

CPSC 304 Project Cover Page

Milestone #: 4

Date: April 5th, 2024

Group Number: 5

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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

2.

The script is in the GitHub repository under deliverables:

https://github.students.cs.ubc.ca/CPSC304-2023W-T2/project_m5k1h_s0b9v_x7j4j/blob/e39118c82ed2eef936627c652ae48ddd15121f96/deliverables/startup.sql

3.

a. The project is an e-sports tournament organization system, where organizers can track and manage participants, sponsors, venues, etc.

b. The schema did not change from before.

c.

i. Broadcast(**tid**: int, host: string, viewership: int)

HostPlatform(host, platform)

ESportsOrg(id: int, name: string, region: string, contact: string)

Game(id: int, name: string, genre: string, company: string, yearPublished: int)

IndividualGame(**id**: int)

TeamGame(**id**: int, teamSize: int, numTeams: int)

Organizer(id: int, name: string, email: string)

Participant(id: int, displayName: string)

Player(**id**: int, firstName: string, lastName: string, age: int)

Team(**id**: int, coach: string)

Sponsor(id: int, name: string)

Tournament(id: int, name: string, startDate: date, endDate: date, **streetAddress**: string, **city**: string, **country**: string, **organizerid**: int, **gameid**: int)

StartDate(startDate: date, year: int)

Venue(streetAddress: string, postalCode: string)

PostalCode(postalCode: string, city: string, country: string)

Contract(pid: int, **orgid**: string, startDate: date, endDate: date, amount: int)

Joins(pid: int, tid: int)

Member(playerid: int, **teamid**: int)

TournamentFunding(tid: int, sid, amount: int)

TeamPlays(teamid: int, gameid: int)

PlayerPlays(playerid: int, gameid: int)

- ii. Screenshots of the relations are in the deliverables folder on Github:
https://github.students.cs.ubc.ca/CPSC304-2023W-T2/project_m5k1h_s0b9v_x7j4j/blob/master/deliverables/milestone_4%20screenshots.pdf

d. **All queries can be found in server/dbConnector.js.**

INSERT: can be found in executeInsert() starting on line 131

```
INSERT ALL  
INTO table (columns)  
VALUES (valuesArr)  
SELECT * FROM dual
```

DELETE: can be found in executeDelete() starting on line 197

```
DELETE FROM table  
WHERE whereClause
```

UPDATE: can be found in executeUpdate() starting on line 165

```
UPDATE table  
SET setList  
WHERE whereClause
```

Selection: can be found the in executeQuery() starting on line 87

```
SELECT selectList FROM fromList  
WHERE whereClause  
GROUP BY groupList  
HAVING havingClause  
ORDER BY orderList
```

Projection: can be found in executeQuery() starting on line 87

```
SELECT selectList FROM fromList
WHERE whereClause
GROUP BY groupList
HAVING havingClause
ORDER BY orderList
```

Join: can be found in getTeamPlayers() starting on line 225

```
SELECT *
FROM Member, Player
WHERE teamid = <teamId> AND
       playerid = id
```

Aggregation with GROUP BY: can be found in getNumTournParticipants() starting on line 252

```
SELECT tid, COUNT(*) as PARTICIPANT_COUNT
FROM Joins
GROUP BY tid
```

Aggregation with HAVING: can be found in getPopularGames() starting on line 277 or 286

```
SELECT id, name, genre, company, yearPublished
FROM Game
WHERE id IN (SELECT gameid
FROM TeamPlays
GROUP BY gameid
HAVING COUNT(*) >= 3)
```

```
SELECT id, name, genre, company, yearPublished
FROM Game
WHERE id IN (SELECT gameid
FROM PlayerPlays
GROUP BY gameid
HAVING COUNT(*) >= 5)
```

Nested Aggregation with GROUP BY: can be found in
getHighestAvgViewershipPlatform() starting on line 316

```
SELECT platform, AVG(viewership) as AVG_VIEWERSHIP
FROM Broadcast NATURAL JOIN HostPlatform
GROUP BY platform
HAVING AVG(viewership) >= ALL (SELECT AVG(viewership)
    FROM Broadcast NATURAL JOIN HostPlatform
    GROUP BY platform)
```

