APEX ATHLETE MANAGEMENT
—
DBMS PROJECT

THE TEAM

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DELIVERABLE 1

PROJECT DESCRIPTION

Apex athlete management company was established in 2002 based in Chicago, USA. Over the past years, it has expanded and set up offices in multiple states and now has offices in Seattle, Austin, and New Jersey. We focus on three major sports which is Baseball, Basketball, and football.

Apex is a professional organization that helps athletes navigate the various stages of their careers. We provide a wide range of services to support athletes at every stage of their development, from amateur to professional, and beyond. The lifecycle of an athlete typically involves several stages, including talent identification, development, and competition. At each stage, we provide critical support and guidance to help the athlete reach their full potential and achieve their goals. To help manage the lifecycle of the athletes, we have created a database.

For Talent identification, we have our scouts who work with different schools and their school coaches to select players, who have great performance and want to take sports as a career. After selection of players, Apex creates a partnership agreement with the player which mentions the terms and yearly stipend.

Once the player signs the agreement, there will be a coach assigned to him, who will take care of his nutrition and physical training for that specific sport. Each coach can have more than one player that he may be training.

We also have a database on the history of matches and tournaments the athlete has participated in to monitor and record his performance. In case of any injuries, we also need to record his medical history.

Once the athlete is fully trained, the agents of Apex will need to get in touch with multiple clubs to sign up the athlete. Based on the performance of the athlete, when a club selects an athlete, they will need to create a contract with Apex.

Our database stores data on schools, scouts, athletes, coaches, agents, athlete's medical history, tournaments played and his performance rating. This database allows us to better manage and track important information related to athletes and our customers (clubs), which can help to improve the quality of the services we provide and enhance the success of our athletes and customers.
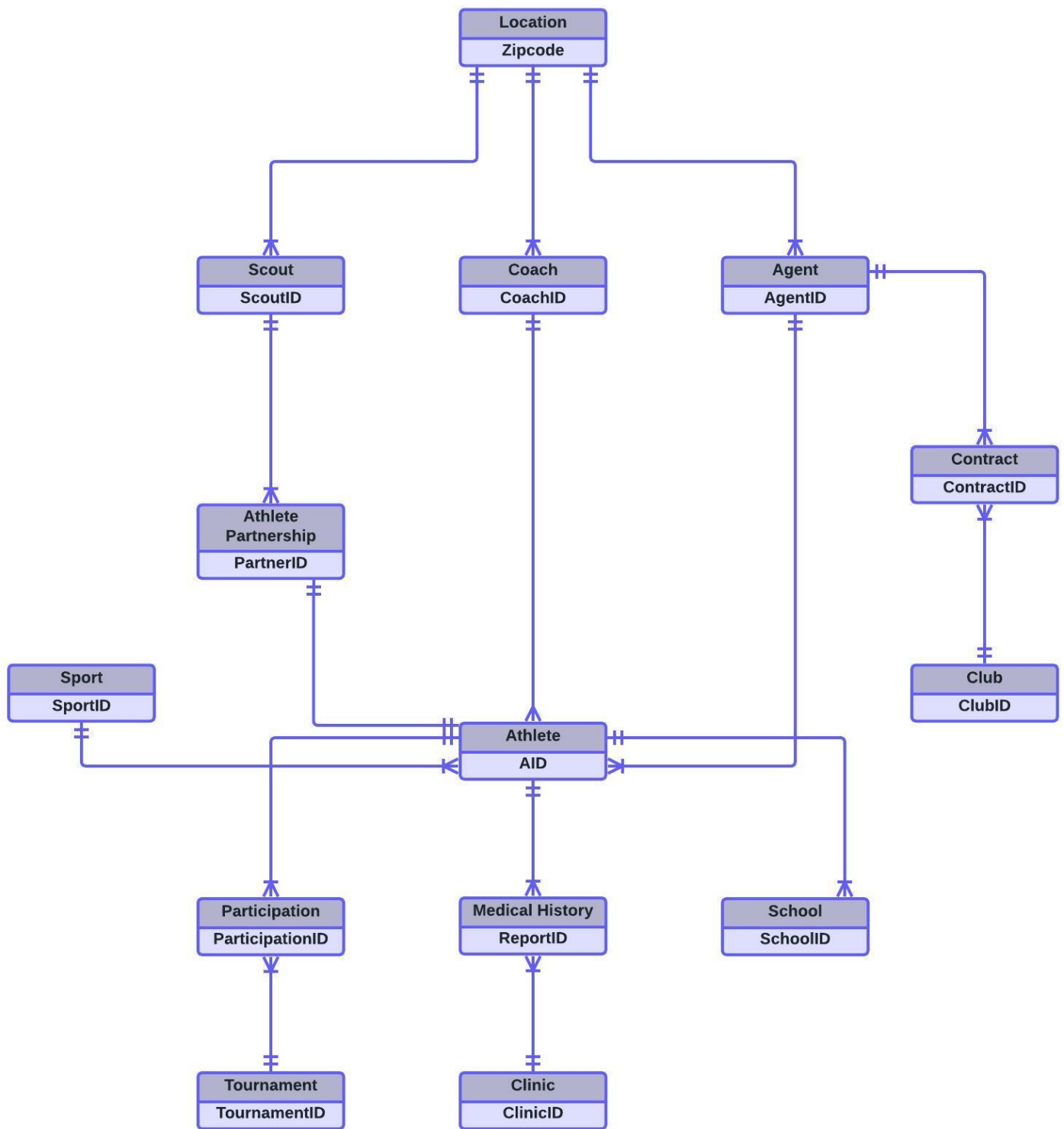
DELIVERABLE 2

