ion: Number of Notific	ation per day	
Group By	NOTIFICATIONID N1	TEXT Notification to	xt 1	DATEGENERATED 20-MAR-24 10.00.00.00	0000 AM		2024/03/25	4		
	N2	Notification te		21-MAR-24 09.30.00.00			2024/03/24	1		
notification	N3	Notification te		22-MAR-24 02.45.00.000000 PM		2024/03/23	1			
dates			23-MAR-24 03.00.00.000000 PM 24-MAR-24 11.20.00.00000 AM		2024/03/21	1				
luates			25-MAR-24 11.20.21.000000 AM		2024/03/20	1				
			25-MAR-24 11.20.22.00 25-MAR-24 11.20.23.00							
	N9	Notification to		25-MAR-24 11.20.24.00						
A ====================================	Retrieved data from tables i	Project and Task:					Retrieved data from tables Project	and Task:		
Aggregation with	Project ID	Project Name		# of Task	Status		Project ID Proj	ect Name	# of Task	Status
Having filter	P1 P3	Project 1		6	T		P1 Proje	ect 1	6	Т
	P4	Project 3 Project 4		1	F					
projects	P5	Project 5		1	т					
Sort Projects by the Number of	P2	Project 2		1	F					
Filter out projects based on how many subtasks the										
Choose the number of the task(s) to filter: 6 ~										
Display										
Nicologi	MEETUPEVENT T	able					Patriavad data from Monta 5	table:		
Nested	MEETUPEVENTID	PROJECTID	LOCATION	TIME		USERID	Retrieved data from MeetupEvent Location	Average Attendees P	er Event	
Aggregation with	MEETUPRICHMOND1	P1	Richmond	20-MAR-24 10.00.00	MA 000000.	U1	Richmond	1.5		
	MEETUPRICHMOND1 MEETUPRICHMOND2	P1 P1	Richmond	20-MAR-24 10.00.00 20-MAR-24 10.00.00		U2 U1	UBCV/UBCO UBC	2		
Group By	MEETUPUBC1	P1 P2	UBC	20-MAR-24 10.00.00 21-MAR-24 09.30.00		U1 U4	Burnaby	1		
average	MEETUPUBC1	P2	UBC	21-MAR-24 09.30.00		U5	Downtown	1		
	MEETUPDOWNTOWN1 MEETUPDOWNTOWN2	P3	Downtown	22-MAR-24 02.45.00 22-MAR-24 02.45.00		U4 U5				
attendees	MEETUPBURNABY1	P3	Burnaby	23-MAR-24 03.00.00		U4				
	MEETUPUBC2	P4	UBCV/UBCO	27-MAR-24 03.00.00	.000000 PM	U4				
	MEETUPUBC3	P4	UBCV/UBCO	27-MAR-24 07:00:00	1.000000 PM	U4				

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DIVISION all users participated in all projects

PROJECTID	USERID
P1	U1
P1	U2
P1	ИЗ
P2	U1
P2	U2
P2	U3
P3	U1
P3	U2
P3	U3
P4	U1
P4	U2
P4	U3
P4	U4
P5	U1
P5	U2
P5	U3
P5	U5

APPUSER Table

USERID	EMAIL
U1	user1@example.com
U2	user2@example.com
U3	user3@example.com
U4	user4@example.com
U5	user5@example.com

APPUSER3 Table

EMAIL	LASTNAME
user1@example.com	White
user2@example.com	Lin
user3@example.com	Henderson
user4@example.com	Tanner
user5@example.com	Farley

PROJECT Table

PROJECTID	PROJECTNAME	STATUS
P1	Project 1	Т
P2	Project 2	F
P3	Project 3	Т
P4	Project 4	F
P5	Project 5	Т

APPUSER2 Table

EMAIL	FIRSTNAME
user1@example.com	Jeff
user2@example.com	Jessica
user3@example.com	Caroline
user4@example.com	Michael
user5@example.com	Rachel

USERID	FIRSTNAME	LASTNAME
U1	Jeff	White
U2	Jessica	Lin
U3	Caroline	Henderson