



# **CSE302: Database Systems (Section 1) [FALL 2022]**

## **Project Report**

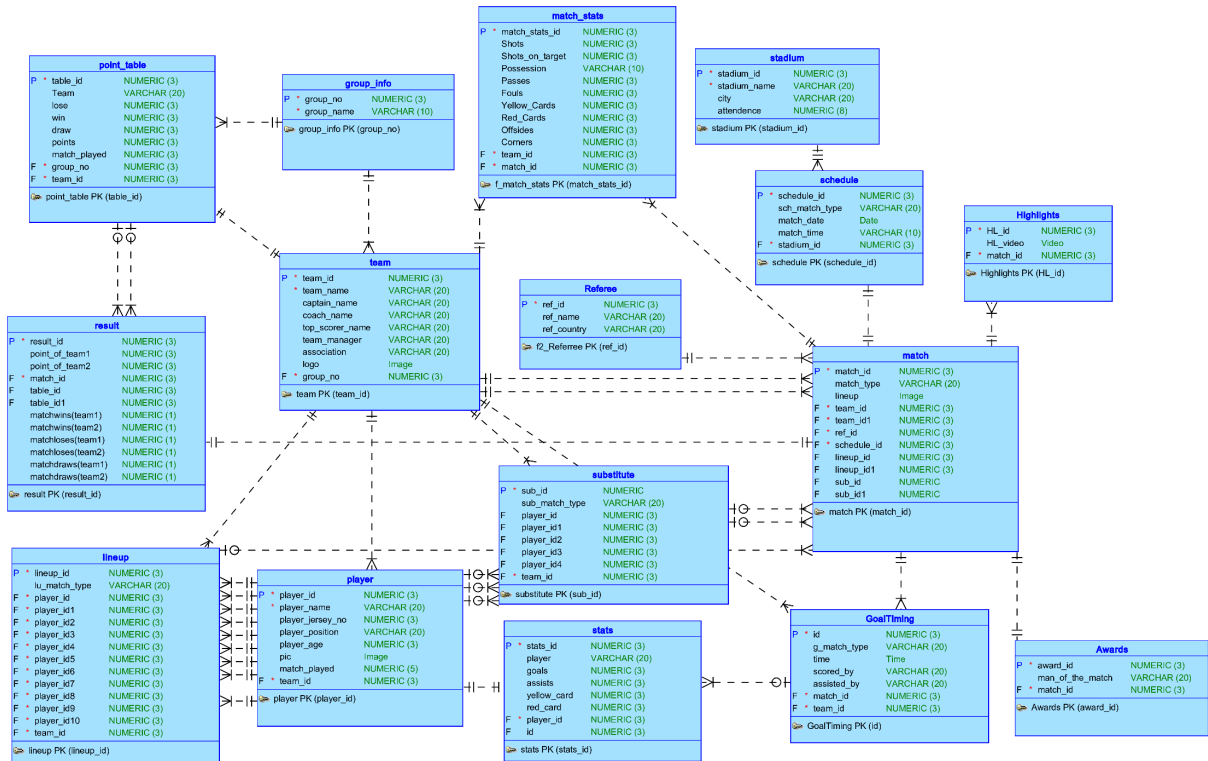
FIFA WORLD CUP 2022

<https://apex.oracle.com/pls/apex/r/sumaiyacse302/fifa-world-cup-2022>

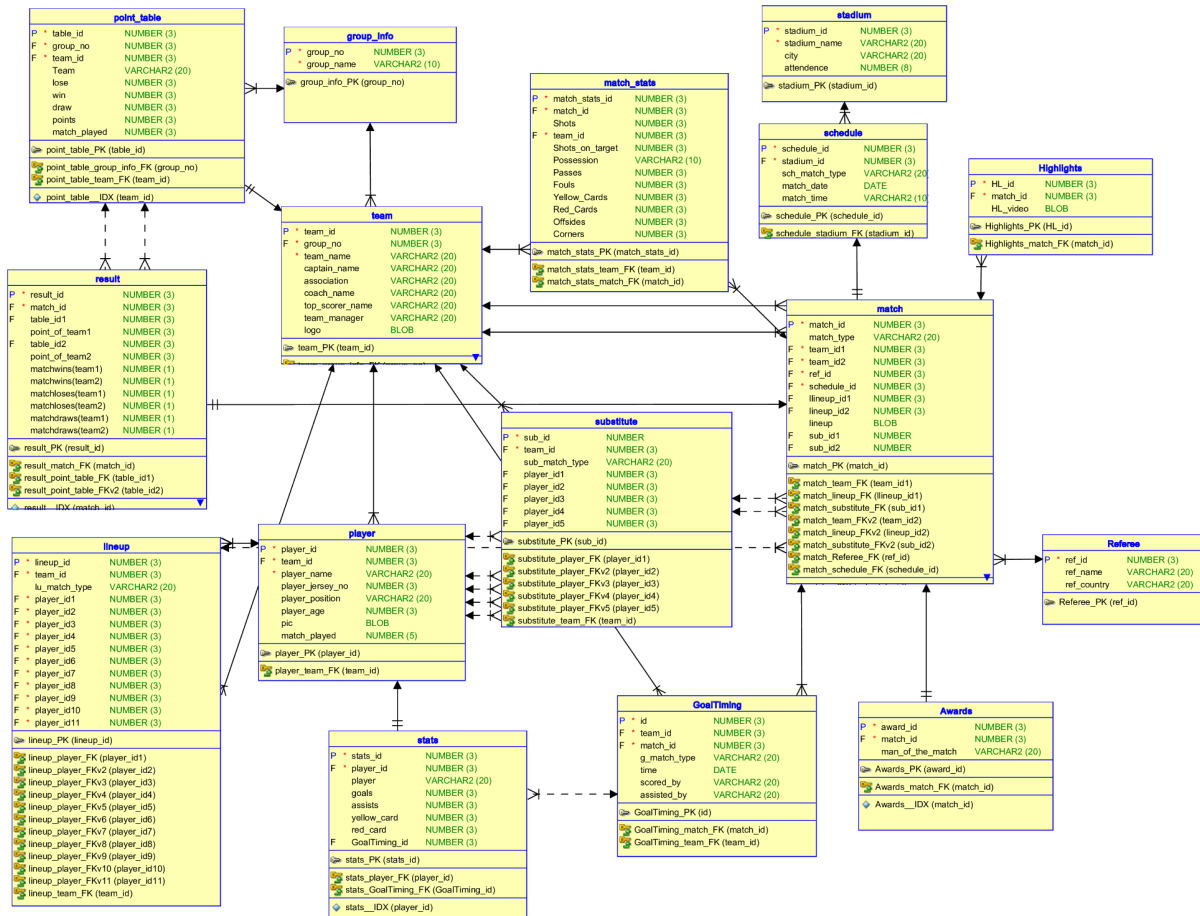
**Submitted by:**

<b>Student ID</b>	<b>Student Name</b>	<b>Contribution Percentage</b>
2019-3-60-105	Sumaiya Sanjin	30%
2020-1-68-013	Sadia Tasnim Shifa	20%
2020-1-60-097	Razia Bashir Rahi	20%
2021-1-60-042	Sumaiya Tabassum	30%

# 1. Final version of the E-R Model of the Project



## 2. Final Version of the Relational Data Model of the Project



## 3. Implementation Checklist

Description	Remarks
Project ID	147146
Workspace Name	sumaiyacse302
Workspace Email	<a href="mailto:SUMASANJIN@GMAIL.COM">SUMASANJIN@GMAIL.COM</a>
Workspace Password	sumaiyasanjin24

Authentication Type	Access control user role assignments
Username and Password to Login	
username : admin	password : cse302project
username : <a href="mailto:sumasanjin@gmail.com">sumasanjin@gmail.com</a>	password : sumaiyasanjin24
Uploaded and Displayed Images in Reports	Yes
Implemented Page-wise Authorization	Yes
Number of Reports with Forms	18
Number of Master-detail Forms	3
Number of Reports based on Queries, Aggregate Queries	2
Number of Parameterized Reports	0
Number of Graphs/Charts	4
Included any trigger/other feature which is not taught in class. If yes, please explain briefly.	Yes, we have used a few triggers to update some values of our point table.
Write the most unique feature/functionality in your application or the page of your application that you are proud of. Explain briefly.	By using HTML, we have added animated background and, used triggers to update values. And from the little we have learned, adding these features kind of makes us feel proud.