Division: can be found in getMVPs() on line 344

```
SELECT *
FROM Player p
WHERE NOT EXISTS (SELECT t.id
    FROM Tournament t
    WHERE t.gameid IN (SELECT g.id
        FROM IndividualGame g)
    MINUS
    SELECT j.tid
    FROM Joins j
    WHERE j.pid = p.id)
```

e. **Insertion:** executeInsert() on line 119

```
SQL> SELECT * FROM Participant;

  ID  DISPLAYNAME
-----
1001 TEAM AceHunter
1002 TEAM BlazeKnight
1003 TEAM CrimsonFury
1004 TEAM DeltaEcho
1005 TEAM EchoRanger
1006 SOLO FoxtrotAlpha
1007 SOLO GammaHawk
1008 SOLO HyperIon
1009 SOLO IvoryWolf
1010 SOLO JadeFalcon
1011 SOLO KiloTango
1012 SOLO LimaCharlie
1013 SOLO MysticDragon
1014 SOLO NovaPirate
1015 SOLO OmegaSpartan
1016 SOLO PhantomKnight
1017 SOLO QuartzSpecter
1018 SOLO RazorEdge
1019 SOLO StormSeeker
1020 SOLO TitaniumFist

20 rows selected.
```

Participants

9999	DURING SCREENSHOT
Add Participant	Delete

```
SQL> SELECT * FROM Participant;
```

ID	DISPLAYNAME
1001	TEAM AceHunter
1002	TEAM BlazeKnight
1003	TEAM CrimsonFury
1004	TEAM DeltaEcho
1005	TEAM EchoRanger
1006	SOLO FoxtrotAlpha
1007	SOLO GammaHawk
1008	SOLO HyperIon
1009	SOLO IvoryWolf
1010	SOLO JadeFalcon
1011	SOLO KiloTango
1012	SOLO LimaCharlie
1013	SOLO MysticDragon
1014	SOLO NovaPirate
1015	SOLO OmegaSpartan
1016	SOLO PhantomKnight
1017	SOLO QuartzSpecter
1018	SOLO RazorEdge
1019	SOLO StormSeeker
1020	SOLO TitaniumFist
9999	DURING SCREENSHOT

21 rows selected.

Delete: executeDelete() on line 185

```
SQL> SELECT * FROM Participant;
```

ID	DISPLAYNAME
1001	TEAM AceHunter
1002	TEAM BlazeKnight
1003	TEAM CrimsonFury
1004	TEAM DeltaEcho
1005	TEAM EchoRanger
1006	SOLO FoxtrotAlpha
1007	SOLO GammaHawk
1008	SOLO HyperIon
1009	SOLO IvoryWolf
1010	SOLO JadeFalcon
1011	SOLO KiloTango
1012	SOLO LimaCharlie
1013	SOLO MysticDragon
1014	SOLO NovaPirate
1015	SOLO OmegaSpartan
1016	SOLO PhantomKnight
1017	SOLO QuartzSpecter
1018	SOLO RazorEdge
1019	SOLO StormSeeker
1020	SOLO TitaniumFist
9999	DURING SCREENSHOT

21 rows selected.

```
SQL> SELECT * FROM Participant;
```

ID	DISPLAYNAME
1001	TEAM AceHunter
1002	TEAM BlazeKnight
1003	TEAM CrimsonFury
1004	TEAM DeltaEcho
1005	TEAM EchoRanger
1006	SOLO FoxtrotAlpha
1007	SOLO GammaHawk
1008	SOLO HyperIon
1009	SOLO IvoryWolf
1010	SOLO JadeFalcon
1011	SOLO KiloTango
1012	SOLO LimaCharlie
1013	SOLO MysticDragon
1014	SOLO NovaPirate
1015	SOLO OmegaSpartan
1016	SOLO PhantomKnight
1017	SOLO QuartzSpecter
1018	SOLO RazorEdge
1019	SOLO StormSeeker
1020	SOLO TitaniumFist

20 rows selected.

