

American International University-Bangladesh Department of Computer Science and Engineering Dhaka, Bangladesh

$00892~{\rm ADVANCE~DATABASE~MANAGEMENT~SYSTEM}$

PROJECT Report

 $[\mathrm{B}][\mathrm{SUMMER}\ 22\text{-}23]$

E-Sports Management System

Submitted by

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Relational Algebra	0%	0%	0%	0%	0(%)
Report Writing	50%	30%	0%	0%	80(%)

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Introduction

Esports Management System is an innovative platform that will revolutionize the management and organization of esports teams, participants, tournaments, and sponsors. This system seeks to provide users with an efficient and user-friendly way to search for their preferred professional esports players.

A user-friendly interface is at the core of the Esports Management System, allowing users to seamlessly navigate and explore the realm of professional esports. With only a few clicks, users can search for potential professional athletes and teams, as well as access valuable information such as their winning records and accomplishments. This enables fans and enthusiasts to remain up-to-date on their preferred players and teams, nurturing a stronger connection within the esports community.

The Esports Management System's ability to facilitate sponsorships is a crucial feature. Numerous organizations and businesses can engage in sponsorship activities, whether for the purpose of supporting tournaments or individual athletes. The system serves as a centralized repository where the information and details of these sponsors can be efficiently stored and managed. This facilitates the sponsorship process and ensures that sponsors and the esports industry collaborate effectively.

There are specialized administrators within the Esports Management System who play crucial roles in managing and enhancing the overall experience. The social media manager is among these supervisors; he or she supervises the organization's online presence and engagement on various social media platforms. In addition, the content creator/VFX/GFX team assures the creation of visually stunning and captivating content that enhances the overall esports experience.

Dynamic features and functionalities make the Esports Management System an indispensable instrument for the esports industry. It makes it easier for fans to discover and connect with professional esports players, allowing them to remain informed and engaged. It enhances collaboration between organizations and the esports community by providing a centralized platform for sponsorship management. In addition, the system enables administrators to enhance the organization's online presence and develop visually appealing content, ensuring that all stakeholders have an engaging experience.

In the following sections, we will delve deeper into the features, functionalities, and innovative aspects of the Esports Management System, demonstrating its potential to revolutionize the management and celebration of esports teams, players, tournaments, and sponsors.

1.1 Project Proposal

This proposal for the development and implementation of an Esports Management System is presented with pleasure. This revolutionary platform seeks to transform the management and organization of esports teams, players, tournaments, and sponsors. The Esports Management System will improve the user experience, encourage community engagement, and expedite operations within the esports industry by leveraging advanced technology and comprehensive functionalities.

1.1.1 Purposes

- Create an intuitive web-based platform that serves as the central hub for esports administration, catering to the requirements of teams, players, tournament organizers, and sponsors.
- Implement a sophisticated matching algorithm to facilitate the search and discovery of favored professional esports players, thereby enhancing the fan experience and fostering esports community connections.
- Provide efficient sponsorship administration capabilities, enabling organizations and businesses to support tournaments or individual athletes through sponsorship activities.
- Enhance the organization's online presence by supervising social media platforms and having the content creator/VFX/GFX team produce visually spectacular and engaging content.

1.1.2 Methodology

System Development:

- Conduct exhaustive investigation on the necessary requirements and features of an effective Esports Management System.
- Utilize industry-standard programming languages and technologies to create a scalable and secure web-based platform.
- Implement a user-friendly interface with intuitive navigation in order to provide a seamless and enjoyable user experience.

Matching Algorithm

- Collaboration with data scientists and psychologists to create a matching algorithm based on personality traits, values, and beliefs.
- Integrate the matching algorithm into the system to recommend professional esports players compatible with the user's preferences.

Sponsorship Management

- Create an all-encompassing sponsorship management module to facilitate collaborations between organizations and the esports industry.
- Provide a centralized repository for sponsor information to facilitate communication and sponsorship efficiency.

Online Presence Enhancement

- Appoint a social media manager to supervise the organization's online presence and interact with the esports community.
- Appoint a social media manager to supervise the organization's online presence and interact with the esports community.

1.2 Project Scenario

Imagine an eSports organization called "eSports FTW" that manages various teams and tournaments in the gaming industry. The organization is led by an Admin who oversees the operations. The Admin entity contains attributes such as email, picture, password, name, and a unique ID.

Under the Admin, there are multiple Managers responsible for different departments. Each Manager has attributes including hire date, picture, salary, email, name, department ID, and a unique ID. One Manager specifically manages the Finance department, ensuring financial stability and handling the accounts for the organization. The Finance entity consists of attributes such as a unique ID, account number, and balance.

In addition to managing the finances, each Manager is in charge of a specific team. The Teams entity includes details such as the team's established date, country, name, team ID, team icon, winning numbers, and total prize money. Each team has a unique Manager assigned to it, ensuring proper coordination and organization. The Manager entity is linked to the Teams entity through the Manager ID attribute.

Within each team, there are multiple Players who represent the organization in various games. The Players entity contains attributes such as name, player ID, picture, salary, winning prize money, total hours played, phone number, and address (including country, city, zip code, and road number). Additionally, players have links to their social media profiles on platforms like Facebook, Instagram, Twitter, and YouTube.

The organization hosts tournaments, bringing together teams from different games. The Tournament entity consists of attributes such as tournament ID, name, prize pool, starting date, and ending date. Each tournament features various games such as Valorant, Mobile Legends: Bang Bang (MLBB), and Rainbow Six Siege. The Game entity contains attributes like name, release date, genre, game picture, publisher, platform, game ID, and prize pool. Each tournament may have different games associated with it, creating diverse competitive environments.

To support the teams and tournaments financially, eSports FTW seeks sponsorships from different companies. The Companies entity includes attributes such as name, company ID, location, sponsor date, and phone number. Multiple companies can sponsor both teams and tournaments, forming a many-to-many relationship between the Companies, Teams, and Tournament entities.

Additionally, eSports FTW employs a Social Media Manager responsible for managing the organization's online presence. The Social Media Manager entity contains attributes such as name, picture, email, manager ID, hire date, salary, phone number, and social media links (Facebook, Instagram, Twitter, YouTube). The Social Media Manager oversees the VFX/GFX and Content Creator teams, ensuring engaging content creation and visual effects. The VFX/GFX and Content Creator entities include attributes like name, picture, VFX/GFX ID, email, phone number, salary, and address (country, city, zip code, and road number).

Diagrams

2.1 ER Diagram



ER Diagram

2.2 Class Diagram



Class Diagram

2.3 Use Case Diagram



Use Case Diagram

2.4 Activity Diagram



Activity Diagram

User Interface

3.1 Technologies Used

- SvelteKit
- Tailwind CSS

3.1.1 Login Page



3.1.2 Home Page



3.1.3 Tournament Page



3.1.4 Team Page



3.1.5 Game Page



Normalization and Schema Design

4.1 Manage branch

$4.1.1 \quad (Admin \rightarrow Manager)$

UNF

(<u>Admin_ID</u>, Admin_Name, Admin_Email, Admin_Password, Admin_Picture, <u>Manager_ID</u>, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate, Manager_Phone)

1NF

Phone is multi-valued attribute.

