DATABASE 2

RDF Group Project

Team Protegers

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OUTLINE

Dataset

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DATASET

ICC Mens World Cup 2023

ICC Mens Cricket World Cup 2023, India

Data Card | Code (4) | Discussion (1)

About Dataset

Context

The 2023 ICC Men's Cricket World Cup is the 13th edition of the Cricket World Cup, a quadrennial One Day International (ODI) cricket tournament contested by men's national teams and organized by the International Cricket Council (ICC). The tournament is being hosted by India, it started on 5 October and is scheduled to conclude on 19 November 2023. England are the defending champions, having won the 2019 edition by defeating New Zealand in the final at Lord's, London.

Reference: https://en.wikipedia.org/wiki/2023_Cricket_World_Cup

Content

- `deliveries.csv` → Containing ball by ball all matches data
- `matches.csv` → Details for each match played
- `points_table.csv` → Tournament standings so far

Usability
10.00

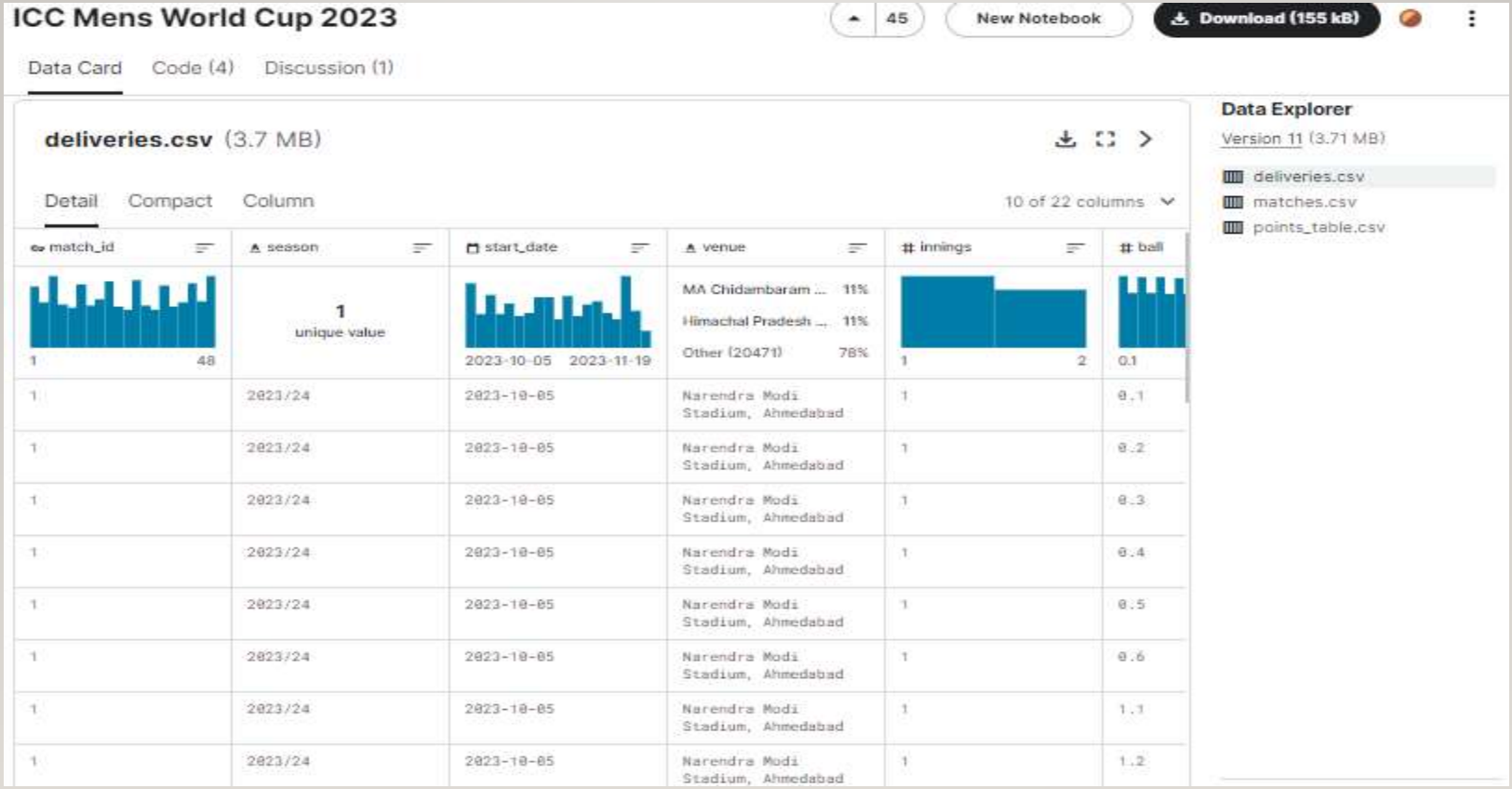
License
CC0: Public Domain

Expected update frequency
Daily

Tags
Sports | Cricket

Get The Data Here
https://www.kaggle.com/datasets/pardeep19singh/icc-mens-world-cup-2023

DATASET



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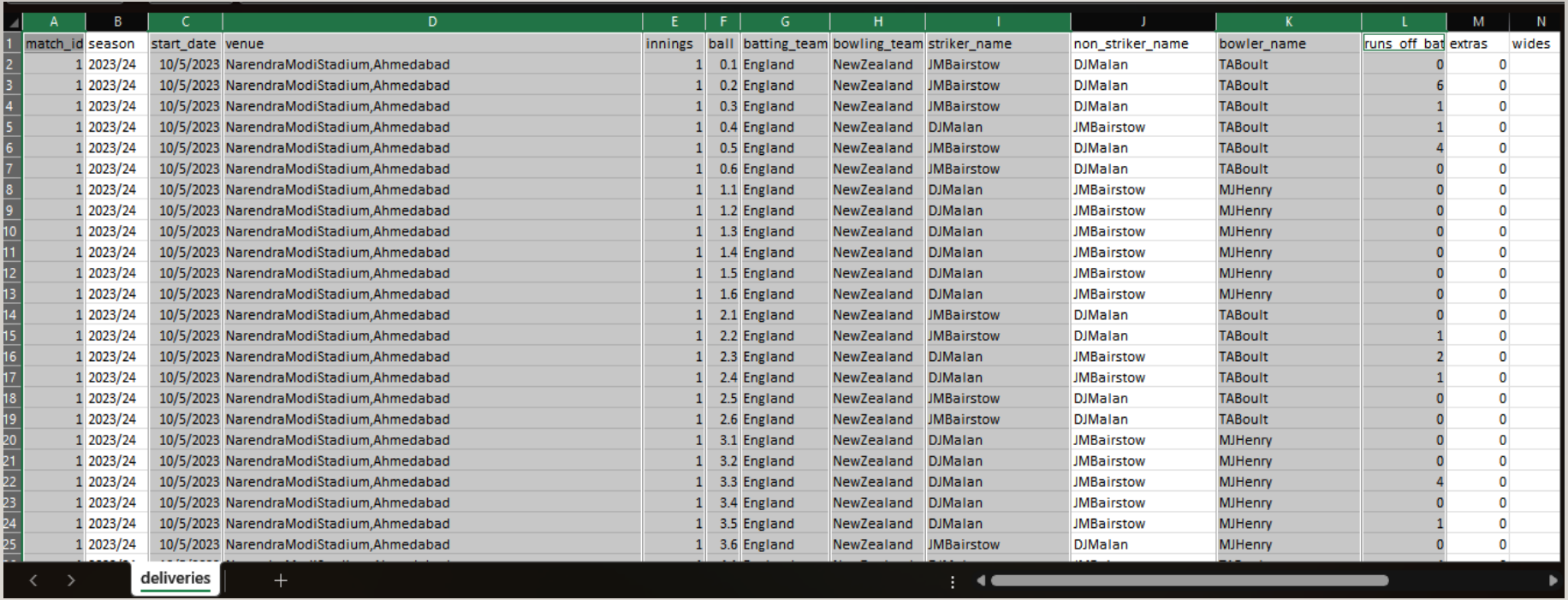
DATASET

