

# CPSC 304 Project Cover Page

Milestone #: \_\_\_\_4\_\_\_\_

Date: \_\_\_\_\_Dec 1, 2023\_\_\_\_\_

Group Number: \_\_\_\_21\_\_\_\_

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Winnie Wu	26039453	b7i8b	Wwu947@student.ubc.ca
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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

## **Project description**

### A short description of the final project, and what it accomplished.

Our project is a user-friendly GUI application designed to manage an Oracle database of sports tournaments. It is developed in Java and SQL scripts. There are scripts to set up database tables and fill it with entries so the database can be stored persistently. The database keeps track of tournaments, tournament matches, teams, team members (players, coaches, business members), sponsors etc. Users can interact with and view tables in the database, for example, update and view team and player information. To support our GUI, we developed functions to handle events that would respond to user inputs, and trigger warnings when prohibited actions happen (i.e., add Player with same ID as an existing Player).

To ensure that our tests are meaningful, we created and populated our tables with real-world data, including constraints required to model the ER diagram. We also allow the users to query the database with a few button clicks to see which entries fall under certain conditions. They do not have to write any code or the like. It is completely user-friendly in that aspect. Anyone without a computer science background should be able to use it easily.

### A description of how your final schema differed from the schema you turned in. If the final schema differed, explain why.

Nothing changed in our final schema. It is the exact same as the original one we turned in.

### **Locations where each query can be found in the code:**

ALL backend query logic can be found in this file:

[https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project\\_b7i8b\\_g3i0k\\_v7o6b/blob/main/CPSC304\\_Java\\_Project-master/src/ca/ubc/cs304/database/TournieDBHandler.java](https://github.students.cs.ubc.ca/CPSC304-2023W-T1/project_b7i8b_g3i0k_v7o6b/blob/main/CPSC304_Java_Project-master/src/ca/ubc/cs304/database/TournieDBHandler.java)

Insert: lines 42-63

Update: lines 65-171

Delete: lines 173-192

Selection: IS NOT IMPLEMENTED

Projection: lines 194-270 (frontend uses `getTables` to get tables then sends back which table it wants, then asks for the columns of that table using `getTableColumns`, then sends back which columns it wants to project and projects using `project`)

Join: lines 272-306

Aggregation Group By: lines 308-341

Aggregation Group By Having: lines 343-380

Aggregation Group By Nested: lines 382-409

Division: lines 422-465

## Screenshots of query results

Screenshots of the sample output of the queries using the GUI (for example, for an insertion query you can show what data is in your table before you run the query, and then show another screenshot after running the query, from some kind of GUI input like a button).

- You need only to include screenshots for the required queries – if you implemented more than what was required, screenshots are not needed for those extra queries.
- Each screenshot should be clearly labelled with which query (i.e., rubric item) it represents.