• (<u>Admin_ID</u>, Admin_Name, Admin_Email, Admin_Password, Admin_Picture, <u>Manager_ID</u>, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, <u>Manager_Hiredate</u>, Manager_Phone)

2NF

- Admin_ID, Admin_Name, Admin_Email, Admin_Password, Admin_Picture
- Manager_ID, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate, Manager_Phone

3NF

No transitive dependencies found. Same as 2NF

- Manager (Manager_ID, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate, Admin_ID)
- Admin (Admin_ID, Admin_Name, Admin_Email, Admin_Password, Admin_Picture)
- Manager_Phone (Mp_ID, Manager_ID, Manager_Phone)

4.1.2 (Manager \rightarrow Finance)

$\underline{\mathbf{UNF}}$

(<u>Manager_ID</u>, Manager_Name, Manager_Email, Manager_Password,Manager_Picture, Manager_Hiredate, Manager_Phone, <u>Finance_ID</u>, Finance_Account_Number, Finance_Balance)

1NF

Phone is multi-valued attribute.

• (<u>Manager_ID</u>, Manager_Name, Manager_Email, Manager_Password,Manager_Picture, Manager_Hiredate, Manager_Phone, <u>Finance_ID</u>, Finance_Account_Number, Finance_Balance)

2NF

- Manager_Manager_ID, Manager_Name, Manager_Email, Manager_Password,Manager_Picture, Manager_Hiredate, Manager_Phone)
- Finance(Finance_ID, Finance_Account_Number, Finance_Balance)

3NF

No transitive dependency found. Same as 2NF.

- Manager(Manager_ID, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate)
- Finance(Finance_ID, Finance_Account_Number, Finance_Balance, Manager_ID)
- Manager_Phone (Mp_ID, Manager_ID, Manager_Phone)

4.1.3 (Manager \rightarrow Teams)

$\underline{\mathbf{UNF}}$

(<u>Manager_ID</u>, Manager_Name, Manager_Email, Manager_Password,Manager_Picture, Manager_Hiredate, Manager_Phone, <u>Team_ID</u>, Team_Name,Team_Icon, Team_established_date, Team_country,Total_Price_Money,Team_Winnig)

1NF

Winning & Phone are multi-valued attribute.

• (<u>Manager_ID</u>, Manager_Name, Manager_Email, Manager_Password,Manager_Picture, Manager_Hiredate, Manager_Phone, <u>Team_ID</u>, Team_Name,Team_Icon, Team_established_date, Team_country,Team_Total_Price_Money,Team_Winnig)

2NF

- Manager_Manager_ID, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate, Manager_Phone)
- Team(Team_ID, Team_Name, Team_Icon, Team_established_date, Total_Price_Money, Team_country

3NF

No transitive dependency found. Same as 2NF.

- Manager(Manager_ID, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate)
- **Team**(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Price_Money, **Manager_ID**
- Team_Winnig(Tw_ID, Team_ID, Team_Winnig)
- Manager_Phone (Mp_ID, Manager_ID, Manager_Phone)

4.1.4 (SocialMedia \rightarrow ContentCreator)

UNF

(<u>SocialMedia_ID</u>, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Phone, SocialMedia_Hiredate, SocialMedia_Salary, <u>ContentCreator_ID</u>, ContentCreator_Name, ContentCreator_Email, ContentCreator_Password, ContentCreator_Picture, ContentCreator_Phone, ContentCreator_Hiredate, ContentCreator_Salary, ContentCreator_Facebook_Link, ContentCreator_Twitter_Link, ContentCreator_Instagram_Link, ContentCreator_Youtube_Link, ContentCreator_Country, ContentCreator_City, ContentCreator_Street, ContentCreator_Zip_Code)

1NF

Phone is multi-valued attribute.

• (<u>SocialMedia_ID</u>, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Phone, SocialMedia_Hiredate, SocialMedia_Salary, <u>ContentCreator_ID</u>, ContentCreator_Name, ContentCreator_Email, ContentCreator_Password, ContentCreator_Picture, ContentCreator_Phone, ContentCreator_Hiredate, ContentCreator_Salary, ContentCreator_Facebook_Link, ContentCreator_Twitter_Link, ContentCreator_ator_

 $Instagram_Link, ContentCreator_Youtube_Link \,,\, ContentCreator_Country, ContentCreator_City, \, ContentCreator_Street, \, ContentCreator_Zip_Code)$

2NF

- SocialMedia (SocialMedia_ID, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Phone, SocialMedia_Hiredate, SocialMedia_Salary)
- ContentCreator (ContentCreator_ID, ContentCreator_Name, ContentCreator_Email, ContentCreator_Password, ContentCreator_Picture, ContentCreator_Phone, ContentCreator_Hiredate, ContentCreator_Salary, ContentCreator_Facebook_Link, ContentCreator_Twitter_Link, ContentCreator_Unstagram_Link_ContentCreator_Voutube_Link_ContentCreator_Country_Country_ContentCreator_Country_Countr

Instagram_Link, ContentCreator_Youtube_Link, ContentCreator_Country, ContentCreator_City, ContentCreator_Street, ContentCreator_Zip_Code)

3NF

- SocialMedia SocialMedia ID, SocialMedia Name, SocialMedia Email, SocialMedia Password, SocialMedia Picture, SocialMedia Hiredate, SocialMedia Salary)
- ContentCreator <u>ContentCreator_ID</u>, ContentCreator_Name, ContentCreator_Email, ContentCreator_Password, ContentCreator_Picture, ContentCreator_Hiredate, ContentCreator_Salary)
- ContentCreator_SocialMedia (ContentCreator_ID, SocialMedia_ID, ContentCreator_Facebook_Link, ContentCreator_Twitter_Link, ContentCreator_Instagram_Link, ContentCreator_Youtube_Link)
- ContentCreator_Address (ContentCreator_ID, ContentCreator_Country, ContentCreator_City, ContentCreator_Street, ContentCreator_Zip_Code)

- SocialMedia (SocialMedia_ID, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Hiredate, SocialMedia_Salary)
- ContentCreator (ContentCreator_ID, ContentCreator_Name, ContentCreator_Email, ContentCreator_Password, ContentCreator_Picture, ContentCreator_Hiredate, ContentCreator_Salary)
- ContentCreator_SocialMedia (<u>Ccs_ID</u>,ContentCreator_ID, ContentCreator_Facebook_Link, ContentCreator_Twitter_Link, ContentCreator_ Instagram_Link, ContentCreator_Youtube_Link)
- ContentCreator_Address (<u>Cca_ID</u>, ContentCreator_ID, ContentCreator_Country, ContentCreator_City, ContentCreator_Street, ContentCreator_Zip_Code)
- ContentCreator_Phone (Ccp_ID, ContentCreator_ID, ContentCreator_Phone)
- SocialMedia_Phone (Smp_ID, SocialMedia_ID, SocialMedia_Phone)
- ContentCreator_SocialMedia_Phone (<u>Ccp_ID</u>, ContentCreator_ID, ContentCreator_Phone)

4.2 Pay branch

4.2.1 (Finance \rightarrow SocialMedia)

$\overline{\text{UNF}}$

(<u>Finance_ID</u>, Finance_Account_Number, Finance_Balance, <u>SocialMedia_ID</u>, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Phone, SocialMedia_Hiredate, SocialMedia_Salary)

1NF

Phone is multi-valued attribute.