#### 4. Reports with Forms

Report Page Number and Name	Form Page Number and Name	Table
Awards-2	Award-3	Awards
Goaltiming-4	Goaltiming-5	GoalTiming
Group Info-6	Group Info-7	Group_info
Highlights-8	Highlight-9	Highlights

Lineup-10	Lineup-11	Lineup
Match-12	Match-13	Match
Match-stats-14	Match-stats-15	match_stats
Player10-51	Player11-52	Player
Point table-18	Point table-19	Point_table
Referee-20	Referee-21	Referee
Result-22	Result-23	Result
Schedule-24	Schedule-25	Schedule
Stadium-26	Stadium-27	Stadium
Stats-28	Stat-29	Stats
Substitute-30	Substitute-31	Substitute
Team-32	Team-33	Team
User info-39	User info1-40	my_users
Player_image-41	Player_image1-42	Player_image

Award

✕

award id  
1

Match  
1

Man of The Match  
Enner Valencia

Figure 4.1: Award Form

Awards		
	Match T.L.	Man of The Match
	Group Stage 01	Enner Valencia
	Group Stage 03	Cody Gakpo
	Group Stage 04	Gareth Bale
	Group Stage 10	Kevin De Bruyne
	Group Stage 11	Shuichi Gonda
	Group Stage 12	Gavi
	Group Stage 14	Cristiano Ronaldo
	Group Stage 15	Yann Sommer
	Group Stage 17	Frenkie de Jong
	Group Stage 19	Mehdi Taremi

Figure 4.2: Award report

Group Info

group no.



Group Name

Figure 4.3: Group Info Form

Group Info		
	Group Name ↑	
🏆	A	
🏆	B	
🏆	C	
🏆	D	
🏆	E	
🏆	F	
🏆	G	
🏆	H	

1 - 8

Figure 4.4: Group Info Report

Lineup

lineup id

1

Team

Argentina

Lu Match Type

Group Stage 22

Player Id1

Lionel Messi

Player Id2

Lautaro Martinez

Player Id3

Julian Alvarez

Player Id4

Angel Di Maria

Player Id5

Rodriqo De Paul

Player Id6

Enzo Fernandez

Player Id7

Nahuel Molina

Player Id8

Gonzalo Montiel

Player Id9

Lisandro Martinez

Player Id10

Marcos Acuna

Player Id11

Geronimo Rulli

Figure 4.5: Line up Form

Home

Awards

Goaltiming

Group Info

Highlights

Lineup

Match

Match Stats

Player

Point Table

Referee

Result

Lineup

	Team T L	Lu Match Type	Player Id1	Player Id2	Player Id3	Player Id4	Player Id5	Player Id6	Player Id7	Player Id8	Player Id9	Player Id10	Player Id11
	Argentina	Group Stage 22	Lionel Messi	Lautaro Martinez	Julian Alvarez	Angel Di Maria	Rodrigo De Paul	Ezeo Fernandez	Nahuel Molina	Gonzalo Montiel	Lisandro Martinez	Marcos Acuna	Geronimo Rulli
	Australia	Group Stage 37	Marco Tilio	Mathew Leckie	Ajdin Hrustic	Jackson Irvine	Aaron Mooy	Aziz Behich	Nathaniel Atkinson	Milos Degenek	Danny Vukovic	Andrew Redmayne	Maty Ryan
	Belgium	Group Stage 10	Simon Mignolet	Thibaut Courtois	Koen Casteels	Axel Witsel	Hans Vanaken	Romelu Lukaku	Michy Batshuayi	Leandro Trossard	Eden Hazard	Hans Vanaken	Jan Vertonghen
	Brazil	Group Stage 16	Neymar	Pedro Miguel	Gabriel Martinelli	Rodrigo Bentancur	Antony	Bruno Guimaraes	Eder Militao	Danilo	Thiago Silva	Weverton	Allison
	Costa Rica	Group Stage 43	Keylor Navas	Keysher Fuller	Oscar Duarte	Francisco Calvo	Carlos Martinez	Carlos Martinez	Jewison Bennette	Bryan Ruiz	Anthony Hernandez	Brandon Aguilera	Anthony Contreras

