



Department of Computer Science and Mathematics



A Database Design for the Marvel Galactic Radio Station Company

By

MARVEL DATA GUARDIANS

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A REPORT

Submitted to Dr. Ramzi Haraty in partial fulfillment of the requirements of Phase 3 of the database project for the course CSC/BIF 375 – Database Management Systems

Table of Contents

1. Introduction.....	1
2. Tools used to draw the ER.....	1
3. System Description & Requirements.....	1
4. Legend of ER Diagram Symbols.....	2
5. Complete old ER Diagram for “Marvel Sounds of the Universe”.....	3
6. New Complete Amended ER Diagram for “Marvel Sounds of the Universe”.....	4
6.1. Entity Types & Their Attributes.....	5
6.2. Elaboration on Relationships.....	22
7. ER to Relational Mapping.....	27
7.1. – Step 1- Mapping Strong Entity Types.....	27
7.2. – Step 2 – Mapping of Weak Entity Types.....	31
7.3. – Step 3 – Mapping of Binary 1:1 Relationship Types.....	31
7.4. – Step 4 – Mapping of Binary 1:M Relationship Types.....	32
7.5. – Step 5 – Mapping of Binary M:N Relationship Types.....	34
7.6. – Step 6 – Mapping of multivalued attributes.....	39
7.7. – Step 7 – Mapping of N-ary attributes.....	41
7.8. – Step 8 – Mapping aggregation, specialization relationships.....	41
8. Final Display.....	43
9. Table States	47
10. Edited ER Diagram for phase III	65
11. Database Creation and Queries for “Marvel Sounds of the Universe” database	65
11.1. Creation of the Database Tables and their Descriptions	66
11.2. Insertion of Data into the Database Tables	81
11.3. Complex Queries	105
12. Normalization until the BCNF Normal Formal	112
12.1. Normalization for each relation	113
12.2. Relation Schemas without non-prime attributes	126

Marvel Galactic Radio Station is a unique and innovative addition to the world of radio broadcasting. It is a cutting-edge radio station that combines elements of entertainment, education, and imagination such as space-themed music, original radio dramas, educational programs and space exploration, and interviews with experts in various fields. It's an interstellar journey through the universe from the moment you tune in, you are transported to a world where you can explore distant galaxies, encounter alien species, and witness celestial events, all through the power of sound.

1. Introduction:

Radio stations are broadcast media organizations that transmit audio content over the airwaves to a wide and diverse audience. Radio has been a significant invention of communication and entertainment for decades, offering news, music, talk shows, and various other forms of content. They also have a diverse audience, with listeners of various ages and backgrounds. Our project intends to create a MARVELOUS database design for Galactic Marvel Radio Station.

2. Tool(s) used to draw the ER:

We utilized Microsoft Visio to create our ER model.

3. System Description:

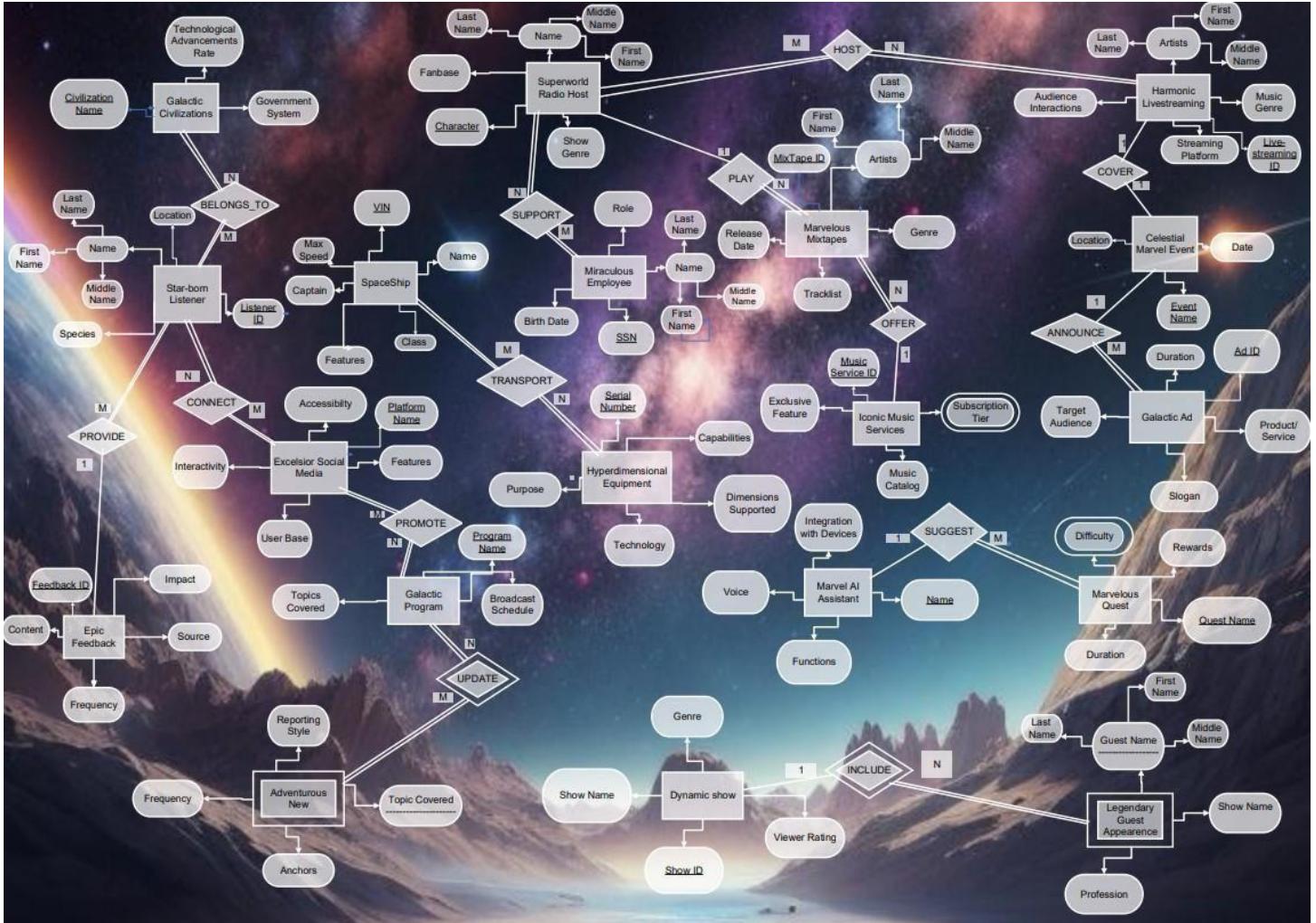
The Marvel Galactic Radio Station operates as a dynamic and engaging platform, where various entities collaborate seamlessly to offer a rich and diverse experience. Galactic Programs, at the heart of the station, are promoted extensively through various Excelsior Social Media, ensuring their broad reach. Super-World Radio Hosts play a central role by curating and presenting content and can feature multiple unique mixtapes, enhancing the variety of offerings. Also, they are all supported by the diverse skill sets and services offered by some Miraculous Employees. Iconic Music Service provides access to these mixtapes through a well-organized distribution system. To make the programs more interactive and captivating, Harmonic Live Streaming is employed, allowing multiple Super-World Radio Hosts to actively participate, and diverse live-streaming events can include a mix of hosts, thereby ensuring an engaging experience. Celestial Marvel Events, covered by Harmonic Live Streaming, become truly unique, with each event complemented by a dedicated harmonic live-streaming session. Effective promotion of these events is achieved through a comprehensive approach, as multiple advertisements are associated with a single event, ensuring broad awareness and interest. Adventurous News updates, shared across various programs, keep the audience well-informed. The radio station maintains efficient operations through the collaboration of Hyperdimensional Equipment and Spaceships, which transport equipment reliably and swiftly. This streamlined process guarantees the seamless operation of the station. Excelsior Social Media platforms foster a strong sense of community among Star-Born Listeners, who can actively engage across multiple platforms, resulting in a highly interactive online environment. The station promotes diversity and the exchange of ideas by connecting Star-Born Listeners of various

Galactic Civilizations, creating a vibrant and interconnected community. The gaming aspect of the radio station is enhanced by Marvel AI Assistants, suggesting a variety of Marvelous Quests, thereby keeping players entertained and engaged where all these quests are included in some Dynamic Shows. Each Galactic Program boasts its unique Broadcast Schedule, ensuring listeners can easily follow their favorite shows and stay informed. This integrated system functions cohesively, delivering diverse content, efficient operations, and a strong sense of community, offering a rich and engaging experience to the audience.

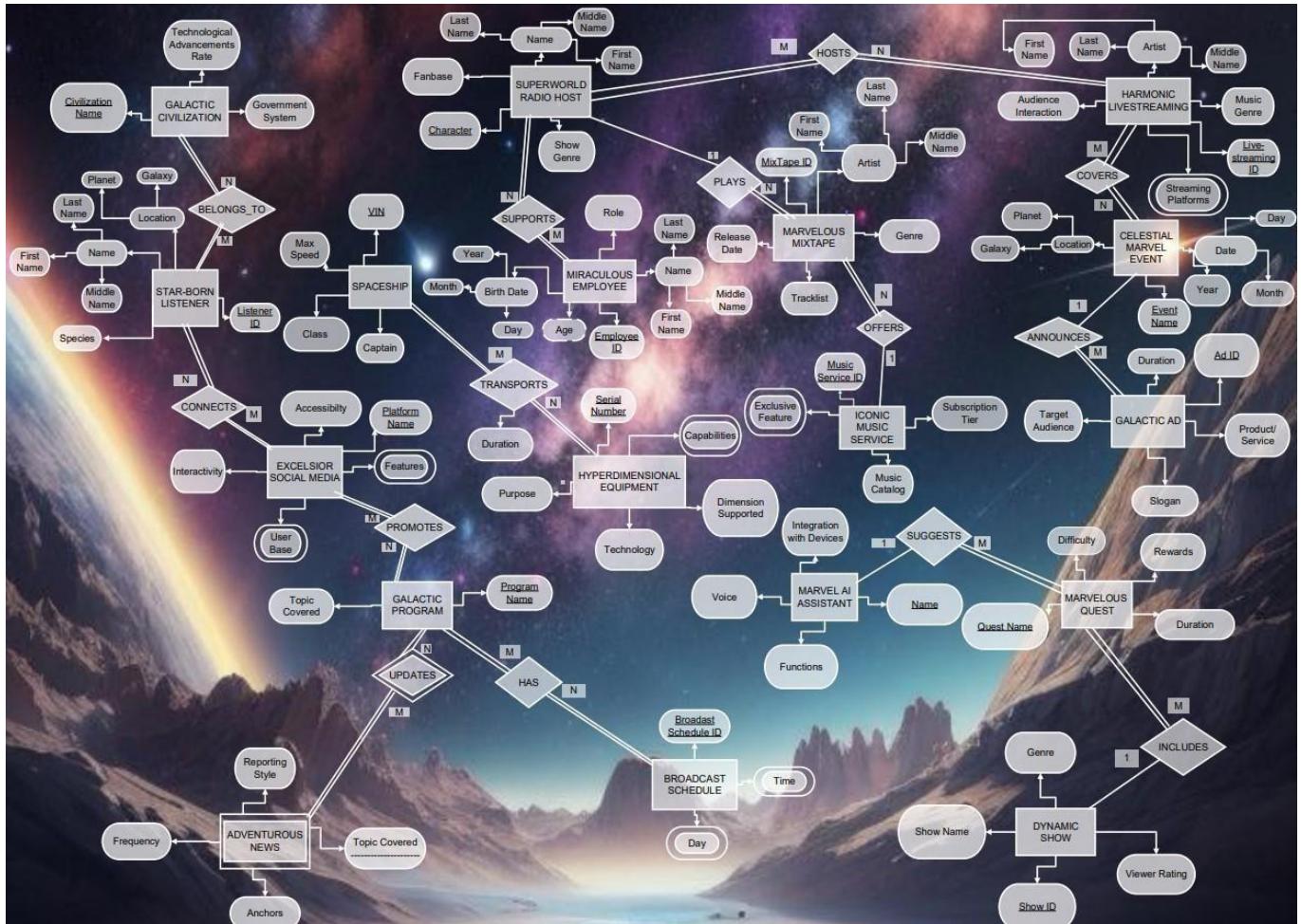
4. Legend of ER diagram symbols:

