

University of British Columbia, Vancouver

Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 4

Date: April 3, 2023

Group Number: 67 (Jason)

Name	Student Number	CS ALias (Userid)	Preferred Email Address
Brian Berger	93392686	h7b9x	briantb@student.ubc.ca
David Murgulet	60753076	x4r6m	dgmurgulet@gmail.com
Jennifer Nguyen	20629010	v8k3i	jennifer.t.nguyen.02@gmail.com

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

Project Repository Link

https://github.students.cs.ubc.ca/CPSC304-2022W-T2/project_h7b9x_v8k3i_x4r6m

SQL Script:

https://github.students.cs.ubc.ca/CPSC304-2022W-T2/project_h7b9x_v8k3i_x4r6m/blob/main/hackathon.sql

Project Summary

This project models the overall structure and organization of a hackathon. This includes aspects like hacker/participants, teams, and staffing as well as other logistical aspects of the competition. Our application is separated into four pages - Hackathon information, pertaining to info that is applicable to all the hackathons; Volunteer information, pertaining to information that would concern volunteers; Hacker information, pertaining to anything that may be relevant to hackers and a final page where a user can view a specific set of columns from a chosen table. The Hackathon information page allows users to look up Hackathons that have occurred multiple times, find hackers that have participated in every iteration of a particular hackathon, find the projects that have won a user chosen prize, and remove submissions/teams from a hackathon. The Volunteer information page allows users to find all the hackathons that a given volunteer has participated in, and find the average score awarded by judges who have ranked a user chosen amount of projects. The Hacker information page allows users to find out how many hackers participated in each hackathon or how many participated in all hackathons in a given year, as well as mechanisms for inserting new hackers under a project and updating the skill level of a given hacker.

Schema

The direction of association between Provide/Prize-Win was reversed, as it made more sense for Prize-Win to have a key referencing the name of a prize in Provide. In this way, multiple teams would be able to win a prize of the same name (i.e. there can be more than one first place winner, which would be the case across multiple hackathons – this was not the case with the original schema we proposed). Otherwise, it has remained the same.

Relational Schema & Data

Legend:

Primary Keys are underlined (i.e., Name: String)

Foreign Keys are bolded (i.e., **Hackathon_Year**)

- 1 Hackathon (name: Char(30), year: Integer, proj_deadline: Timestamp, start_time: Timestamp, end_time: Timestamp, location: Char(30), city: Char(30))
 Constraint: proj_deadline and location must be **NOT NULL**

LOCATION	NAME	YEAR	PROJ_DEADLINE
UBC Life Science Institute	nwHacks	2023	22-JAN-23 12.00.00.000000 PM
UBC Robert H. Lee Alumni Centre	cmd-f	2023	12-MAR-23 12.00.00.000000 PM
UBC Robert H. Lee Alumni Centre	cmd-f	2022	12-MAR-22 12.00.00.000000 PM
UBC Robert H. Lee Alumni Centre	cmd-f	2021	12-MAR-21 12.00.00.000000 PM
UBC Robert H. Lee Alumni Centre	cmd-f	2020	12-MAR-20 12.00.00.000000 PM
SFU	StormHacks	2023	21-MAY-23 01.00.00.000000 PM
Zoom	nwHacks	2021	11-JAN-21 12.00.00.000000 PM
UBC Life Science Institute	nwHacks	2020	22-JAN-20 12.00.00.000000 PM
UBC Life Science Institute	nwHacks	2019	22-JAN-19 12.00.00.000000 PM
UBCO	BC Hacks 2	2021	21-FEB-21 01.30.00.000000 PM
University of Waterloo	Hack the N	2022	18-SEP-22 12.00.00.000000 PM

START_TIME	END_TIME
21-JAN-23 09.00.00.000000 AM	22-JAN-23 06.00.00.000000 PM
11-MAR-23 08.00.00.000000 AM	12-MAR-23 07.00.00.000000 PM
11-MAR-22 08.00.00.000000 AM	12-MAR-22 07.00.00.000000 PM
11-MAR-21 08.00.00.000000 AM	12-MAR-21 07.00.00.000000 PM
11-MAR-20 08.00.00.000000 AM	12-MAR-20 07.00.00.000000 PM
20-MAY-23 08.30.00.000000 AM	21-MAY-23 06.30.00.000000 PM
18-JAN-21 08.30.00.000000 AM	11-JAN-21 07.00.00.000000 PM
21-JAN-20 09.00.00.000000 AM	22-JAN-20 06.00.00.000000 PM
21-JAN-19 09.00.00.000000 AM	22-JAN-19 06.00.00.000000 PM
20-FEB-21 08.30.00.000000 AM	21-FEB-21 06.30.00.000000 PM
16-SEP-22 09.00.00.000000 AM	18-SEP-22 07.00.00.000000 PM

- 2 J_volunteers (VID: Integer, hackathon_name: Char(30), hackathon_yr: Integer)
 VID refers to judge(VID)
 hackathon_name refers to Hackathon (name)
 hackathon_yr refers to Hackathon (year)

