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Description automatically generated**

**Final Assessment: Database Systems**

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Contents

# **Detailed Descriptions** …....………………………………………………..3

# **Animation inspirations** …………………………………………4

# **Descriptions of implementation** ………..…….….………….5 - 8

**Detailed Description**

Entity Set

|  |  |  |
| --- | --- | --- |
| Entity Set | Key | Other Attributes |
| Game | gameID, participantID | date, time |
| Venue | venueCode | name, gameType |
| Participant | ID | firstname, lastname, country, game, age, gender |
| Winner |  | gold, silver, bronze, gameID |
| Loser |  | gameID, loserID, position |
| Country | name | noParticipants, noBronze, noSilver, noGold |
| Match | matchID | gameID |

Relationship Set

|  |  |  |
| --- | --- | --- |
| Relationship Set | Between Entity Sets | Attributes |
| Register | Participant, Game |  |
| Present | Participant, Venue | date, time |
| Represents | Participant, Country |  |
| isA | Participant, Winner |  |
| isA | Paricipant, Loser |  |
| Held | Venue, Match | date, time |

Constraints

|  |  |
| --- | --- |
| Relationship sets | Constraints |
| Register | one to one |
| Present | one to one |
| Represents | one to one |
| isA | one to one |
| isA | one to one |
| Held | one to many |

Relational Mapping

Country(countryName, noParticipants, noGold, noSilver, noBronze)

Game(gameID, gamedesc, date\_time)

Participant(ID, gameID, firstname, lastname, countryName, age, gender)

FOREIGN KEY (gameID) REFERENCES Game(gameID) ON DELETE CASCADE

Venue(venueCode, gameID, venueName)

FOREIGN KEY (gameID) REFERENCES Game(gameID) ON DELETE CASCADE

Matches(matchID, gameID, matchdesc)

FOREIGN KEY(gameID) REFERENCES Game(gameID) ON DELETE CASCADE

Winner(gold, silver, bronze, gameID)

FOREIGN KEY (gold) REFERENCES Participant(ID) ON DELETE CASCADE

FOREIGN KEY(silver) REFERENCES Participant(ID) ON DELETE CASCADE

FOREIGN KEY(bronze) REFERENCES Participant(ID) ON DELETE CASCADE

FOREIGN KEY (gameID) REFERENCES Game(gameID)

Loser(gameID, loserID, place)

FOREIGN KEY (gameID) REFERENCES Game(gameID) ON DELETE CASCADE

FOREIGN KEY (loserID) REFERENCES Participant(ID) ON DELETE CASCADE

Questions for querying

1. Display the participants ID, fullname (combination of firstname and lastname) who registered in Badminton.
2. Display all the game(s) which will be played on 1st August 2021.
3. Display the number of participants from Malaysia.
4. Display all the winners in Swimming game.
5. Display all the matches that are in Semi-Final.
6. Display the participants ID, firstname, lastname who is from Malaysia and registered in Badminton.
7. Display the number of gold(s) won by USA.
8. Display the fullname of all the loser(s) in Badminton order by their places.
9. Display all the upcoming matche(s).
10. Display the venueCode for Taekwondo.