ER DIAGRAM AND ENTITIES

The main **entities** for our database are as below:

1. Zip code – This table contains the Zip code, states, and cities.

2. Scout – This table contains the details of the scouts who work for Apex and take care of talent identification.

3. Coach – This table contains the details of the coaches who work with players. This table consist of different coaches such as physical training coach and nutrition coaches as well.

4. Athlete – This table contains the details of the athletes, including their physical appearance such as height and weight.

5. Athlete Partnership – This table contains the details of the partnership agreement signed by the player with Apex.

6. Sport – This table contains the details of the sport and Sport ID.

7. Participation - This table is a bridging entity between athlete and tournaments. As many athletes play many tournaments.

8. Tournament – This table contains the details of the different kinds of tournaments and matches that the athletes take part in.

9. Agent – This table contains the details of our agents who work to sign our athletes with the different clubs.

10. Contract – This table contains the data of the contract signed between Apex and the club for a specific athlete.

11. Clubs – This table contains the data of the different clubs that we have signed our athletes with.

12. Medical History – This table contains the reports of any athletes that have ever suffered an injury or are having an ongoing treatment.

13. Clinics – This tables contains the details of the hospitals/ clinics that have treated our players.

14. Schools – This table contains the details of the schools from where our players had been selected.
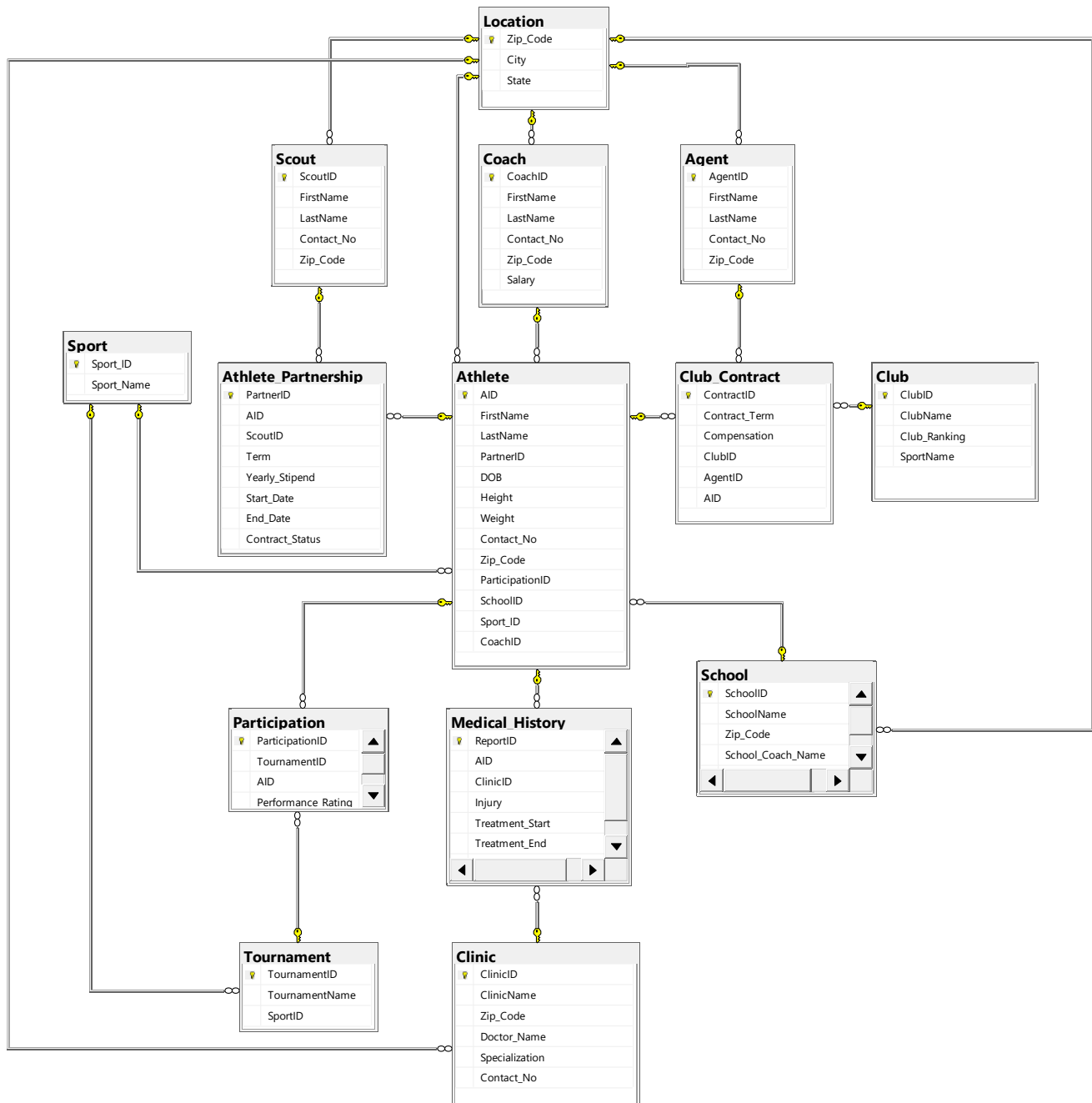
The **attributes** for our entities are as below:

- The Primary keys are <u>double underlined</u> and foreign keys are <u>single underlined</u>.

1. **Location:** <u>ZipCode,</u> City, State

2. **Scout:** <u>ScoutID</u>, FirstName, LastName, Contact_No, <u>Zip_Code</u>

3. **Coach:** <u>CoachID</u>, FirstName, LastName, Contact_No, Salary, <u>Zip_Code</u>

4. **Athlete:** <u>AID,</u> FirstName, LastName, PartnerID, DOB, Height, Weight, Contact_No, <u>Zip_Code</u>, <u>ParticipationID</u>, <u>SchoolID</u>, <u>Sport_ID</u>, <u>CoachID</u>

5. **Athlete Partnership:** <u>PartnerID</u>, <u>AID</u>, <u>ScoutID</u>, Term, Yearly_Stipend, Start_Date , End_Date, Contract_Status

6. **Agent:** <u>AgentID</u>, FirstName, LastName, Contact_No, <u>Zip_Code</u>

7. **Club Contract:** <u>ContractID</u>, Contract Term, Compensation, <u>ClubID</u>, <u>AgentID</u> , <u>AID</u>

8. **Club:** <u>ClubID</u>, ClubName, Club_Ranking, SportName

9. **Participation:** <u>ParticipationID</u>, TournamentID, <u>AID</u>, Performance_Rating

10. **Tournament:** <u>TournamentID</u>, TournamentName, <u>SportID</u>

11. **Medical History:** <u>ReportID</u>, <u>AID</u>, <u>ClinicID</u>, Injury, Treatment_Start, Treatment _End Treatment_Progress

12. **Clinics:** <u>Clinic_ID</u>, ClinicName, <u>Zip_Code</u>, Doctor, Name, Specialization, Contact_No

13. **Schools:** <u>School_ID</u>, SchoolName, <u>Zip_Code</u>, School_Coach_Name, School_Coach_Contact

14. **Sport:** <u>Sport_ID</u>, Sport_Name

The **ER diagram**:

The **Database diagram**:

Location
- 🔑 Zip_Code
- City
- State

Scout
- 🔑 ScoutID
- FirstName
- LastName
- Contact_No
- Zip_Code

Coach
- 🔑 CoachID
- FirstName
- LastName
- Contact_No
- Zip_Code
- Salary

Agent
- 🔑 AgentID
- FirstName
- LastName
- Contact_No
- Zip_Code

Sport
- 🔑 Sport_ID
- Sport_Name

Athlete_Partnership
- 🔑 PartnerID
- AID
- ScoutID
- Term
- Yearly_Stipend
- Start_Date
- End_Date
- Contract_Status