• (<u>Finance_ID</u>, Finance_Account_Number, Finance_Balance, <u>SocialMedia_ID</u>, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Phone, SocialMedia_Hiredate, SocialMedia_Salary)

2NF

- Finance(Finance_ID, Finance_Account_Number, Finance_Balance)
- SocialMedia(SocialMedia_ID, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Phone, SocialMedia_Hiredate, SocialMedia_Salary)

3NF

No transitive dependency found. Same as 2NF.

- Finance(Finance_ID, Finance_Account_Number, Finance_Balance)
- SocialMedia(SocialMedia_ID, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Hiredate, SocialMedia_Salary, Finance_ID)
- SocialMedia_Phone (Smp_ID, SocialMedia_ID, SocialMedia_Phone)

4.2.2 (Finance \rightarrow organization)

UNF

(<u>Finance_ID</u>, Finance_Account_Number, Finance_Balance, <u>Organization_ID</u>, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone)

1NF

Phone is multi-valued attribute.

• (<u>Finance_ID</u>, Finance_Account_Number, Finance_Balance, <u>Organization_ID</u>, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone)

2NF

- Finance(Finance_ID, Finance_Account_Number, Finance_Balance)
- Organization(Organization_ID, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone)

3NF

No transitive dependency found. Same as 2NF.

- Finance(Finance_ID, Finance_Account_Number, Finance_Balance)
- Organization(Organization_ID, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone, Finance_ID)
- Organization_Phone (Op_ID, Organization_ID,Organization_Phone)

4.3 Formed branch

$4.3.1 \quad (\text{Teams} \rightarrow \text{Player})$

$\overline{ ext{UNF}}$

(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning,

Team_Winnig, <u>Player_ID</u>, <u>Player_Name</u>, <u>Player_Email</u>, <u>Player_Password</u>, <u>Player_Picture</u>, <u>Player_JoinDate Player_Phone</u>, <u>Player_Salary</u>, <u>Player_Winnig_Money</u>, <u>Player_Play_Hours</u>, <u>Player_country</u>, <u>Player_City</u>, <u>Player_Street</u>, <u>Player_Zip_Code</u>, <u>Player_DOB</u>, <u>Player_Facebook_Link</u>, <u>Player_Instagram_Link</u>, <u>Player_Twitter_Link</u>, <u>Player_Youtube_Link</u>)

1NF

Phone & Wining number are multi-valued attribute.

• (<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig, <u>Player_ID</u>, Player_Name, Player_Email, Player_Password, Player_Picture, Player_JoinDate, Player_Phone, Player_Salary, Player_Winnig_Money, Player_Play_Hours, Player_country, Player_City, Player_Street, Player_Zip_Code, Player_DOB, Player_Facebook_Link, Player_Instagram_Link, Player_Twitter_Link, Player_Youtube_Link)

2NF

- **Team**(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig)
- Player_Player_ID, Player_Name, Player_Email, Player_Password, Player_Picture, Player_JoinDate, Player_Salary, Player_Winnig_Money, Player_Play_Hours, Player_country, Player_City, Player_Street, Player_Zip_Code, Player_DOB, Player_Facebook_Link, Player_Instagram_Link, Player_Twitter_Link, Player_Youtube_Link)

3NF

- **Team**(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig)
- Player_ID, Player_Name, Player_Email, Player_Password, Player_Picture, Player_JoinDate, Player_Salary, Player_Winnig_Money, Player_Play_Hours, Player_DOB)
- Player_Address (<u>Pa_ID</u>, Player_ID, Player_country, Player_City, Player_Street, Player_Zip_Code)
- Player_Social_Link (Psl_ID, Player_ID, Player_Facebook_Link, Player_Instagram_Link, Player_Twitter_Link, Player_Youtube_Link)

- **Team**(<u>Team_ID</u>, <u>Team_Name</u>, <u>Team_Icon</u>, <u>Team_established_date</u>, <u>Team_country</u>, <u>Total_Earning</u>, <u>Team_Winnig</u>)
- Player(Player_ID, Player_Name, Player_Email, Player_Password, Player_Picture, Player_JoinDate, Player_Salary, Player_Play_Hours, Player_DOB)

- Player_Address (Pa_ID, Player_ID, Player_country, Player_City, Player_Street, Player_Zip_Code)
- Player_Social_Link (<u>Psl_ID</u>, Player_ID, Player_Facebook_Link, Player_Instagram_Link, Player_Twitter_Link, Player_Youtube_Link)
- Player_Phone (Pp_ID, Player_ID, Player_Phone)
- Player_Wining (<u>Pw_ID</u>, Player_ID, Player_Winnig)
- $\bullet \ \, \mathbf{Player_Team} \ (\underline{\mathrm{Pt_ID}}, \, \mathbf{Player_ID}, \, \mathbf{Team_ID})$

4.4 Has branch

$\textbf{4.4.1} \quad (\textbf{Record} \rightarrow \textbf{Tournament})$

$\underline{\mathbf{UNF}}$

(<u>Record_ID</u>, Record_Date, Record_Price_Pool, <u>Tournament_ID</u>, Tournament_Name, Tournament_StartingDate, Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool)

1NF

• (<u>Record_ID</u>, Record_Date, Record_Price_Pool, <u>Tournament_ID</u>, Tournament_Name, Tournament_StartingDate, Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool)

2NF

- Record(Record_ID, Record_Date, Record_Price_Pool, Tournament_ID)
- Tournament_ID, Tournament_Name, Tournament_StartingDate,Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool)

3NF

No transitive dependency found. Same as 2NF.

- Record(Record_ID, Record_Date, Record_Price_Pool, Tournament_ID)
- Tournament_ID, Tournament_Name, Tournament_StartingDate,Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool)

4.4.2 (Tournament \rightarrow Game)

$\underline{\mathbf{UNF}}$

(<u>Tournament_ID</u>, Tournament_Name, Tournament_StartingDate, Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool, <u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)

1NF

• (<u>Tournament_ID</u>, Tournament_Name, Tournament_StartingDate, Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool, <u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)

2NF

- **Tournament**_ID, Tournament_Name, Tournament_StartingDate,Tournament_Ending Tournament_Location, Tournament_Prize_Pool)
- Game(<u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)

3NF

No transitive dependency found. Same as 2NF.

- Tournament_ID, Tournament_Name, Tournament_StartingDate,Tournament_Ending Tournament_Location, Tournament_Prize_Pool)
- Game(Game_ID, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)
- Tournament_Game(Tournament_ID, Game_ID)

4.5 Participate branch

$4.5.1 \quad (\text{Teams} \rightarrow \text{Game})$

UNF

(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig, <u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool Game_Genre, Game_Publisher))

1NF

• (<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig, <u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)

2NF

- **Team**(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig)
- Game(<u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)

3NF

No transitive dependency found. Same as 2NF.