Query	Before running query	After running query																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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19	44	Ruler	Park	South Korea	2023-01-01	44																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
20	45	Missing	Lou	China	2023-01-01	45																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
21	51	Bin	Chen	China	2021-01-01	51																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
22	52	Xun	Peng	China	2023-01-01	52																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
23	53	Yagao	Zeng	China	2022-01-01	53																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
24	54	Elk	Zhao	China	2023-02-01	54																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
25	55	On	Luo	China	2023-02-02	55																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
26	61	Zika	Tang	China	2023-01-01	61																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
27	62	Tarzan	Lee	South Korea	2023-01-01	62																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
28	63	Scout	Lee	South Korea	2023-01-01	63																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
29	64	LP	Li	China	2022-01-01	64																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
30	65	Hang	Fu	China	2023-01-01	65																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
31	71	TheShy	Kang	South Korea	2022-01-01	71																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
32	72	Karsa	Hung	PCS	2023-01-01	72																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
33	73	Xiaohu	Li	China	2023-01-01	73																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
34	74	Light	Wang	China	2023-01-01	74																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
35	75	Crisp	Liu	China	2020-01-01	75																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
36	81	Dhokla	Doshi	USA	2023-04-06	81																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
37	82	Contractz	Garcia	USA	2023-04-06	82																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
38	83	Palafox	Palafox	USA	2023-04-06	83																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
39	84	FBI	Huang	Australia	2023-05-27	84																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
40	85	Igwar	Lee	South Korea	2023-05-27	85																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
41	666	Patrick	Parker	Canada	2018-02-05	6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
42	777	Quinna	Quarles	USA	2020-12-31	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
43	888	Rachel	Rayon	Mexico	2023-01-01	8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
44	999	Sylvia	Sin	Japan	2019-07-31	7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
45	1010	Tin	Thomas	Finland	2022-10-31	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
1	10	Nicole	Cheese	Canada	2002-02-02	10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
2	11	Doran	Choi	South Korea	2022-01-01	11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
3	12	Peanut	Han	South Korea	2022-01-01	12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
4	13	Chovy	Jeong	South Korea	2022-01-01	13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
5	14	Peyz	Kim	South Korea	2023-01-01	14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
6	15	DeLight	Yoo	South Korea	2023-01-01	15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
7	21	Zeus	Choi	South Korea	2020-11-05	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
8	22	Oner	Mun	South Korea	2021-01-01	22																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
9	23	Faker	Lee	South Korea	2013-01-01	23																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
10	24	Gumayusi	Lee	South Korea	2021-02-03	24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
11	25	Keria	Ryu	South Korea	2020-11-05	25																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
12	31	Kiin	Kim	South Korea	2023-01-01	31																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
13	32	Cuzz	Moon	South Korea	2023-01-01	32																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
14	33	Bdd	Gwak	South Korea	2023-01-02	33																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
15	34	Aining	Kim	South Korea	2023-01-01	34																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
16	35	Lehends	Son	South Korea	2023-01-01	35																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
17	41	369	Bai	China	2023-01-01	41																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
18	42	Kanavi	Seo	South Korea	2022-01-01	42																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
19	43	Knight	Zhuo	China	2023-01-01	43																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
20	44	Ruler	Park	South Korea	2023-01-01	44																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
21	45	Missing	Lou	China	2023-01-01	45																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

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DELETE
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Team2			
	ID	NAME	ORGANIZATION
1	101	TeamA	OrgA
2	102	TeamB	OrgB
3	103	TeamC	OrgC
4	104	TeamD	OrgD
5	105	TeamE	OrgE
6	1	Gen.G	KSV GEN
7	2	T1	SK Telecom
8	3	KT	KT Corp
9	4	JDG	JingDong
10	5	BLG	Bilibili
11	6	LNG	LiNing
12	7	WBG	Weibo
13	8	NRG	NR

The screenshot displays a web application interface. At the top, there is a 'Menu' button. Below it, the 'Tournament Database' header is visible, followed by a 'Main Menu' link. The main content area contains three buttons: 'Add Data', 'Modify Data', and 'View Data'. Below these, there are two buttons: 'Delete Team' and 'Update Player'. A 'Delete Team' dialog box is open, showing a 'Team ID' input field with the value '102' and a 'Delete' button. Below the dialog, a table with three columns: 'ID', 'NAME', and 'ORGANIZATION' is shown. The table contains 12 rows of data.

	ID	NAME	ORGANIZATION
1	101	TeamA	OrgA
2	103	TeamC	OrgC
3	104	TeamD	OrgD
4	105	TeamE	OrgE
5	1	Gen.G	KSV GEN
6	2	T1	SK Telecom
7	3	KT	KT Corp
8	4	JDG	JingDong
9	5	BLG	Bilibili
10	6	LNK	LiNing
11	7	WBG	Weibo
12	8	NRG	NR

