

CPSC 304 Project Cover Page

Milestone #: 4

Date: Dec 1, 2023

Group Number: 104

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Julia Zhong	80432404	h2a0v	z.zhong@mail.com
Christine Yang	84646108	q3p0v	yang.christine28@gmail.com
Wenhan Zhu	50497973	i7x1s	zhuwenhan1010@163.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 Description

Our final project is a site that allows a user to access legal information, including data about cases, lawyers, and their associated data. Users can insert/delete/update various data entries and do queries on them through a web interface.


Changes in Final Schema

Changes: added "Evidence" e


Verdict changed from bool to CHAR(10)

// copied from ms2, remember to reflect the changes done



Defendant(SIN: int[9], *name*: varchar)

 SIN	NAME
123456789	Jordon Johnson
987654321	Rachel Pottinger
112233445	Steve Wolfman
112233456	Geoffrey Tien
112234567	Gregor Kizcales




Prosecutor(SIN: int[9], *name*: varchar)

 SIN	NAME
111111111	Adam Ant
222222222	Bob Bridge
333333333	Cathy Car
444444444	Doug Dog
555555555	Edward Egg




Defend(SIN: int[9], license#: char[5], *offense*: varchar)

 SIN	 LICENSENUM	OFFENSE
123456789	11111	Referenced Hitchhikers Guide to the Galaxy one too many times
987654321	22222	Created too many databases
112233445	33333	Leaving lego bricks on the ground
112233456	44444	Jaywalking
112234567	55555	Pineapple on pizza



Represent(**SIN**: int[9], **license#**: char[5], *claimed damages*: varchar)

 SIN ↕	 LICENSENUM ↕	 CLAIMED_DAMAGES ↕
111111111	55555	copyright claims
222222222	44444	data overflow
333333333	33333	unimaginable pain
444444444	22222	dented car
555555555	11111	unrepairable mental trauma



Lawyers(**license#**: char[5], *name*: varchar, **company**: varchar)

 LICENSENUM ↕	 NAME ↕	 COMPANY ↕
11111	Scott Owen	Kent & Smith
22222	Cindy Low	Peterson Association
33333	Jane Gooden	Sam & Associates
44444	Larry Joe	Lane & Bond
55555	Steve Kid	Sullivan Group


LawyerCompanyPhone(company: varchar, *phone*: int)

 COMPANY ↕	 PHONE ↕
Kent & Smith	1111111111
Peterson Association	2222222222
Sam & Associates	3333333333
Lane & Bond	4444444444
Sullivan Group	5555555555



LawyerCompanyAddress(**company**: varchar, *office address*: varchar)

 COMPANY ↕	 OFFICE_ADDRESS ↕
Kent & Smith	12 Main Street, Van
Peterson Association	13 Main Street, Van
Sam & Associates	14 Main Street, Van
Lane & Bond	15 Main Street, Van
Sullivan Group	16 Main Street, Van



Witness(SIN: int[9], *relation*: varchar)

 SIN	RELATION
205893055	Random dude walking on the street
104859039	Unsuspecting TA
273940683	Steve Wolfman (Husband)
950302740	Italian person
208475950	Pizza connoisseur

WorkOn(license#: char[5], case#: char[5])

 CASENUM	 LICENSENUM
1	11111
123	33333
2	22222
23	11111
3	33333
356	44444
4	44444
4490	55555
5	55555
7634	22222

TestifyFor(SIN: int[9], case#: char[5])

 SIN	 CASENUM
104859039	23
205893055	1
208475950	356
273940683	4
950302740	7634

EvidenceBelongingTo(ObjectID: char[5], *description*: varchar, **case#**: char[5])

OBJECT_ID	DESCRIPTION	CASENUM
2331	A smol knife	23
2332	Towel	23
2441	Canvas course page	7634
356	Fingerprints on lego bricks	123
2661	Pizza	356
2662	Open can of pineapples	356
2771	Traffic camera footage	4490
fds	Footprint	1
gfd	Glove	2
jhg	Broken mouse	3
ewq	Surveillance footage	4
kop	Traffic camera footage	5

JudgedCases(case#: char[5], title: varchar, start date: date, **license#**: char[5])