VID	HACKATHON_NAME	HACKATHON_YR
0	cmd-f	2020
0	cmd-f	2022
0	cmd-f	2023
0	nwHacks	2020
0	nwHacks	2023
11111	BC Hacks 2.0	2021
11111	Hack the North	2022
11111	cmd-f	2022
11111	cmd-f	2023
22222	Hack the North	2022
22222	StormHacks	2023
22222	cmd-f	2021
33333	Hack the North	2022
33333	StormHacks	2023
33333	cmd-f	2021
33333	nwHacks	2019
44444	BC Hacks 2.0	2021
44444	StormHacks	2023
44444	nwHacks	2021
55555	cmd-f	2023
55555	nwHacks	2021
66666	StormHacks	2023
66666	cmd-f	2020
66666	nwHacks	2019
66666	nwHacks	2023
77777	BC Hacks 2.0	2021
77777	cmd-f	2020
77777	nwHacks	2023
88888	BC Hacks 2.0	2021
88888	cmd-f	2022
88888	nwHacks	2020
99999	cmd-f	2021
99999	cmd-f	2022
99999	nwHacks	2019
99999	nwHacks	2020
99999	nwHacks	2021

3	<p>Sponsors (<u>sponsor_org: Char(30)</u>, <u>hackathon_name: Char(30)</u>, <u>hackathon_yr: Integer</u>)</p> <p>Sponsor_Organization refers to Sponsor (Organization_Name)</p> <p>Hackathon_Name refers to Hackathon (name)</p> <p>Hackathon_yr refers to Hackathon (year)</p> <table border="1" data-bbox="267 370 1295 1066"> <thead> <tr> <th>SPONSOR_ORG</th><th>HACKATHON_NAME</th><th>HACKATHON_YR</th></tr> </thead> <tbody> <tr><td>Deloitte</td><td>Hack the North</td><td>2022</td></tr> <tr><td>MLH</td><td>BC Hacks 2.0</td><td>2021</td></tr> <tr><td>MLH</td><td>Hack the North</td><td>2022</td></tr> <tr><td>MLH</td><td>StormHacks</td><td>2023</td></tr> <tr><td>MLH</td><td>cmd-f</td><td>2020</td></tr> <tr><td>MLH</td><td>cmd-f</td><td>2021</td></tr> <tr><td>MLH</td><td>cmd-f</td><td>2022</td></tr> <tr><td>MLH</td><td>cmd-f</td><td>2023</td></tr> <tr><td>MLH</td><td>nwHacks</td><td>2019</td></tr> <tr><td>MLH</td><td>nwHacks</td><td>2020</td></tr> <tr><td>MLH</td><td>nwHacks</td><td>2021</td></tr> <tr><td>MLH</td><td>nwHacks</td><td>2023</td></tr> <tr><td>Red Bull</td><td>StormHacks</td><td>2023</td></tr> <tr><td>Red Bull</td><td>nwHacks</td><td>2020</td></tr> <tr><td>Red Bull</td><td>nwHacks</td><td>2021</td></tr> <tr><td>Red Bull</td><td>nwHacks</td><td>2023</td></tr> <tr><td>SAP</td><td>cmd-f</td><td>2020</td></tr> <tr><td>SAP</td><td>cmd-f</td><td>2021</td></tr> <tr><td>SAP</td><td>cmd-f</td><td>2022</td></tr> <tr><td>SAP</td><td>cmd-f</td><td>2023</td></tr> <tr><td>SAP</td><td>nwHacks</td><td>2019</td></tr> <tr><td>SAP</td><td>nwHacks</td><td>2020</td></tr> <tr><td>SAP</td><td>nwHacks</td><td>2023</td></tr> <tr><td>livepeer</td><td>nwHacks</td><td>2023</td></tr> </tbody> </table>	SPONSOR_ORG	HACKATHON_NAME	HACKATHON_YR	Deloitte	Hack the North	2022	MLH	BC Hacks 2.0	2021	MLH	Hack the North	2022	MLH	StormHacks	2023	MLH	cmd-f	2020	MLH	cmd-f	2021	MLH	cmd-f	2022	MLH	cmd-f	2023	MLH	nwHacks	2019	MLH	nwHacks	2020	MLH	nwHacks	2021	MLH	nwHacks	2023	Red Bull	StormHacks	2023	Red Bull	nwHacks	2020	Red Bull	nwHacks	2021	Red Bull	nwHacks	2023	SAP	cmd-f	2020	SAP	cmd-f	2021	SAP	cmd-f	2022	SAP	cmd-f	2023	SAP	nwHacks	2019	SAP	nwHacks	2020	SAP	nwHacks	2023	livepeer	nwHacks	2023
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4	<p>Participates (<u>HID: Integer</u>, <u>hackathon_name: String</u>, <u>hackathon_yr: Integer</u>)</p> <p>HID refers to Hacker</p> <p>hackathon_name refers to Hackathon (name)</p> <p>hackathon_yr refers to Hackathon (year)</p>																																																																											

HID	HACKATHON_NAME	HACKATHON_YR
0	Hack the North	2022
0	StormHacks	2023
0	nwHacks	2021
0	nwHacks	2023
1	cmd-f	2023
1	nwHacks	2021
1	nwHacks	2023
2	cmd-f	2023
2	nwHacks	2021
2	nwHacks	2023
3	BC Hacks 2.0	2021
3	StormHacks	2023
3	cmd-f	2023
4	BC Hacks 2.0	2021
4	Hack the North	2022
4	StormHacks	2023
5	BC Hacks 2.0	2021
5	Hack the North	2022
11	BC Hacks 2.0	2021
11	Hack the North	2022
11	StormHacks	2023
11	cmd-f	2020
11	cmd-f	2021
11	cmd-f	2022
11	cmd-f	2023
11	nwHacks	2019
11	nwHacks	2020
11	nwHacks	2021
11	nwHacks	2023
12	nwHacks	2019
12	nwHacks	2020
12	nwHacks	2021
12	nwHacks	2023
13	cmd-f	2020
13	cmd-f	2021
13	cmd-f	2022
13	cmd-f	2023