UPDATE

Player

ID	FIRST_NAME	LAST_NAME	COUNTRY	JOIN_DATE	RANKING	TEAM_ID
1	10 Nicole	Cheese	Canada	2002-02-02	10	1
2	11 Doran	Choi	South Korea	2022-01-01	11	1
3	12 Peanut	Han	South Korea	2022-01-01	12	1
4	13 Chovy	Jeong	South Korea	2022-01-01	13	1
5	14 Peyz	Kim	South Korea	2023-01-01	14	1
6	15 DeLight	Yoo	South Korea	2023-01-01	15	1
7	21 Zeus	Choi	South Korea	2020-11-05	21	2
8	22 Oner	Nun	South Korea	2021-01-01	22	2
9	23 Faker	Lee	South Korea	2011-01-01	23	2
10	24 Gumayusi	Lee	South Korea	2021-02-03	24	2
11	25 Keria	Ryu	South Korea	2020-11-05	25	2
12	31 Kiin	Kim	South Korea	2023-01-01	31	3
13	32 Cuzz	Moon	South Korea	2023-01-01	32	3
14	33 Bdd	Gwak	South Korea	2023-01-02	33	3
15	34 Alaming	Kim	South Korea	2023-01-01	34	3
16	35 Lehends	Son	South Korea	2023-01-01	35	3
17	41 369	Bai	China	2023-01-01	41	4
18	42 Kanavi	Seo	South Korea	2022-01-01	42	4
19	43 Knight	Zhuo	China	2023-01-01	43	4
20	44 Butler	Park	South Korea	2023-01-01	44	4
21	45 Missing	Lou	China	2023-01-01	45	4
22	51 Bin	Chen	China	2021-01-01	51	5
23	52 Xun	Peng	China	2023-01-01	52	5
24	53 Yagao	Zeng	China	2022-01-01	53	5
25	54 Elk	Zhao	China	2023-02-01	54	5
26	55 On	Luo	China	2023-02-02	55	5
27	61 Zika	Tang	China	2023-01-01	61	6
28	62 Tarzan	Lee	South Korea	2023-01-01	62	6
29	63 Scout	Lee	South Korea	2023-01-01	63	6
30	64 LP	Li	China	2022-01-01	64	6
31	65 Hang	Fu	China	2023-01-01	65	6
32	71 TheShy	Kang	South Korea	2022-01-01	71	7
33	72 Karsa	Hung	PCS	2023-01-01	72	7
34	73 Xiaohu	Li	China	2023-01-01	73	7
35	74 Light	Wang	China	2023-01-01	74	7
36	75 Crisp	Liu	China	2020-01-01	75	7
37	81 Ohokla	Doshi	USA	2023-04-06	81	8
38	82 Contractz	Garcia	USA	2023-04-06	82	8
39	83 Palafox	Palafox	USA	2023-04-06	83	8
40	84 FBI	Huang	Australia	2023-05-27	84	8
41	85 Iglar	Lee	South Korea	2023-05-27	85	8
42	666 Patrick	Parker	Canada	2018-02-05	6	101
43	777 Quinna	Quarles	USA	2020-12-31	2	102
44	888 Rachel	Rayon	Mexico	2023-01-01	8	103
45	999 Sylvia	Sin	Japan	2019-07-31	7	104
46	1010 Tim	Thomas	Finland	2022-10-31	1	105

Menu

Tournament Database

Main Menu

Add DataModify DataView Data

Delete TeamUpdate Player

Update Player

Player ID10

First name

Last nameCake

Country

Join date (YYYY-MM-DD)