Symbol	Meaning
	Entity
	Weak Entity
	Relationship
	Identifying Relationship
	Attribute
	Key Attribute
	Multivalued Attribute
	Composite Attribute
	Derived Attribute
	Total Participation of E_2 in R
	Cardinality Ratio 1: N for $E_1:E_2$ in R

5. Complete old ER Diagram for “Galactic Marvel Radio Station”

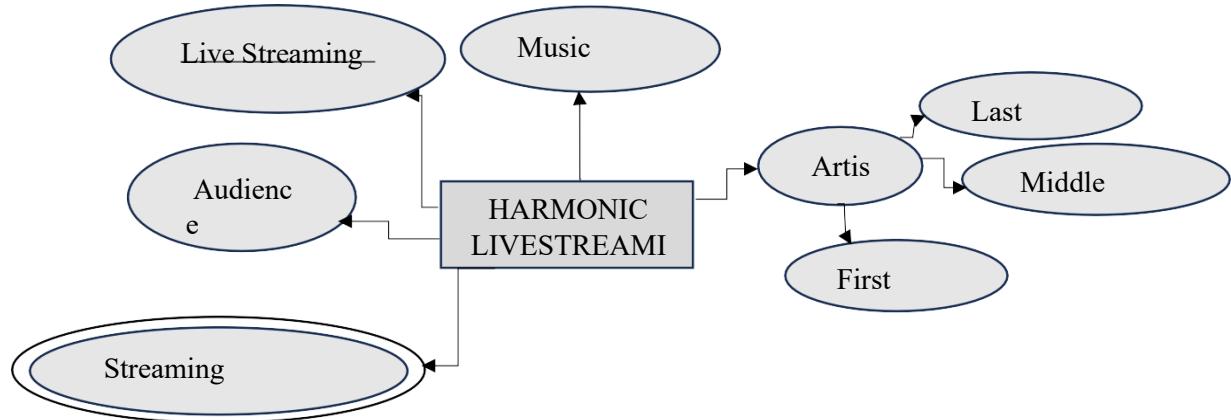


6. New Complete Amended ER Diagram for “Galactic Marvel Radio Station”



6.1. Entity Types & Their Attributes

6.1.1. HARMONIC LIVESTREAMING

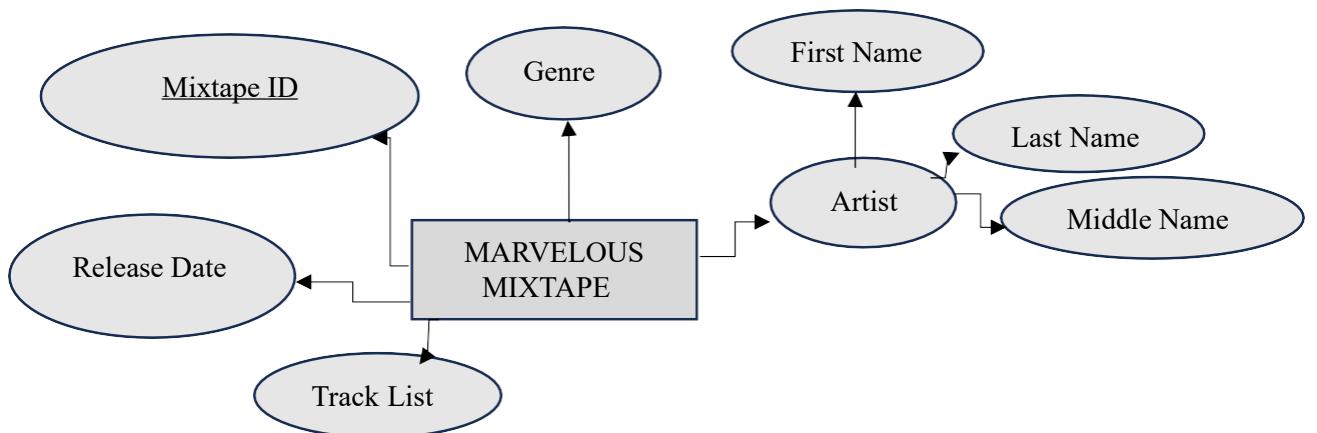


Harmonic livestreaming is an immersive form of online content delivery that blends the world of music and realtime audience interaction. It creates an engaging experience where artists and audiences come together in a harmonious fusion of music, and shared moments.

Attributes:

- a- **Livestreaming ID** (**Key attribute**): acts as a unique identifier of a live stream.
- b- **Music Genre**: The music genre attribute defines the style, mood, and musical direction of the livestream.
- c- **Artist**: The artist attribute lists the performer, band, or musical act involved in the livestream.
- d- **Audience Interaction**: The audience interaction attribute describes the level of engagement and participation allowed for the viewers.
- e- **Streaming Platforms** (**Multi-valued attribute**): The streaming platforms attribute specify the online platform where the harmonic livestream takes place. This could be via dedicated music streaming services, social media platforms, or a specialized live-streaming websites.

6.1.2. MARVELOUS MIXTAPE:



As part of its music offerings, the station features a series of MARVELOUS MIXTAPE each with a unique cosmic theme. These mixtapes are carefully curated to create immersive musical experiences, making them a highlight of the station's programming.

Attributes:

- a- **Mixtape ID** (**key attribute**): it is Mixtape's unique identifier.
- b- **Genre**: The genre attribute of a mixtape helps classify the type of music contained within. Genres can range from classical, jazz, and rock to more specific cosmic or interstellar themes. This attribute sets the musical tone and expectations for the listener.

- c- **Artist (Composite attribute):** This attribute in a mix tape refers to the musicians included, it consists of the first, middle and last name of the artist.
- d- **Release Date:** The release date provides context to the mixtape.
- e- **Track List:** It is a sequential list of the songs featured in the mix, determining the order in which the songs are presented.

6.1.3. GALACTIC PROGRAM:

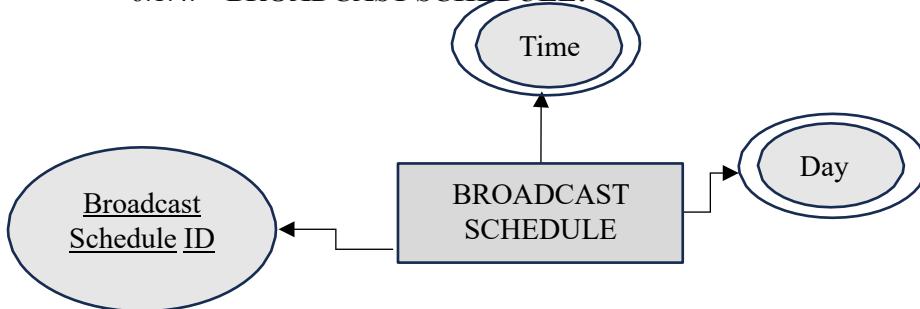


Each program offers a diverse range of content under a certain topic, from space science to imaginative storytelling, and other genres in which they serve as a source of education, inspiration, and entertainment for listeners.

Attributes:

- a- **Program Name (Key attribute):** The program name is the program's unique identifier.
- b- **Topic Covered:** Topic covered tackles the subject matter of the program. A Galactic Program explores various themes, including space exploration, astronomy, astrobiology, fictional space, and adventures. This attribute defines the program content and value. (Ex: under the topic sports, we can explore different themes including Sports in Space, Sports and Education, Covering Sports Games...)

6.1.4. BROADCAST SCHEDULE:



The broadcast schedule provides details on how frequently the program airs. This entity ensures the listeners can tune in at the right time with their favorite programs.

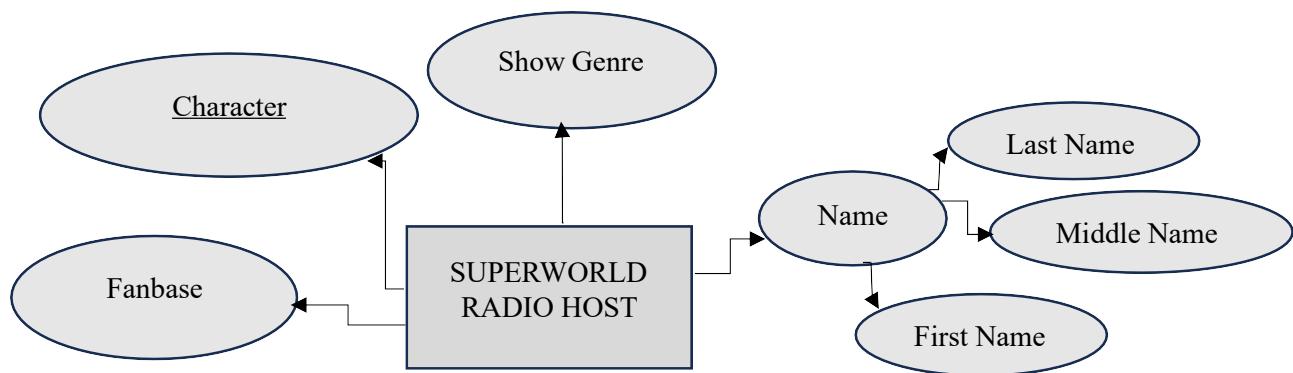
- Attributes:**
- a- **Broadcast Schedule ID (Key attribute):** This attribute is the broadcast schedule unique identifier.

b- Day (Multi-valued attribute): This attribute is to specify on which day a program is aired.