deliveries.csv

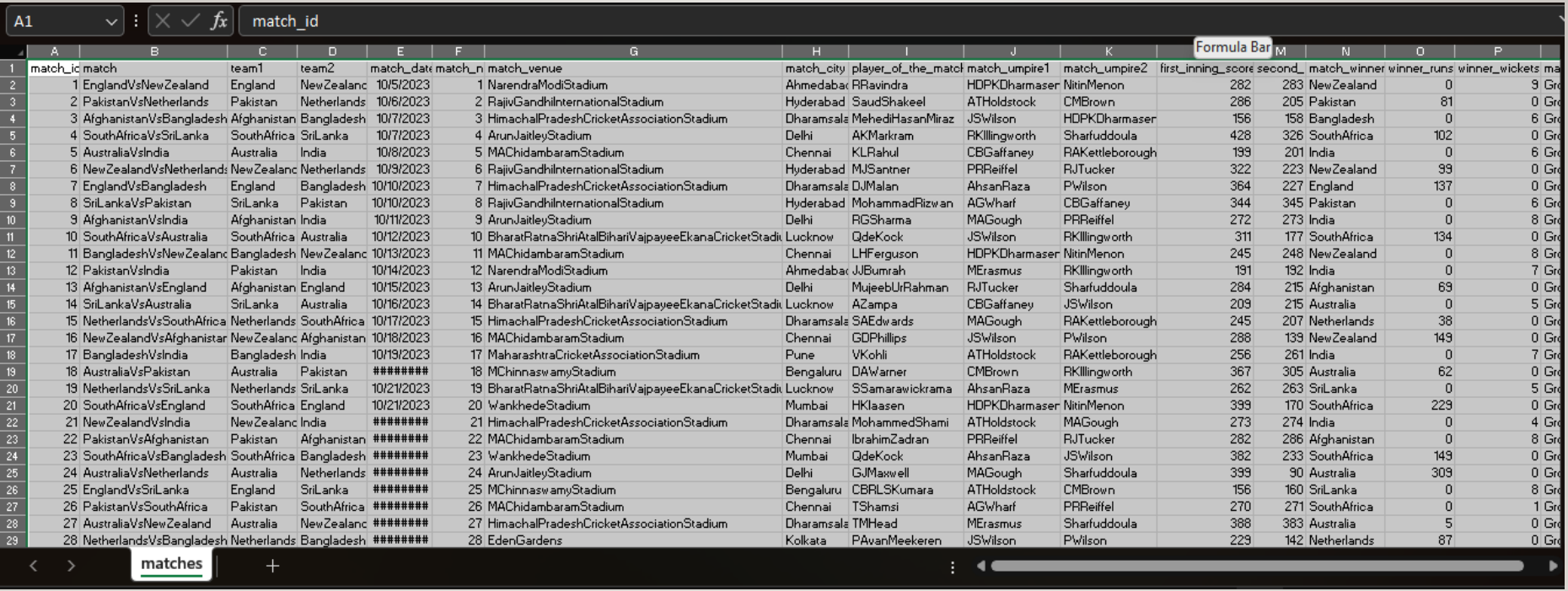


	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	match_id	season	start_date	venue	innings	ball	batting_team	bowling_team	striker_name	non_striker_name	bowler_name	runs_off_bat	extras	wides
2	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	0.1	England	NewZealand	JMBairstow	DJMalan	TABoult	0	0	
3	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	0.2	England	NewZealand	JMBairstow	DJMalan	TABoult	6	0	
4	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	0.3	England	NewZealand	JMBairstow	DJMalan	TABoult	1	0	
5	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	0.4	England	NewZealand	DJMalan	JMBairstow	TABoult	1	0	
6	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	0.5	England	NewZealand	JMBairstow	DJMalan	TABoult	4	0	
7	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	0.6	England	NewZealand	JMBairstow	DJMalan	TABoult	0	0	
8	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	1.1	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
9	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	1.2	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
10	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	1.3	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
11	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	1.4	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
12	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	1.5	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
13	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	1.6	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
14	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	2.1	England	NewZealand	JMBairstow	DJMalan	TABoult	0	0	
15	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	2.2	England	NewZealand	JMBairstow	DJMalan	TABoult	1	0	
16	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	2.3	England	NewZealand	DJMalan	JMBairstow	TABoult	2	0	
17	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	2.4	England	NewZealand	DJMalan	JMBairstow	TABoult	1	0	
18	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	2.5	England	NewZealand	JMBairstow	DJMalan	TABoult	0	0	
19	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	2.6	England	NewZealand	JMBairstow	DJMalan	TABoult	0	0	
20	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	3.1	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
21	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	3.2	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
22	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	3.3	England	NewZealand	DJMalan	JMBairstow	MJHenry	4	0	
23	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	3.4	England	NewZealand	DJMalan	JMBairstow	MJHenry	0	0	
24	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	3.5	England	NewZealand	DJMalan	JMBairstow	MJHenry	1	0	
25	1	2023/24	10/5/2023	NarendraModiStadium,Ahmedabad	1	3.6	England	NewZealand	JMBairstow	DJMalan	MJHenry	0	0	