Ranking

Team ID

Add

ID	FIRST_NAME	LAST_NAME	COUNTRY	JOIN_DATE	RANKING	TEAM_ID
1	10 Nicole	Cake	Canada	2002-02-02	10	1
2	11 Doran	Choi	South Korea	2022-01-01	11	1
3	12 Peanut	Han	South Korea	2022-01-01	12	1
4	13 Chovy	Jeong	South Korea	2022-01-01	13	1
5	14 Peyz	Kim	South Korea	2023-01-01	14	1
6	15 DeLight	Yoo	South Korea	2023-01-01	15	1
7	21 Zeus	Choi	South Korea	2020-11-05	21	2
8	22 Oner	Nun	South Korea	2021-01-01	22	2
9	23 Faker	Lee	South Korea	2011-01-01	23	2
10	24 Gumayusi	Lee	South Korea	2021-02-03	24	2
11	25 Keria	Ryu	South Korea	2020-11-05	25	2
12	31 Kiin	Kim	South Korea	2023-01-01	31	3
13	32 Cuzz	Moon	South Korea	2023-01-01	32	3
14	33 Bdd	Gwak	South Korea	2023-01-02	33	3
15	34 Alaming	Kim	South Korea	2023-01-01	34	3
16	35 Lehends	Son	South Korea	2023-01-01	35	3
17	41 369	Bai	China	2023-01-01	41	4
18	42 Kanavi	Seo	South Korea	2022-01-01	42	4
19	43 Knight	Zhuo	China	2023-01-01	43	4
20	44 Butler	Park	South Korea	2023-01-01	44	4
21	45 Missing	Lou	China	2023-01-01	45	4

22	51 Bin	Chen	China	2021-01-01	51	5
23	52 Xun	Peng	China	2023-01-01	52	5
24	53 Yagao	Zeng	China	2022-01-01	53	5
25	54 Elk	Zhao	China	2023-02-01	54	5
26	55 On	Luo	China	2023-02-02	55	5
27	61 Zika	Tang	China	2023-01-01	61	6
28	62 Tarzan	Lee	South Korea	2023-01-01	62	6
29	63 Scout	Lee	South Korea	2023-01-01	63	6
30	64 LP	Li	China	2022-01-01	64	6
31	65 Hang	Fu	China	2023-01-01	65	6
32	71 TheShy	Kang	South Korea	2022-01-01	71	7
33	72 Karsa	Hung	PCS	2023-01-01	72	7
34	73 Xiaohu	Li	China	2023-01-01	73	7
35	74 Light	Wang	China	2023-01-01	74	7
36	75 Crisp	Liu	China	2020-01-01	75	7
37	81 Ohokla	Doshi	USA	2023-04-06	81	8
38	82 Contractz	Garcia	USA	2023-04-06	82	8
39	83 Palafox	Palafox	USA	2023-04-06	83	8
40	84 FBI	Huang	Australia	2023-05-27	84	8
41	85 Iglar	Lee	South Korea	2023-05-27	85	8
42	666 Patrick	Parker	Canada	2018-02-05	6	101
43	777 Quinna	Quarles	USA	2020-12-31	2	102
44	888 Rachel	Rayon	Mexico	2023-01-01	8	103
45	999 Sylvia	Sin	Japan	2019-07-31	7	104
46	1010 Tim	Thomas	Finland	2022-10-31	1	105

Selection

n/a

n/a

Projection

Player

	ID	FIRST_NAME	LAST_NAME	COUNTRY	JOIN_DATE	RANKING	TEAM_ID
1	666	Patrick	Parker	Canada	2018-02-05	6	101
2	777	Quinn	Quarles	USA	2020-12-31	2	102
3	888	Rachel	Rayon	Mexico	2023-01-01	8	103
4	999	Sylvia	Sin	Japan	2019-07-31	7	104
5	1010	Tim	Thomas	Finland	2022-10-31	1	105
6	11	Doran	Choi	South Korea	2022-01-01	11	1
7	12	Peanut	Han	South Korea	2022-01-01	12	1
8	13	Chovy	Jeong	South Korea	2022-01-01	13	1
9	14	Peyz	Kim	South Korea	2023-01-01	14	1
10	15	Delight	Yoo	South Korea	2023-01-01	15	1
11	21	Zeus	Choi	South Korea	2020-11-05	21	2
12	22	Oner	Mun	South Korea	2021-01-01	22	2
13	23	Faker	Lee	South Korea	2013-01-01	23	2
14	24	Gumayusi	Lee	South Korea	2021-02-03	24	2
15	25	Keria	Ryu	South Korea	2020-11-05	25	2
16	31	Kiin	Kim	South Korea	2023-01-01	31	3
17	32	Cuzz	Moon	South Korea	2023-01-01	32	3
18	33	Bos	Gwak	South Korea	2023-01-02	33	3
19	34	Aiming	Kim	South Korea	2023-01-01	34	3
20	35	Lehends	Son	South Korea	2023-01-01	35	3
21	41	369	Bai	China	2023-01-01	41	4
22	42	Kanavi	Seo	South Korea	2022-01-01	42	4
23	43	Knight	Zhuo	China	2023-01-01	43	4
24	44	Ruler	Park	South Korea	2023-01-01	44	4
25	45	Missing	Lou	China	2023-01-01	45	4
26	51	Bln	Chen	China	2021-01-01	51	5
27	52	Xun	Peng	China	2023-01-01	52	5
28	53	Yagao	Zeng	China	2022-01-01	53	5