A program could be aired on several days. **c- Time (Multi-valued attribute):** This attribute is to specify at what time a program is aired.

A program could be aired several times.

6.1.5. SUPER-WORLD RADIO HOST:



Each host of this radio station is special ones; each is a unique character of Marvel World!

Attributes: a- Character (Key attribute): Character is a unique defining attribute of radio hosts.

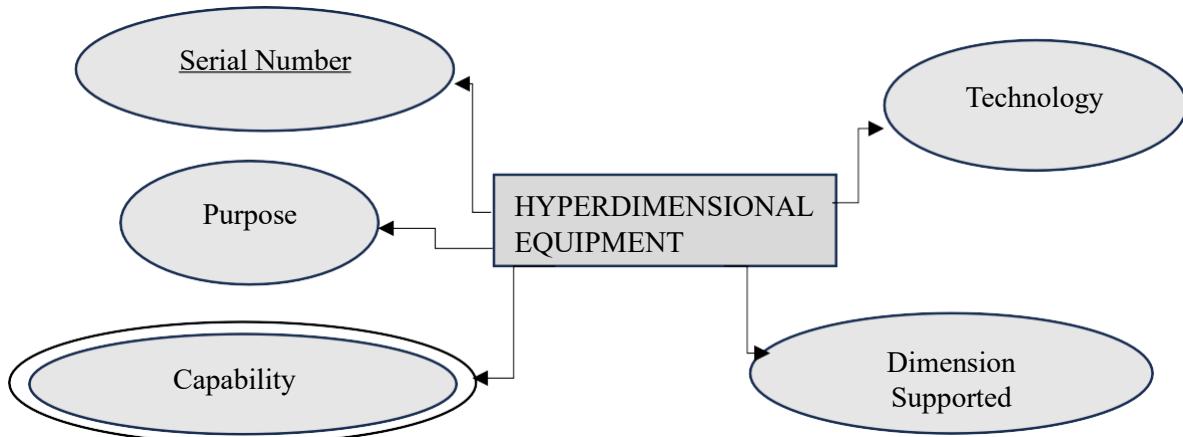
Each host is a unique character in the Marvel world. (Ex: Spiderman, Hulk, Thor...)

b- Name (Composite attribute): The name of each of the radio hosts identifies them. It is usually consisting of their first, middle and last names.

c- Show Genre: Show genre defines the type of content a radio host presents. In other words, this attribute dictates the style, theme, and content of the show.

d- Fanbase: The fanbase attribute represents the loyal audience that follows a specific radio host. Hosts with a strong fan base often engage with their listeners through social media and live events.

6.1.6. HYPERDIMENSIONAL EQUIPMENT:

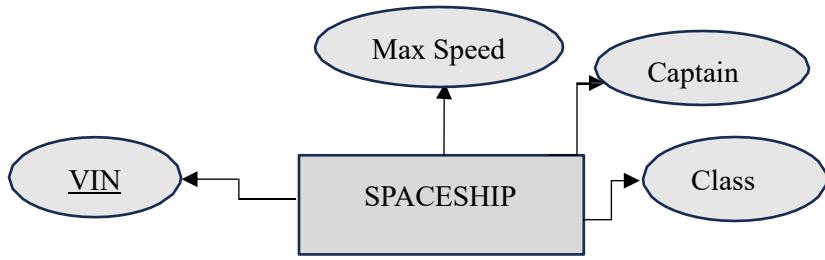


Hyperdimensional equipment represents the technology that allows for traversing multiple dimensions and exploring existence beyond traditional boundaries. These advanced devices open the door to a world of interdimensional possibilities.

Attributes:

- a- **Serial Number (Key Attribute):** The serial number attribute provides a unique identification code for each equipment.
- b- **Purpose:** The purpose attribute of hyperdimensional equipment defines its primary function which includes interdimensional travel and exploration to research, communication, or even experimental applications. Each piece of equipment serves a specific purpose.
- c- **Technology:** The technological attribute outlines the scientific principles and advanced technologies that enable hyperdimensional equipment to function. It may include quantum mechanics, string theory, or other scientific concepts. This attribute represents the sophistication of the equipment's design.
- d- **Capability (Multi-valued attribute):** The capabilities of hyperdimensional equipment describe what it can achieve. This may involve traveling through alternate realities, accessing parallel universes, or conducting experiments in dimensions beyond the conventional understanding of space and time. The capabilities attribute defines the equipment's potential and what makes it extraordinary.
- e- **Dimension Supported:** The dimensions supported attribute specifies the number and types of dimensions that the equipment can interact with or explore. This attribute outlines the scope of the equipment's reach into the multiverse.

6.1.7. SPACESHIP:

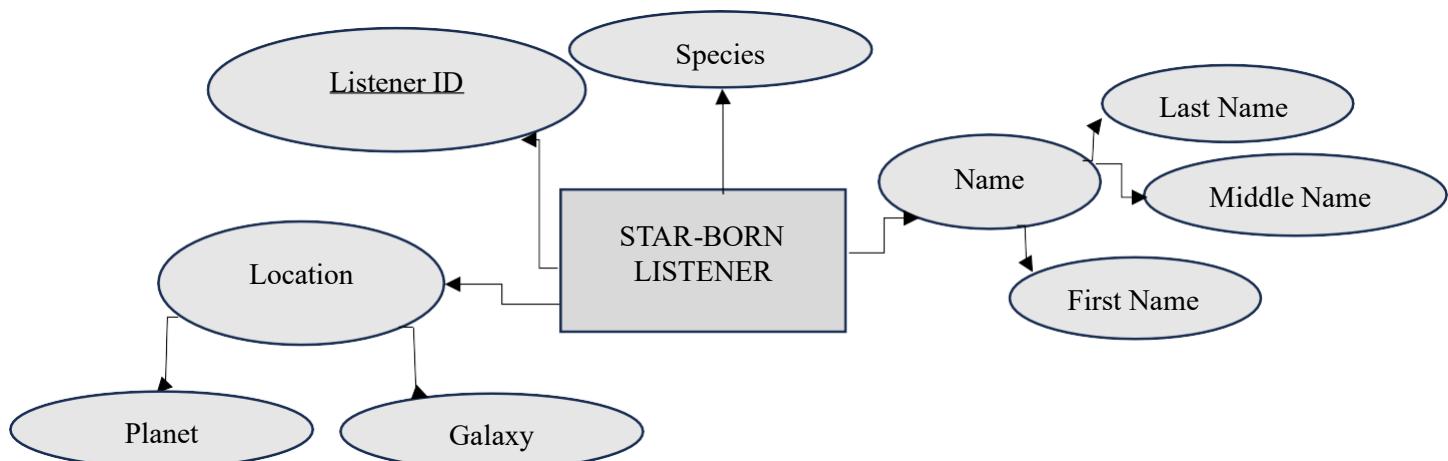


A spaceship represents the interstellar transportation of the radio station's equipment. This advanced vessel is designed for traveling through space.

Attributes:

- a- **Vehicle Verification Number (VIN)** (**Key Attribute**): The VIN attribute provides a unique identification code for each spaceship. This alphanumeric or numerical code serves as a specific reference for tracking and identifying the ship within the interstellar community.
- b- **Class**: The class attribute categorizes spaceships based on their size, capabilities, and intended use. Classes can vary based on the distance that is needed to be covered by the ship.
- c- **Captain**: The captain attribute identifies the individual responsible for leading and operating the spaceship. Captains are skilled and experienced individuals who ensure the safety and success of transportation missions.
- d- **Max Speed**: The max speed attribute quantifies the vessel's top velocity. It is a critical factor in determining the ship's efficiency in reaching its destination within a reasonable timeframe. Speed may vary significantly between different spaceship classes.

6.1.8. STAR-BORN LISTENER:

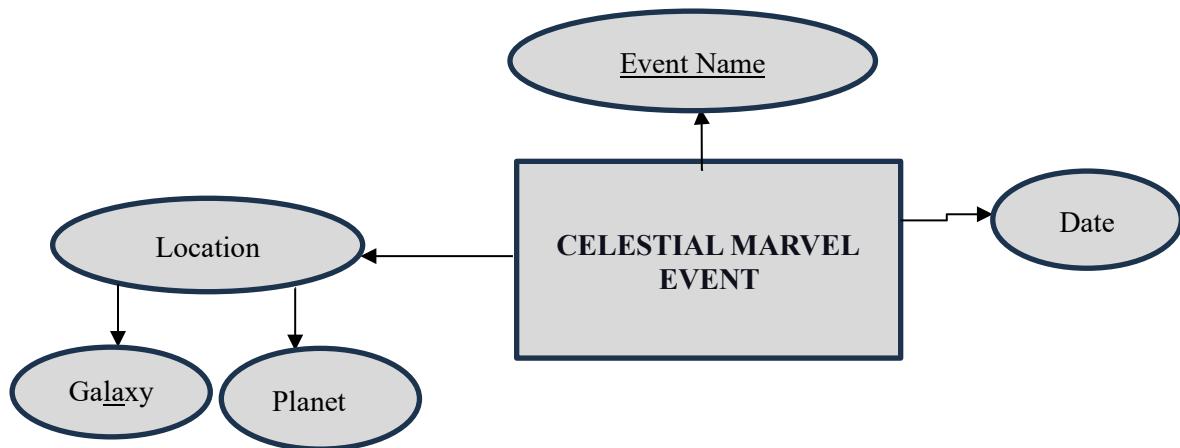


The star-born listener is a unique individual with a deep and innate connection to music.

Attributes:

- a- **ID (key attribute):** The ID attribute provides a unique identification code for the star-born listener which refers to tracking and managing the listener's interactions.
- b- **Name (Composite attribute):** The name attribute acts as one of the individual's identifiers. It includes a listener's first, middle and last names.
- c- **Species:** The species attribute identifies the cosmic species or origin of the star-born listener. This attribute reflects the listener's background or race.
- d- **Location (Composite attribute):** The location attribute specifies the specific celestial location whether they are an Earth-based observer or positioned on a different planet or even galaxy. So, it includes the galaxy and the planet of the listener.