Athlete
- 🔑 AID
- FirstName
- LastName
- PartnerID
- DOB
- Height
- Weight
- Contact_No
- Zip_Code
- ParticipationID
- SchoolID
- Sport_ID
- CoachID

Club_Contract
- 🔑 ContractID
- Contract_Term
- Compensation
- ClubID
- AgentID
- AID

Club
- 🔑 ClubID
- ClubName
- Club_Ranking
- SportName

School
- 🔑 SchoolID
- SchoolName
- Zip_Code
- School_Coach_Name

Participation
- 🔑 ParticipationID
- TournamentID
- AID
- Performance_Rating

Medical_History
- 🔑 ReportID
- AID
- ClinicID
- Injury
- Treatment_Start
- Treatment_End

Tournament
- 🔑 TournamentID
- TournamentName
- SportID

Clinic
- 🔑 ClinicID
- ClinicName
- Zip_Code
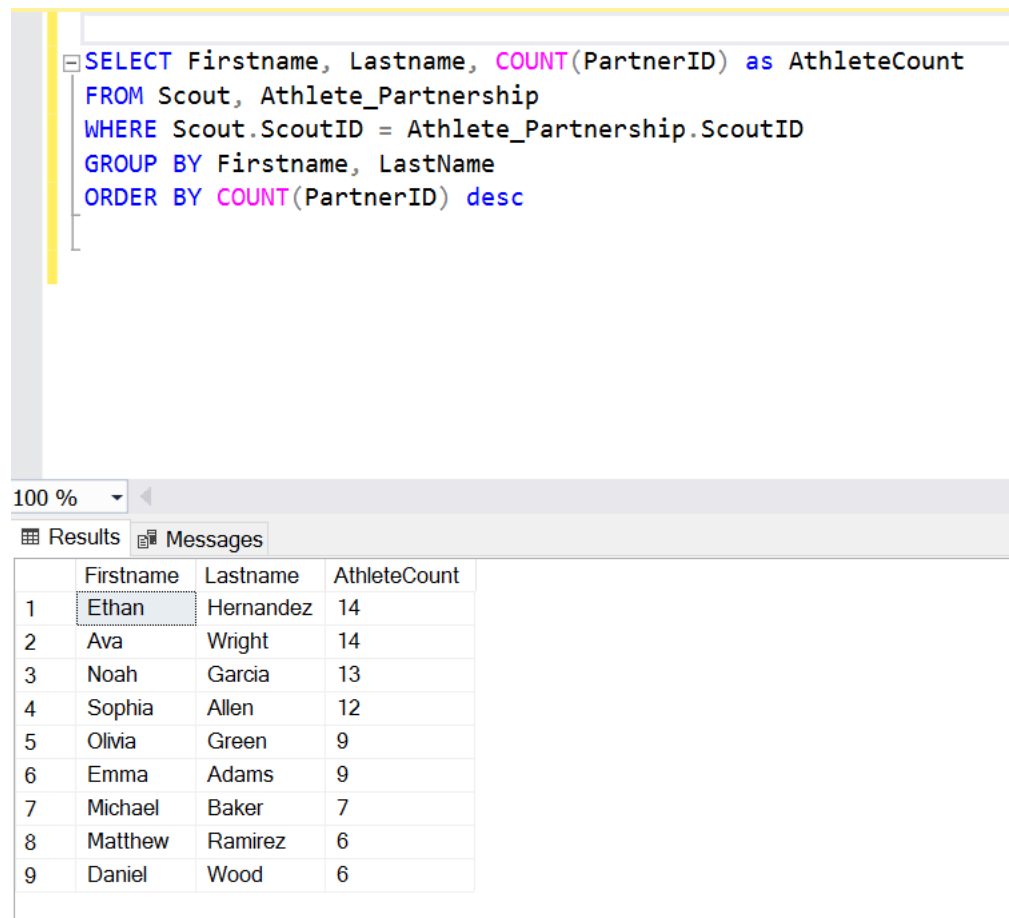- Doctor_Name
- Specialization
- Contact_No