- 5 Team_Submits_Project(tnum: integer, **hackathon_name: Char(30)**,
hackathon_yr: Integer, submission_time: timestamp, project_name: Char(30))
 hacakthon_name refers to Hackathon (name)
 hackathon_yr refers to Hackathon (year)

TNUM	HACKATHON_NAME	HACKATHON_YR	SUBMISSION_TIME	PROJECT_NAME
106	nwHacks	2023	22-JAN-23 11:59:00.000000 AM	project1
107	nwHacks	2021	12-JAN-21 11:59:00.000000 AM	project2
108	nwHacks	2020	22-JAN-20 12:00:00.000000 PM	project3
109	nwHacks	2019	22-JAN-19 12:00:00.000000 PM	project4
110	cmd-f	2023	12-MAR-23 12:00:00.000000 PM	project5
111	cmd-f	2022	12-MAR-22 12:00:00.000000 PM	project6
112	cmd-f	2021	12-MAR-21 12:00:00.000000 PM	project7
113	cmd-f	2020	12-MAR-20 12:00:00.000000 PM	project8
101	nwHacks	2021	11-JAN-21 12:00:00.000000 PM	Yudo
102	cmd-f	2023	12-MAR-23 12:00:00.000000 PM	test
103	StormHacks	2023	21-MAY-23 01:00:00.000000 PM	kizuna
104	BC Hacks 2.0	2021	21-FEB-21 01:30:00.000000 PM	Project Panini
105	Hack the North	2022	18-SEP-22 12:00:00.000000 PM	Recipeeasy

- 6 Judge (VID: Integer, name: CHAR(30), occupation: CHAR(30))

VID	NAME	OCCUPATION
0	Gregor Kic	Software Processor
11111	Andrew Bid	Investor, Inovia Capital
22222	Danielle R	CEO, Ceragen
33333	Shannon We	Head of Ecosystem Growth
44444	Myra Arsha	Co-founder and CEO, ALT TEX
55555	Paul Atrei	Muadib
66666	Phoenix Wr	Attorney at Law
77777	Conan Obri	Talk show host
88888	Woody Goss	Bird watcher
99999	Cole Cassi	Bounty Hunter

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Rank (VID: Integer, tnum: Integer, score: Integer)

VID refers to Judge

tum refers to Team-Submits_Project

Constraints: score must be **NOT NULL**

VID	TNUM	SCORE
0	106	7
77777	106	5
11111	105	6
22222	105	7
33333	105	5
77777	104	8
88888	104	4
44444	104	6
33333	103	5
44444	103	9
66666	103	10
44444	101	9
55555	101	8
99999	101	7
0	102	10
11111	102	8
55555	102	7
11111	104	7
22222	103	6
66666	106	4
44444	107	2
55555	107	1
99999	107	10
0	108	6
88888	108	5
99999	108	4
99999	109	8
33333	109	9
66666	109	10
0	110	5
11111	110	4
55555	110	6
0	111	5
88888	111	8
99999	111	9
11111	111	7
22222	112	4
33333	112	4
99999	112	5
0	113	1
66666	113	2
77777	113	3

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Mentor (VID: Integer, name: CHAR(30) expertise: Char(30))

VID	NAME	EXPERTISE
10000	Lori Larso	Java
20000	Trevor Joh	SQL
30000	Joseph Pit	Databases
40000	Sandra Ada	OOP
50000	Bruce Garc	Python
60000	Carl Sagan	science guy
70000	Bill Nye	THE science guy
80000	Colin Mcra	Rally Driver
90000	Daniel Ric	Professional Australian