6.1.9. CELESTIAL MARVEL EVENT:



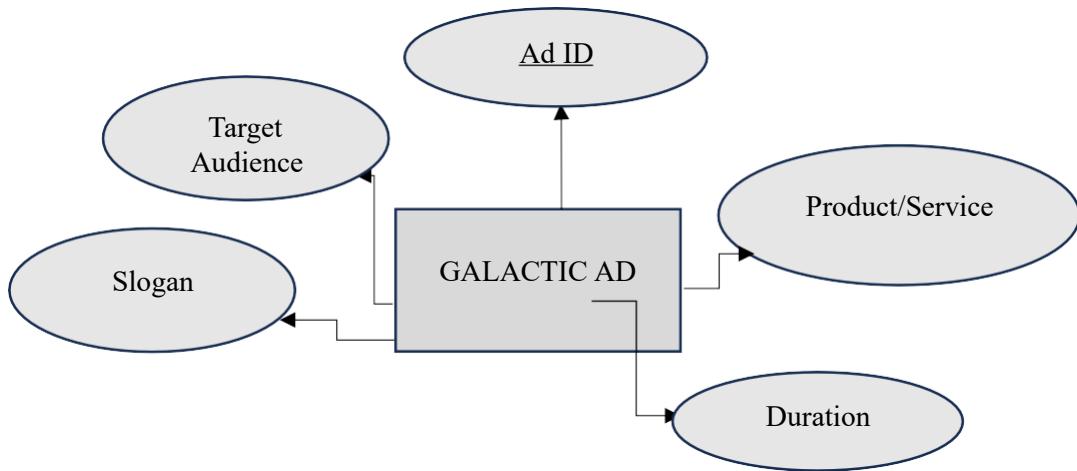
Celestial marvel event is an extraordinary occurrence in the universe that catches the attention of various galactical civilizations. These events capture a wide range of astronomical phenomena such as eclipses and cometary appearances. A celestial event provides opportunities for observation, study, and wonder.

Attributes:

- a- **Event Name (Key attribute):** The event name is a unique identifier for the celestial event. It often reflects the nature or significance of the event, allowing attendees to easily recognize and refer to it.
- b- **Date:** The date attribute specifies the date when the celestial event is set to occur.

c- **Location (Composite attribute):** The location attribute outlines the geographic or celestial position from which the event can be best observed. It may be a specific region on Earth, a particular point in the sky, or any other planet or galaxy where the event might be visible. So, it includes the galaxy and the planet of the event.

6.1.10. GALACTIC AD:

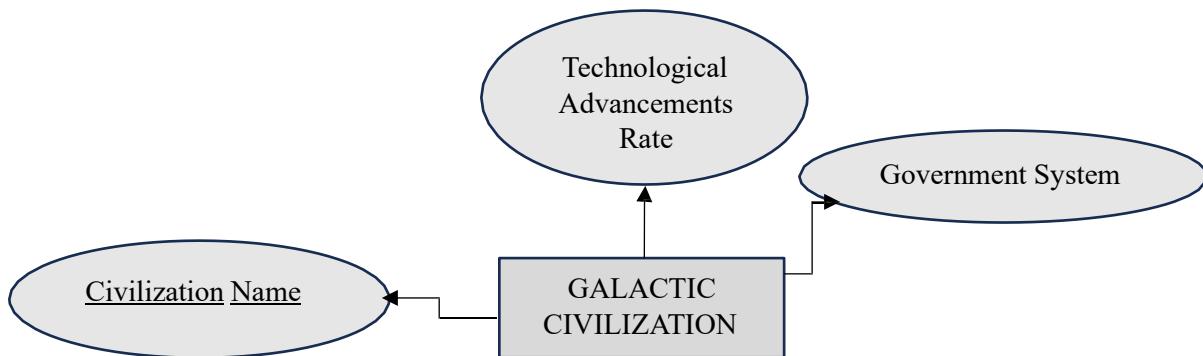


Galactic ads are promotional materials or campaigns designed for interstellar and extragalactic audiences. They aim to reach potential customers or consumers across vast cosmic distances and offer products, services, or experiences.

Attributes:

- a- **Ad ID (Key attribute):** This is the unique identifier of each ad.
- b- **Product/Service:** The product or service attribute identifies what the ad is promoting. It could vary between advanced technology, cosmic tourism, or any other offering.
- c- **Target Audience:** It is any group or individual that might be interested in the advertised offer.
- d- **Slogan:** The slogan attribute is a catchy or memorable phrase used in the ad to capture the attention and imagination of potential customers.
- e- **Duration:** The duration attribute refers to the length of time the ad campaign will run.

6.1.11. GALACTIC CIVILIZATION:

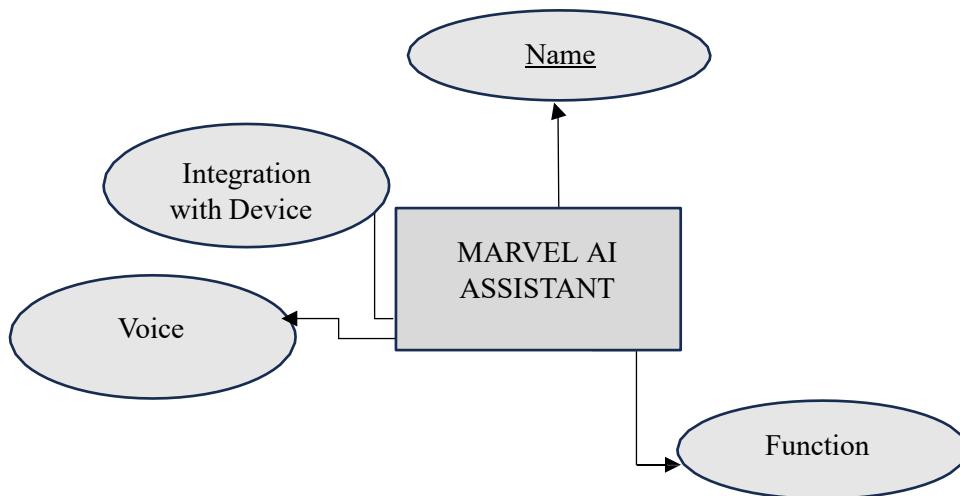


A galactic civilization represents an advanced and diverse society that has expanded beyond its home planets to establish interstellar or even intergalactic communities. These civilizations are characterized by their technological prowess, species diversity, and a collective commitment to exploring. **Attributes:**

- a- **Civilization Name (Key attribute):** Civilization's name is its unique identifier.
- b- **Government System:** The government system attribute defines the political structure that governs the galactic civilization. It may be a democratic alliance, a council of species, an empire, or any other form of governance suitable for governing a vast interstellar domain.
- c- **Technological Advancement Rate:** The technological advancements rate attribute describes

the level of technological progress achieved by civilization in fields such as space travel, energy sources, communication, and scientific achievements.

6.1.12. MARVEL AI ASSISTANT:



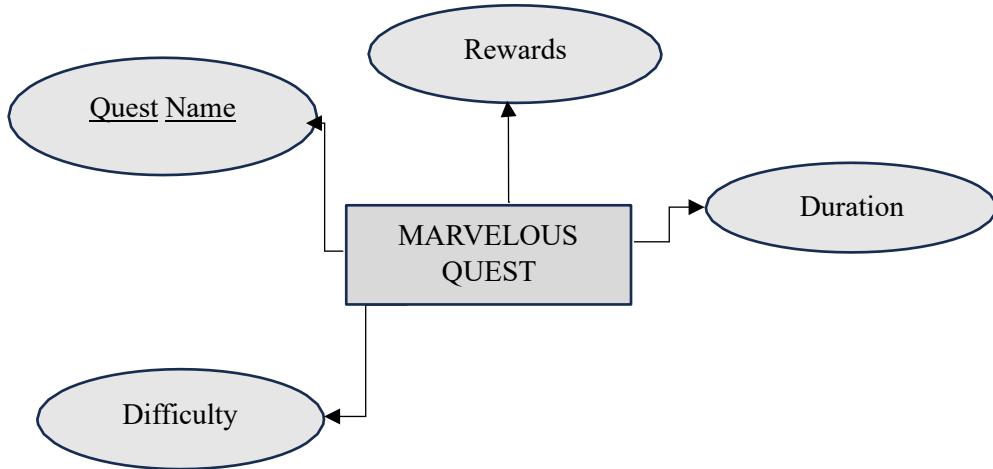
The Marvel AI Assistant is a design that assists individuals in their exploration of the cosmos and provides valuable insights into the marvels of the universe. This advanced AI is integrated into various devices and systems, serving as an invaluable resource for space-related inquiries and exploration.

Attributes:

- a- **Name (Key attribute):** The name attribute is the unique identifier for the Marvel AI Assistant. It provides a distinct and recognizable nickname for the AI, making it more relatable and memorable to users.
- b- **Function:** The function attribute outlines the various tasks and capabilities that the AI can perform. These functions may include language support, recommendations, and suggesting Marvel Quest.
- c- **Voice:** The voice attribute specifies the AI's vocal characteristics, such as tone, pitch, and style. It helps in creating a personalized and user-friendly interaction experience.
- d- **Integration with Device:** The integration with devices attribute describes the compatibility of the Marvel AI Assistant with a hardware or software platform. It may

be integrated into a spacesuit, spacecraft control system, or other space-related device to offer access to its function.

6.1.13. MARVELOUS QUEST:

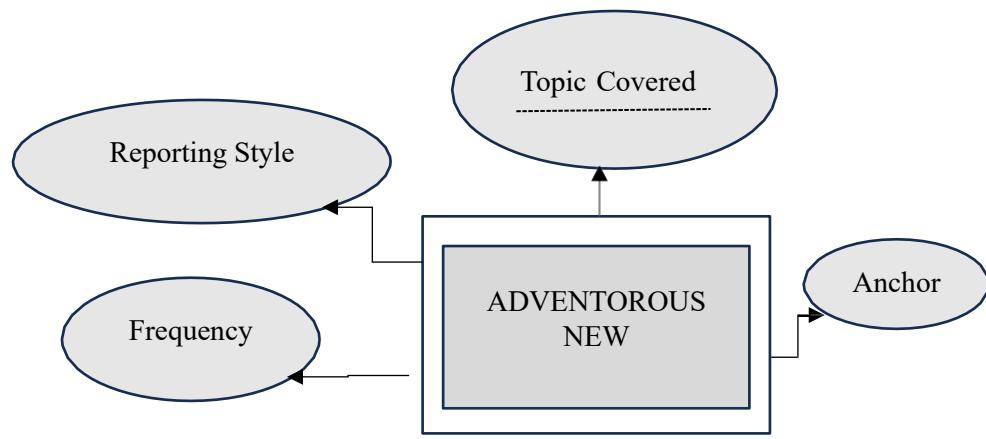


The marvelous quest for participants is a captivating cosmic adventure designed to challenge, inspire, and entertain those who embark on these extraordinary missions. These quests offer participants the opportunity to immerse themselves in exploration, overcome obstacles, and experience the wonders of the universe.