Menu

Tournament Database

Main Menu

Add DataModify DataView Data

SelectionProjectionJoinAggregationDivision

Select Table

Select table

PLAYER

Show attributes

Select attributes

ID

Exclude ID

FIRST\_NAME

FIRST\_NAME

LAST\_NAME

Exclude LAST\_NAME

COUNTRY

Exclude COUNTRY

JOIN\_DATE

Exclude JOIN\_DATE

RANKING

Exclude RANKING

TEAM\_ID

Exclude TEAM\_ID

Display

View Table

FIRST\_NAME

Patrick

Quinna

Rachel

Sylvia

Tim

Doran

Peanut

Chovy

Peyz

Delight

Zeus

Oner

Faker

Gumayusi

Keria

Kiin

Cuzz

Bdd

Aiming

Lehends

369

Kanavi

Knight

Ruler

Missing

Bin

Xun

Yagao

Join

Team1

	ORGANIZATION	COUNTRY
1	OrgA	Canada
2	OrgB	USA
3	OrgC	Mexico
4	OrgD	Japan
5	OrgE	Finland
6	KSV GEN	South Korea
7	SK Telecom	South Korea
8	KT Corp	South Korea
9	JingDong	China
10	Bilibili	China
11	LiNing	China
12	Weibo	China
13	NR	Canada

Team2

Menu

Tournament Database

Main Menu

Add DataModify DataView Data

SelectionProjectionJoinAggregationDivision

Join Team Tables by Country

Team country

China

Join

View Table

Team Name	Organization
JDG	JingDong
BLG	Bilibili
LNG	LiNing
WBG	Weibo

	ID	NAME	ORGANIZATION
1	103	TeamC	OrgC
2	104	TeamD	OrgD
3	105	TeamE	OrgE
4	1	Gen.G	KSV GEN
5	2	T1	SK Telecom
6	3	KT	KT Corp
7	4	JDG	JingDong
8	5	BLG	Bilibili
9	6	LNG	LiNing
10	7	WBG	Weibo
11	8	NRG	NR