9	<p>Supports (<u>VID: Integer</u>, <u>HID: Integer</u>)</p> <p>VID refers to Mentor HID refers to Hacker</p> <table border="1" data-bbox="267 280 621 512"> <thead> <tr> <th>VID</th><th>HID</th></tr> </thead> <tbody> <tr><td>10000</td><td>1</td></tr> <tr><td>20000</td><td>1</td></tr> <tr><td>30000</td><td>3</td></tr> <tr><td>40000</td><td>4</td></tr> <tr><td>50000</td><td>5</td></tr> </tbody> </table>	VID	HID	10000	1	20000	1	30000	3	40000	4	50000	5																																																
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10	<p>Hacker (<u>HID: Integer</u>, name: Char(30), email: Char(30), skill_level: Char(30))</p> <p>Candidate Key: email</p> <p>Constraint: email is UNIQUE and NOT NULL</p> <table border="1" data-bbox="267 676 1221 1170"> <thead> <tr> <th>HID</th><th>NAME</th><th>EMAIL</th><th>SKILL_LEVEL</th></tr> </thead> <tbody> <tr><td>0</td><td>Michael Ro</td><td>mrobinson06@gmail.com</td><td>beginner</td></tr> <tr><td>1</td><td>Erica Wade</td><td>ericawade@outlook.com</td><td>beginner</td></tr> <tr><td>2</td><td>Brianna Gr</td><td>brigreg00@gmail.com</td><td>beginner</td></tr> <tr><td>3</td><td>Karl Melton</td><td>karlmelton87@aol.com</td><td>professional</td></tr> <tr><td>4</td><td>Mary Roble</td><td>mrobles@gmail.com</td><td>beginner</td></tr> <tr><td>5</td><td>Don Madden</td><td>dmadden@gmail.com</td><td>intermediate</td></tr> <tr><td>6</td><td>Kent Newma</td><td>knewman@yahoo.com</td><td>beginner</td></tr> <tr><td>7</td><td>Danielle T</td><td>dthompson08@gmail.com</td><td>beginner</td></tr> <tr><td>8</td><td>Thomas Mor</td><td>thomorgan07@gmail.com</td><td>beginner</td></tr> <tr><td>9</td><td>Steven Bon</td><td>stevebonila05@outlook.com</td><td>intermediate</td></tr> <tr><td>10</td><td>Brandon Ro</td><td>brobinson06@gmail.com</td><td>beginner</td></tr> <tr><td>11</td><td>Mr. All Ha</td><td>iminallthehackathons@aol.com</td><td>professional</td></tr> <tr><td>12</td><td>nwHacks Fa</td><td>iminallnwHacks@gmail.com</td><td>intermediate</td></tr> <tr><td>13</td><td>Script Kid</td><td>cmdffan@outlook.com</td><td>beginner</td></tr> </tbody> </table>	HID	NAME	EMAIL	SKILL_LEVEL	0	Michael Ro	mrobinson06@gmail.com	beginner	1	Erica Wade	ericawade@outlook.com	beginner	2	Brianna Gr	brigreg00@gmail.com	beginner	3	Karl Melton	karlmelton87@aol.com	professional	4	Mary Roble	mrobles@gmail.com	beginner	5	Don Madden	dmadden@gmail.com	intermediate	6	Kent Newma	knewman@yahoo.com	beginner	7	Danielle T	dthompson08@gmail.com	beginner	8	Thomas Mor	thomorgan07@gmail.com	beginner	9	Steven Bon	stevebonila05@outlook.com	intermediate	10	Brandon Ro	brobinson06@gmail.com	beginner	11	Mr. All Ha	iminallthehackathons@aol.com	professional	12	nwHacks Fa	iminallnwHacks@gmail.com	intermediate	13	Script Kid	cmdffan@outlook.com	beginner
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11	<p>Student_Hacker (<u>HID: Integer</u>, school: Char(30), stu_id: Integer)</p> <p>Candidate Key: (stu_id, school)</p> <p>HID refers to Hacker</p> <p>Constraint: (stu_id, school) is UNIQUE and must be NOT NULL</p> <table border="1" data-bbox="267 1379 987 1612"> <thead> <tr> <th>HID</th><th>SCHOOL</th><th>STU_ID</th></tr> </thead> <tbody> <tr><td>0</td><td>SFU</td><td>37516290</td></tr> <tr><td>1</td><td>UBC</td><td>37516290</td></tr> <tr><td>2</td><td>UBC</td><td>95301764</td></tr> <tr><td>4</td><td>UVIC</td><td>70469513</td></tr> <tr><td>6</td><td>UBC</td><td>34097651</td></tr> </tbody> </table>	HID	SCHOOL	STU_ID	0	SFU	37516290	1	UBC	37516290	2	UBC	95301764	4	UVIC	70469513	6	UBC	34097651																																										
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12	<p>Hacker_U19 (<u>HID</u>, parent_phone#: Integer, parent_name: Char(30), DateOfBirth: Date, age: Integer)</p> <p>HID refers to Hacker</p> <table border="1" data-bbox="267 1776 717 2010"> <thead> <tr> <th>HID</th><th>PARENT_PHONE</th><th>DATEOFBIR</th></tr> </thead> <tbody> <tr><td>0</td><td>2484345508</td><td>01-MAR-06</td></tr> <tr><td>7</td><td>8453549912</td><td>17-JAN-08</td></tr> <tr><td>8</td><td>7192662837</td><td>01-JAN-07</td></tr> <tr><td>9</td><td>2018675309</td><td>01-FEB-05</td></tr> <tr><td>10</td><td>5058425662</td><td>02-APR-06</td></tr> </tbody> </table>	HID	PARENT_PHONE	DATEOFBIR	0	2484345508	01-MAR-06	7	8453549912	17-JAN-08	8	7192662837	01-JAN-07	9	2018675309	01-FEB-05	10	5058425662	02-APR-06																																										
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20

M_Volunteers (VID: Integer, hackathon_name: Char(30), hackathon_yr: Integer)

VID refers to Mentor(VID)

hackathon_name refers to Hackathon (name)

hackathon_yr refers to Hackathon (year)

VID	HACKATHON_NAME	HACKATHON_YR
10000	cmd-f	2022
10000	cmd-f	2023
10000	nwHacks	2023
20000	cmd-f	2022
20000	cmd-f	2023
20000	nwHacks	2021
20000	nwHacks	2023
30000	BC Hacks 2.0	2021
30000	StormHacks	2023
30000	cmd-f	2022
30000	cmd-f	2023
40000	BC Hacks 2.0	2021
40000	cmd-f	2021
50000	BC Hacks 2.0	2021
50000	StormHacks	2023
50000	cmd-f	2021
60000	BC Hacks 2.0	2021
60000	StormHacks	2023
60000	cmd-f	2021
60000	nwHacks	2021
60000	nwHacks	2023
70000	StormHacks	2023
70000	cmd-f	2020
70000	nwHacks	2019
70000	nwHacks	2020
70000	nwHacks	2021
70000	nwHacks	2023
80000	cmd-f	2020
80000	nwHacks	2019
80000	nwHacks	2020
90000	cmd-f	2020
90000	nwHacks	2019
90000	nwHacks	2020