CASENUM	TITLE	START_DATE	LICENSENUM
23	Johnson VS Ant	2021-11-21	b1
7634	Pottinger VS Bridge	2020-12-21	b2
123	Wolfman VS Car	2019-12-21	b3
356	Tien VS Dog	2021-12-11	b4
4490	Kizcales VS Egg	2021-12-26	b5
1	The Cool Case	2021-10-21	b1
2	The Weird Case	2021-11-21	b2
3	The Epic Case	2021-11-11	b3
4	The Quality Case	2021-02-21	b4
5	The Sad Case	2021-03-21	b5

CaseHearings(hearing#: char[5], location: varchar, date: date, **case#**: char[5])



Other candidate key: case# + location + date

HEARINGNUM	LOCATION	HEARING_DATE	CASENUM
11	1 East Ave, Van	2021-12-21	23
22	2 East Ave, Van	2021-12-21	7634
33	3 East Ave, Van	2021-12-21	123
44	4 East Ave, Van	2021-12-21	356
55	5 East Ave, Van	2021-12-21	4490
1	6 East Ave, Van	2021-12-21	1
2	7 East Ave, Van	2021-12-22	2
3	8 East Ave, Van	2021-12-23	3
4	1 East Ave, Van	2021-12-24	4
5	1 East Ave, Van	2021-12-25	5


Judge(license#: char[5], name: varchar)

 LICENSENUM	NAME
b1	Albert Wu
b2	Ben Carter
b3	Chloe Williams
b4	Dora Potter
b5	Elenor Denman

CaseJury(head juror SIN: char[5], #people: int[2], **case#**: char[5])
Unique: case#

 HEAD_JUROR_SIN	NUMPEOPLE	 CASENUM
121314156	12	1
232425267	14	23
113355779	12	7634
224466880	12	5
131517190	14	356

ClosedCase(**case#**: char[5], EndDate: date, Verdict: **CHAR(10)**)

 CASENUM	VERDICT	END_DATE
1	guilty	3022-12-21
2	innocent	2122-12-20
3	guilty	2031-12-01
4	guilty	2023-12-21
5	innocent	2024-12-21

Screenshots of Queries

Insert Operation:

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/cb7bb9639c6a8de60588698d3c816b4da702ad48/public/scripts.js#L767-L806

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/main/appService.js#L248-L290

insert before

	CASENUM	TITLE	START_DATE	LICENSENUM
1	23	Johnson VS Ant	2021-11-21	b1
2	7634	Pottinger VS Bridge	2020-12-21	b2
3	123	Wolfman VS Car	2019-12-21	b3
4	356	Tien VS Dog	2021-12-11	b4
5	4490	Kizcales VS Egg	2021-12-26	b5
6	1	The Cool Case	2021-10-21	b1
7	2	The Weird Case	2021-11-21	b2
8	3	The Epic Case	2021-11-11	b3
9	4	The Quality Case	2021-02-21	b4
10	5	The Sad Case	2021-03-21	b5

insert during

2	The Weird Case	2021-11-21T08:00:00.000Z	b2
3	The Epic Case	2021-11-11T08:00:00.000Z	b3
4	The Quality Case	2021-02-21T08:00:00.000Z	b4
5	The Sad Case	2021-03-21T08:00:00.000Z	b5

Judge

License Number	Name
b1	Albert Wu
b2	Ben Carter
b3	Chloe Williams
b4	Dora Potter
b5	Elenor Denman

Insert Case into Judged Cases Table

Case Number:

9999

Title:

The new case

Start Date:

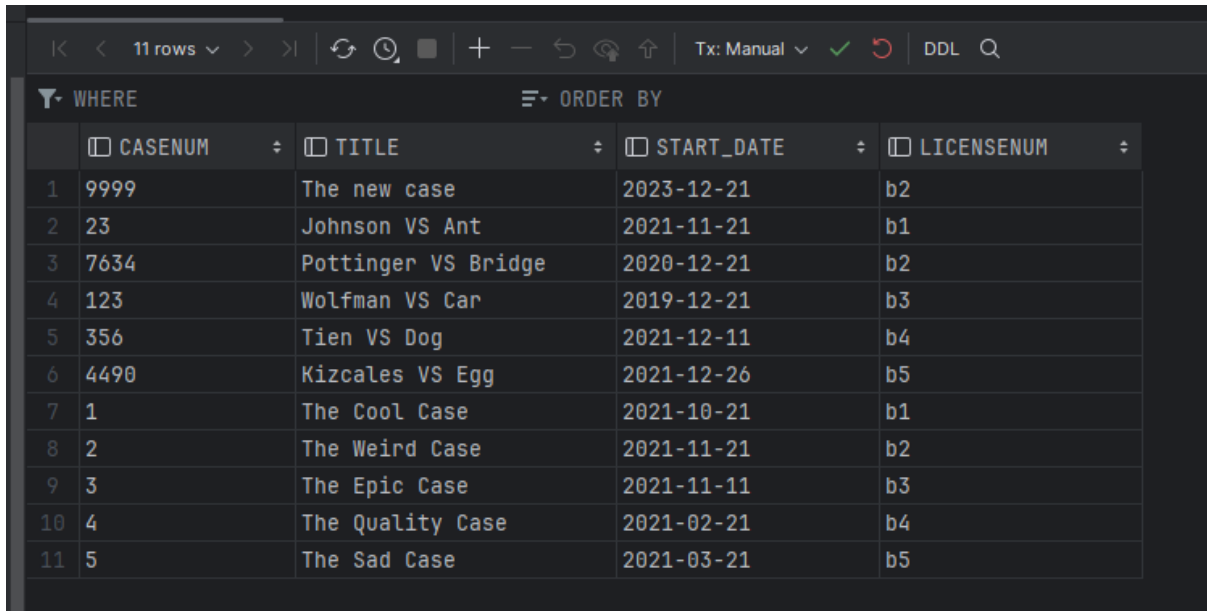
2023/12/21

Judge License Number:

b2

insert

insert after



	CASENUM	TITLE	START_DATE	LICENSENUM
1	9999	The new case	2023-12-21	b2
2	23	Johnson VS Ant	2021-11-21	b1
3	7634	Pottinger VS Bridge	2020-12-21	b2
4	123	Wolfman VS Car	2019-12-21	b3
5	356	Tien VS Dog	2021-12-11	b4
6	4490	Kizcales VS Egg	2021-12-26	b5
7	1	The Cool Case	2021-10-21	b1
8	2	The Weird Case	2021-11-21	b2
9	3	The Epic Case	2021-11-11	b3
10	4	The Quality Case	2021-02-21	b4
11	5	The Sad Case	2021-03-21	b5

Delete Operation

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/cb7bb9639c6a8de60588698d3c816b4da702ad48/public/scripts.js#L808-L834

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/main/appService.js#L293-L327

delete before

11 rows

WHERE

ORDER BY

	CASENUM	TITLE	START_DATE	LICENSENUM
1	9999	The new case	2023-12-21	b2
2	23	Johnson VS Ant	2021-11-21	b1
3	7634	Pottinger VS Bridge	2020-12-21	b2
4	123	Wolfman VS Car	2019-12-21	b3
5	356	Tien VS Dog	2021-12-11	b4
6	4490	Kizcales VS Egg	2021-12-26	b5
7	1	The Cool Case	2021-10-21	b1
8	2	The Weird Case	2021-11-21	b2
9	3	The Epic Case	2021-11-11	b3
10	4	The Quality Case	2021-02-21	b4
11	5	The Sad Case	2021-03-21	b5

delete during

Judges

Judge should not be deleted if case is deleted!

Case Hearings

All case hearings should be deleted if a case is deleted!

Juries

All juries should be deleted if a case is deleted!

Closed cases

Associated closed case entry should be deleted if a case is deleted!

Evidence

All evidence should be deleted if a case is deleted!

Testifying

All testifying relationships should be deleted if a case is deleted!

Lawyer Working On

All of these relationships should be deleted if a case is deleted!

Case ID:

Delete

delete after

	CASENUM	TITLE	START_DATE	LICENSENUM
1	23	Johnson VS Ant	2021-11-21	b1
2	7634	Pottinger VS Bridge	2020-12-21	b2
3	123	Wolfman VS Car	2019-12-21	b3
4	356	Tien VS Dog	2021-12-11	b4
5	4490	Kizcales VS Egg	2021-12-26	b5
6	1	The Cool Case	2021-10-21	b1
7	2	The Weird Case	2021-11-21	b2
8	3	The Epic Case	2021-11-11	b3
9	4	The Quality Case	2021-02-21	b4
10	5	The Sad Case	2021-03-21	b5

Update Operation

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/cb7bb9639c6a8de60588698d3c816b4da702ad48/public/scripts.js#L836-L966