Figure 4.6: Line up report

Point Table

table id

102

Group No

A

Team

Netherlands

Team

Netherlands

Lose

0

Win

1

Draw

1

Points

4

Match Played

2

Figure 4.7: Point table form










Home	Awards	Goaltiming	Group Info	Highlights	Lineup	Match	Match Stats	Player	Point Table	Referee	Result	▼
Point Table												
	Group No ↑↓	Team	Team	Lose	Win	Draw	Points	Match Played				
	A	Netherlands	102	0	1	1	4	2				
	A	Ecuador	103	0	1	1	4	2				
	A	Senegal	104	1	0	0	0	1				
	A	Qatar	101	1	0	0	0	1				
	B	Iran	202	0	0	1	1	1				
	B	England	201	0	0	0	0	0				
	B	Wales	204	0	0	0	0	0				
	B	USA	203	0	0	1	1	1				
	C	Mexico	301	0	1	0	3	1				
	C	Poland	302	1	0	0	0	1				

Figure 4.8: Point table report

Referee

✕

referee id  
1

Ref Name  
Abdulrahman Al-Jassim

Ref Country  
Qatar

Figure 4.9: Referee input form











Referee		
	Ref Name ↑	Ref Country
	Abdulahman Al-Jassim	Qatar
	Alireza Faghani	Iran
	Andres Matonte	Uruguay
	Anthony Taylor	England
	Antonio Mateu Lahoz	Spain
	Bekary Gassama	Gambia
	Cesar Arturo Ramos	Mexico
	Chris Beath	Australia
	Clement Turpin	France
	Daniel Siebert	Germany

Figure 4.10: Referee report

Result

result id

1

Match

Group Stage 01

Table Id1

Qatar

Point of Team1

lose

Table Id2

Ecuador

Point of Team2

win

Matchwins\_Team1

no

Matchloses(Team1)

yes

Matchdraws(Team1)

no

Matchwins(Team2)

yes

Matchloses(Team2)

no

Matchdraws(Team2)

no

Figure 4.11: Result input form











Result											
	Match	Table Id1	Point of Team1	Table Id2	Point of Team2	Matchwins(Team1)	Matchwins(Team2)	Matchloses(Team1)	Matchloses(Team2)	Matchdraws(Team1)	Matchdraws(Team2)
	1	Qatar	0	Ecuador	3	0	1	1	0	0	0
	10	Belgium	3	Canada	0	1	0	0	1	0	0
	11	Germany	0	Japan	3	0	1	1	0	0	0
	12	Spain	3	Costa Rica	0	1	0	0	1	0	0
	13	Uruguay	1	South Korea	1	0	0	0	0	1	1
	14	Portugal	3	Ghana	0	1	0	0	1	0	0
	15	Switzerland	3	Cameroon	0	1	0	0	1	0	0
	16	Brazil	3	Serbia	0	1	0	0	1	0	0
	17	Netherlands	1	Ecuador	1	0	0	0	0	1	1
	3	Senegal	0	Netherlands	3	0	1	1	0	0	0

Figure 4.12: Result Report

Schedule

schedule id

25

Sch Match Type

Group Stage 25

Stadium

Ahmad Bin Ali Stadium

Match Date

11/27/2022

Match Time

4 PM

Figure 4.13: Schedule input form












Schedule				
	Stadium 	Sch Match Type	Match Date	Match Time
	Ahmad Bin Ali Stadium	Group Stage 25	11/27/2022	16:00
	Ahmad Bin Ali Stadium	Group Stage 09	11/23/2022	16:00
	Ahmad Bin Ali Stadium	Group Stage 17	11/25/2022	22:00
	Ahmad Bin Ali Stadium	Group Stage 04	11/22/2022	01:00
	Ahmad Bin Ali Stadium	Group Stage 41	12/1/2022	21:00
	Ahmad Bin Ali Stadium	Group Stage 33	11/30/2022	01:00
	Al Bayt Stadium	Group Stage 28	11/27/2022	19:00
	Al Bayt Stadium	Group Stage 12	11/23/2022	22:00
	Al Bayt Stadium	Group Stage 20	11/26/2022	01:00
	Al Bayt Stadium	Group Stage 01	11/20/2022	22:00