SQL Queries	
Insert	<pre>INSERT INTO Team_Submits_project values (\$tnum, '\$hackathonName', \$hackathonYear, '\$gmTime', '\$projName'). INSERT INTO Belong_to values (\$teamMemberX, \$tnum) Where 1 <= X <= 4 File: hacker.php Line: 304</pre>
Delete	<pre>DELETE FROM team_submits_project WHERE tnum = '". \$tnum ."' AND hackathon_name = '\$name' AND hackathon_yr = '". \$tnum ."'</pre> <p>File: hackathon.php Line: 311</p>
Update	<pre>UPDATE hacker SET skill_level = '". \$skill ."' WHERE hid = '". \$hid . "'</pre> <p>File: hacker.php Line: 241</p>
Selection	<p>The variables \$whereJObj and \$whereMObj are constructed using the user input - these extend the WHERE beyond the join condition for the two relevant tables.</p> <pre>SELECT j.vid as VID, j.name as NAME, hackathon_name, hackathon_yr FROM J_Volunteers jv, Judge j WHERE jv.vid = j.vid \$whereJObj UNION SELECT m.vid as VID, m.name as NAME, hackathon_name, hackathon_yr FROM M_Volunteers mv, Mentor m WHERE mv.vid = m.vid \$whereMObj</pre> <p>File: volunteer.php Line: 350</p>
Projection	<p>For all tables:</p> <pre>SELECT table_name FROM user_tables Line: 13</pre> <p>For attributes:</p> <pre>SELECT column_name FROM USER_TAB_COLUMNS WHERE table_name = '\$tableName' Line: 115</pre>

	<p>Dynamic Query of chosen columns on table:</p> <pre>SELECT '\$attributes' FROM '\$table'</pre> <p>Attributes is a list of user select attributes corresponding to the chosen table.</p> <p>Lines: 237 - 256</p> <p>File: projection.php</p>
Join	<pre>SELECT t.project_name, p.p_name, p.amount FROM prize_win p, Team_Submits_Project t WHERE p.tnum = t.tnum AND p.p_name = '". \$pname ."'</pre> <p>File: hackathon.php Line: 268</p>
Aggregation with Group By	<pre>SELECT \$groupBy, count(*) as numHackers FROM Participates p GROUP BY \$groupBy</pre> <p>File: hacker.php Line: 372</p>
Aggregation with Having	<pre>SELECT DISTINCT h.name, count(*) FROM hackathon h GROUP BY h.name HAVING count(*) >= \$numHostings</pre> <p>File: hackathon.php Line: 352</p>
Nested Aggregation with Group By	<pre>SELECT vid, avg(score) FROM Rank GROUP BY vid HAVING COUNT(*) >= \$numProj</pre> <p>File: volunteer.php Line: 236</p>
Division	<pre>SELECT h.hid, h.name FROM Hacker h WHERE NOT EXISTS ((SELECT name, year FROM Hackathon WHERE name = '\$hackathon') MINUS (SELECT hackathon_name, hackathon_yr FROM Participates p WHERE p.hid = h.hid));</pre> <p>File: hackathon.php Line: 469</p>

Demonstration of SQL Query Functionality

Insert

Description: Adds a new team and submission, and associates all hackers involved in the new team with that team in Belong_to

Data before -

Team_Submits_Project table:

TNUM	HACKATHON_NAME	HACKATHON_YR	SUBMISSION_TIME	PROJECT_NAME
100	nwhacks	2023	22-JAN-23 12:00:00.000000 PM	
106	nwhacks	2023	22-JAN-23 11:59:00.000000 AM	
107	nwhacks	2021	12-JAN-21 11:59:00.000000 AM	
108	nwhacks	2020	22-JAN-20 12:00:00.000000 PM	
109	nwhacks	2019	22-JAN-19 12:00:00.000000 PM	
110	cmd-f	2023	12-MAR-23 12:00:00.000000 PM	
111	cmd-f	2022	12-MAR-22 12:00:00.000000 PM	
112	cmd-f	2021	12-MAR-21 12:00:00.000000 PM	
113	cmd-f	2020	12-MAR-20 12:00:00.000000 PM	
101	nwhacks	2021	11-JAN-21 12:00:00.000000 PM	
102	cmd-f	2023	12-MAR-23 12:00:00.000000 PM	
TNUM	HACKATHON_NAME	HACKATHON_YR	SUBMISSION_TIME	PROJECT_NAME
103	StormHacks	2023	21-MAY-23 01:00:00.000000 PM	
104	BC Hacks 2.0	2021	21-FEB-21 01:30:00.000000 PM	
105	Hack the North	2022	18-SEP-22 12:00:00.000000 PM	

Belong_to table:

HID	TNUM
0	100
0	101
0	103
0	105
0	106
0	107
1	100
1	101
1	102
1	106
2	100
HID	TNUM
2	101
2	102
3	102
3	103
3	104
4	103
4	104
4	105
5	104
5	105
11	107
HID	TNUM
11	108
11	109
11	110
11	111
11	112
11	113
12	106
12	107
12	108
12	109
13	110
HID	TNUM
13	111
13	112
13	113

UI for Insert:

Submit a new project

Specify up to 4 team members:

8, Thomas Morgan

Name of project:

Hackathon submitted to:

UI After Insert:

Successfully submitted project testProject by 5, 6, 7, 8 to nwHacks, 2023

TEAM NUM	HACKATHON	YEAR	PROJECT	SUBMISSION TIME
100	nwHacks	2023	Maya Mental Health Assistant	22-JAN-23 12.00.00.000000 PM
106	nwHacks	2023	project1	22-JAN-23 11.59.00.000000 AM
107	nwHacks	2021	project2	12-JAN-21 11.59.00.000000 AM
108	nwHacks	2020	project3	22-JAN-20 12.00.00.000000 PM
109	nwHacks	2019	project4	22-JAN-19 12.00.00.000000 PM
110	cmd-f	2023	project5	12-MAR-23 12.00.00.000000 PM
111	cmd-f	2022	project6	12-MAR-22 12.00.00.000000 PM
112	cmd-f	2021	project7	12-MAR-21 12.00.00.000000 PM
113	cmd-f	2020	project8	12-MAR-20 12.00.00.000000 PM
101	nwHacks	2021	Yudo	11-JAN-21 12.00.00.000000 PM
102	cmd-f	2023	test	12-MAR-23 12.00.00.000000 PM
103	StormHacks	2023	kizuna	21-MAY-23 01.00.00.000000 PM
104	BC Hacks 2.0	2021	Project Panini	21-FEB-21 01.30.00.000000 PM
105	Hack the North	2022	Recipeeasy	18-SEP-22 12.00.00.000000 PM
434	nwHacks	2023	testProject	06-APR-23 03.12.44.000000 AM