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/main/appService.js#L329-L378

update before

	CASENUM	TITLE	START_DATE	LICENSENUM
1	23	Johnson VS Ant	2021-11-21	b1
2	7634	Pottinger VS Bridge	2020-12-21	b2
3	123	Wolfman VS Car	2019-12-21	b3
4	356	Tien VS Dog	2021-12-11	b4
5	4490	Kizcales VS Egg	2021-12-26	b5
6	1	The Cool Case	2021-10-21	b1
7	2	The Weird Case	2021-11-21	b2
8	3	The Epic Case	2021-11-11	b3
9	4	The Quality Case	2021-02-21	b4
10	5	The Sad Case	2021-03-21	b5

update during

Update Title, Start Date, and/or Judge License Number in Judged Cases Table

The values are case sensitive and if you enter in the wrong case, the update statement will not do anything.

Case Number:

1

New Title:

The not so cool case

Update Title

Case Number:

1

New Start Date:

2023/12/29

Update Start Date

Case Number:

1

New Judge License Number:

b2

Update Judge License Number

update after

	CASENUM	TITLE	START_DATE	LICENSENUM
1	23	Johnson VS Ant	2021-11-21	b1
2	7634	Pottinger VS Bridge	2020-12-21	b2
3	123	Wolfman VS Car	2019-12-21	b3
4	356	Tien VS Dog	2021-12-11	b4
5	4490	Kizcales VS Egg	2021-12-26	b5
6	1	The not so cool case	2023-12-29	b2
7	2	The Weird Case	2021-11-21	b2
8	3	The Epic Case	2021-11-11	b3
9	4	The Quality Case	2021-02-21	b4
10	5	The Sad Case	2021-03-21	b5

Projection Operation

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/cb7bb9639c6a8de60588698d3c816b4da702ad48/public/scripts.js#L614-L765

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/main/appService.js#L215-L245

Projection before

View Attributes From Table

Tables to Project From

Table Names
<input type="button" value="Display Table Names"/>

projection during

View Attributes From Table

Tables to Project From

Table Names
LAWYERCOMPANYPHONE
LAWYERCOMPANYADDRESS
LAWYERS
DEFENDANT
PROSECUTOR
DEFEND
REPRESENT
WITNESS
JUDGE
JUDGEDCASES
WORKON
TESTIFYFOR
EVIDENCEBELONGINGTO
CASEHEARINGS
CASEJURY
CLOSEDCASE

Display Table Names

Select Which Table to Project From

The values are case sensitive and if you enter in the wrong case, the select statement will not do anything.

Table Name:

Select Which Table to Project From

The values are case sensitive and if you enter in the wrong case, the select statement will not do anything.

Table Name:

Table attributes are displayed below!

Attributes of Table to Project From

Attribute Names
CASENUM
VERDICT
END_DATE

Select Which Attribute(s) to View

Select Which Attribute(s) to View

Please add a comma and space between the attribute names!

The values are case sensitive and if you enter in the wrong case, the select statement will not do anything.

Table Name:

Attribute Names:

projection after

Select Which Attribute(s) to View

Please add a comma and space between the attribute names!

The values are case sensitive and if you enter in the wrong case, the select statement will not do anything.

Table Name:

CLOSEDCASE

Attribute Names:

VERDICT, END_DATE

select

Attributes projected successfully!

View the Attributes

VERDICT	END_DATE
guilty	3022-12-21T08:00:00.000Z
innocent	2122-12-20T08:00:00.000Z
guilty	2031-12-01T08:00:00.000Z
guilty	2023-12-21T08:00:00.000Z
innocent	2024-12-21T08:00:00.000Z

Join Operation

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/cb7bb9639c6a8de60588698d3c816b4da702ad48/public/scripts.js#L986-L1029

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/main/appService.js#L468-L528

Join before

Object ID	Description	Case Number
2331	A smol knife	23
2332	Towel	23
2441	Canvas course page	7634
356	Fingerprints on lego bricks	123
2661	Pizza	356
2662	Open can of pineapples	356
2771	Traffic camera footage	4490
fds	Footprint	1
gfd	Glove	2
jhg	Broken mouse	3
ewq	Surveillance footage	4
kop	Traffic camera footage	5

Input Date for Join Condition

Please input a date to find the evidence description, case title, and case starting date of cases with starting dates after the input dates

Start Date:

2021/06/01



input

Joined Judged Cases and Evidence Belonging Table

Evidence Description	Case Title	Case Start Date
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join after

Input Date for Join Condition

Please input a date to find the evidence description, case title, and case starting date of cases with starting dates after the input dates

Start Date:

2021/06/01

input

Tables joined successfully!