deliveries

DATASET

matches.csv



A1 match_id

Formula Bar

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
1	match_ic	match	team1	team2	match_dat	match_n	match_venue	match_city	player_of_the_matc	match_umpire1	match_umpire2	first_inning_score	second_	match_winner	winner_runs	winner_wickets	ma
2	1	EnglandVsNewZealand	England	NewZealanc	10/5/2023	1	NarendraModiStadium	Ahmedabac	RRavindra	HDPKDharmaser	NitinMenon	282	283	NewZealand	0	9	Gr
3	2	PakistanVsNetherlands	Pakistan	Netherlands	10/6/2023	2	RajivGandhiInternationalStadium	Hyderabad	SaudShakeel	ATHoldstock	CMBrown	286	205	Pakistan	81	0	Gr
4	3	AfghanistanVsBangladesh	Afghanistan	Bangladesh	10/7/2023	3	HimachalPradeshCricketAssociationStadium	Dharamsala	MehediHasanMiraz	JSWilson	HDPKDharmaser	156	158	Bangladesh	0	6	Gr
5	4	SouthAfricaVsSriLanka	SouthAfrica	SriLanka	10/7/2023	4	ArunJaitleyStadium	Delhi	AKMarkram	RKIllingworth	Sharfuddoula	428	326	SouthAfrica	102	0	Gr
6	5	AustraliaVsIndia	Australia	India	10/8/2023	5	MAChidambaramStadium	Chennai	KLRahul	CBGaffaney	RAKettleborough	199	201	India	0	6	Gr
7	6	NewZealandVsNetherlands	NewZealanc	Netherlands	10/9/2023	6	RajivGandhiInternationalStadium	Hyderabad	MJSantner	PRReiffel	RJTucker	322	223	NewZealand	99	0	Gr
8	7	EnglandVsBangladesh	England	Bangladesh	10/10/2023	7	HimachalPradeshCricketAssociationStadium	Dharamsala	DJMalan	AhsanRaza	PWilson	364	227	England	137	0	Gr
9	8	SriLankaVsPakistan	SriLanka	Pakistan	10/10/2023	8	RajivGandhiInternationalStadium	Hyderabad	MohammadRizwan	AGWharf	CBGaffaney	344	345	Pakistan	0	6	Gr
10	9	AfghanistanVsIndia	Afghanistan	India	10/11/2023	9	ArunJaitleyStadium	Delhi	RGSharma	MAGough	PRReiffel	272	273	India	0	8	Gr
11	10	SouthAfricaVsAustralia	SouthAfrica	Australia	10/12/2023	10	BharatRatnaShriAtalBihariVajpayeeEkanaCricketStadiu	Lucknow	QdeKock	JSWilson	RKIllingworth	311	177	SouthAfrica	134	0	Gr
12	11	BangladeshVsNewZealanc	Bangladesh	NewZealanc	10/13/2023	11	MAChidambaramStadium	Chennai	LHFerguson	HDPKDharmaser	NitinMenon	245	248	NewZealand	0	8	Gr
13	12	PakistanVsIndia	Pakistan	India	10/14/2023	12	NarendraModiStadium	Ahmedabac	JJBumrah	MErasmus	RKIllingworth	191	192	India	0	7	Gr
14	13	AfghanistanVsEngland	Afghanistan	England	10/15/2023	13	ArunJaitleyStadium	Delhi	MujeebUrRahman	RJTucker	Sharfuddoula	284	215	Afghanistan	69	0	Gr
15	14	SriLankaVsAustralia	SriLanka	Australia	10/16/2023	14	BharatRatnaShriAtalBihariVajpayeeEkanaCricketStadiu	Lucknow	AZampa	CBGaffaney	JSWilson	209	215	Australia	0	5	Gr
16	15	NetherlandsVsSouthAfrica	Netherlands	SouthAfrica	10/17/2023	15	HimachalPradeshCricketAssociationStadium	Dharamsala	SAEdwards	MAGough	RAKettleborough	245	207	Netherlands	38	0	Gr
17	16	NewZealandVsAfghanistan	NewZealanc	Afghanistan	10/18/2023	16	MAChidambaramStadium	Chennai	GDPhillips	JSWilson	PWilson	288	139	NewZealand	149	0	Gr
18	17	BangladeshVsIndia	Bangladesh	India	10/19/2023	17	MaharashtraCricketAssociationStadium	Pune	VKohli	ATHoldstock	RAKettleborough	256	261	India	0	7	Gr
19	18	AustraliaVsPakistan	Australia	Pakistan	########	18	MChinnaswamyStadium	Bengaluru	DAWarner	CMBrown	RKIllingworth	367	305	Australia	62	0	Gr
20	19	NetherlandsVsSriLanka	Netherlands	SriLanka	10/21/2023	19	BharatRatnaShriAtalBihariVajpayeeEkanaCricketStadiu	Lucknow	SSamarawickrama	AhsanRaza	MErasmus	262	263	SriLanka	0	5	Gr
21	20	SouthAfricaVsEngland	SouthAfrica	England	10/21/2023	20	WankhedeStadium	Mumbai	HKlaasen	HDPKDharmaser	NitinMenon	399	170	SouthAfrica	229	0	Gr
22	21	NewZealandVsIndia	NewZealanc	India	########	21	HimachalPradeshCricketAssociationStadium	Dharamsala	MohammedShami	ATHoldstock	MAGough	273	274	India	0	4	Gr
23	22	PakistanVsAfghanistan	Pakistan	Afghanistan	########	22	MAChidambaramStadium	Chennai	IbrahimZadran	PRReiffel	RJTucker	282	286	Afghanistan	0	8	Gr
24	23	SouthAfricaVsBangladesh	SouthAfrica	Bangladesh	########	23	WankhedeStadium	Mumbai	QdeKock	AhsanRaza	JSWilson	382	233	SouthAfrica	149	0	Gr
25	24	AustraliaVsNetherlands	Australia	Netherlands	########	24	ArunJaitleyStadium	Delhi	GJMaxwell	MAGough	Sharfuddoula	399	90	Australia	309	0	Gr
26	25	EnglandVsSriLanka	England	SriLanka	########	25	MChinnaswamyStadium	Bengaluru	CBRLSKumara	ATHoldstock	CMBrown	156	160	SriLanka	0	8	Gr
27	26	PakistanVsSouthAfrica	Pakistan	SouthAfrica	########	26	MAChidambaramStadium	Chennai	TShamsi	AGWharf	PRReiffel	270	271	SouthAfrica	0	1	Gr
28	27	AustraliaVsNewZealand	Australia	NewZealanc	########	27	HimachalPradeshCricketAssociationStadium	Dharamsala	TMHead	MErasmus	Sharfuddoula	388	383	Australia	5	0	Gr
29	28	NetherlandsVsBangladesh	Netherlands	Bangladesh	########	28	EdenGardens	Kolkata	PAvanMeekeren	JSWilson	PWilson	229	142	Netherlands	87	0	Gr

matches

DATASET

points_table.csv

	A	B	C	D	E	F	G	H	I
1	team_ranking	team	matches_played	matches_won	matches_lost	Tie	no_result	team_points	team_net_run_rate
2	1	India	9	9	0	0	0	18	2.57
3	2	SouthAfrica	9	7	2	0	0	14	1.261
4	3	Australia	9	7	2	0	0	14	0.841
5	4	NewZealand	9	5	4	0	0	10	0.743
6	5	Pakistan	9	4	5	0	0	8	-0.199
7	6	Afghanistan	9	4	5	0	0	8	-0.336
8	7	England	9	3	6	0	0	6	-0.572
9	8	Bangladesh	9	2	7	0	0	4	-1.087
10	9	SriLanka	9	2	7	0	0	4	-1.419
11	10	Netherlands	9	2	7	0	0	4	-1.825
12									
13									
14									
15									
16									
17									
18									
19									
20									