Attributes: a- **Quest Name** (**Key attribute**): The quest name serves as the unique identifier for the adventure. It encapsulates the objectives of the quest, making it easily recognizable for those who seek exploration.

- b- **Difficulty**: The difficulty attribute assesses the level of challenge participants will face during the quest. Quests are categorized as easy, moderate, difficult, or epic, allowing participants to choose adventures that match their skill and determination.
- c- **Reward**: The reward attribute outlines the incentives and experiences that await participants upon successful quest completion.
- d- **Duration**: The duration attribute specifies the expected time frame for participants to complete the quest.

6.1.14. ADVENTEROUS NEW (Weak entity):

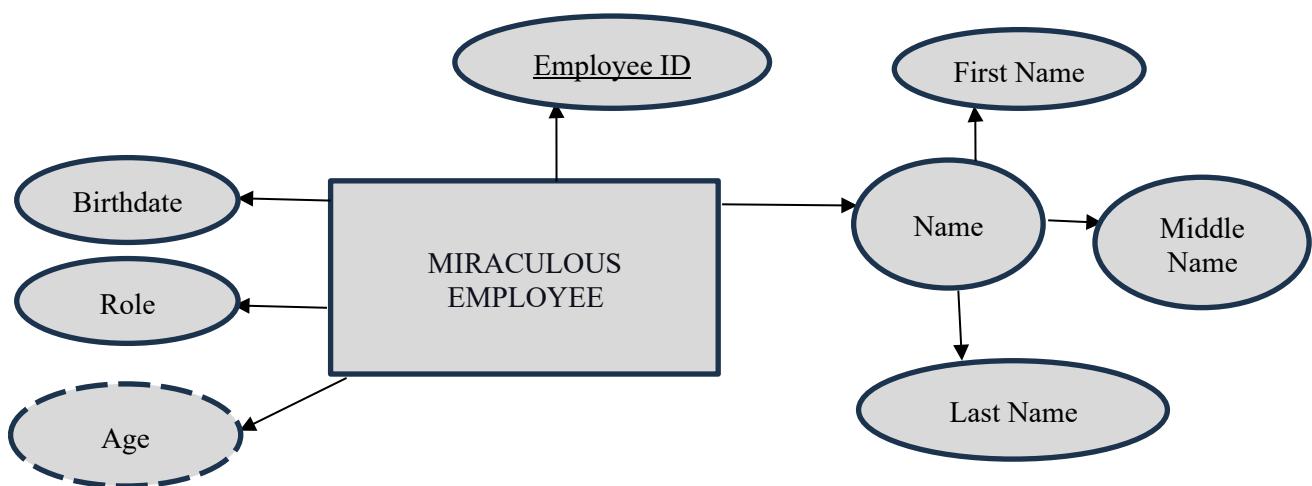


Adventurous news is a captivating form of reporting that brings thrilling and extraordinary stories related to space exploration, discoveries, and interstellar adventures to audiences. It provides a fresh perspective on events and developments, offering education, excitement, and wonder.

Attributes:

- a- **Topic Covered (Partial key):** The topic covered attribute defines the unique range of subjects and themes featured in adventurous news. This may include space missions, celestial phenomena, astronaut experiences, and cosmic research.
- b- **Reporting Style:** The reporting style attribute describes the tone and approach used in presenting adventurous news. It may be characterized as informative, exploratory, enthusiastic, or even dramatic, depending on the storytelling style.
- c- **Frequency:** The frequency attribute outlines how often adventurous news is published or broadcast. It may vary from daily updates to periodic features, depending on the news outlet's schedule.
- d- **Anchor:** The anchor attribute provides the presenter, reporter, or host who deliver s adventurous news. These individuals are often well-versed in cosmic topics and play a key role in conveying the excitement and wonder of space-related stories.

6.1.15. MIRACULOUS EMPLOYEE:

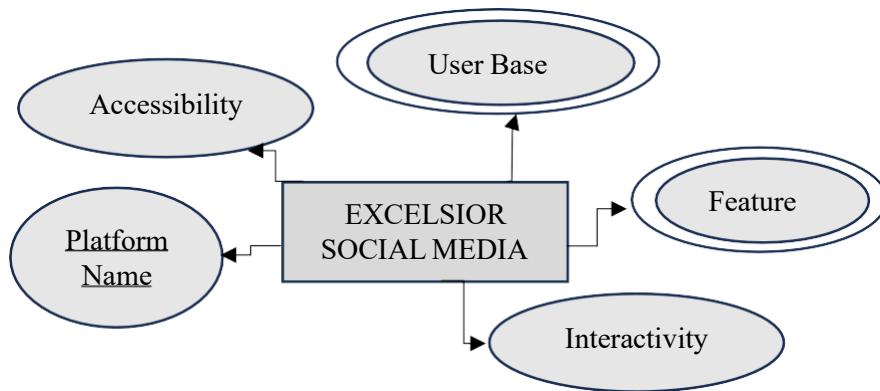


A Miraculous Employee is a member of the radio team, known for their exceptional contributions to the station's success. This individual plays a major role in ensuring the station's continued growth, captivating content, and operations.

Attributes:

- a- **Employee ID (Key attribute):** This attribute represents the unique identifier assigned to the employee for administrative and official purposes within the Marvel Radio Station. It is vital for maintaining records and ensuring compliance with legal and financial regulations.
- b- **Name (Composite attribute):** The name attribute identifies the employee by their given first, middle and last names.
- c- **Role:** The role attribute outlines the specific responsibilities and duties held by the Miraculous Employee within the radio station. This role may encompass content creation, production, or management.
- d- **Birthdate:** The birthdate attribute signifies the day, month, and year on which the employee was born.
- e- **Age (Derived attribute):** It is additional vital information about the employee and can be calculated from the Birth Date attribute.

6.1.16. EXCELSIOR SOCIAL MEDIA:

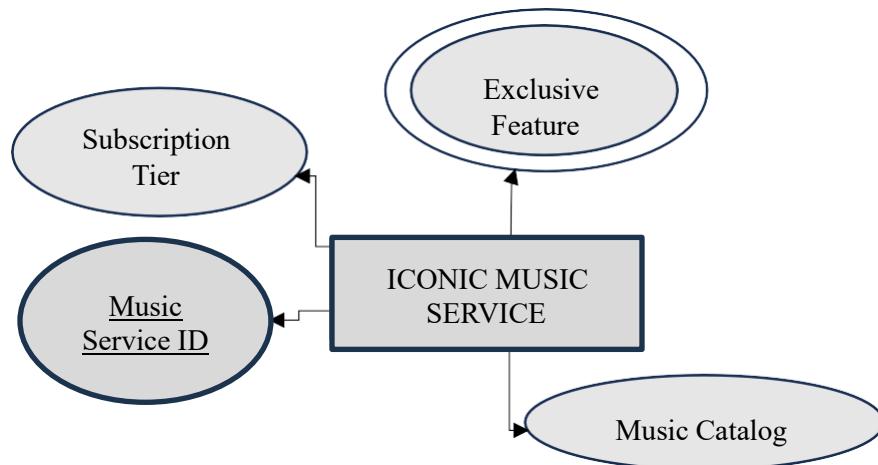


Excelsior social media is a space-themed social networking platform that offers a unique service for listeners, audience, and those who follow the Marvel Radio Station to connect, engage, and discuss with uploaded posts, stories, and posts.

Attributes:

- a- **Platform Name (Key attribute):** Each platform has its unique name that can act as a unique identifier to the Excelsior social media.
- b- **Feature (Multi-valued attribute):** The platform offers an array of features to create a space-centric experience. Users can customize avatars, set interactive cosmic backgrounds, share space-related content, participate in discussion forums, and engage in live space events.
- c- **User Base (Multi-valued attribute):** Excelsior social media has attracted a diverse user base, including space enthusiasts, scientists, and sci-fi fans. This community contributes to rich discussions and interactions, fostering a sense of unity among those passionate about music.
- d- **Interactivity:** The platform thrives on user interaction, with space-themed groups, live chats, webinars, and virtual space events. This interactivity enhances the user experience, providing opportunities for learning and engagement.
- e- **Accessibility:** Excelsior social media prioritizes accessibility, ensuring that users from various galaxies and regions can easily connect. It is compatible with multiple devices, features an intuitive interface, and promotes universal connectivity, and unites individuals from across the universe.

6.1.17. ICONIC MUSIC SERVICE:



Iconic Music Service is a leading unique interstellar music streaming service that has redefined the way audiences across the galaxy discover, enjoy, and engage with music. It offers a selection of music, innovative features, and an interactive music ecosystem that transcends traditional audio experiences for special subscribers on the radio station.

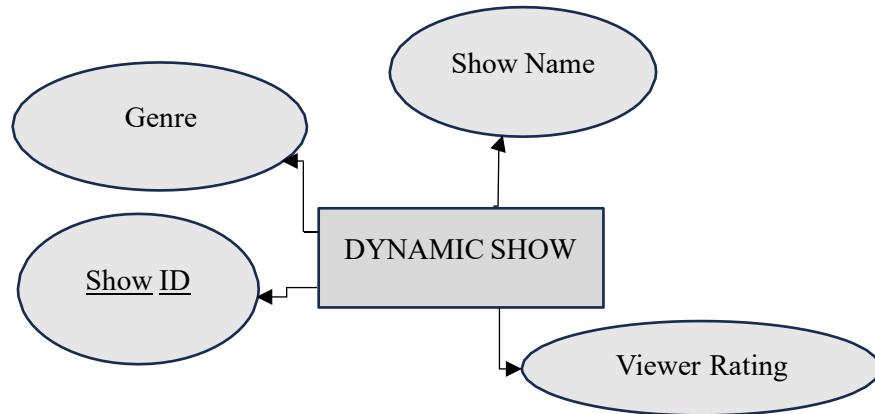
Attributes:

- a- **Music Service ID (key attribute):** it is a Music Service unique identifier.
- b- **Music Catalog:** It provides an extensive library of tracks that cover a wide range of musical preferences.
- c- **Exclusive Feature (Multi-valued attribute):** Iconic Music Service goes beyond standard music streaming with its exclusive features which include personalized playlists according to user preferences, AI recommendations based on a user's listening history, immersive audio for those who appreciate more than just the sounds

of the music where listeners can enjoy 3D audio, surround sound, and spatial audio to enhance the overall listening experience.