Figure 4.14: Schedule Report

Stadium
✕

stadium id

4

Stadium Name

Ahmad Bin Ali Stadium

City

Al Rayyan

Capacity

40000

Figure 4.15: Stadium input form









Stadium			
	Stadium Name	City	Capacity
	Ahmad Bin Ali Stadium	Al Rayyan	40000
	Al Bayt Stadium	Al Khor	60000
	Al Janoub Stadium	Al Wakrah	40000
	Al Thumama Stadium	Doha	40000
	Education City Stadium	Doha	40000
	Khalifa International Stadium	Doha	40000
	Lusail Stadium	Lusail	80000
	Stadium 974	Doha	40000
			1 - 8

Figure 4.16: Stadium Report

Substitute

sub id

1

Team

Argentina

Sub Match Type

Group Stage 02

Player Id1

Juan Foyth

Player Id2

Gonzalo Montiel

Player Id3

Marcos Acuna

Player Id4

Lisandro Martinez

Player Id5

Nahuel Molina

Figure 4.17: Substitute input form



# Substitute

Q

Go

Actions

Create

	Team	Sub Match Type	Player Id1	Player Id2	Player Id3	Player Id4	Player Id5
	Argentina	Group Stage 02	Juan Foyth	Gonzalo Montiel	Marcos Acuna	Lisandro Martinez	Nahuel Molina
	Brazil	Group Stage 09	Weverton	Marquinhos	Fred	Bruno Guimaraes	Neymar

1 - 2

Figure 4.18: Substitute Report

Team

✕

team id

102

Group No

A

Team Name

Netherlands

Association

Team Manager

Louis van Gaal

Captain Name

Virgil van Dijk

Coach Name

Louis van Gaal

Top Scorer Name

Cody Gakpo

Logo

Choose File

Download

Figure 4.19: Team input form











Team							
	Group No	Team Name	Captain Name	Coach Name	Top Scorer Name	Team Manager	Logo
	A	Netherlands	Virgil van Dijk	Louis van Gaal	Cody Gakpo	Louis van Gaal	
	A	Senegal	Kalidou Koulibaly	Aliou Cisse	Koulibaly	Aliou Cisse	
	A	Qatar	Hassan Al-Haydos	Felix Sanchez Read	Saleh Al-Shehri	Felix Sánchez Bas	
	A	Ecuador	Enner Valencia	Gustavo Alfaro Read	Enner Valencia	Gustavo Alfaro	
	B	England	Harry Kane	Gareth Southgate Re	Marcus Rashford	Gareth Southgate	
	B	Wales	Gareth Bale	Rob Page	Gareth Bale	Robert Page	
	B	USA	Tyler Adams	Gregg Berhalter	Christian Pulisic	Gregg Berhalter	
	B	Iran	Ehsan Hajsafti	Carlos Quieroz	Mehdi Taremi	Quieroz	

Figure 4.20: Team Report

player11

New

Musaab Khidir

Team Id

Qatar

Player Name

Musaab Khidir

Player Jersey No

13

Player Position

Defender

Player Age

29

Pic

Choose File

Match Played

Figure 4.21: Player input form









player10							
	Player ID	Team	Player Name	Player Jersey No	Player Position	Player Age	Pic
	123	Belgium	Simon Mignolet	12	Goalkeeper	34	
	128	Belgium	Kevin De Bruyne	7	Midfielder	31	
	129	Belgium	Axel Witsel	6	Midfielder	33	
	132	Belgium	Eden Hazard	10	Forward	31	
	136	Denmark	Kasper Schmeichel	1	Goalkeeper	35	

Figure 4.21: Player Report

## 5. Master-Detail Form

Page Number and Name	Master Table (Parent)	Detail Table (Child)
Page 16: Stadium and Schedule	Stadium	Schedule
Page 59: Team status	Team	Point_table
Page 63: Match and Team	Team	match

stadium & schedule

Reset

Create

Search...

