CPSC 304 Project Cover Page

Milestone #: 4

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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(<u>host</u>, platform)

        ESportsOrg(<u>id</u>: int, name: string, region: string, contact: string)

        Game(<u>id</u>: int, name: string, genre: string, company: string, yearPublished: int)

        IndividualGame(**<u>id</u>**: int)

        TeamGame(**<u>id</u>**: int, teamSize: int, numTeams: int)

        Organizer(<u>id</u>: int, name: string, email: string)

        Participant(<u>id</u>: int, displayName: string)

        Player(**<u>id</u>**: int, firstName: string, lastName: string, age: int)

        Team(**<u>id</u>**: int, coach: string)

        Sponsor(<u>id</u>: int, name: string)

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

        StartDate(<u>startDate</u>: date, year: int)

        Venue(<u>streetAddress</u>: string, postalCode: string)

        PostalCode(<u>postalCode</u>: 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)
```
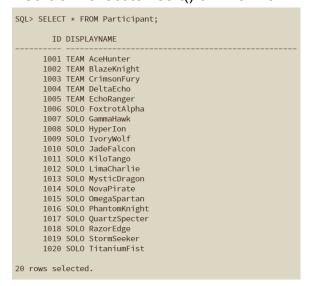
Nested Aggregation with GROUP BY: can be found in getHighestAvgViewershipPlatform() starting on line 316

```
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.
```

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

☐ Show MVP

```
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.
```

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
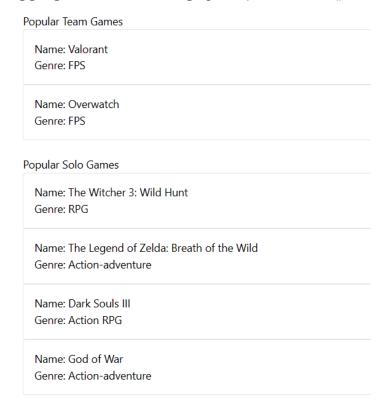- 1005 - Oscar Hughes, Age: 19

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