- **Team**(<u>Team_ID</u>, <u>Team_Name</u>, <u>Team_Icon</u>, <u>Team_established_date</u>, <u>Team_country</u>, <u>Total_Earning</u>, <u>Team_Winnig</u>)
- Game(<u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)
- Team_Game(Team_ID, Game_ID)

4.6 Host branch

4.6.1 (Organizer \rightarrow Tournament)

UNF

(<u>Tournament_ID</u>, Tournament_Name, Tournament_StartingDate, Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool, <u>Organization_ID</u>, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone)

1NF

Phone is a multi-vale attribute.

• (<u>Tournament_ID</u>, Tournament_Name, Tournament_StartingDate, Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool, <u>Organization_ID</u>, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone)

2NF

- Tournament_ID, Tournament_Name, Tournament_StartingDate,Tournament_Ending Tournament_Location, Tournament_Prize_Pool, Organization_ID)
- Organization(Organization_ID, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone)

3NF

No transitive dependency found. Same as 2NF.

- Tournament_ID, Tournament_Name, Tournament_StartingDate,Tournament_Ending Tournament_Location, Tournament_Prize_Pool, Organization_ID)
- Organization (Organization_ID, Organization_Name, Organization_Email, Organization_Password, Organization_Picture)
- Organization_Phone(Organization_ID, Organization_Phone)
- Organization_Tournament(Organization_ID, <u>Tournament_ID</u>)

4.7 Sponsor branch

4.7.1 (Companies \rightarrow Organization)

UNF

(<u>Organization_ID</u>, Organization_Name, Organization_Email, Organization_Picture, Organization_Phone, <u>Company_ID</u>, Company_Name, Company_Email, Company_Picture, Company_Phone, location)

1NF

phone is a multi-value attribute.

• (<u>Organization_ID</u>, Organization_Name, Organization_Email, Organization_Picture, Organization_Phone, <u>Company_ID</u>, Company_Name, Company_Email, Company_Picture, Company_Phone, <u>location</u>)

2NF

- Organization(Organization_ID, Organization_Name, Organization_Email, Organization_Picture, Organization_Phone, Company_ID)
- Company (Company_ID, Company_Name, Company_Email, Company_Picture, Company_Phone, location)

3NF

No transitive dependency found. Same as 2NF.

- Organization(Organization_ID, Organization_Name, Organization_Email, Organization_Picture, Company_ID)
- Organization_Phone(Organization_ID, Organization_Phone)
- Company (Company_ID, Company_Name, Company_Email, Company_Picture, Company_Phone, location)
- Company_Phone(Company_ID, Company_Phone)
- Organization_Company(Organization_ID, Company_ID)

4.7.2 (Companies \rightarrow Teams)

UNF

(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig, <u>Company_ID</u>, Company_Name, Company_Email, Company_Password, Company_Picture, Company_Phone, Company_location)

1NF

Phone is multi-value attribute.

• (<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig, <u>Company_ID</u>, Company_Name, Company_Email, Company_Password, Company_Picture, Company_Phone, Company_location)

2NF

- **Team**(<u>Team_ID</u>, <u>Team_Name</u>, <u>Team_Icon</u>, <u>Team_established_date</u>, <u>Team_country</u>, <u>Total_Earning</u>, <u>Team_Winnig</u>
- Company (Company ID, Company Name, Company Email, Company Password, Company Picture, Company Phone, Company location)

3NF

No transitive dependency found. Same as 2NF.

- **Team**(<u>Team_ID</u>, <u>Team_Name</u>, <u>Team_Icon</u>, <u>Team_established_date</u>, <u>Team_country</u>, <u>Total_Earning</u>, <u>Team_Winnig</u>
- Company (Company ID, Company Name, Company Email, Company Password, Company Picture, Company Phone, Company Location)
- Team_Company(Team_ID, Company_ID)
- Company_Phone(Company_ID, Company_Phone)

4.8 Temporary Tables

- 1. **Manager** (Manager_ID, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate, **Admin_ID**)
- 2. Admin (Admin_ID, Admin_Name, Admin_Email, Admin_Password, Admin_Picture)
- 3. Manager_Phone (Mp_ID, Manager_ID, Manager_Phone)
- 4. Manager_Hanager_ID, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate)
- 5. Finance(Finance_ID, Finance_Account_Number, Finance_Balance, Manager_ID)
- 6. Manager_Phone (Mp_ID, Manager_ID, Manager_Phone)
- 7. Manager_Manager_D, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate)
- 8. **Team**(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Price_Money, **Manager_ID**
- 9. **Team_Winnig**(<u>Tw_ID</u>, <u>Team_ID</u>, Team_Winnig)
- 10. Manager_Phone (Mp_ID, Manager_ID, Manager_Phone)
- 11. **SocialMedia** (<u>SocialMedia_ID</u>, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Hiredate, SocialMedia_Salary)
- 12. **ContentCreator** (<u>ContentCreator_ID</u>, ContentCreator_Name, ContentCreator_Email, ContentCreator_Password, ContentCreator_Picture, ContentCreator_Hiredate, ContentCreator_Salary)
- 13. ContentCreator_SocialMedia (<u>Ccs_ID</u>,ContentCreator_ID, ContentCreator_Facebook_Link, ContentCreator_Twitter_Link, ContentCreator_ Instagram_Link, ContentCreator_Youtube_Link)
- 14. ContentCreator_Address (<u>Cca_ID</u>, ContentCreator_ID, ContentCreator_Country, ContentCreator_City, ContentCreator_Street, ContentCreator_Zip_Code)
- 15. ContentCreator_Phone (Ccp_ID, ContentCreator_ID, ContentCreator_Phone)
- 16. SocialMedia_Phone (Smp_ID, SocialMedia_ID, SocialMedia_Phone)
- 17. Finance (Finance ID, Finance Account Number, Finance Balance)
- 18. **Organization**(Organization_ID, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone, **Finance_ID**)
- 19. **Organization_Phone** (Op_ID, **Organization_ID**, Organization_Phone)
- 20. Finance Finance ID, Finance Account Number, Finance Balance)
- 21. SocialMedia_SocialMedia_ID, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Hiredate, SocialMedia_Salary, Finance_ID)
- 22. SocialMedia Phone (Smp.ID, SocialMedia ID, SocialMedia Phone)