Ahmad Bin Ali Stadium  
Al Rayyan

Al Bayt Stadium  
Al Khor

Al Janoub Stadium  
Al Wakrah

Al Thumama Stadium  
Doha

Education City Stadium  
Doha

Stadium

Edit

New

4

Stadium Id

4

Stadium Name

Ahmad Bin Ali Stadium

City

Al Rayyan

Attendance

40000

Schedule

+

Schedule Id

Sch Match Type

Match Date

Match Time

Figure 5.1: Master Detail form (Stadium and Schedule -16)



Figure 5.2: Master Detail form (Team status-59)

Figure 5.3: Master Detail form (Match and Team-63)

## 6. Reports based on Multi-Table and Aggregate Queries

Page Number and Name	Query Type	Report description
Page-89: player_jersey10	Multi-table	This report shows us the team name and players with jersey no. 10
Page 93: team_stats	Aggregate	This report shows us the total count of yellow cards, red cards, fouls, offsides and corners of each team

**player\_jersey10**

Team Name	Player Name	Player Jersey No
Mexico	Alexis Vega	10
Belgium	Eden Hazard	10
Spain	Marco Asensio	10
Costa Rica	Bryan Ruiz	10
Argentina	Lionel Messi	10
Ghana	Andre Ayew	10
Japan	Takumi Minamino	10
Brazil	Neymar	10
Cameroon	Vincent Aboubakar	10
Denmark	Christian Eriksen	10
Ecuador	Romario Ibarra	10
Serbia	Dusan Tadic	10
South Korea	Lee Jaesung	10
Australia		10

Figure 6.1: report based on multitable queries (player\_jersey10-89)

**team\_stats**

Team Name	Sum(Yellow Cards)	Sum(Red Cards)	Sum(Fouls)	Sum(Offsides)	Sum(Corners)
Saudi Arabia	0	0	7	10	9
Poland	2	0	21	0	6
Wales	2	0	10	1	3
Costa Rica	2	0	12	7	0
South Korea	1	0	10	0	3
Brazil	0	0	7	1	6
Croatia	0	0	11	1	5
Argentina	1	0	18	11	18
Morocco	1	0	16	0	0
Tunisia	1	0	10	1	9
Spain	0	0	8	3	5
Netherlands	1	0	13	1	7
Iran	2	0	14	2	0
Japan				4	6

Figure 6.1: report based on aggregate queries (team\_stats-93)

## 7. Parameterized Reports

Page Number and Name	Given Input	Report description
----------------------	-------------	--------------------

## 8. Charts and Other Pages

Page Number and Name	Chart description
Page 80: Bar Chart Total Goal	This bar chart shows that the total number goal given by each team.
Page 85: Passes	This bar chart shows all the passes given by players of each team
Page 88: Pie-chart of match stats	This pie chart indicate the total count of yellow cards in each match
Page 82: shots	This bar chart shows all the shots given by players of each team