points_table

OUTLINE

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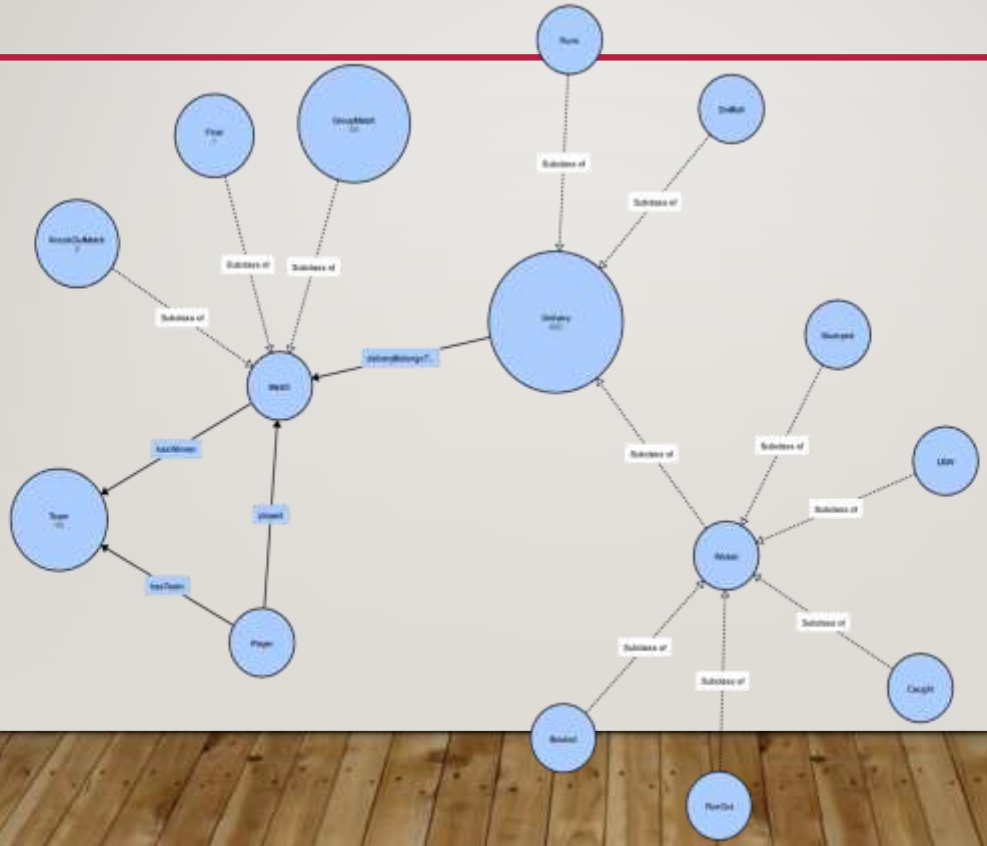
GRAPH



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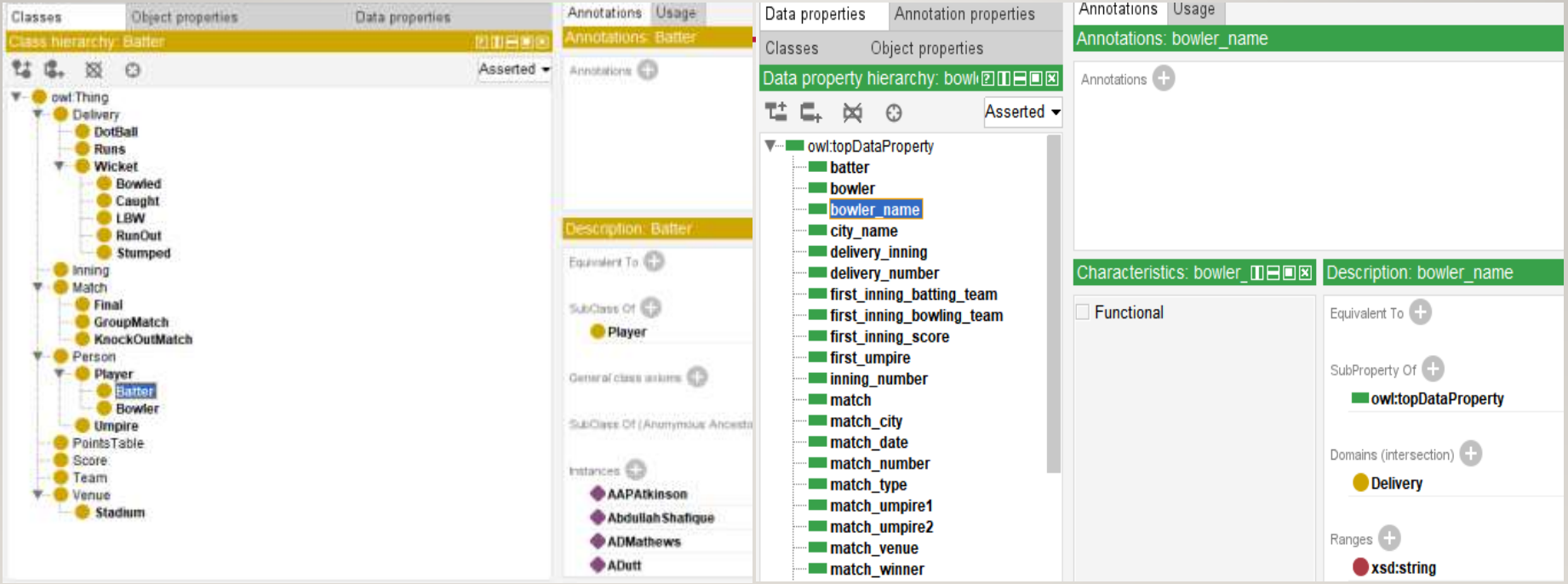
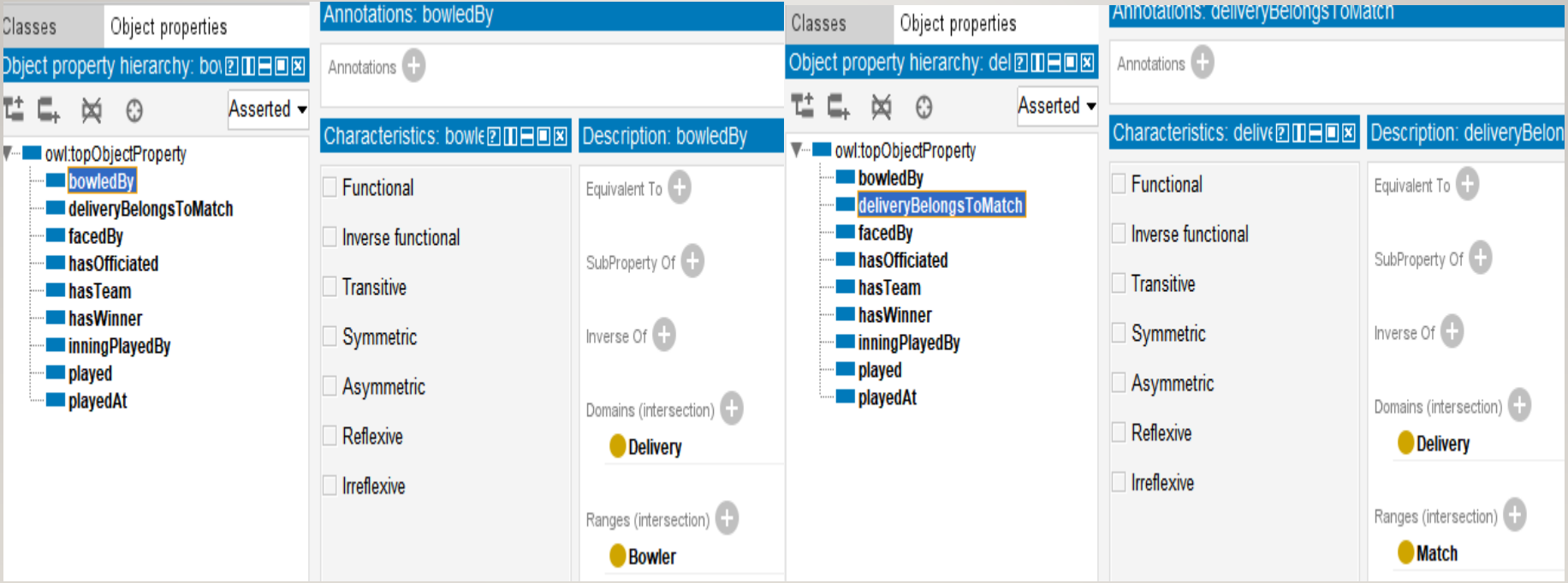
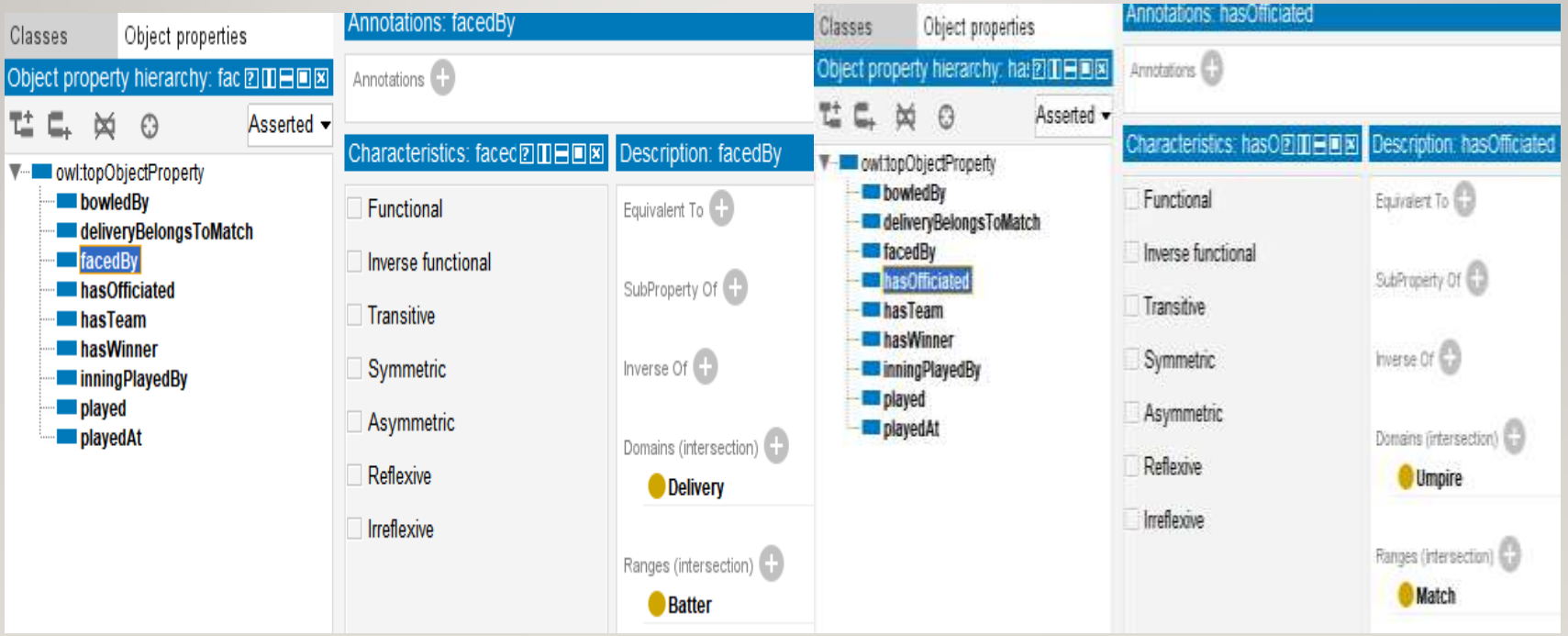
ONTOLOGY (CLASSES & DATA PROPERTIES)