Belong_to table after insert:

HID	TNUM
0	100
0	101
0	103
0	105
0	106
0	107
1	100
1	101
1	102
1	106
2	100
HID	TNUM
2	101
2	102
3	102
3	103
3	104
4	103
4	104
4	105
5	104
5	105
5	434
HID	TNUM
6	434
7	434
8	434
11	107
11	108
11	109
11	110
11	111
11	112
11	113
12	106
HID	TNUM
12	107
12	108
12	109
13	110
13	111
13	112
13	113

Delete

Description: Deletes a submission/team from a hackathon if the team exists.

Data before:

TNUM	HACKATHON_NAME	HACKATHON_YR
<hr/>		
<hr/>		
<hr/>		
112	cmd-f	2021
12-MAR-21	12.00.00.000000 PM	
project7		
113	cmd-f	2020
12-MAR-20	12.00.00.000000 PM	
project8		

UI for remove:

Remove a submission

TNUM: 113

Hackathon: cmd-f

Year: 2020

Remove

UI after removal:

Submission successfully removed from Hackathon with Name = cmd-f and Year = 2020.

Project Submissions:

TNUM	HACKATHON NAME	YEAR	SUBMISSION TIME	PROJECT NAME
183	cmd-f	2020	12-MAR-20 12.00.00.000000 PM	test 0
106	nwHacks	2023	22-JAN-23 11.59.00.000000 AM	project1
107	nwHacks	2021	12-JAN-21 11.59.00.000000 AM	project2
108	nwHacks	2020	22-JAN-20 12.00.00.000000 PM	project3
109	nwHacks	2019	22-JAN-19 12.00.00.000000 PM	project4
110	cmd-f	2023	12-MAR-23 12.00.00.000000 PM	project5
111	cmd-f	2022	12-MAR-22 12.00.00.000000 PM	project6
102	cmd-f	2023	12-MAR-23 12.00.00.000000 PM	test
103	StormHacks	2023	21-MAY-23 01.00.00.000000 PM	kizuna
104	BC Hacks 2.0	2021	21-FEB-21 01.30.00.000000 PM	Project Panini
105	Hack the North	2022	18-SEP-22 12.00.00.000000 PM	Recipeeasy
586	BC Hacks 2.0	2021	05-APR-23 08.06.27.000000 AM	help
574	BC Hacks 2.0	2021	05-APR-23 08.08.10.000000 AM	help

Data after:

TNUM	HACKATHON_NAME	HACKATHON_YR
<hr/>		
<hr/>		
<hr/>		
112	cmd-f	2021
12-MAR-21	12.00.00.000000 PM	
project7		
101	nwHacks	2021
11-JAN-21	12.00.00.000000 PM	
Yudo		

Team isn't found in selected hackathon:

No team found with TNUM = 113 under the hackathon: cmd-f, in 2020.

Update

Description: update the skill level of a given hacker if the hacker exists

Data before:

HID	NAME	EMAIL
SKILL_LEVEL		
12	nwHacks Fan intermediate	iminallnwHacks@gmail.com
13	Script Kiddie <u>beginner</u>	cmdffan@outlook.com

Update UI:

Update Hacker Skill Level

HID:

Skill Level:

Update UI after:

Successfully updated hacker with HID = 13 to have intermediate skill level!

Data after:

HID	NAME	EMAIL
SKILL_LEVEL		
12	nwHacks Fan intermediate	iminallnwHacks@gmail.com
13	Script Kiddie <u>intermediate</u>	cmdffan@outlook.com

If given HID is invalid:

Update Hacker Skill Level

HID:

Skill Level:

There is no Hacker with the given HID = 222

Selection

Description: Users can look for Volunteers and Hackathons they participated in.

UI During filter selection:

Volunteer Hackathons

Find information about volunteers

VID: Hackathon: Year:

11111

UI After filter selection:

Hackathons that volunteer 11111 has participated in:

VID	NAME	HACKATHON NAME	HACKATHON YEAR
11111	Andrew Biddell	BC Hacks 2.0	2021

The VID field can be left blank to find all volunteers at a particular hackathon.

UI during filter selection:

Volunteer Hackathons

Find information about volunteers

VID: Hackathon: Year:

UI After filter selection:

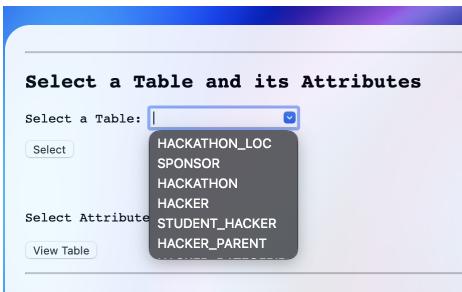
Hackathons that volunteer has participated in:

VID	NAME	HACKATHON NAME	HACKATHON YEAR
11111	Andrew Biddell	BC Hacks 2.0	2021
30000	Joseph Pittman	BC Hacks 2.0	2021
40000	Sandra Adams	BC Hacks 2.0	2021
44444	Myra Arshad	BC Hacks 2.0	2021
50000	Bruce Garcia	BC Hacks 2.0	2021
60000	Carl Sagan	BC Hacks 2.0	2021
77777	Conan Obrien	BC Hacks 2.0	2021
88888	Woody Goss	BC Hacks 2.0	2021

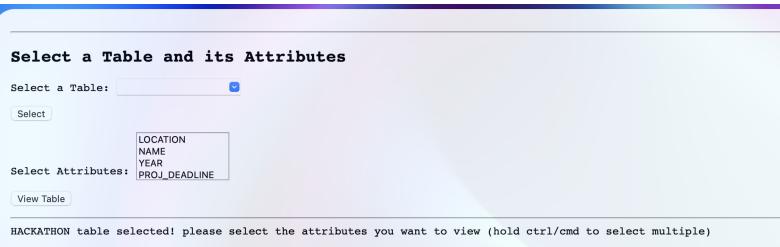
Projection

Description: User chosen columns from a user chosen table.

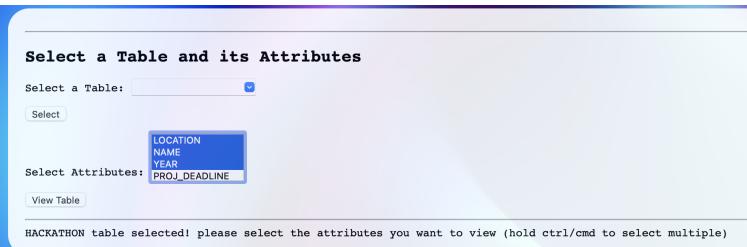
UI during Table selection:



UI after a table is selected:



UI during column selection:



UI after columns have been selected:

LOCATION	NAME	YEAR
UBC Life Science Institute	nwHacks	2023
UBC Robert H. Lee Alumni Centre	cmd-f	2023
UBC Robert H. Lee Alumni Centre	cmd-f	2022
UBC Robert H. Lee Alumni Centre	cmd-f	2021
UBC Robert H. Lee Alumni Centre	cmd-f	2020
SFU	StormHacks	2023
Zoom	nwHacks	2021
UBC Life Science Institute	nwHacks	2020
UBC Life Science Institute	nwHacks	2019
UBCO	BC Hacks 2.0	2021
University of Waterloo	Hack the North	2022

Join

Description: view the project name that won a selected prize and the prize amount

Data before - Prize_Win table:

P_NAME	AMOUNT	TNUM
1st Place	2000	101
2nd Place	1000	102
3rd Place	500	103
Best Beginner Project	100	105
Most Creative	100	104
1st Place	2000	106
2nd Place	1000	106
3rd Place	250	107
Red Bull Award	100000	108
Poke Award	20	109
1st Place	3000	110
SAP Award	4000	111
SAP Award 3	4500	112
Best Beginner Project	2000	113

Data before - Team_Submits_Project table:

TNUM	HACKATHON_NAME	HACKATHON_YR	SUBMISSION_TIME	PROJECT_NAME
106	nwHacks	2023	22-JAN-23 11:59:00.000000 AM	project1
107	nwHacks	2021	12-JAN-21 11:59:00.000000 AM	project2
108	nwHacks	2020	22-JAN-20 12:00:00.000000 PM	project3
109	nwHacks	2019	22-JAN-19 12:00:00.000000 PM	project4
110	cmd-f	2023	12-MAR-23 12:00:00.000000 PM	project5
111	cmd-f	2022	12-MAR-22 12:00:00.000000 PM	project6
112	cmd-f	2021	12-MAR-21 12:00:00.000000 PM	project7
113	cmd-f	2020	12-MAR-20 12:00:00.000000 PM	project8
101	nwHacks	2021	11-JAN-21 12:00:00.000000 PM	Yudo
102	cmd-f	2023	12-MAR-23 12:00:00.000000 PM	test
103	StormHacks	2023	21-MAY-23 01:00:00.000000 PM	kizuna
104	BC Hacks 2.0	2021	21-FEB-21 01:30:00.000000 PM	Project Panini
105	Hack the North	2022	18-SEP-22 12:00:00.000000 PM	Recipeeasy

UI During:

HACKATHON_NAME	HACKATHON_YR	SUBMISSION_TIME	PROJECT_NAME
nwHacks	2023	22-JAN-23 11:59:00.000000 AM	project1
nwHacks	2021	12-JAN-21 11:59:00.000000 AM	project2
nwHacks	2020	22-JAN-20 12:00:00.000000 PM	project3
nwHacks	2019	22-JAN-19 12:00:00.000000 PM	project4
cmd-f	2023	12-MAR-23 12:00:00.000000 PM	project5
cmd-f	2022	12-MAR-22 12:00:00.000000 PM	project6
cmd-f	2021	12-MAR-21 12:00:00.000000 PM	project7
cmd-f	2020	12-MAR-20 12:00:00.000000 PM	project8
nwHacks	2021	11-JAN-21 12:00:00.000000 PM	Yudo
cmd-f	2023	12-MAR-23 12:00:00.000000 PM	test
StormHacks	2023	21-MAY-23 01:00:00.000000 PM	kizuna
BC Hacks 2.0	2021	21-FEB-21 01:30:00.000000 PM	Project Panini
Hack the North	2022	18-SEP-22 12:00:00.000000 PM	Recipeeasy

UI after:

Winner of 1st Place Prize:		
PROJECT	PRIZE	AMOUNT
Yudo	1st Place	2000
project1	1st Place	2000
project5	1st Place	3000