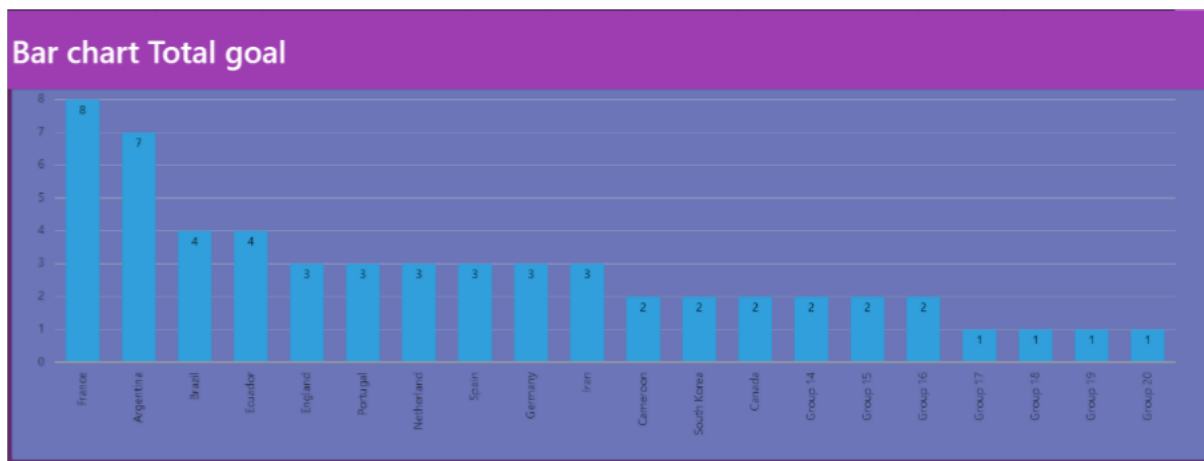


Figure 8.1: Bar chart of total goal

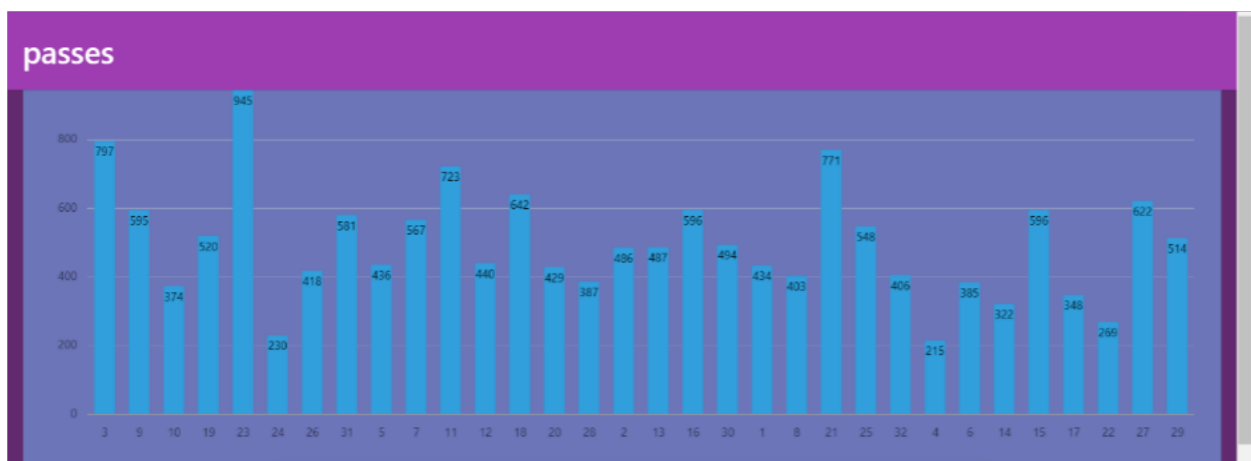


Figure 8.2: Bar chart of total passes

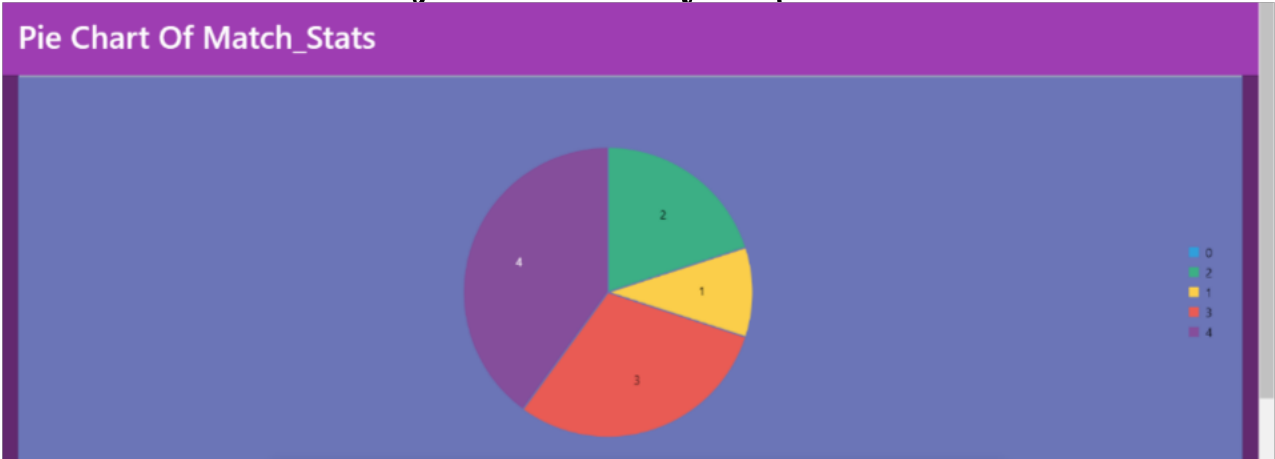


Figure 8.3: pie chart of Match Stats

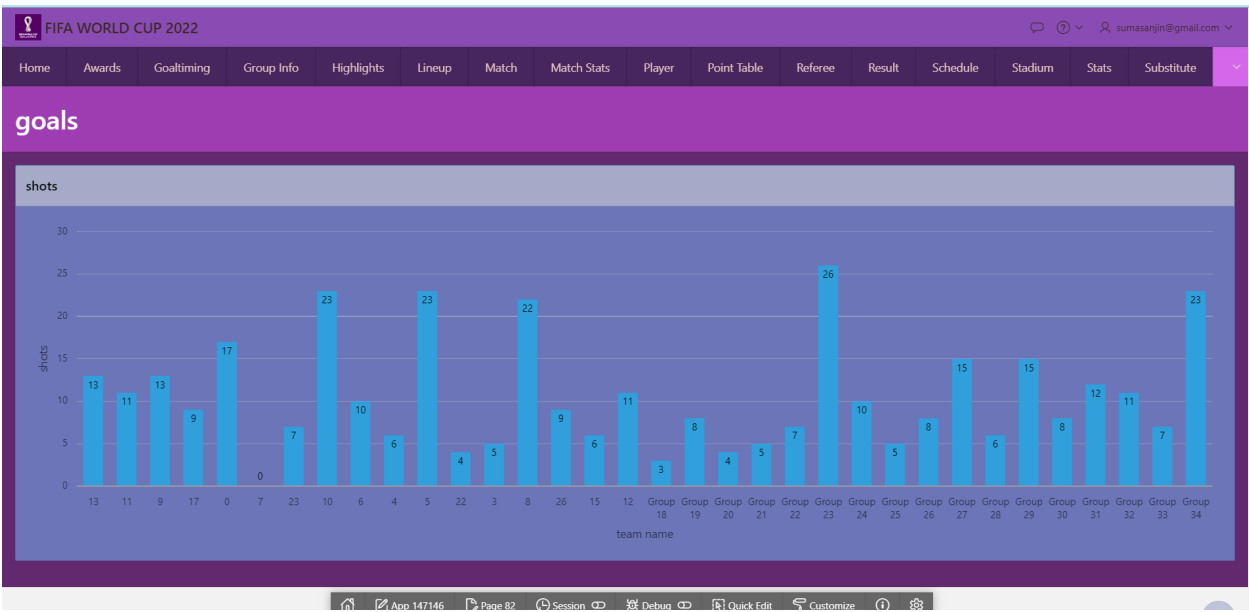


Figure 8.2: Bar chart of total shots

## 9. Authorization and User Role Assignment

### User Role Assignment

User name	Password	Role
Admin	cse302project	Administrator, contributor
sumasanjin@gmail.com	sumaiyasanjin24	Administrator
Viewer	cse302project	Reader

### Page-wise Authorization Information

Page number and name	Authorization Level
P1: Home	Reader
P9999: Login Page	Public
P10000: Administration	Administrator

## 10. Concluding Remarks

Here we used Oracle APEX to build an application "FIFA WORLD CUP 2022". We learned how to build an application and add different types of pages and reports to make it useful and learned how to authorize users and maintain a database. We have made the ER-diagram primarily to build our application. While doing our work, we faced some problems like image resizing and using HTML. Also, we have used triggers and made the master detailed report and many other things. By using HTML, we have also added animated background on the login page. This project consumes more time during data input. But as it is a team project so, when we face any problem, we discussed and solve it quickly and that is the main fun to work with a group. And our work went more smoothly because of our honorable instructor's excellent teaching method and guidance.