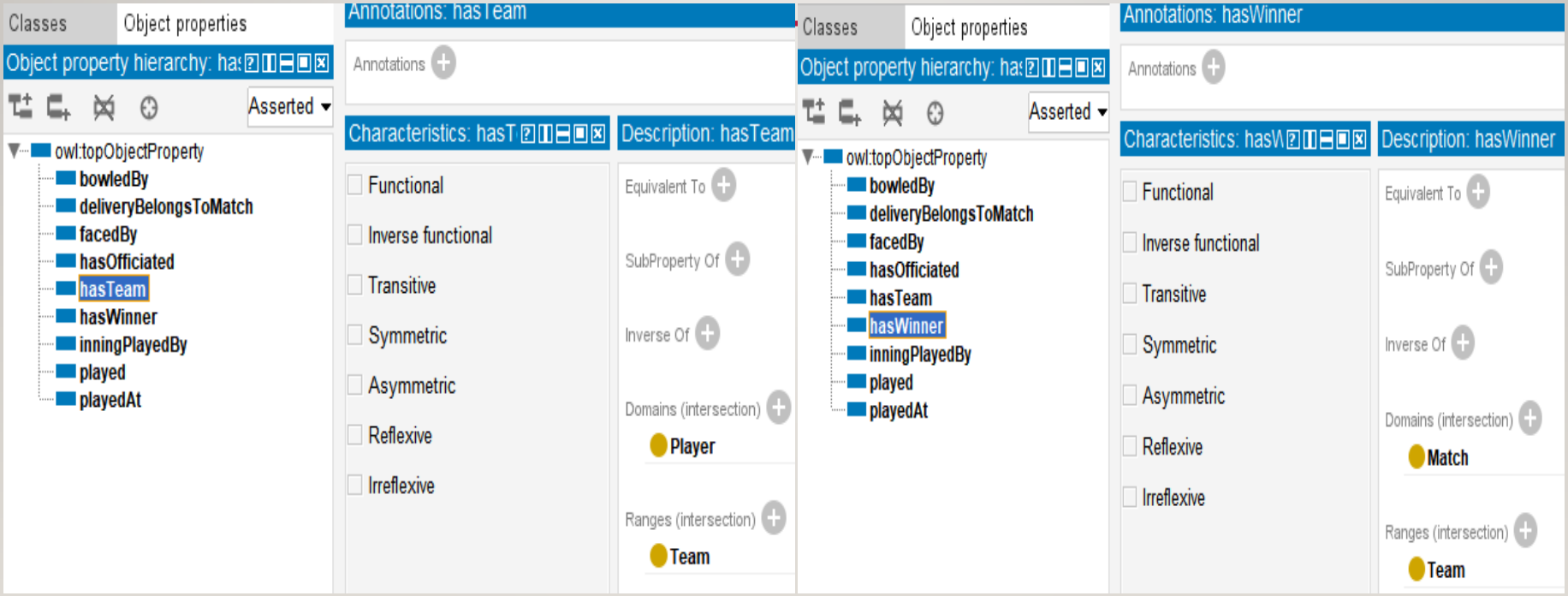
ONTOLOGY (OBJECT PROPERTIES)