DELIVERABLE 3

SQL QUERIES

1. Display the names of the scouts and the number of athletes they have signed up in descending order.

```
SELECT Firstname, Lastname, COUNT(PartnerID)
FROM Scout, Athlete_Partnership
WHERE Scout.ScoutID = Athlete_Partnership.ScoutID
GROUP BY Firstname, LastName
ORDER BY COUNT(PartnerID) desc
```

```
SELECT Firstname, Lastname, COUNT(PartnerID) as AthleteCount
FROM Scout, Athlete_Partnership
WHERE Scout.ScoutID = Athlete_Partnership.ScoutID
GROUP BY Firstname, LastName
ORDER BY COUNT(PartnerID) desc
```

100 %

▦ Results 📝 Messages

	Firstname	Lastname	AthleteCount
1	Ethan	Hernandez	14
2	Ava	Wright	14
3	Noah	Garcia	13
4	Sophia	Allen	12
5	Olivia	Green	9
6	Emma	Adams	9
7	Michael	Baker	7
8	Matthew	Ramirez	6
9	Daniel	Wood	6

2. Display the cities and number of athletes from each city

```
SELECT City, count(aid)
FROM Athlete, Location
WHERE Athlete.Zip_Code = location.Zip_Code
GROUP BY City
```

```
SELECT City, count(aid)
FROM Athlete, Location
WHERE Athlete.Zip_Code = location.Zip_Code
GROUP BY City
```

100 %

⊞ Results   🗊 Messages

	City	(No column name)
1	Austin	22
2	Chicago	22
3	Los Angeles	23
4	Miami	23

3. Display the names of the athletes and their performance rating.

```
SELECT Firstname, Lastname, Performance_Rating
FROM Athlete, Participation
WHERE Athlete.AID = Participation.AID
order by Performance_Rating desc
```

```
SELECT Firstname, Lastname, Performance_Rating
FROM Athlete, Participation
WHERE Athlete.AID = Participation.AID
order by Performance_Rating desc
```

100 %

▦ Results ▦ Messages

	Firstname	Lastname	Performance_Rating
1	Emily	Johnson	9
2	Charlotte	Scott	9
3	Joseph	Perez	9
4	Levi	Cooper	9
5	Ethan	Sanchez	9
6	Grace	Bailey	9
7	Zachary	Frazier	9
8	Lauren	Montgomery	9
9	Victoria	Hernandez	9
10	James	Brown	9
11	Amelia	Price	9
12	Owen	Rivera	9
13	Owen	Hamilton	9
14	Chloe	Hayes	9
15	Elena	Ramirez	8
16	John	Smith	8
17	Jackson	Brooks	8
18	Grace	Cox	8

4. Which the clubs and number of athletes hired from Apex

```
select club.ClubID, clubname, count(AID)
from Club, club_contract
where club.clubID=club_contract.ClubID
group by club.clubID, ClubName
```

```
select club.ClubID, clubname, count(AID)
from Club, club_contract
where club.clubID=club_contract.ClubID
group by club.clubID, ClubName
```

100 %

▦ Results ▦ Messages

	ClubID	clubname	(No column name)
1	CUB3001	Warriors	8
2	CUB3002	Red sox	8
3	CUB3003	Kings	7
4	CUB3004	Bulls	7
5	CUB3005	Twins	7
6	CUB3006	Capitals	6

5. Name all the athletes that have undergone medical treatment in the past 6 months.

```
SELECT athlete.AID, Firstname, Lastname
FROM Athlete, Medical_History
WHERE Athlete.AID = Medical_History.AID and Treatment_End >= DATEADD (month,-6, GETDATE())
```

```
SELECT athlete.AID, Firstname, Lastname
FROM Athlete, Medical_History
WHERE Athlete.AID = Medical_History.AID and Treatment_End >= DATEADD (month,-6, GETDATE())
```

0 %

Results   Messages

AID	Firstname	Lastname
3080	Sydney	Bryant

6. Name the top five highest paid athletes in Apex.

```
SELECT TOP 5 Athlete.AID, Firstname, Lastname, Yearly_Stipend
FROM Athlete, Athlete_Partnership
where athlete.aid=Athlete_Partnership.AID
ORDER BY Yearly_Stipend desc
```

```
SELECT TOP 5 Athlete.AID, Firstname, Lastname, Yearly_Stipend
FROM Athlete, Athlete_Partnership
where athlete.aid=Athlete_Partnership.AID
ORDER BY Yearly_Stipend desc
```

100 %

Results | Messages

	AID	Firstname	Lastname	Yearly_Stipend
1	3004	Sarah	Davis	60000
2	3008	Sophia	Martinez	60000
3	3012	Mia	Lopez	60000
4	3016	Amelia	Adams	60000
5	3020	Stella	Mitchell	60000