- 23. Team_(Team_ID, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Earning, Team_Winnig)
- 24. **Player**_Player_Name, Player_Email, Player_Password, Player_Picture, Player_JoinDate, Player_Salary, Player_Play-Hours, Player_DOB)
- 25. Player_Address (Pa_ID, Player_ID, Player_country, Player_City, Player_Street, Player_Zip_Code)
- 26. **Player_Social_Link** (<u>Psl_ID</u>, **Player_ID**, Player_Facebook_Link, Player_Instagram_Link, Player_Twitter_Link, Player_Youtube_Link)
- 27. Player_Phone (Pp_ID, Player_ID, Player_Phone)
- 28. Player_Wining (Pw_ID, Player_ID, Player_Winnig)
- 29. Player_Team (Pt_ID, Player_ID, Team_ID)
- 30. Record(Record_ID, Record_Date, Record_Price_Pool, Tournament_ID)
- 31. **Tournament**_ID, Tournament_Name, Tournament_StartingDate,Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool)
- 32. **Tournament**(<u>Tournament_ID</u>, Tournament_Name, Tournament_StartingDate,Tournament_Ending Tournament_Location, Tournament_Prize_Pool)
- 33. **Game**(<u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)
- 34. Tournament_Game(<u>Tournament_ID</u>, <u>Game_ID</u>)
- 35. **Tournament**_ID, Tournament_Name, Tournament_StartingDate,Tournament_Ending Tournament_Location, Tournament_Prize_Pool, Organization_ID)
- 36. Organization (Organization ID, Organization Name, Organization Email, Organization Password Organization Picture)
- 37. Organization_Phone(Organization_ID, Organization_Phone)
- 38. **Organization_Tournament**(Organization_ID, <u>Tournament_ID</u>)
- 39. **Team**(<u>Team_ID</u>, <u>Team_Name</u>, <u>Team_Icon</u>, <u>Team_established_date</u>, <u>Team_country</u>, <u>Total_Earning</u>, <u>Team_Winnig</u>)
- 40. Game_Came_ID, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)
- 41. Team_Game(Team_ID, Game_ID)
- 42. Organization (Organization ID, Organization Name, Organization Email, Organization Picture, Company ID)
- 43. Organization_Phone(Organization_ID, Organization_Phone)
- 44. **Company**(Company_ID, Company_Name, Company_Email, Company_Picture, Company_Phone, location)

- 45. Company_Phone(Company_ID, Company_Phone)
- 46. **Organization_Company**(Organization_ID, Company_ID)
- 47. Team (Team ID, Team Name, Team Icon, Team established date, Team country, Total Earning, Team Winnig
- 48. Company (Company ID, Company Name, Company Email, Company Password, Company Pietur Company Phone, Company location)
- 49. **Team_Company**(<u>Team_ID</u>, Company_ID)
- 50. Company_Phone(Company_ID, Company_Phone)

4.9 Final Tables

- 1. **Manager** (Manager_ID, Manager_Name, Manager_Email, Manager_Password, Manager_Picture, Manager_Hiredate, **Admin_ID**)
- 2. Admin (Admin_ID, Admin_Name, Admin_Email, Admin_Password, Admin_Picture)
- 3. Manager_Phone (Mp_ID, Manager_ID, Manager_Phone)
- 4. Finance(Finance_ID, Finance_Account_Number, Finance_Balance, Manager_ID)
- 5. **Team**(<u>Team_ID</u>, Team_Name, Team_Icon, Team_established_date, Team_country, Total_Price_Money, **Manager_ID**
- 6. **Team_Winnig**(<u>Tw_ID</u>, **Team_ID**, Team_Winnig)
- 7. **SocialMedia** (SocialMedia_ID, SocialMedia_Name, SocialMedia_Email, SocialMedia_Password, SocialMedia_Picture, SocialMedia_Hiredate, SocialMedia_Salary)
- 8. **ContentCreator** (<u>ContentCreator_ID</u>, ContentCreator_Name, ContentCreator_Email, ContentCreator_Password, ContentCreator_Picture, ContentCreator_Hiredate, ContentCreator_Salary)
- 9. ContentCreator_SocialMedia (<u>Ccs_ID</u>,ContentCreator_ID, ContentCreator_Facebook_Link, ContentCreator_Twitter_Link, ContentCreator_ Instagram_Link, ContentCreator_Youtube_Link)
- 10. ContentCreator_Address (<u>Cca_ID</u>, ContentCreator_ID, ContentCreator_Country, ContentCreator_City, ContentCreator_Street, ContentCreator_Zip_Code)
- 11. ContentCreator_Phone (Ccp_ID, ContentCreator_ID, ContentCreator_Phone)
- 12. SocialMedia_Phone (Smp_ID, SocialMedia_ID, SocialMedia_Phone)

- 13. **Organization**(Organization_ID, Organization_Name, Organization_Email, Organization_Password, Organization_Picture, Organization_Phone, **Finance_ID**)
- 14. **Organization_Phone** (Op_ID, **Organization_ID**, Organization_Phone)
- 15. **Player**(<u>Player_ID</u>, Player_Name, Player_Email, Player_Password, Player_Picture, Player_JoinDate, Player_Salary, Player_Play_Hours, Player_DOB)
- 16. Player_Address (Pa_ID, Player_ID, Player_country, Player_City, Player_Street, Player_Zip_Code)
- 17. **Player_Social_Link** (<u>Psl_ID</u>, **Player_ID**, Player_Facebook_Link, Player_Instagram_Link, Player_Twitter_Link, Player_Youtube_Link)
- 18. Player_Phone (Pp_ID, Player_ID, Player_Phone)
- 19. Player_Wining (<u>Pw_ID</u>, Player_ID, Player_Winnig)
- 20. Player_Team (Pt_ID, Player_ID, Team_ID)
- 21. Record(Record_ID, Record_Date, Record_Price_Pool, Tournament_ID)
- 22. **Tournament**_ID, Tournament_Name, Tournament_StartingDate,Tournament_EndingDate, Tournament_Location, Tournament_Prize_Pool)
- 23. **Game**(<u>Game_ID</u>, Game_Name, Game_Icon, Game_ReleaseDate, Game_Platform, Game_PricePool, Game_Genre, Game_Publisher)
- 24. Tournament_Game(Tournament_ID, Game_ID)
- 25. Organization_Tournament(Organization_ID, <u>Tournament_ID</u>)
- 26. Team_Game(Team_ID, Game_ID)
- 27. **Company**(Company_ID, Company_Name, Company_Email, Company_Picture, Company_Phone, location)
- 28. Company_Phone(Company_ID, Company_Phone)
- 29. **Organization_Company**(Organization_ID, Company_ID)
- 30. **Team_Company**(<u>Team_ID</u>, Company_ID)

4.10 Schema Diagram



Schema Diagram

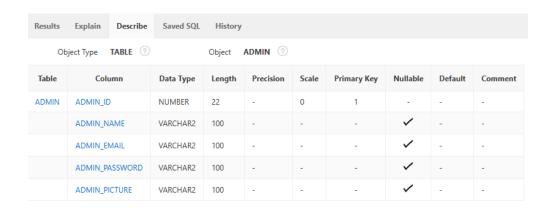
SQL Queries

5.1 Table Creation

```
CREATE TABLE Admin (
Admin_ID INT PRIMARY KEY,
Admin_Name VARCHAR(100),
Admin_Email VARCHAR(100),
Admin_Password VARCHAR(100),
Admin_Picture VARCHAR(100)

);
```