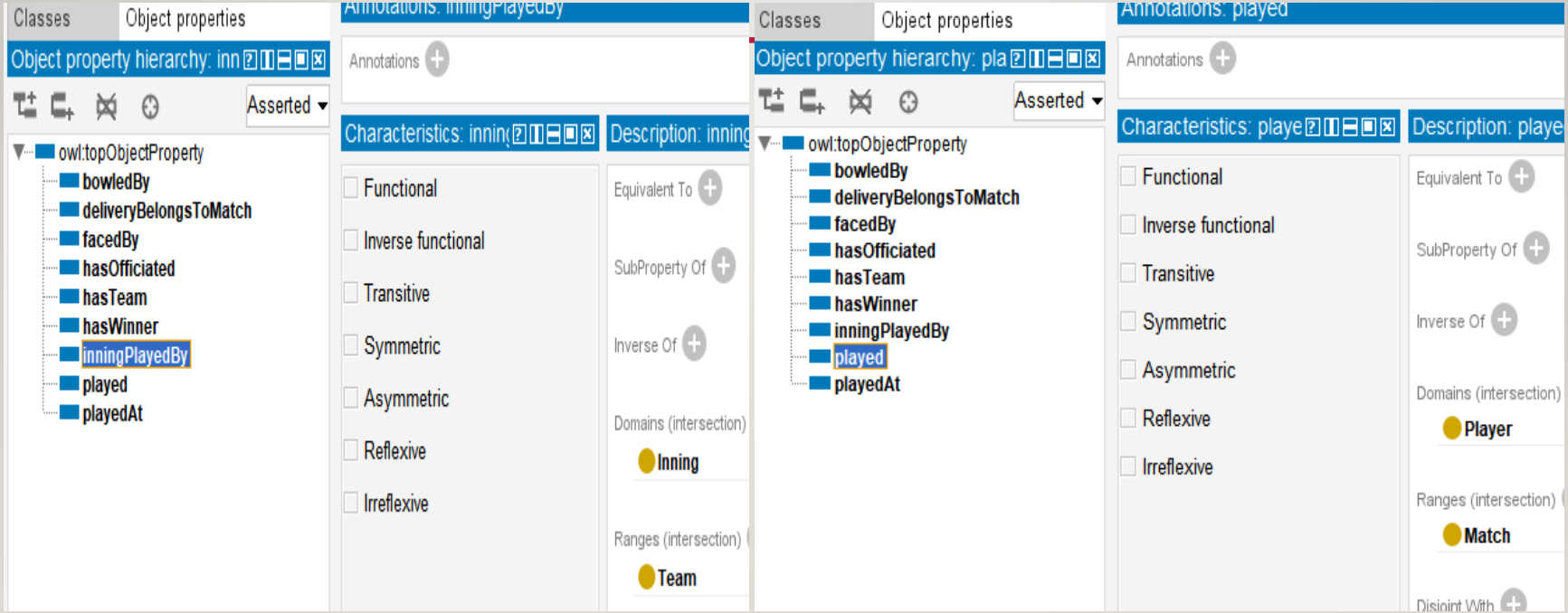
ONTOLOGY (OBJECT PROPERTIES)



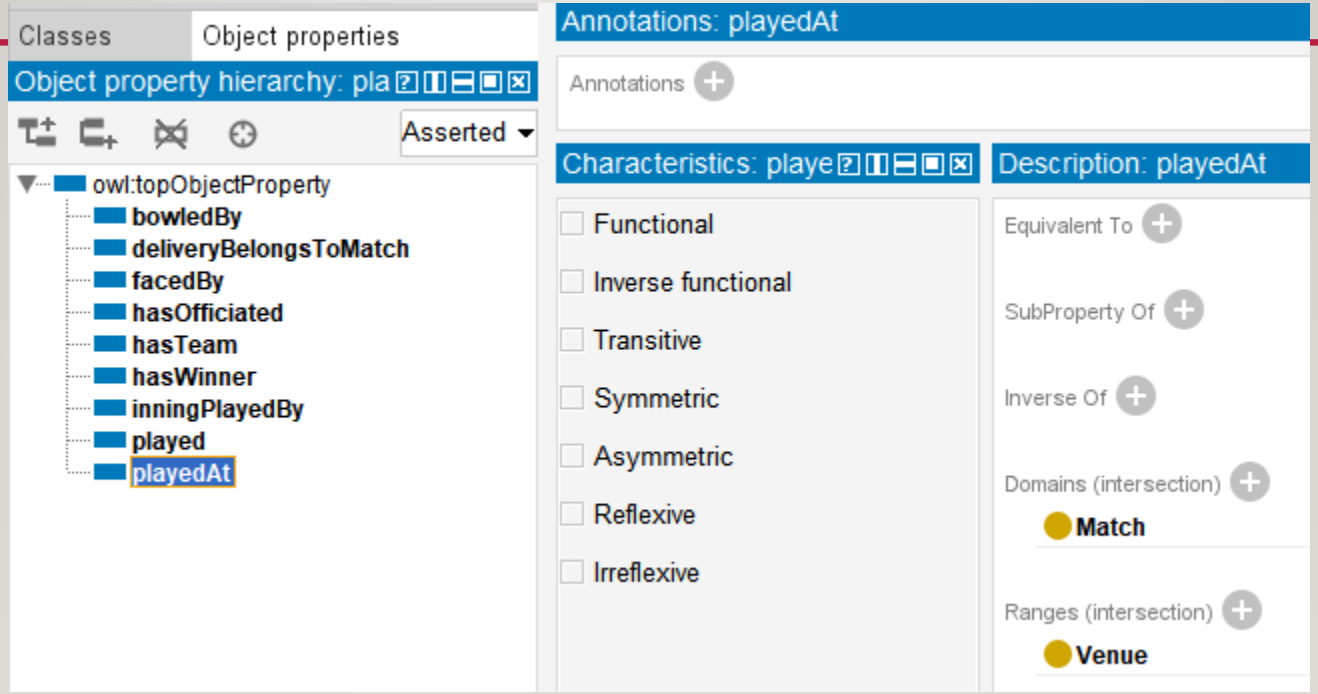
ONTOLOGY (OBJECT PROPERTIES)



ONTOLOGY (OBJECT PROPERTIES)



ONTOLOGY (OBJECT PROPERTIES)