7. Name the top 5 athletes making the highest profit for the company.

```
Select top 5 firstname, lastname, club_contract.compensation -
athlete_partnership.yearly_stipend as Highest
From athlete, athlete_partnership, club_contract
Where athlete.aid = athlete_partnership.aid and athlete.aid = club_contract.aid
order by Highest desc
```

```
Select top 5 firstname, lastname, club_contract.compensation - athlete_partnership.yearly_stipend as Highest
From athlete, athlete_partnership, club_contract
Where athlete.aid = athlete_partnership.aid and athlete.aid = club_contract.aid
order by Highest desc
```

100 %

Results | Messages

	firstname	lastname	Highest
1	James	Brown	114000
2	Isaac	Torres	114000
3	Ethan	Sanchez	114000
4	Harper	Nelson	108000
5	Chloe	Watson	108000

8. Name the school from which the highest number of athletes have been signed up.

```
SELECT TOP 1 School.SchoolID, SchoolName, COUNT(AID)
FROM School, Athlete
WHERE School.SchoolID = Athlete.SchoolID
GROUP BY school.SchoolID, SchoolName
```

```
ORDER BY COUNT(AID) DESC
```

```sql
SELECT TOP 1 School.SchoolID, SchoolName, COUNT(AID)
FROM School, Athlete
WHERE School.SchoolID = Athlete.SchoolID
GROUP BY school.SchoolID, SchoolName
ORDER BY COUNT(AID) DESC
```

100 %

⊞ Results | Messages

	SchoolID	SchoolName	(No column name)
1	SCH4002	Roosevelt High School	12

9. Name the athlete that has a rating of nine or above in the tournaments.

```sql
SELECT firstname, lastname, performance_rating
From athlete, participation
Where athlete.aid = participation.aid and performance_rating >=9
```

```sql
SELECT firstname, lastname, performance_rating
From athlete, participation
Where athlete.aid = participation.aid and performance_rating >=9
```

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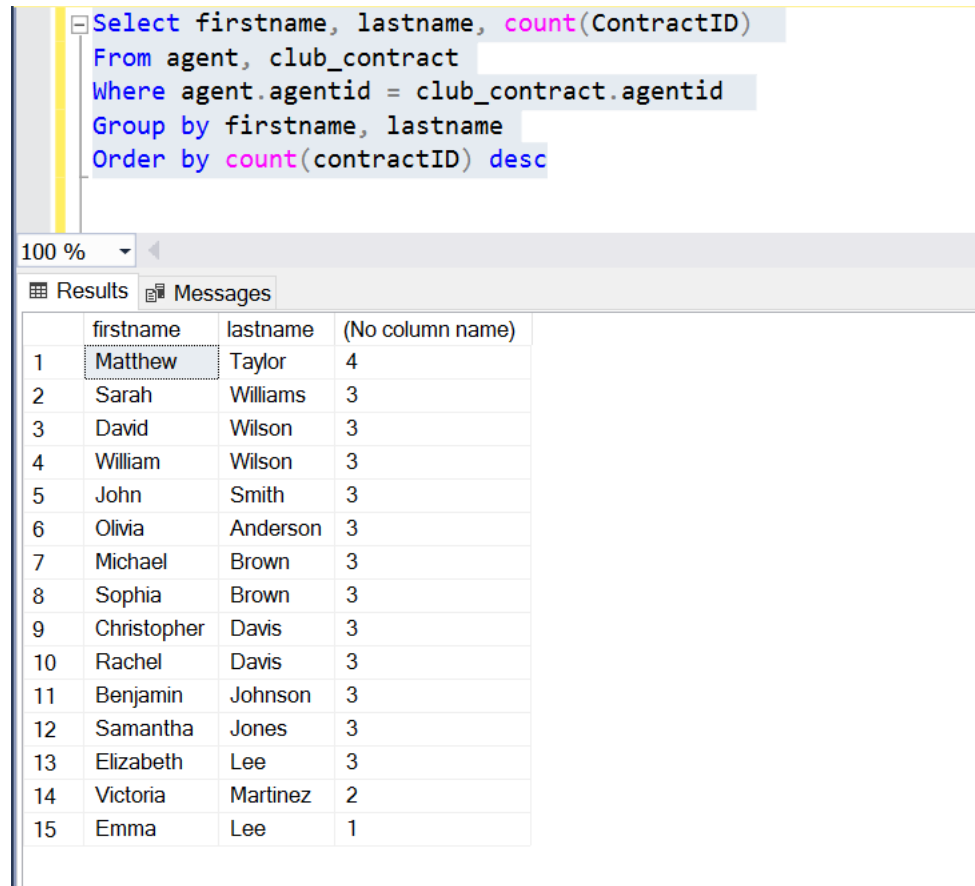
⊞ Results | Messages