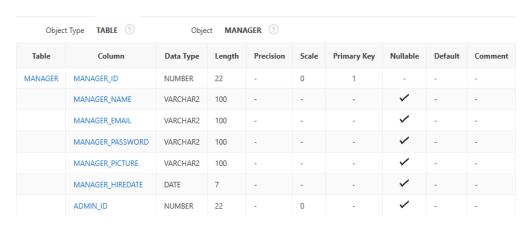
Create Admin table



Admin table description

```
CREATE TABLE Manager (
1
2
            Manager_ID INT PRIMARY KEY,
            Manager_Name VARCHAR (100),
3
            Manager_Email VARCHAR (100),
5
            Manager_Password VARCHAR(100),
6
            Manager_Picture VARCHAR (100),
            Manager_Hiredate DATE,
8
            Admin_ID INT,
            FOREIGN KEY (Admin_id) REFERENCES Manager (Admin_ID)
9
       );
10
```

Create Manager table



Manager table description

```
CREATE TABLE Manager_Phone (

Mp_ID INT PRIMARY KEY,

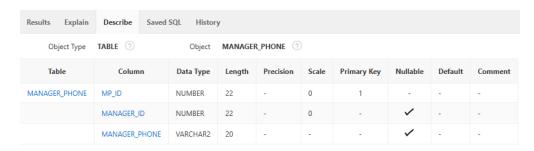
Manager_ID INT,

Manager_Phone VARCHAR(20),

FOREIGN KEY (Manager_ID) REFERENCES Manager (Manager_ID)

);
```

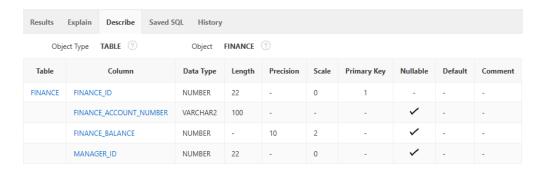
Create Manager Phone table



Manager Phone table description

```
CREATE TABLE Finance (
Finance_ID INT PRIMARY KEY,
Finance_Account_Number VARCHAR(100),
Finance_Balance DECIMAL(10, 2),
Manager_ID INT,
FOREIGN KEY (Manager_ID) REFERENCES Manager (Manager_ID)
);
```

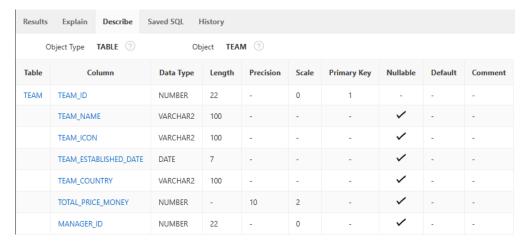
Create Finance table



Finance table description

```
CREATE TABLE Team (
1
2
            Team_ID INT PRIMARY KEY,
3
            Team_Name VARCHAR (100),
4
            Team_Icon VARCHAR (100),
5
            Team_Established_Date DATE,
6
            Team_Country VARCHAR(100),
7
            Total_Price_Money DECIMAL(10, 2),
            Manager_ID INT,
8
9
            FOREIGN KEY (Manager_ID) REFERENCES Manager (Manager_ID)
10
        );
```

Create Team table



Team table description

```
CREATE TABLE Team_Winning (
Tw_ID INT PRIMARY KEY,

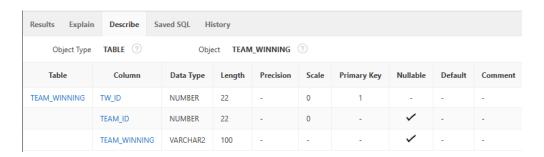
Team_ID INT,

Team_Winning VARCHAR(100),

FOREIGN KEY (Team_ID) REFERENCES Team (Team_ID)

);
```

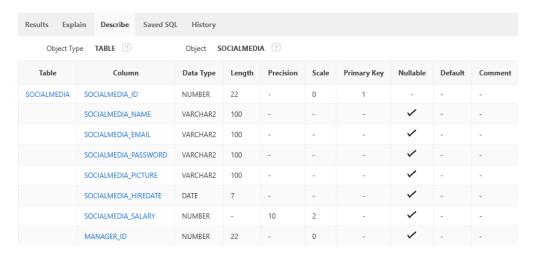
Create Team Winning table



Team Winning table description

```
1
        CREATE TABLE SocialMedia (
2
            SocialMedia_ID INT PRIMARY KEY,
3
            SocialMedia_Name VARCHAR (100),
            SocialMedia_Email VARCHAR(100),
4
5
            {\tt SocialMedia\_Password\ VARCHAR\,(100)\,,}
6
            SocialMedia_Picture VARCHAR(100),
            SocialMedia_Hiredate DATE,
7
8
            SocialMedia_Salary DECIMAL(10, 2),
9
            Manager_ID INT,
10
            FOREIGN KEY (Manager_ID) REFERENCES Manager (Manager_ID)
       );
```

Create SocialMedia table



SocialMedia table description

```
1
        CREATE TABLE ContentCreator (
2
            ContentCreator_ID INT PRIMARY KEY,
3
            ContentCreator_Name VARCHAR(100),
4
            ContentCreator_Email VARCHAR(100),
            ContentCreator_Password VARCHAR (100),
5
6
            ContentCreator_Picture VARCHAR(100),
7
            ContentCreator_Hiredate DATE,
8
            ContentCreator_Salary DECIMAL(10, 2),
9
            SocialMedia_ID INT,
10
            FOREIGN KEY (SocialMedia_ID) REFERENCES SocialMedia (SocialMedia_ID)
       );
11
```

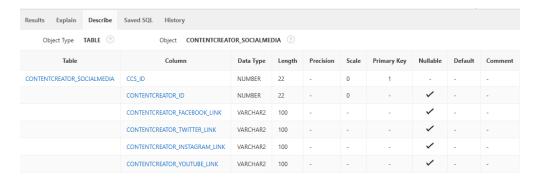
Create ContentCreator table



ContentCreator table description

```
1
       CREATE TABLE ContentCreator_SocialMedia (
2
           Ccs_ID INT PRIMARY KEY,
           ContentCreator_ID INT,
           {\tt ContentCreator\_Facebook\_Link\ VARCHAR(100),}
4
5
           ContentCreator_Twitter_Link VARCHAR(100)
6
           ContentCreator_Instagram_Link VARCHAR(100),
7
           ContentCreator_Youtube_Link VARCHAR(100),
           FOREIGN KEY (ContentCreator_ID) REFERENCES ContentCreator (ContentCreator_ID)
8
9
       );
```

Create ContentCreator SocialMedia table



ContentCreator SocialMedia table description

```
1
       CREATE TABLE ContentCreator_Address (
2
           Cca_ID INT PRIMARY KEY,
3
           ContentCreator_ID INT,
4
           ContentCreator_Country VARCHAR (100),
5
           ContentCreator_City VARCHAR(100),
6
           ContentCreator_Street VARCHAR(100),
           ContentCreator_Zip_Code VARCHAR(20),
7
           FOREIGN KEY (ContentCreator_ID) REFERENCES ContentCreator (ContentCreator_ID)
       );
```