Aggregation  
with Group  
By

Player						
	ID	FIRST_NAME	LAST_NAME	COUNTRY	JOIN_DATE	RANKING
1	10	Nicole	Cake	Canada	2002-02-02	10
2	11	Doran	Choi	South Korea	2022-01-01	11
3	12	Peanut	Han	South Korea	2022-01-01	12
4	13	Chovy	Jeong	South Korea	2022-01-01	13
5	14	Peyz	Kim	South Korea	2023-01-01	14
6	15	Delight	Yoo	South Korea	2023-01-01	15
7	21	Zeus	Choi	South Korea	2020-11-05	21
8	22	Gner	Mun	South Korea	2021-01-01	22
9	23	Faker	Lee	South Korea	2013-01-01	23
10	24	Gumayusi	Lee	South Korea	2021-02-03	24
11	25	Keria	Ryu	South Korea	2020-11-05	25
12	31	Kiin	Kim	South Korea	2023-01-01	31
13	32	Cuzz	Moon	South Korea	2023-01-01	32
14	33	Bdd	Gwak	South Korea	2023-01-02	33
15	34	Aiming	Kim	South Korea	2023-01-01	34
16	35	Lehends	Son	South Korea	2023-01-01	35
17	41	369	Bai	China	2023-01-01	41
18	42	Kanavi	Seo	South Korea	2022-01-01	42
19	43	KnighT	Zhuo	China	2023-01-01	43
20	44	Ruler	Park	South Korea	2023-01-01	44
21	45	Missing	Lou	China	2023-01-01	45
22	51	Bin	Chen	China	2021-01-01	51
23	52	Xun	Peng	China	2023-01-01	52
24	53	Yagao	Zeng	China	2022-01-01	53
25	54	Elk	Zhao	China	2023-02-01	54
26	55	On	Luo	China	2023-02-02	55
27	61	Zika	Tang	China	2023-01-01	61
28	62	Tarzan	Lee	South Korea	2023-01-01	62
29	63	Scout	Lee	South Korea	2023-01-01	63
30	64	LP	Li	China	2022-01-01	64
31	65	Hang	Fu	China	2023-01-01	65
32	71	TheShy	Kang	South Korea	2022-01-01	71
33	72	Karsa	Hung	PCS	2023-01-01	72
34	73	Xiaohu	Li	China	2023-01-01	73
35	74	Light	Wang	China	2023-01-01	74
36	75	Crisp	Liu	China	2020-01-01	75
37	81	Dhokla	Doshi	USA	2023-04-06	81
38	82	Contractz	Garcia	USA	2023-04-06	82
39	83	Palafox	Palafox	USA	2023-04-06	83
40	84	FBI	Huang	Australia	2023-05-27	84
41	85	IgMar	Lee	South Korea	2023-05-27	85
42	666	Patrick	Parker	Canada	2018-02-05	6
43	777	Quinn	Quarles	USA	2020-12-31	2
44	888	Rachel	Rayon	Mexico	2023-01-01	8
45	999	Sylvia	Sin	Japan	2019-07-31	7
46	1010	Tin	Thomas	Finland	2022-10-31	1

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Team_ID	Average_Team_Ranking
6	63
1	12.5
105	1
7	73
104	7
2	23
8	83
101	6
103	8
4	43
5	53
3	33
102	2



Aggregation with Having

Tournament

ID	NAME	START_DATE	END_DATE	FORMAT	VENUE_NAME	VENUE_CITY	OPPONUM_ID	WINNING_TEAM
1	TournamentA	2012-04-08	2012-04-12	Progression	VenueA	Shanghai	11	win11
2	TournamentB	2020-12-07	2020-12-21	Elimination	VenueB	Vancouver	55	win11
3	TournamentC	2016-11-03	2016-11-09	Elimination	VenueC	Helsinki	22	win11
4	LOL	2018-11-05	2019-11-05	Elimination	VenueD	Incheon	33	102
5	2018 Winter Olympics	2018-02-09	2018-02-25	Progression	VenueE	PyeongChang	44	104
6	2023 LVL Worlds	2023-11-02	2023-11-19	Elimination	Gocheok Sky Dome	Seoul	22	2

Venue

ID	NAME	CITY	COUNTRY	CAPACITY
1	VenueA	Shanghai	China	100000
2	VenueB	Vancouver	Canada	100000
3	VenueC	Helsinki	Finland	100000
4	VenueD	Incheon	South Korea	50000
5	VenueE	PyeongChang	South Korea	100000
6	Gocheok Sky Dome	Seoul	South Korea	16744

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City	Average_Venue_Capacity
Shanghai	100000
Helsinki	100000
Vancouver	100000
Seoul	16744
Incheon	50000
PyeongChang	100000