	firstname	lastname	performance_rating
1	Emily	Johnson	9
2	Charlotte	Scott	9
3	Joseph	Perez	9
4	Levi	Cooper	9
5	Zachary	Bryant	10
6	Jocelyn	Edwards	10
7	Adam	Ross	10
8	Ethan	Sanchez	9
9	Grace	Bailey	9
10	Zachary	Frazier	9
11	Lauren	Montgomery	9
12	Olivia	Garcia	10
13	Sophia	Martinez	10
14	Alexander	Hill	10
15	Chloe	Watson	10

10. Display the names of the agents and number of athletes they signed up with clubs. Sort in descending order

```
Select firstname, lastname, count(ContractID)
From agent, club_contract
Where agent.agentid = club_contract.agentid
Group by firstname, lastname
Order by count(contractID) desc
```

```
Select firstname, lastname, count(ContractID)
From agent, club_contract
Where agent.agentid = club_contract.agentid
Group by firstname, lastname
Order by count(contractID) desc
```

100 %

⊞ Results ▤ Messages

	firstname	lastname	(No column name)
1	Matthew	Taylor	4
2	Sarah	Williams	3
3	David	Wilson	3
4	William	Wilson	3
5	John	Smith	3
6	Olivia	Anderson	3
7	Michael	Brown	3
8	Sophia	Brown	3
9	Christopher	Davis	3
10	Rachel	Davis	3
11	Benjamin	Johnson	3
12	Samantha	Jones	3
13	Elizabeth	Lee	3
14	Victoria	Martinez	2
15	Emma	Lee	1

11. Name the schools and the total number of athletes from each school. Display in descending order.

```
Select School.SchoolID, schoolname, count(AID) as AthleteNo
from school, athlete
where school.SchoolID=athlete.SchoolID
group by school.SchoolID, SchoolName
```

```
 Select School.SchoolID, schoolname, count(AID) as AthleteNo
 from school, athlete
 where school.SchoolID=athlete.SchoolID
 group by school.SchoolID, SchoolName
```

100 % ▾ ◂

⊞ Results ▤ Messages

	SchoolID	schoolname	AthleteNo
1	SCH4001	Lincoln High School	12
2	SCH4002	Roosevelt High School	12
3	SCH4003	Wilson High School	11
4	SCH4004	Jefferson High School	11
5	SCH4005	Madison High School	11
6	SCH4006	Franklin High School	11
7	SCH4007	Garfield High School	11
8	SCH4008	Cleveland High School	11

12. Name the athlete, performance rating and sport name of those players with a rating of 10 in basketball.

```
Select firstname, lastname, performance_rating, sport.Sport_Name
From athlete, Participation, sport
Where athlete.aid=participation.aid and athlete.sport_id=sport.sport_id
and Performance_Rating =10 and Sport_Name = 'Basketball'
```

```
 Select firstname, lastname, performance_rating, sport.Sport_Name
 From athlete, Participation, sport
 Where athlete.aid=participation.aid and athlete.sport_id=sport.sport_id
 and Performance_Rating =10 and Sport_Name = 'Basketball'
```

100 % ▾ ◂

⊞ Results ▤ Messages

	firstname	lastname	performance_rating	Sport_Name
1	Zachary	Bryant	10	Basketball
2	Jocelyn	Edwards	10	Basketball
3	Adam	Ross	10	Basketball

13. How many athletes are there for Baseball

```
Select sport_name, count(aid)
From sport, athlete
Where sport.sport_id=athlete.sport_id and sport_name='Baseball'
Group by sport_name
```

```
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    Select sport_name, count(aid)
    From sport, athlete
    Where sport.sport_id=athlete.sport_id and sport_name='Baseball'
    Group by sport_name
```

100 %

▦ Results ▤ Messages

	sport_name	(No column name)
1	Baseball	30

14. Name the athletes who in Football.

```
Select firstname, lastname, sport_name
From athlete, sport
Where athlete.sport_id=sport.sport_id and sport_name = 'Football'
```

```
    Select firstname, lastname, sport_name
    From athlete, sport
    Where athlete.sport_id=sport.sport_id and sport_name = 'Football'
```