Create ContentCreator Address table

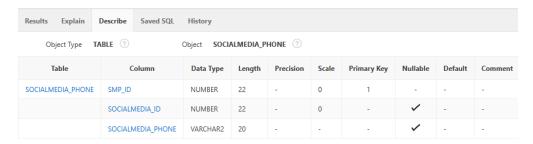


ContentCreator Address table description

Create ContentCreator Phone table

```
CREATE TABLE SocialMedia_Phone (
Smp_ID INT PRIMARY KEY,
SocialMedia_ID INT,
SocialMedia_Phone VARCHAR(20),
FOREIGN KEY (SocialMedia_ID) REFERENCES SocialMedia (SocialMedia_ID)
);
```

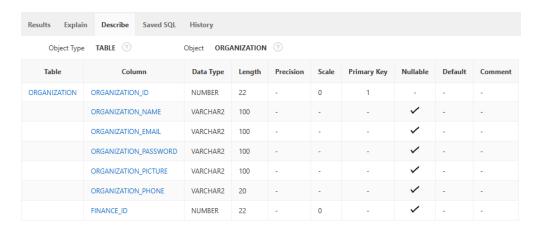
Create SocialMedia Phone table



SocialMedia Phone table description

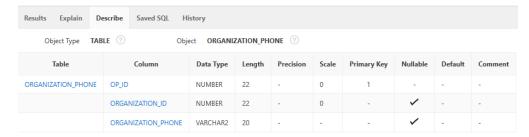
```
1
        CREATE TABLE Organization (
2
            Organization_ID INT PRIMARY KEY,
3
            Organization_Name VARCHAR(100),
            Organization_Email VARCHAR(100),
4
5
            {\tt Organization\_Password\ VARCHAR}\,({\tt 100})\,,
6
            Organization_Picture VARCHAR(100),
7
            Organization_Phone VARCHAR(20),
8
            Finance_ID INT,
9
            FOREIGN KEY (Finance_ID) REFERENCES Finance (Finance_ID)
10
        );
```

Create Organization table



Organization table description

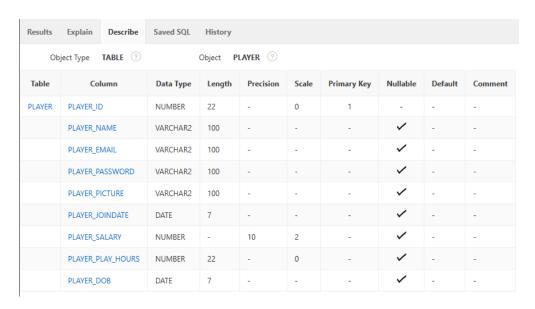
Create Organization Phone table



Organization Phone table description

```
CREATE TABLE Player (
2
            Player_ID INT PRIMARY KEY,
3
            Player_Name VARCHAR (100),
            Player_Email VARCHAR (100),
4
5
            Player_Password VARCHAR (100),
6
            Player_Picture VARCHAR(100),
7
            Player_JoinDate DATE,
8
            Player_Salary DECIMAL(10, 2),
9
            Player_Play_Hours INT,
10
            Player_DOB DATE
       );
11
```

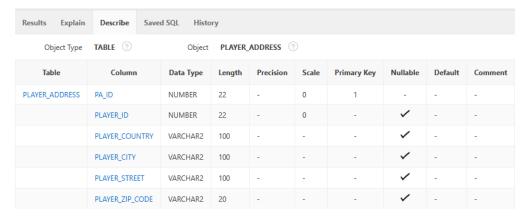
Create Player table



Player table description

```
CREATE TABLE Player_Address (
1
2
           Pa_ID INT PRIMARY KEY,
3
           Player_ID INT,
           Player_Country VARCHAR(100),
4
5
           Player_City VARCHAR (100),
           Player_Street VARCHAR (100),
6
7
           Player_Zip_Code VARCHAR(20),
           FOREIGN KEY (Player_ID) REFERENCES Player (Player_ID)
8
       );
```

Create Player Address table



Player Address table description

```
CREATE TABLE Player_Social_Link (
1
2
           Psl_ID INT PRIMARY KEY,
3
           Player_ID INT,
           Player_Facebook_Link VARCHAR(100),
5
           {\tt Player\_Instagram\_Link~VARCHAR(100),}
6
7
           Player_Twitter_Link VARCHAR(100),
            Player_Youtube_Link VARCHAR(100),
8
           FOREIGN KEY (Player_ID) REFERENCES Player (Player_ID)
9
       );
```

Create Player Social Link table



Player Social Link table description

```
CREATE TABLE Player_Phone (
Pp_ID INT PRIMARY KEY,

Player_ID INT,
Player_Phone VARCHAR(20),
FOREIGN KEY (Player_ID) REFERENCES Player (Player_ID)

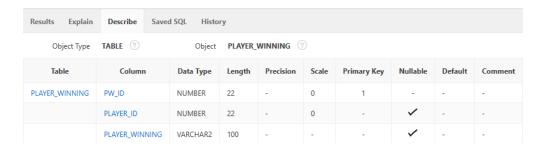
);
```

Create Player Phone table



Player Phone table description

Create Player Winning table



Player Winning table description

```
CREATE TABLE Player_Team (

Pt_ID INT PRIMARY KEY,

Player_ID INT,

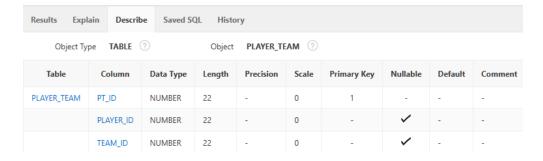
Team_ID INT,

FOREIGN KEY (Player_ID) REFERENCES Player (Player_ID),

FOREIGN KEY (Team_ID) REFERENCES Team (Team_ID)

7);
```

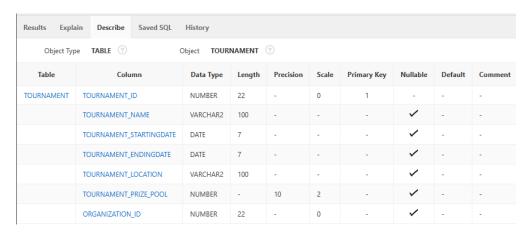
Create Player Team table



Player Team table description

```
1
        CREATE TABLE Tournament (
2
            Tournament_ID INT PRIMARY KEY,
3
            Tournament_Name VARCHAR (100),
4
            Tournament_StartingDate DATE,
5
            Tournament_EndingDate DATE,
6
            Tournament_Location VARCHAR (100),
7
            Tournament_Prize_Pool DECIMAL(10, 2),
            Organization_ID INT,
8
9
            FOREIGN KEY (Organization_ID) REFERENCES Organization (Organization_ID)
10
       );
```

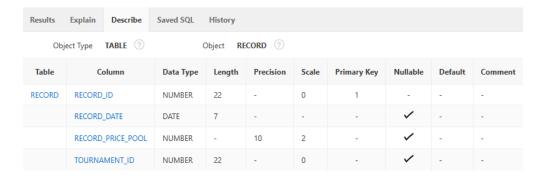
Create Tournament table



Tournament table description

```
CREATE TABLE Record (
Record_ID INT PRIMARY KEY,
Record_Date DATE,
Record_Price_Pool DECIMAL(10, 2),
Tournament_ID INT,
FOREIGN KEY (Tournament_ID) REFERENCES Tournament (Tournament_ID)
);
```