Aggregation with Group By

Description: Count number of registrants either per hackathon (name and year), per hackathon name (i.e. each iteration of the hackathon), or by year

Data before (participants table):

HID	HACKATHON_NAME	HACKATHON_YR
0	Hack the North	2022
0	StormHacks	2023
0	nwHacks	2021
0	nwHacks	2023
1	cmd-f	2023
1	nwHacks	2021
1	nwHacks	2023
2	cmd-f	2023
2	nwHacks	2021
2	nwHacks	2023
3	BC Hacks 2.0	2021
3	StormHacks	2023
3	cmd-f	2023
4	BC Hacks 2.0	2021
4	Hack the North	2022
4	StormHacks	2023
5	BC Hacks 2.0	2021
5	Hack the North	2022
11	BC Hacks 2.0	2021
11	Hack the North	2022
11	StormHacks	2023
11	cmd-f	2020
11	cmd-f	2021
11	cmd-f	2022
11	cmd-f	2023
11	nwHacks	2019
11	nwHacks	2020
11	nwHacks	2021
11	nwHacks	2023
12	nwHacks	2019
12	nwHacks	2020
12	nwHacks	2021
12	nwHacks	2023
13	cmd-f	2020
13	cmd-f	2021
13	cmd-f	2022
13	cmd-f	2023

UI during (group on hackathon name):

Count Hackers

Find the number of hackers that participated in hackathons, either by organization, year, or specific hackathon.

Group on:

UI after:

Total number of hackers each hackathon organization has hosted:	
HACKATHON NAME	NUMBER OF HACKERS
Hack the North	4
StormHacks	4
BC Hacks 2.0	4
nwHacks	14
cmd-f	11

UI During (group on year):

Count Hackers

Find the number of hackers that participated in hackathons, either by organization, year, or specific hackathon.

Group on:

UI After:

Number of hackers that participated in a hackathon by year:

HACKATHON YEAR	NUMBER OF HACKERS
2021	11
2019	2
2022	6
2023	14
2020	4

UI During (group on hackathon name and year):

Count Hackers

Find the number of hackers that participated in hackathons, either by organization, year, or specific hackathon.

Group on:

UI After:

Number of hackers that participated in each hackathon:

HACKATHON NAME	HACKATHON YEAR	NUMBER OF HACKERS
Hack the North	2022	4
nwHacks	2021	5
nwHacks	2020	2
BC Hacks 2.0	2021	4
StormHacks	2023	4
cmd-f	2023	5
cmd-f	2020	2
cmd-f	2021	2
cmd-f	2022	2
nwHacks	2019	2
nwHacks	2023	5

Aggregation with Having

Description: View hackathons that have hosted greater or equal to the user selected amount of events.

UI During:

Hackathons with multiple hostings

View hackathons with 1 hostings

View

2
3
4

Hackathons with multiple hostings

View hackathons with 3 hostings

View

UI After:

Hackathons with more than 3 hostings:	
NAME	COUNT
cmd-f	4
nwHacks	4

Nested Aggregation with Group By

Description: View the average score given by judge volunteers that have ranked at least the selected amount of projects

Data Before:

VID	TNUM	SCORE			
0	106	7			
77777	106	5			
11111	105	6			
22222	105	7			
33333	105	5			
77777	104	8			
88888	104	4			
44444	104	6			
33333	103	5			
44444	103	9			
66666	103	10			
44444	101	9			
55555	101	8			
99999	101	7			
0	102	10			
11111	102	8			
55555	102	7			
11111	104	7			
22222	103	6			
66666	106	4			
44444	107	2			
55555	107	1			
99999	107	10			
0	108	6			

UI during:

Average Scores
View the average score given by Judge volunteers who have ranked at least 1 project(s)

Average Scores

View the average score given by Judge volunteers who have ranked at least project(s)

UI after:

Division

Description: Displays hackers who have been in every iteration of a particular organization's hackathon, or who have been in every hackathon.

Data before:

HID	HACKATHON_NAME	HACKATHON_YR
0	Hack the North	2022
0	StormHacks	2023
0	nwHacks	2021
0	nwHacks	2023
1	cmd-f	2023
1	nwHacks	2021
1	nwHacks	2023
2	cmd-f	2023
2	nwHacks	2021
2	nwHacks	2023
3	BC Hacks 2.0	2021
3	StormHacks	2023
3	cmd-f	2023
4	BC Hacks 2.0	2021
4	Hack the North	2022
4	StormHacks	2023
5	BC Hacks 2.0	2021
5	Hack the North	2022
11	BC Hacks 2.0	2021
11	Hack the North	2022
11	StormHacks	2023
11	cmd-f	2020
11	cmd-f	2021
11	cmd-f	2022
11	cmd-f	2023
11	nwHacks	2019
11	nwHacks	2020
11	nwHacks	2021
11	nwHacks	2023
12	nwHacks	2019
12	nwHacks	2020
12	nwHacks	2021
12	nwHacks	2023
13	cmd-f	2020
13	cmd-f	2021
13	cmd-f	2022
13	cmd-f	2023

UI During (for each iteration of a specific Hackathon):

Hackers in All Hackathons

Find names of hackers that have participated in every iteration of the selected hackathon

nwHacks ▾

View

UI After:

Hackers who have participated in every iteration of nwHacks :

HID	NAME
11	Mr. All Hackathons
12	nwHacks Fan

UI During (for all hackathons):

Hackers in All Hackathons

Find names of hackers that have participated in every iteration of the selected hackathon

All Hackathons ▾

View

UI After:

Hackers who have participated in every hackathon:

HID	NAME
11	Mr. All Hackathons