- d- **Subscription Tier:** Iconic Music Service understands that users have diverse preferences and requirements, which is why it offers a tiered subscription model (Ex: Standard Tier, Premium Tier, Platinum Tier)

6.1.18. DYNAMIC SHOW:



Dynamic Show would be a category of entertainment programs that offer a wide range of genres, and interactivity. These shows are designed to engage and captivate audiences, often incorporating real-time elements and interactive features to enhance the viewing experience.

Attributes:

- a- **Show ID (Key attribute):** Each Dynamic Show is assigned a unique identifier, known as the "Show ID." This identifier helps in tracking, organizing, and differentiating between various shows in a broadcasting network. It is a fundamental element in show management and content scheduling.
- b- **Show Name:** The "Show Name" is the title or designation of the Dynamic Show. It represents the identity and branding of the program, often reflecting its genre, theme, or content. The show's name is an essential element in marketing and audience recognition, serving as the primary way viewers identify and refer to the program.
- c- **Genre:** Dynamic Shows encompass a diverse array of genres, catering to a wide range of interests. These may include science fiction, space exploration, adventure,

comedy, drama, and more. The choice of genre varies based on the show's theme and target audience.

- d- **Viewer Rating:** Viewer ratings are a measure of a show's popularity and impact. These ratings reflect the audience's feedback, reviews, and responses, which are crucial in evaluating a show's success and helping producers make improvements based on audience preferences.

6.2. Elaboration on Relationships:



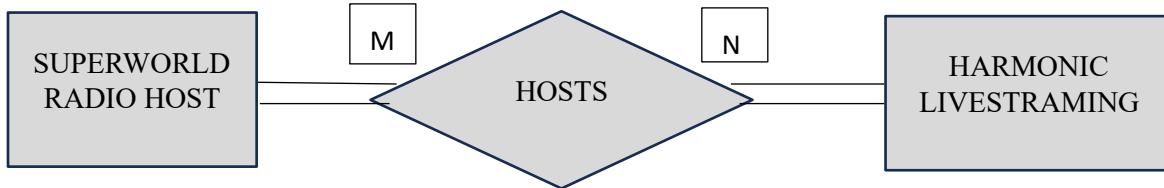
- The "PROMOTES" relationship between "**EXCELSIOR SOCIAL MEDIA**" and "**GALACTIC PROGRAM**" is a many-to-many relationship with total participation of both entities. It means that many social media platforms promote galactic programs, and many galactic programs are being promoted by social media. It allows for a flexible and dynamic promotion strategy where both the programs and social media platforms can have multiple associations with each other. This relationship facilitates the promotion and outreach of galactic programs through various social media channels.



- The "PLAYS" relationship between "**SUPER-WORLD RADIO HOST**" and "**MARVELOUS MIXTAPE**" is a one-to-many relationship with total participation of the marvelous mixtape and partial participation of the super-world radio host. In this context, it means that a single super radio host can play multiple mix tapes, but each mix tape is played by only one super radio host. This relationship reflects the fact that a super radio host can curate and play various mix tapes during the radio shows, and each mix tape is associated with a specific radio host. It allows for a diverse selection of mixtapes to be featured on the radio station, with each host having their own unique set of mix tapes to share with the audience.



- The "OFFERS" relationship between "**ICONIC MUSIC SERVICE**" and "**MARVELOUS MIXTAPE**" is a one-to-many relationship with total participation of the marvelous mixtape and partial participation of the iconic music service. In this context, it signifies that a single music service can provide access to multiple mix tapes, ensuring a broad and varied collection of mix tapes available through a single service. Each mix tape is linked to a specific music service, creating a platform for the distribution of mix tapes to a wide audience. This relationship enables users to explore and enjoy an extensive range of mix tapes, each conveniently offered by their respective music service.



- The "HOSTS" relationship between "**SUPERWORLD RADIO HOST**" and "**HARMONIC LIVESTREAMING**" is a many-to-many relationship with total participation of both entities. In this context, it signifies that multiple Super World Radio hosts can participate in various live-streaming events, and at the same time, each live-streaming event can involve several Super World Radio hosts. This relationship reflects the dynamic nature of Super World Radio, where numerous hosts collaborate to bring live-streaming content to their audience and live-streaming events can feature a mix of hosts with diverse styles and shows.



- The "COVERS" relationship between "**HARMONIC LIVE STREAMING**" and "**CELESTIAL MARVEL EVENT**" is a many-to-many relationship with partial participation of both entities. In this context, it signifies that many harmonic live-streaming sessions are dedicated for many events, and conversely, many events are complemented by different live-streaming sessions. This relationship is instrumental in ensuring that many

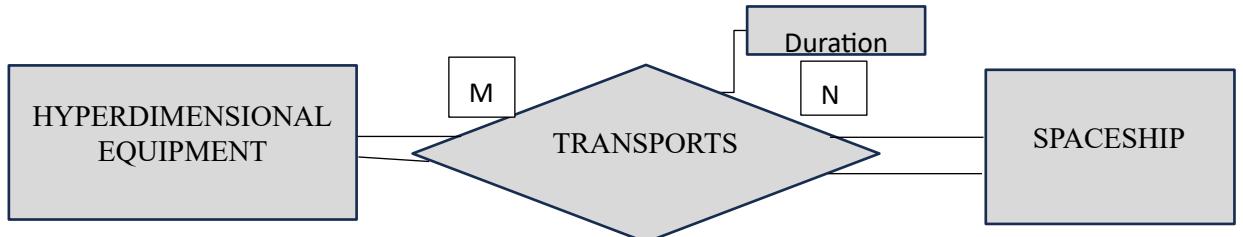
events have different harmonic live-streaming performances, enhancing the overall experience for event attendees. It allows for a seamless connection between live music and event participation, making each event distinctive and musically vibrant.



- The "ANNOUNCES" relationship between "**CELESTIAL MARVEL EVENT**" and "**GALACTIC AD**" with partial participation of the celestial marvel event and total participation of the galactic ad. is a many-to-one relationship. In this context, it indicates that multiple advertisements (ads) can be associated with a single event. These advertisements serve to promote and announce the event to a wider audience. This relationship enables event organizers to use various ads to create awareness and generate interest in their events. It ensures that the event is effectively publicized through multiple advertisements.



- The "UPDATES" relationship between "**ADVENTOROUS NEW**" and "**GALACTIC PROGRAM**" is a many-to-many relationship with total participation of both entities. This means that news updates can be associated with multiple programs, and various programs can feature the same news update. This dynamic connection allows news updates to be shared across a range of programs, ensuring that the latest information is delivered to a diverse audience. It also offers the flexibility for programs to choose specific news updates to share with their audience.



The "TRANSPORTS" relationship between "**HYPERDIMENSIONAL EQUIPMENT**" and "**SPACESHIP**" is a many-to-many relationship with total participation of both entities. Many spaceships transport radio station equipment and many equipment is transported by many spaceships. Its has an attribute **duration**, to indicate the average duration that a spaceship takes to transport hyperdimensional equipment. Spaceships serve as a reliable means of transporting a wide array of radio station equipment, ensuring that different tools, devices, and supplies are efficiently delivered to their intended destinations.



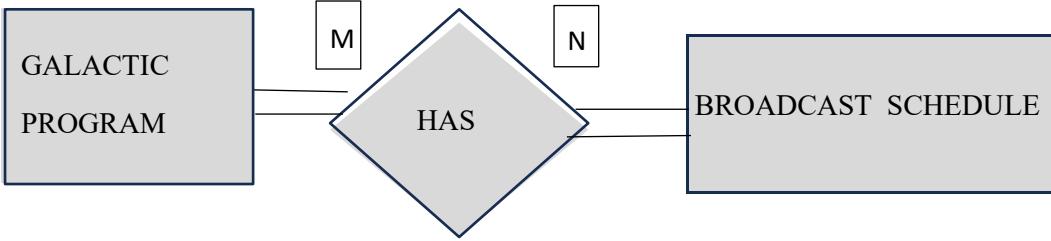
- The “CONNECTS” relationship between “**EXCELSIOR SOCIAL MEDIA**” and “**STAR-BORN LISTENER**” is a many-to-many connection with total participation of both entities. It means that listeners can connect and engage across multiple social media platforms, and social media serves as a bridge for numerous listeners to interact with one another. This allows listeners to actively participate in discussions, share content, and stay connected with the online community. It also provides social media platforms with a broad and engaged audience, creating an interactive online environment.



- The “BELONGS_TO” relationship between “**STAR-BORN LISTENER**” and “**GALACTIC CIVILIZATION**” is a dynamic many-to-many relationship with total participation of both entities. This signifies that listeners can be part of multiple civilizations, and different civilizations can include various listeners. This flexibility encourages a diverse exchange of ideas and cultures, creating a lively and interconnected community of individuals and civilizations.



- The "SUGGESTS" relationship between “**MARVEL AI ASSISTANT**” and “**MARVELOUS QUEST**” is a one-to-many relationship with partial participation of both entities. In this setup, an AI assistant can provide suggestions for multiple quests, making it easier for players to discover exciting challenges and adventures. This feature enhances the gaming experience by offering a variety of quest options, all while keeping players engaged and entertained.



- The “HAS” relationship between “**GALACTIC PROGRAM**” and “**BROADCAST SCHEDULE**” is a many-to-many relationship with total participation of galactic program and partial participation of broadcast schedule. is a one-to-one relationship with total participation of both entities. Where each galactic program has its own unique broadcast schedule and all galactic programs must have a broadcast schedule, also all broadcast schedules are related to galactic programs.



- The “INCLUDES” relationship between “**DYNAMIC SHOW**” and “**MARVELOUS QUEST**” is a one-to-many connection with partial participation of dynamic show and total participation of marvelous quest. In this context, it means that a dynamic show can incorporate multiple quests, enhancing the show's interactivity and entertainment value. Each quest represents a set of questions or challenges that the dynamic show incorporates, making it engaging for the audience.



- The "SUPPORTS" relationship between "**MIRACULOUS EMPLOYEE**" and "**SUPERWORLD RADIO HOST**" is a many-to-many collaboration with the total

participation of the super-world radio host and partial participation of the miraculous employee. This relationship embodies the essential support system within the radio station. Super-World Radio Hosts are at the forefront of delivering captivating content, and Miraculous Employees play a pivotal role in ensuring the hosts have the necessary resources, assistance, and support for their shows.