Create Record table



Record table description

```
CREATE TABLE Game (
2
            Game_ID INT PRIMARY KEY,
3
            Game_Name VARCHAR(100),
            Game_Icon VARCHAR(100),
5
            Game_ReleaseDate DATE,
6
            Game_Platform VARCHAR(100),
7
            Game_Price_Pool DECIMAL(10, 2),
8
            Game_Genre VARCHAR(100),
9
            Game_Publisher VARCHAR(100)
10
       );
```

Create Game table



Game table description

```
CREATE TABLE Tournament_Game (
Tournament_ID INT,
Game_ID INT,
PRIMARY KEY (Tournament_ID, Game_ID),
FOREIGN KEY (Tournament_ID) REFERENCES Tournament (Tournament_ID),
FOREIGN KEY (Game_ID) REFERENCES Game (Game_ID)
);
```

Create Tournament Game table



Tournament Game table description

Create Organization Tournament table

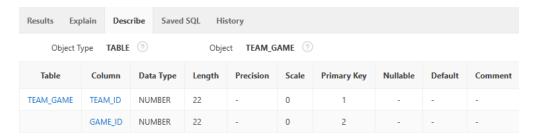


Organization Tournament table description

```
CREATE TABLE Team_Game (
Team_ID INT,
Game_ID INT,
Game_ID INT,
PRIMARY KEY (Team_ID, Game_ID),
FOREIGN KEY (Team_ID) REFERENCES Team (Team_ID),
FOREIGN KEY (Game_ID) REFERENCES Game (Game_ID)

7 );
```

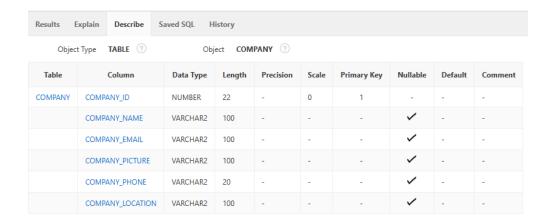
Create Team Game table



Team Game table description

```
CREATE TABLE Company (
Company_ID INT PRIMARY KEY,
Company_Name VARCHAR(100),
Company_Email VARCHAR(100),
Company_Picture VARCHAR(100),
Company_Phone VARCHAR(20),
Company_Location VARCHAR(100)
);
```

Create Company table



Company table description

```
CREATE TABLE Company_Phone (
Company_ID INT,
Company_Phone VARCHAR(20),
PRIMARY KEY (Company_ID, Company_Phone),
FOREIGN KEY (Company_ID) REFERENCES Company (Company_ID)
);
```

Create Company Phone table



Company Phone table description

Create Organization Company table



Organization Company table description

```
CREATE TABLE Team_Company (
Team_ID INT,
Company_ID INT,
PRIMARY KEY (Team_ID, Company_ID),
FOREIGN KEY (Team_ID) REFERENCES Team (Team_ID),
FOREIGN KEY (Company_ID) REFERENCES Company (Company_ID)
);
```

Create Team Company table



Team Company table description

5.2 Sequence Creation

```
-- Create sequence for Manager table
    CREATE SEQUENCE seq_manager_id START WITH 1 INCREMENT BY 1;
3
4
    -- Create sequence for Admin table
   CREATE SEQUENCE seq_admin_id START WITH 1 INCREMENT BY 1;
6
     - Create sequence for Manager_Phone table
    CREATE SEQUENCE seq_mp_id START WITH 1 INCREMENT BY 1;
q
10
     - Create sequence for Finance table
    CREATE SEQUENCE seq_finance_id START WITH 1 INCREMENT BY 1;
11
12
13
     - Create sequence for Team table
   CREATE SEQUENCE seq_team_id START WITH 1 INCREMENT BY 1;
14
15
     - Create sequence for Team_Winning table
16
   CREATE SEQUENCE seq_tw_id START WITH 1 INCREMENT BY 1;
17
18
     - Create sequence for SocialMedia table
19
20
   CREATE SEQUENCE seq_socialmedia_id START WITH 1 INCREMENT BY 1;
21
22
    -- Create sequence for ContentCreator table
23
   CREATE SEQUENCE seq_contentcreator_id START WITH 1 INCREMENT BY 1;
24
    -- Create sequence for ContentCreator_SocialMedia table
25
26
    CREATE SEQUENCE seq_ccs_id START WITH 1 INCREMENT BY 1;
27
28
    -- Create sequence for ContentCreator_Address table
    CREATE SEQUENCE seq_cca_id START WITH 1 INCREMENT BY 1;
29
30
31
    -- Create sequence for ContentCreator_Phone table
32
    CREATE SEQUENCE seq_ccp_id START WITH 1 INCREMENT BY 1;
33
    -- Create sequence for SocialMedia_Phone table
34
    CREATE SEQUENCE seq_smp_id START WITH 1 INCREMENT BY 1;
35
36
    -- Create sequence for Organization table
37
    CREATE SEQUENCE seq_organization_id START WITH 1 INCREMENT BY 1;
38
39
40
    -- Create sequence for Organization_Phone table
    CREATE SEQUENCE seq_op_id START WITH 1 INCREMENT BY 1;
41
42
    -- Create sequence for Player table
43
44
   CREATE SEQUENCE seq_player_id START WITH 1 INCREMENT BY 1;
45
    -- Create sequence for Player_Address table
46
47
   CREATE SEQUENCE seq_pa_id START WITH 1 INCREMENT BY 1;
48
    -- Create sequence for Player_Social_Link table
49
   CREATE SEQUENCE seq_psl_id START WITH 1 INCREMENT BY 1;
51
52
    -- Create sequence for Player_Phone table
   CREATE SEQUENCE seq_pp_id START WITH 1 INCREMENT BY 1;
54
55
    -- Create sequence for Player_Winning table
    CREATE SEQUENCE seq_pw_id START WITH 1 INCREMENT BY 1;
56
57
     - Create sequence for Record table
58
    CREATE SEQUENCE seq_record_id START WITH 1 INCREMENT BY 1;
59
60
    -- Create sequence for Tournament table
61
   CREATE SEQUENCE seq_tournament_id START WITH 1 INCREMENT BY 1;
62
63
64
     - Create sequence for Game table
   CREATE SEQUENCE seq_game_id START WITH 1 INCREMENT BY 1;
65
66
     - Create sequence for Company table
67
   CREATE SEQUENCE seq_company_id START WITH 1 INCREMENT BY 1;
68
70
     - Create sequence for Company_Phone table
71
   CREATE SEQUENCE seq_cp_id START WITH 1 INCREMENT BY 1;
72
73
    -- Create sequence for Organization_Company table
74
    CREATE SEQUENCE seq_oc_id START WITH 1 INCREMENT BY 1;
```

Relational Algebra

6.1 Selection

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Conclusion

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Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

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