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NOTEBOOK

```
# Players
striker_players = deliveries['striker_name'].unique()
bowler_players = deliveries['bowler_name'].unique()

# Combine unique values
players = np.union1d(striker_players, bowler_players)

for player_name in players:
    Player = URIRef(CNS['Player_' + player_name.replace(' ', '_')])
    g.add((Player, RDF.type, CNS.Player))
    g.add((Player, CNS['name'], Literal(player_name, datatype=XSD.string)))
```

```
# Save players to TTL file
with open(save_path + 'players.ttl', 'w') as file:
    file.write(g.serialize(format='turtle'))
```

```
# Create a new graph for matches
g_matches = Graph()
g_matches.bind("foaf", FOAF)
g_matches.bind("xsd", XSD)
g_matches.bind("cricket", CNS)

# Matches
for index, row in matches.iterrows():
    Match = URIRef(CNS['Match_' + str(row['match_number'])])
    g_matches.add((Match, RDF.type, CNS.Match))


    g_matches.add((Match, CNS['match_name'], Literal(row['match'], datatype=XSD.string)))
    g_matches.add((Match, CNS['venue'], Literal(row['match_venue'], datatype=XSD.string)))
    g_matches.add((Match, CNS['city'], Literal(row['match_city'], datatype=XSD.string)))
    g_matches.add((Match, CNS['player_of_the_match'], Literal(row['player_of_the_match'], datatype=XSD.string)))
    g_matches.add((Match, CNS['umpire1'], Literal(row['match_umpire1'], datatype=XSD.string)))
    g_matches.add((Match, CNS['umpire2'], Literal(row['match_umpire2'], datatype=XSD.string)))
    g_matches.add((Match, CNS['first_inning_score'], Literal(row['first_inning_score'], datatype=XSD.int)))
    g_matches.add((Match, CNS['second_inning_score'], Literal(row['second_inning_score'], datatype=XSD.int)))
    g_matches.add((Match, CNS['match_winner'], Literal(row['match_winner'], datatype=XSD.string)))
    g_matches.add((Match, CNS['winner_runs'], Literal(row['winner_runs'], datatype=XSD.int)))
    g_matches.add((Match, CNS['match_type'], Literal(row['match_type'], datatype=XSD.string)))
    g_matches.add((Match, CNS['winner_wickets'], Literal(row['winner_wickets'], datatype=XSD.int)))
    g_matches.add((Match, CNS['team1'], Literal(row['team1'], datatype=XSD.string)))
    g_matches.add((Match, CNS['team2'], Literal(row['team2'], datatype=XSD.string)))
    g_matches.add((Match, CNS['date'], Literal(row['match_date'], datatype=XSD.string)))
```

NOTEBOOK

```
# Create a new graph for Deliveries
g_deliveries = Graph()
g_deliveries.bind("foaf", FOAF)
g_deliveries.bind("xsd", XSD)
g_deliveries.bind("cricket", CNS)

# Deliveries
for index, row in deliveries.iterrows():
    Deliveries = URIRef(CNS['Deliveries' + str(index)])
    g_deliveries.add((Deliveries, RDF.type, CNS.Deliveries))

    batsman = URIRef(CNS['Player_' + row['striker_name'].replace(' ', '_')])
    bowler = URIRef(CNS['Player_' + row['bowler_name'].replace(' ', '_')])
    match = URIRef(CNS['Match_' + str(row['match_id'])])

    g_deliveries.add((Deliveries, CNS['match'], match))
    g_deliveries.add((Deliveries, CNS['batsman'], batsman))
    g_deliveries.add((Deliveries, CNS['bowler'], bowler))
    g_deliveries.add((Deliveries, CNS['inning'], Literal(row['innings'], datatype=XSD.int)))
    g_deliveries.add((Deliveries, CNS['runs'], Literal(row['runs_off_bat'], datatype=XSD.int)))
    g_deliveries.add((Deliveries, CNS['player_dismissed'], Literal(row['player_dismissed'], datatype=XSD.string)))
    g_deliveries.add((Deliveries, CNS['wicket_type'], Literal(row['wicket_type'], datatype=XSD.string)))
```

```
# Save Deliveries to TTL file
with open(save_path + 'deliveries.ttl', 'w') as file:
    file.write(g_deliveries.serialize(format='turtle'))
```

NOTEBOOK

```
# Create a new graph for points table
g_points_table = Graph()
g_points_table.bind("foaf", FOAF)
g_points_table.bind("xsd", XSD)
g_points_table.bind("cricket", CNS)

# Points Table
for index, row in points_table.iterrows():

    Team = URIRef(CNS['Team_' + row['team'].replace(' ', '_')])
    g_points_table.add((Team, RDF.type, CNS.Team))
    g_points_table.add((Team, CNS['team_name'], Literal(row['team'], datatype=XSD.string)))
    g_points_table.add((Team, CNS['team_points'], Literal(row['team_points'], datatype=XSD.int)))
    g_points_table.add((Team, CNS['matches_played'], Literal(row['matches_played'], datatype=XSD.int)))
    g_points_table.add((Team, CNS['matches_won'], Literal(row['matches_won'], datatype=XSD.int)))
    g_points_table.add((Team, CNS['matches_lost'], Literal(row['matches_lost'], datatype=XSD.int)))
    g_points_table.add((Team, CNS['team_ranking'], Literal(row['team_ranking'], datatype=XSD.int)))
    g_points_table.add((Team, CNS['no_result'], Literal(row['no_result'], datatype=XSD.int)))
    g_points_table.add((Team, CNS['team_net_run_rate'], Literal(row['team_net_run_rate'], datatype=XSD.double)))
```

```
# Save points table to TTL file
with open(save_path + 'points_table.ttl', 'w') as file:
    file.write(g_points_table.serialize(format='turtle'))
```

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RDF DATA

```
cricket:Player_AAPAtkinson a cricket:Player ;
    cricket:name "AAPAtkinson"^^xsd:string .

cricket:Player_ADMathews a cricket:Player ;
    cricket:name "ADMathews"^^xsd:string .

cricket:Player_ADutt a cricket:Player ;
    cricket:name "ADutt"^^xsd:string .

cricket:Player_AKMarkram a cricket:Player ;
    cricket:name "AKMarkram"^^xsd:string .

cricket:Player_ALPhehlukwayo a cricket:Player ;
    cricket:name "ALPhehlukwayo"^^xsd:string .
```

Players

```
cricket:Deliveries0 a cricket:Deliveries ;
    cricket:batsman cricket:Player_JMBairstow ;
    cricket:bowler cricket:Player_TABoult ;
    cricket:inning "1"^^xsd:int ;
    cricket:match cricket:Match_1 ;
    cricket:player_dismissed "nan"^^xsd:string ;
    cricket:runs "0"^^xsd:int ;
    cricket:wicket_type "nan"^^xsd:string .

cricket:Deliveries1 a cricket:Deliveries ;
    cricket:batsman cricket:Player_JMBairstow ;
    cricket:bowler cricket:Player_TABoult ;
    cricket:inning "1"^^xsd:int ;
    cricket:match cricket:Match_1 ;
    cricket:player_dismissed "nan"^^xsd:string ;
    cricket:runs "6"^^xsd:int ;
    cricket:wicket_type "nan"^^xsd:string .
```

Deliveries

RDF DATA

```
cricket:Match_1 a cricket:Match ;
    cricket:city "Ahmedabad"^^xsd:string ;
    cricket:date "10/5/2023"^^xsd:string ;
    cricket:first_inning_score "282"^^xsd:int ;
    cricket:match_name "EnglandVsNewZealand"^^xsd:string ;
    cricket:match_type "Group"^^xsd:string ;
    cricket:match_winner "NewZealand"^^xsd:string ;
    cricket:player_of_the_match "RRavindra"^^xsd:string ;
    cricket:second_inning_score "283"^^xsd:int ;
    cricket:team1 "England"^^xsd:string ;
    cricket:team2 "NewZealand"^^xsd:string ;
    cricket:umpire1 "HDPKDharmasena"^^xsd:string ;
    cricket:umpire2 "NitinMenon"^^xsd:string ;
    cricket:venue "NarendraModiStadium"^^xsd:string ;
    cricket:winner_runs "0"^^xsd:int ;
    cricket:winner_wickets "9"^^xsd:int .
```