7. ER to Relational Mapping

7.1 - Step1 – Mapping Strong Entity Types

As a first step, a separate relation must be created for each regular entity type represented in our ER. This relation will hold all the simple attributes that the regular entity includes. Only one of the key attributes will be chosen as a primary key, which will be evident by an underline. In the case of a composite attribute, the simple attributes composing it will be included in the relation rather than the attribute itself. If the primary key happens to be composite, the simple attributes together will form the underlined primary key of the mentioned relation. Additionally, all derived attributes will be considered as simple ones in our relational schema, however, computation would be done automatically in the database.

HARMONIC LIVESTREAMING

<u>Live streaming ID</u>	Music Genre	Audience interaction	Last Name	Middle Name	First name
--------------------------	-------------	----------------------	-----------	-------------	------------

The HARMONIC LIVESTREAMING entity contains simple, composite, and multivalued attributes. The multivalued attribute *Streaming Platform* is not represented in this relation. This relation only includes all simple attributes and the primary key ***Live Streaming ID*** which is underlined. The HARMONIC LIVESTREAMING entity has *Artist* as a composite attribute of which only the simple attributes *FirstName*, *LastName*, and *Middle Name* are included in the relation.

7.1.1. GALACTIC CIVILIZATION

<u>Civilization Name</u>	Technological Advancement Rate	Government System
--------------------------	--------------------------------	-------------------

The GALACTIC CIVILIZATION entity contains simple attributes one of them is the primary key

Civilization Name which is underlined.

7.1.2. STAR BORN LISTENER

<u>Listener ID</u>	Galaxy	Planet	Last Name	Middle Name	First Name	Species
--------------------	--------	--------	-----------	-------------	------------	---------

The STAR BORN LISTENER entity contains simple, and composite attributes. This relation only includes all simple attributes and the primary key **Listener ID** which is underlined. The STAR BORN LISTENER entity has *Name* as composite attributes of which only the simple attributes *FirstName*, *LastName*, and *Middle Name* are included in the relation. Another composite attribute which is *Location* having simple attributes which are *Galaxy* and *Planet* are included in the relation.

7.1.3. EXELSIOR SOCIAL MEDIA

<u>Platform Name</u>	Accessibility	Interactivity
----------------------	---------------	---------------

The EXELSIOR SOCIAL MEDIA entity contains simple, and multivalued attributes. The multivalued attribute *Features* and *User Base* are not represented in this relation. This relation only includes all simple attributes and the primary key **Platform Name** which is underlined.

7.1.4. GALACTIC PROGRAM

<u>Program Name</u>	Topic Covered
---------------------	---------------

The GALACTIC SOCIAL MEDIA entity contains simple attributes one of them is the primary key **Program Name** which is underlined.

7.1.5. SHAPESHIP

<u>VIN</u>	Max Speed	Class	Captain
------------	-----------	-------	---------

The SHAPESHIP entity contains simple attributes one of them is the primary key **VIN** which is underlined.

7.1.6. SUPERWORLD RADIO HOST

<u>Character</u>	Fanbase	Show Genre	First Name	Middle Name	Last Name
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The SUPERWORLD RADIO HOST entity contains simple, and composite attributes. This relation only includes all simple attributes and the primary key ***Character*** which is underlined. The SUPERWORLD RADIO HOST entity has *Name* as composite attributes of which only the simple attributes *FirstName*, *LastName*, and *Middle Name* are included in the relation.

7.1.7. MIRACULOUS EMPLOYEE

<u>Employee ID</u>	First Name	Middle Name	Last Name	Role	Date
--------------------	------------	-------------	-----------	------	------

The MIRACULOUS EMPLOYEE entity contains simple, derived, and composite attributes. The derived attribute *Age* and the composite attributes *Name* and *Birth Date* are not represented in this relation. This relation only includes all simple attributes and the primary key ***Employee ID*** which is underlined. The MIRACULOUS EMPLOYEE entity has *Name* as a composite attribute of which only the simple attributes *FirstName*, *LastName*, and *MI* are included in the relation. Another composite attribute which is *Birth Date* having simple attributes which are *Day*, *Year*, and *Month* are included in the relation.

7.1.8. HYPERDIMENSIONAL EQUIPMENT

<u>Serial Number</u>	Purpose	Technology	Dimension Supported
----------------------	---------	------------	---------------------

The HYPERDIMENSIONAL EQUIPMENT entity contains simple, and multivalued attributes.

The multivalued attribute *CAPABILITY IS* not represented in this relation. This relation only includes all simple attributes and the primary key ***Serial Number*** which is underlined.

7.1.9. MARVELOUS MIXTAPE

<u>Mixtape ID</u>	First Name	Middle Name	Last Name	Genre	Track list	Release Date
-------------------	------------	-------------	-----------	-------	------------	--------------

The MARVELOUS MIXTAPE entity contains simple, and composite attributes. This relation only includes all simple attributes and the primary key ***Mixtape ID*** which is underlined. The MARVELOUS MIXTAPES entity has *Artist* as composite attributes of which only the simple attributes *FirstName*, *LastName*, and *Middle Name* are included in the relation.

7.1.10. BROADCAST SCHEDULE

Broadcast schedule ID

The BROADCAST SCHEDULE entity contains simple, and multivalued attributes. The multivalued attribute *Time* and *Day* are not represented in this relation. This relation only includes all simple attributes and the primary key ***Broadcast schedule ID*** which is underlined.

7.1.11. ICONIC MUSIC SERVICE

<u>Music Service ID</u>	Subscription Teir	Music Catalog
--------------------------------	--------------------------	----------------------

The BROADCAST SCHEDULE entity contains simple, and multivalued attributes. The multivalued attribute *Exclusive feature* is not represented in this relation. This relation only includes all simple attributes and the primary key ***Music Service ID*** which is underlined.

7.1.12. MARVEL AI ASSISTANT

<u>Name</u>	Integration With Device	Voice	Function
--------------------	--------------------------------	--------------	-----------------

The MARVEL AI ASSISTANT entity contains simple attributes one of them is the primary key

Name which is underlined.

7.1.13. MARVELOUS QUEST

<u>Quest Name</u>	Reward	Duration
--------------------------	---------------	-----------------

The MARVELOUS QUEST entity contains simple, and multivalued attributes. The multivalued attribute *Difficulty* is not represented in this relation. This relation only includes all simple attributes and the primary key ***Quest Name*** which is underlined.

7.1.14. GALACTIC AD

<u>Ad ID</u>	Product/Service	Slogan	Target Audience	Duration
---------------------	------------------------	---------------	------------------------	-----------------

The GALACTIC AD entity contains simple attributes one of them is the primary key ***Ad ID*** which is underlined.

7.1.15. CELESTIAL MARVEL EVENT

<u>Event Name</u>	Planet	Galaxy	Date
--------------------------	---------------	---------------	-------------

The CELESTIAL MARVEL EVENT entity contains simple, and composite attributes. This relation only includes simple and composite attributes, and the primary key ***Event Name*** which is underlined.

The CELESTIAL MARVEL EVENT entity has *Date* as composite attributes of which only the simple attributes *Day*, *Month*, and *Year* are included in the relation. Another composite attribute which is *Location* having simple attributes which are *Planet*, and *Galaxy* are included in the relation.

7.1.16. DYNAMIC SHOW

Show ID	Viewer Rating	Genre	Show Name
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The DYNAMIC SHOW entity contains simple attributes one of them is the primary key ***Show ID*** which is underlined.

7.2 – Step 2 – Mapping of Weak Entity Types

Each weak entity type in our ER model necessitates its own table. This table should include all the individual attributes of the weak entity. In cases where there are composite attributes, the constituent simple attributes should be included in the table. Additionally, the primary key of the owning entity type should be included in the table of the corresponding weak entity as a foreign key. This results in the combined primary key of the weak entity's partial key and the owner entity's primary key being used as the primary key for the weak entity in its table.

ADVENTEROUS NEW:

Program Name	Topic Covered	Reporting Style	Frequency	Anchor
--------------	---------------	-----------------	-----------	--------

The weak entity type ADVENTEROUS NEW includes both a partial, a foreign key. The simple attribute Topic Covered is underlined as it represents the partial key of this entity type.

Additionally, the Program Name represents the key attribute of **GALACTIC PROGRAM** and serves as foreign key that references the **GALACTIC PROGRAM**. Thus, both attributes are underlined as they together form the primary key of this relation. The other attributes included as simple attributes.

7.3 – Step 3 – Mapping of Binary 1:1 Relationship Types

During this phase, each binary 1:1 relationship can be handled using one of three methods. The first method is the foreign key approach, where we extract the primary key from one of the participating entities and insert it as a foreign key in the other entity's table. Generally, it's

preferable to include the foreign key in the table of the entity that fully participates in the relationship.

The second method is the merged relation approach, where a new table is created by combining both entity types and their relationship. This method is useful when both entities have a total participation in the relationship.

The third method is the cross-reference approach, which involves creating an additional table that cross-references the corresponding primary keys from the participating entities.

Our ER diagram did not encompass any 1:1 relationship type, thus this step wasn't implemented.

7.4 – Step 4 – Mapping of Binary 1:N Relationship Types

As for this step, each binary 1:N relationship is mapped by a precise method. To map the mentioned relationship, we'll include in the relation of the participating entity type at the N-side of the relationship, the primary key of the relation of the participating entity type at the 1-side of the relationship. The mentioned key will represent the foreign key. The relationship's derived attributes will also be included in the relation of the participating entity at the N-side of the relationship.

7.4.1. INCLUDES:

DYNAMIC SHOW

Show ID	Show Name	Genre	Viewer Rating	
MARVELEOUS QUEST				
SQ ID	Quest Name	Difficulty	Reward	Duration

The INCLUDES relationship relates DYNAMIC_SHOW entity and MARVELEOUS_QUEST entity. A DYNAMIC_SHOW can have many MARVELEOUS_QUEST, but a MARVELEOUS_QUEST can work in only one DYNAMIC_SHOW. Then the MARVELEOUS_QUEST entity is on the N (many) side. Therefore, the primary key of the DYNAMIC_SHOW entity (Show_ID) is placed in the MARVELEOUS_QUEST relation as a foreign key, with an attribute name of SQ_ID.

7.4.2. SUGGESTS:

MARVEL_AI_ASSISTANT

Name	Function	Voice	Integration with Device	
MARVELEOUS_QUEST				
AI Name	Quest Name	Difficulty	Reward	Duration

The SUGGESTS relationship relates MARVEL_AI_ASSISTANT entity and MARVELEOUS_QUEST entity. A MARVEL_AI_ASSISTANT can have many MARVELEOUS_QUEST, but a MARVELEOUS_QUEST can work in only one MARVEL_AI_ASSISTANT. Then the MARVELEOUS_QUEST entity is on the N (many) side. Therefore, the primary key of the MARVEL_AI_ASSISTANT entity (Name) is placed in the MARVELEOUS_QUEST relation as a foreign key, with an attribute name of AI Name.