Nested Aggregation with Group By

Match2

ID	MATCH_NUMBER	TOURNAMENT_NAME	TOURNAMENT_START_DATE	START_TIME	SCORE	TEAMS	TEAMS	WINNER	STAGE
1	101	2023 LVL Worlds	2023-11-02	2023-11-02 17:00:00	3-0	7	8	7	QuarterFinals1
2	102	2023 LVL Worlds	2023-11-02	2023-11-02 17:00:00	3-2	1	5	5	QuarterFinals2
3	103	2023 LVL Worlds	2023-11-02	2023-11-02 17:00:00	3-1	3	4	4	QuarterFinals3
4	104	2023 LVL Worlds	2023-11-02	2023-11-02 17:00:00	3-0	2	6	6	QuarterFinals4
5	101	2023 LVL Worlds	2023-11-02	2023-11-02 18:00:00	3-2	7	5	5	Seelfinals1
6	102	2023 LVL Worlds	2023-11-02	2023-11-02 18:00:00	3-1	2	4	4	Seelfinals1
7	101	2023 LVL Worlds	2023-11-02	2023-11-02 18:00:00	3-0	7	7	7	Finals

Team2

ID	ID	NAME	ORGANIZATION
1	101	TeamA	OrgA
2	102	TeamB	OrgB
3	103	TeamC	OrgC
4	104	TeamD	OrgD
5	105	TeamE	OrgE
6	1	Gen.G	KSV GEN
7	2	T1	SK Telecom
8	3	KT	KT Corp
9	4	JDG	JingDong
10	5	BLG	Bilibili
11	6	LNG	LiNing
12	7	WBG	Weibo
13	8	NRG	NR

Coach

ID	ID	FIRST_NAME	LAST_NAME	COUNTRY	JOIN_DATE	YEARS_EXPERIENCE	TEAM_ID
1	1010	Frank	Freeman	France	2021-10-02	2	101
2	1020	Bary	Green	Germany	2015-02-12	8	102
3	1030	Helen	HaLL	Hungary	2018-11-06	5	103
4	1040	Irene	Idd	Iceland	2000-09-21	23	104
5	1050	Jackson	Johnson	Japan	2008-12-31	15	105

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Winner	Count_Matches_Won
7	2
2	3
5	1
4	1

Division

Broadcaster

	ID	ORGANIZATION
1	101	NBC
2	202	CBC
3	303	BBC
4	404	CTV
5	505	BTV

Tournaments

	NAME	START_DATE	END_DATE	FORMAT	VENUE_NAME	VENUE_CITY	SPONSOR_ID	WINNING_TEAM
1	TournamentA	2012-04-08	2012-04-12	Progression	VenueA	Shanghai	11	101
2	TournamentB	2020-12-07	2020-12-21	Elimination	VenueB	Vancouver	93	101
3	TournamentC	2016-11-03	2016-11-09	Elimination	VenueC	Welland	22	101
4	L0L	2018-11-05	2018-11-05	Elimination	VenueD	Incheon	31	101
5	2018 Winter Olympics	2018-02-09	2018-02-25	Progression	VenueE	PyeongChang	44	104
6	2023 L0L Worlds	2023-11-02	2023-11-19	Elimination	Gocheok Sky Dome	Seoul	22	2

Broadcasts

	TOURNAMENT_NAME	TOURNAMENT_START_DATE	BROADCASTER_ID
1	2018 Winter Olympics	2018-02-09	101
2	2018 Winter Olympics	2018-02-09	303
3	2023 L0L Worlds	2023-11-02	101
4	2023 L0L Worlds	2023-11-02	303
5	L0L	2018-11-05	101
6	L0L	2018-11-05	303
7	TournamentA	2012-04-08	101
8	TournamentA	2012-04-08	303
9	TournamentB	2020-12-07	101
10	TournamentB	2020-12-07	303
11	TournamentC	2016-11-03	101
12	TournamentC	2016-11-03	303

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Broadcaster_ID	Broadcaster_Organization
101	NBC
303	BBC