100 %

▦ Results ▤ Messages

	firstname	lastname	sport_name
1	Michael	Williams	Football
2	James	Brown	Football
3	Isabella	King	Football
4	Mia	Lopez	Football
5	Daniel	Green	Football
6	Matthew	Baker	Football
7	Violet	Roberts	Football
8	Claire	Phillips	Football
9	Jackson	Evans	Football
10	Gabriel	Collins	Football
11	Ruby	Cox	Football
12	Lucy	Ward	Football
13	Ezra	Gray	Football
14	Samuel	James	Football
15	Amelia	Price	Football
16	Avery	Howard	Football
17	Levi	Bailey	Football

15. Name the doctors that have attended to the maximum number of athletes.

```
Select doctor_name, count(aid)
from Clinic, Medical_History
where clinic.ClinicID=Medical_History.ClinicID
group by Doctor_Name
order by doctor_name desc
```

```
Select doctor_name, count(aid)
from Clinic, Medical_History
where clinic.ClinicID=Medical_History.ClinicID
group by Doctor_Name
order by doctor_name desc
```

100 %

⊞ Results 📋 Messages

	doctor_name	(No column name)
1	Sarah Kim	3
2	Mary Johnson	3
3	John Smith	2
4	David Lee	3

16. Name all the cities and the count of clubs in each city

```
SELECT City, COUNT(ClubName) as Number_Of_Clubs
FROM Location, Agent, Club_Contract, Club
WHERE Location.Zip_Code = Agent.Zip_Code AND
      Agent.AgentID = Club_Contract.AgentID AND
      Club_Contract.ClubID = Club.ClubID
GROUP BY City
```

```
SELECT City, COUNT(ClubName) as Number_Of_Clubs
FROM Location, Agent, Club_Contract, Club
WHERE Location.Zip_Code = Agent.Zip_Code AND
      Agent.AgentID = Club_Contract.AgentID AND
      Club_Contract.ClubID = Club.ClubID
GROUP BY City
```

100 %

⊞ Results 📋 Messages

	City	Number_Of_Clubs
1	Austin	10
2	Chicago	15
3	Los Angeles	10
4	Miami	8

17. Name all the cities and the count of clinics in each city

```
SELECT City, COUNT(ClinicName) as Number_Of_Clinics
FROM Location, Clinic
WHERE Location.Zip_Code = Clinic.Zip_Code
GROUP BY City
```

```
SELECT City, COUNT(ClinicName) as Number_Of_Clinics
FROM Location, Clinic
WHERE Location.Zip_Code = Clinic.Zip_Code
GROUP BY City
```

	City	Number_Of_Clinics
1	Austin	1
2	Chicago	1
3	Los Angeles	1
4	Miami	1

18. Name all the cities and the count of schools in each city

```
SELECT City, COUNT(SchoolName) as Number_Of_School
FROM Location, School
WHERE Location.Zip_Code = School.Zip_Code
GROUP BY City
```

```
SELECT City, COUNT(SchoolName) as Number_Of_School
FROM Location, School
WHERE Location.Zip_Code = School.Zip_Code
GROUP BY City
```

	City	Number_Of_School
1	Austin	2
2	Chicago	2
3	Los Angeles	2
4	Miami	2

19. Name the Athlete and the scout who recruited him, the agent who got him the contract and the coach assigned to him.

```
SELECT Scout.FirstName+' '+Scout.LastName as Scout_Name, Athlete.FirstName+'
'+Athlete.LastName as Athlete_Name, Coach.FirstName+' '+Coach.LastName as Coach_Name,
Agent.FirstName+' '+Agent.LastName as Agent_Name
FROM Scout, Athlete, Coach, Agent, Athlete_Partnership, Club_Contract
WHERE Athlete.AID = Athlete_Partnership.AID AND
        Athlete_Partnership.ScoutID = Scout.ScoutID AND
        Coach.CoachID = Athlete.CoachID AND
        Athlete.AID = Club_Contract.AID AND
        Club_Contract.AgentID = Agent.AgentID
```

20. The tournament details participated by the athlete with highest performance rating.

```
SELECT Firstname, Lastname, Tournament.TournamentID, TournamentName
FROM Athlete, Participation, Tournament
WHERE Athlete.AID = Participation.AID AND
      Participation.TournamentID = Tournament.TournamentID
ORDER BY Performance_Rating desc
```