Matches

```
cricket:Team_Afghanistan a cricket:Team ;
    cricket:matches_lost "5"^^xsd:int ;
    cricket:matches_played "9"^^xsd:int ;
    cricket:matches_won "4"^^xsd:int ;
    cricket:no_result "0"^^xsd:int ;
    cricket:team_name "Afghanistan"^^xsd:string ;
    cricket:team_net_run_rate -3.36e-01 ;
    cricket:team_points "8"^^xsd:int ;
    cricket:team_ranking "6"^^xsd:int .
```

Points Table

OUTLINE

Dataset

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Queries

QUERIES #1: TOP 5 PLAYERS WHO HAVE SCORED A CENTURY IN THE MOST NUMBER OF MATCHES:

```
SELECT ?player_name (COUNT(DISTINCT ?match) AS ?Centuries)
WHERE {
  ?delivery a cricket:Deliveries ;
            cricket:match ?match ;
            cricket:batsman ?player ;
            cricket:runs ?runs .
  ?player a cricket:Player ;
          cricket:name ?player_name .

  {
    SELECT ?player ?match (SUM(?runs) AS ?totalRuns)
    WHERE {
      ?delivery a cricket:Deliveries ;
                cricket:match ?match ;
                cricket:batsman ?player ;
                cricket:runs ?runs .
    }
    GROUP BY ?player ?match
    HAVING (?totalRuns >= 100)
  }
}
GROUP BY ?player ?player_name
ORDER BY DESC(?Centuries)
LIMIT 5
```

QUERIES #1: TOP 5 PLAYERS WHO HAVE SCORED A CENTURY IN THE MOST NUMBER OF MATCHES:

	player_name	Centuries
1	"QdeKock"	"4"^^xsd:integer
2	"RRavindra"	"3"^^xsd:integer
3	"VKohli"	"3"^^xsd:integer
4	"DJMitchell"	"2"^^xsd:integer
5	"DAWarner"	"2"^^xsd:integer

QUERIES #2: PLAYERS WHO HAVE SCORED THE MOST RUNS IN MATCHES PLAYED AT A SPECIFIC VENUE:

```
SELECT ?player ?playerName ?venue (SUM(?runs) AS ?totalRuns)
WHERE {
  ?delivery a cricket:Deliveries ;
            cricket:batsman ?player ;
            cricket:runs ?runs ;
            cricket:match ?match .
  ?player a cricket:Player ;
          cricket:name ?playerName .
  ?match a cricket:Match ;
         cricket:venue ?venue .
}
GROUP BY ?player ?playerName ?venue
ORDER BY DESC(?totalRuns)
LIMIT 5
```

QUERIES #2: PLAYERS WHO HAVE SCORED THE MOST RUNS IN MATCHES PLAYED AT A SPECIFIC VENUE:

	player	playerName	venue	totalRuns
1	http://cwnamespace.org/cricketOntology#Player_VKohli	"VKohli"	"WankhedeStadium"	"205"^^xsd:integer
2	http://cwnamespace.org/cricketOntology#Player_GJMaxwell	"GJMaxwell"	"WankhedeStadium"	"201"^^xsd:integer
3	http://cwnamespace.org/cricketOntology#Player_MohammadRizwan	"MohammadRizwan"	"RajivGandhiInternationalStadium"	"199"^^xsd:integer
4	http://cwnamespace.org/cricketOntology#Player_HKlaasen	"HKlaasen"	"WankhedeStadium"	"199"^^xsd:integer
5	http://cwnamespace.org/cricketOntology#Player_RRavindra	"RRavindra"	"HimachalPradeshCricketAssociationStadium"	"191"^^xsd:integer

QUERIES #3: TOP 5 BATSMEN WITH RESPECT TO THEIR AVERAGE RUNS SCORED:

```
PREFIX cricket: <http://cwnamespace.org/cricketOntology#>

SELECT ?player  (AVG(?totalRuns) AS ?battingAverage)
WHERE {
  ?delivery cricket:batsman ?player .
  ?delivery cricket:runs ?runs .

  {
    SELECT ?player ?match (SUM(?runs) AS ?totalRuns)
    WHERE {
      ?delivery cricket:batsman ?player .
      ?delivery cricket:runs ?runs .
      ?delivery cricket:match ?match.
    }
    GROUP BY ?player  ?match
  }
}
GROUP BY ?player
ORDER BY DESC(?battingAverage)
```

QUERIES #3: TOP 5 BATSMEN WITH RESPECT TO THEIR AVERAGE RUNS SCORED:

	player	battingAverage
1	http://cwnamespace.org/cricketOntology#Player_VKohli	"71.4"^^xsd:decimal
2	http://cwnamespace.org/cricketOntology#Player_KSWilliamson	"64"^^xsd:decimal
3	http://cwnamespace.org/cricketOntology#Player_DJMitchell	"61.333333333333333333333333"^^xsd:decimal
4	http://cwnamespace.org/cricketOntology#Player_QdeKock	"59.4"^^xsd:decimal
5	http://cwnamespace.org/cricketOntology#Player_RRavindra	"57.8"^^xsd:decimal
6	http://cwnamespace.org/cricketOntology#Player_FakharZaman	"55"^^xsd:decimal
7	http://cwnamespace.org/cricketOntology#Player_TMHead	"54.833333333333333333333333"^^xsd:decimal
8	http://cwnamespace.org/cricketOntology#Player_RGSharma	"53.6"^^xsd:decimal
9	http://cwnamespace.org/cricketOntology#Player_AghaSalman	"51"^^xsd:decimal
10	http://cwnamespace.org/cricketOntology#Player_BAStokes	"50.666666666666666666666667"^^xsd:decimal

QUERIES #4: AVERAGE NUMBER OF RUNS SCORED IN A SINGLE MATCH IN EACH CITY:

```
PREFIX cricket: <http://cwnamespace.org/cricketOntology#>
SELECT ?city (AVG(?totalRuns) AS ?averageRuns)
WHERE {
  ?match rdf:type cricket:Match.
  ?match cricket:city ?city.
  ?delivery rdf:type cricket:Deliveries.
  ?delivery cricket:match ?match.
  ?delivery cricket:runs ?runs.
    {
    SELECT  ?city(SUM(?runs) AS ?totalRuns)
    WHERE {
      ?match rdf:type cricket:Match.
      ?match cricket:city ?city.
      ?delivery rdf:type cricket:Deliveries.
      ?delivery cricket:match ?match.
      ?delivery cricket:runs ?runs.
    }
    GROUP BY ?player  ?match ?city
  }
}
GROUP BY ?city
```

QUERIES #4: AVERAGE NUMBER OF RUNS SCORED IN A SINGLE MATCH IN EACH CITY:

	city	averageRuns
1	"Ahmedabad"	"472.2"^^xsd:decimal
2	"Hyderabad"	"550"^^xsd:decimal
3	"Mumbai"	"549.8"^^xsd:decimal
4	"Dharamsala"	"510"^^xsd:decimal
5	"Chennai"	"461.6"^^xsd:decimal
6	"Lucknow"	"401.8"^^xsd:decimal
7	"Delhi"	"539.6"^^xsd:decimal
8	"Bengaluru"	"460.5"^^xsd:decimal
9	"Kolkata"	"417"^^xsd:decimal
10	"Pune"	"508.6"^^xsd:decimal

THANK YOU!