Participant ID	Display Name
Add Participant	Delete
Display Name: TEAM AceHunter	ID: 1001 Update
Display Name: TEAM BlazeKnight	ID: 1002 Update
Display Name: TEAM CrimsonFury	ID: 1003 Update
Display Name: TEAM DeltaEcho	ID: 1004 Update
Display Name: TEAM EchoRanger	ID: 1005 Update
Display Name: SOLO FoxtrotAlpha	ID: 1006 Update
Display Name: SOLO GammaHawk	ID: 1007 Update
Display Name: SOLO HyperIon	ID: 1008 Update
Display Name: SOLO IvoryWolf	ID: 1009 Update
Display Name: SOLO JadeFalcon	ID: 1010 Update
Display Name: SOLO KiloTango	ID: 1011 Update
Display Name: SOLO LimaCharlie	ID: 1012 Update
Display Name: SOLO MysticDragon	ID: 1013 Update
Display Name: SOLO NovaPirate	ID: 1014 Update
Display Name: SOLO OmegaSpartan	ID: 1015 Update
Display Name: SOLO PhantomKnight	ID: 1016 Update
Display Name: SOLO QuartzSpecter	ID: 1017 Update
Display Name: SOLO RazorEdge	ID: 1018 Update
Display Name: SOLO StormSeeker	ID: 1019 Update
Display Name: SOLO TitaniumFist	ID: 1020 Update
Display Name: DURING SCREENSHOT	ID: 9999 Update

Close X

Update: executeUpdate() on line 153

```
SQL> SELECT * FROM Participant;

ID DISPLAYNAME
-----
1001 TEAM AceHunter
1002 TEAM BlazeKnight
1003 TEAM CrimsonFury
1004 TEAM DeltaEcho
1005 TEAM EchoRanger
1006 SOLO FoxtrotAlpha
1007 SOLO GammaHawk
1008 SOLO HyperIon
1009 SOLO IvoryWolf
1010 SOLO JadeFalcon
1011 SOLO KiloTango
1012 SOLO LimaCharlie
1013 SOLO MysticDragon
1014 SOLO NovaPirate
1015 SOLO OmegaSpartan
1016 SOLO PhantomKnight
1017 SOLO QuartzSpecter
1018 SOLO RazorEdge
1019 SOLO StormSeeker
1020 SOLO TitaniumFist

20 rows selected.
```

Participants

Participant ID

AceDonut

Add Participant

Delete

Display Name: TEAM AceHunter ID: 1001 Update

```
SQL> SELECT * FROM Participant;

ID DISPLAYNAME
-----
1001 AceDonut
1002 TEAM BlazeKnight
1003 TEAM CrimsonFury
1004 TEAM DeltaEcho
1005 TEAM EchoRanger
1006 SOLO FoxtrotAlpha
1007 SOLO GammaHawk
1008 SOLO HyperIon
1009 SOLO IvoryWolf
1010 SOLO JadeFalcon
1011 SOLO KiloTango
1012 SOLO LimaCharlie
1013 SOLO MysticDragon
1014 SOLO NovaPirate
1015 SOLO OmegaSpartan
1016 SOLO PhantomKnight
1017 SOLO QuartzSpecter
1018 SOLO RazorEdge
1019 SOLO StormSeeker
1020 SOLO TitaniumFist
9999 DURING SCREENSHOT

21 rows selected.
```

Selection: executeQuery() on line 217

Participants

id=1001 AND displayNam

Participant ID

Display Name

Add Participant

Delete

Display Name: AceDonut

ID: 1001

Update

☐ Show MVP

Join: getTeamPlayers() on line 224

Team Details

ID: 1001
Coach: Danny Sorensen

Players

- 1001 - Max Carter, Age: 18
- 1002 - Ruby Walsh, Age: 24
- 1003 - Leo Fletcher, Age: 16
- 1004 - Zoe Patel, Age: 21
- 1005 - Oscar Hughes, Age: 19

Aggregation with Group By: getNumTournParticipants() on line 252

Solo Cup
ID: 1
Participant count: 2

Aggregation with Having: getPopularGames() on line 269

Popular Team Games

Name: Valorant
Genre: FPS

Name: Overwatch
Genre: FPS

Popular Solo Games

Name: The Witcher 3: Wild Hunt
Genre: RPG

Name: The Legend of Zelda: Breath of the Wild
Genre: Action-adventure

Name: Dark Souls III
Genre: Action RPG

Name: God of War
Genre: Action-adventure

Nested Aggregation with Group By: getHighestAvgViewershipPlatform() on line 304

Streams Page

☒ Highest Viewership

Streams

SteamTV with 2000 viewers

Division: getMVPs() on line 332

☒ Show MVP

ID: 1001 Name: Max Carter