Joined Judged Cases and Evidence Belonging Table

Evidence Description	Case Title	Case Start Date
A smol knife	Johnson VS Ant	2021-11-21T08:00:00.000Z
Towel	Johnson VS Ant	2021-11-21T08:00:00.000Z
Pizza	Tien VS Dog	2021-12-11T08:00:00.000Z
Open can of pineapples	Tien VS Dog	2021-12-11T08:00:00.000Z
Traffic camera footage	Kizcales VS Egg	2021-12-26T08:00:00.000Z
Footprint	The not so cool case	2023-12-29T08:00:00.000Z
Glove	The Weird Case	2021-11-21T08:00:00.000Z
Broken mouse	The Epic Case	2021-11-11T08:00:00.000Z

Aggregation with Group By

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/cb7bb9639c6a8de60588698d3c816b4da702ad48/public/scripts.js#L424-L462

Count hearings

Count how many hearings there are per case!

Count

Hearings per case

Case Number	Number of hearings
-------------	--------------------

Count hearings

Count how many hearings there are per case!

Count

Successfully counted!

Hearings per case

Case Number	Number of hearings
7634	1
123	1
4	1
2	1
4490	1
23	1
356	1
5	1
1	1
3	1

Aggregation with Having

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/cb7bb9639c6a8de60588698d3c816b4da702ad48/public/scripts.js#L468-L507

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/main/ppService.js#L531-L601

Find juries

Type a number to find amount of juries that have strictly greater than a certain number of people!

Successfully processed data!

Number of jurors	Amount of juries
14	2

For each case, find the date of the hearing earlier than or equal to the date of the first ever hearing

Successfully processed data!

Case Number	First case hearing earlier than most recent hearing of all cases
7634	2021-12-21T08:00:00.000Z
123	2021-12-21T08:00:00.000Z
4	2021-12-24T08:00:00.000Z
4490	2021-12-21T08:00:00.000Z
2	2021-12-22T08:00:00.000Z
23	2021-12-21T08:00:00.000Z
356	2021-12-21T08:00:00.000Z
1	2021-12-21T08:00:00.000Z
3	2021-12-23T08:00:00.000Z

Division before

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/cb7bb9639c6a8de60588698d3c816b4da702ad48/public/scripts.js#L383-L419

Find all the judges who have overseen all cases

Search

Judge License Number

division after

Find all the judges who have overseen all cases

Search

Successfully processed data!

Judge License Number

Select before

Closed Cases

Case Number	Verdict	End Date
1	guilty	2022-12-21T08:00:00.000Z
2	innocent	2122-12-20T08:00:00.000Z
3	guilty	2031-12-21T08:00:00.000Z
4	guilty	2023-12-21T08:00:00.000Z
5	innocent	2024-12-21T08:00:00.000Z

Filter closed cases:

Please leave the boxes blank and do not select a checkbox if you would not like that value included. Do not select multiple check boxes per attribute, please! :)

Case number

Case number = ?

Include in filter search, mandatory (and):

Include in filter search, optionally (or):

Verdict

Verdict = ?

Include in filter search, mandatory (and):

Include in filter search, optionally (or):

Submit

Filtered closed cases:

Case Number	Verdict	End Date
-------------	---------	----------

Select after

Filter Closed Cases

Closed Cases

Case Number	Verdict	End Date
1	guilty	2022-12-21T08:00:00.000Z
2	innocent	2122-12-20T08:00:00.000Z
3	guilty	2031-12-01T08:00:00.000Z
4	guilty	2023-12-21T08:00:00.000Z
5	innocent	2024-12-21T08:00:00.000Z

Filter closed cases:

Please leave the boxes blank and do not select a checkbox if you would not like that value included. Do not select multiple check boxes per attribute, please! 3

Case number

2

Include in filter search, mandatory (and):

☒

Include in filter search, optionally (or):

☐

Verdict

innocent

Include in filter search, mandatory (and):

☐

Include in filter search, optionally (or):

☒

Submit

Successfully filtered data!

Filtered closed cases:

Case Number	Verdict	End Date
2	innocent	2122-12-20T08:00:00.000Z
5	innocent	2024-12-21T08:00:00.000Z

https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_h2a0v_i7x1s_q3p0v/blob/main/public/scripts.js#L511