7.4.3 ANNOUNCES:

CELESTIAL_MARVEL_EVENT

Event name	Date	Location			
GALACTIC AD					
EA Name	Ad ID	Product/Service	Target Audience	Slogan	Duration

The ANNOUNCES relationship relates CELESTIAL_MARVEL_EVENT entity and GALACTIC_AD entity. A CELESTIAL_MARVEL_EVENT can have many GALACTIC_AD, but a GALACTIC_AD can work in only one CELESTIAL_MARVEL_EVENT. Then the GALACTIC_AD entity is on the N (many) side. Therefore, the primary key of the CELESTIAL_MARVEL_EVENT entity (Event Name) is placed in the GALACTIC_AD relation as a foreign key, with an attribute name of EA Name.

7.4.4 PLAYS:

SUPERWORLD_RADIO_HOST

Character	Name	Show Genre	Fanbase
-----------	------	------------	---------

MARVELEOUS_MIXTAPE

CharM	Mixtape ID	Genre	Artist	Release Date	Track List
-------	------------	-------	--------	--------------	------------

The PLAYS relationship relates SUPERWORLD_RADIO_HOST entity and MARVELEOUS_MIXTAPE entity. A SUPERWORLD_RADIO_HOST can have many MARVELEOUS_MIXTAPE, but an MARVELEOUS_MIXTAPE can be play by only one SUPERWORLD_RADIO_HOST. Then the MARVELEOUS_MIXTAPE entity is on the N (many) side. Therefore, the primary key of the SUPERWORLD_RADIO_HOST entity (Character) is placed in the MARVELEOUS_MIXTAPE relation as a foreign key, with an attribute name of CharM.

7.4.5 OFFERS:

ICONIC_MUSIC_SERVICE

Music	Music	Exclusive	Subscription
Service	Catalog	Feature	Tier
ID			

MARVELEOUS_MIXTAPE

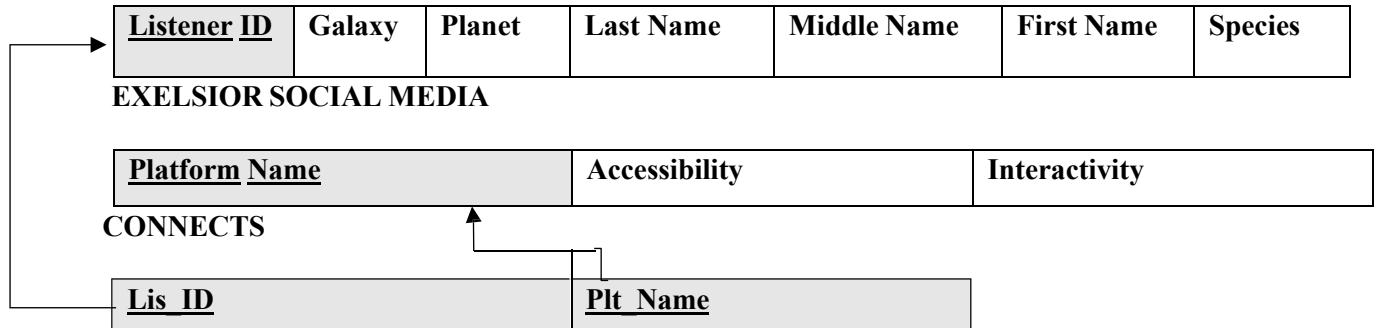
MID	Mixtape	Artist	Track List
ID			

The OFFERS relationship relates ICONIC_MUSIC_SERVICE entity and MARVELEOUS_MIXTAPE entity. An ICONIC_MUSIC_SERVICE can have many MARVELEOUS_MIXTAPE, but a MARVELEOUS_MIXTAPE can work in only one ICONIC_MUSIC_SERVICE. Then the MARVELEOUS_MIXTAPE entity is on the N (many) side. Therefore, the primary key of the ICONIC_MUSIC_SERVICE entity (Music Service ID) is placed in the MARVELEOUS_MIXTAPE relation as a foreign key, with an attribute name of MID.

7.5 – Step 5 - Mapping of Binary M: N Relationship Types

Mapping N to M binary relationships is the only relationship type requiring the creation of a whole new relation (table) which will include as a foreign key both primary keys of the relations of the two participating entities. The relationship's derived attributes will also be included in the relation.

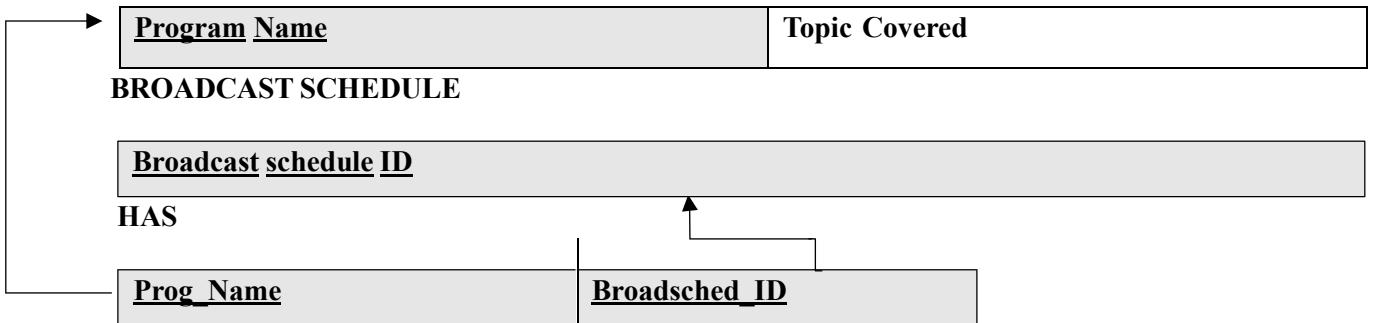
7.5.1. STAR BORN LISTENER



Excelsior social media connects many stars born listeners. Hence, the relationship CONNECTS requires the creation of a new relation, where both the primary keys of the two participating are included as two foreign keys. We added the primary key of the EXELSIOR SOCIAL MEDIA entity (Platform Name) and renamed it (Plt_Name), as well as the primary key of the STARS BORN LISTENER entity (Listener ID) and renamed it (Lis_ID). The combination of both foreign keys represents the primary key of the relation hence both are underlined.

7.5.2.

GALACTIC PROGRAM

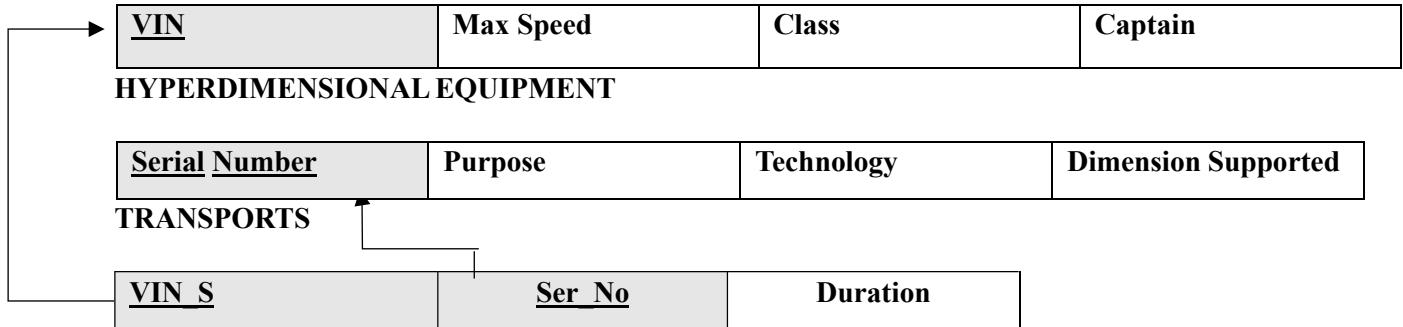


Many galactic programs have many broadcast schedules. Hence, the relationship HAS requires the creation of a new relation, where both the primary keys of the two participating are included as two foreign keys. We added the primary key of the GALACTIC PROGRAM entity (Program Name) and renamed it (Prog_Name), as well as the primary key of the BROADCAST SCHEDULE entity

(Broadcast Schedule ID) and renamed it (Brodsched_ID). The combination of both foreign keys represents the primary key of the relation hence both are underline.

7.5.3.

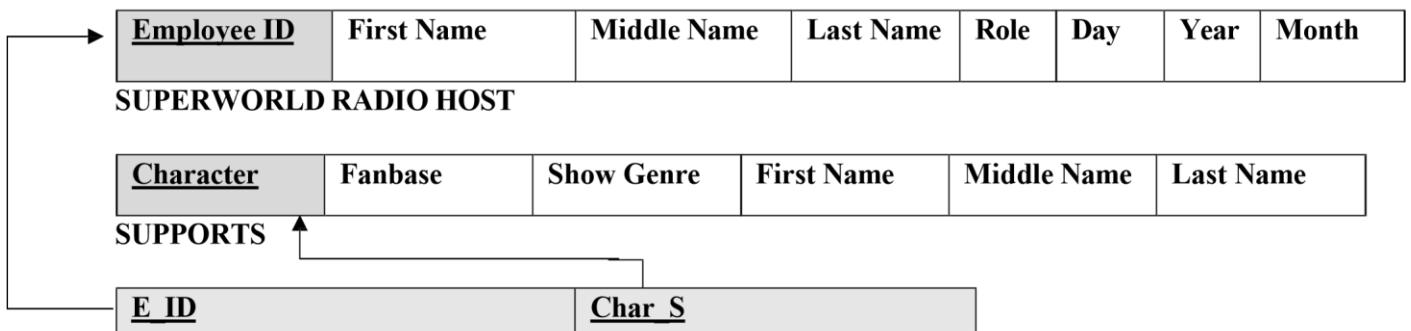
SHAPESHIP



Many spaceships transport many hyperdimensional equipment. Hence, the relationship TRANSPORTS requires the creation of a new relation, where both the primary keys of the two participating are included as two foreign keys. We added the primary key of the SPACESHIP entity (VIN) and renamed it (VIN_S), as well as the primary key of the HYPERDIMENSIONAL EQUIPMENT Entity (Serial Number) and renamed it (Ser_No) in addition to that the table include duration as simple attribute of the transport relation. The combination of both foreign keys represents the primary key of the relation hence both are underlined.

7.5.4.

MIRACULOUS EMPLOYEE

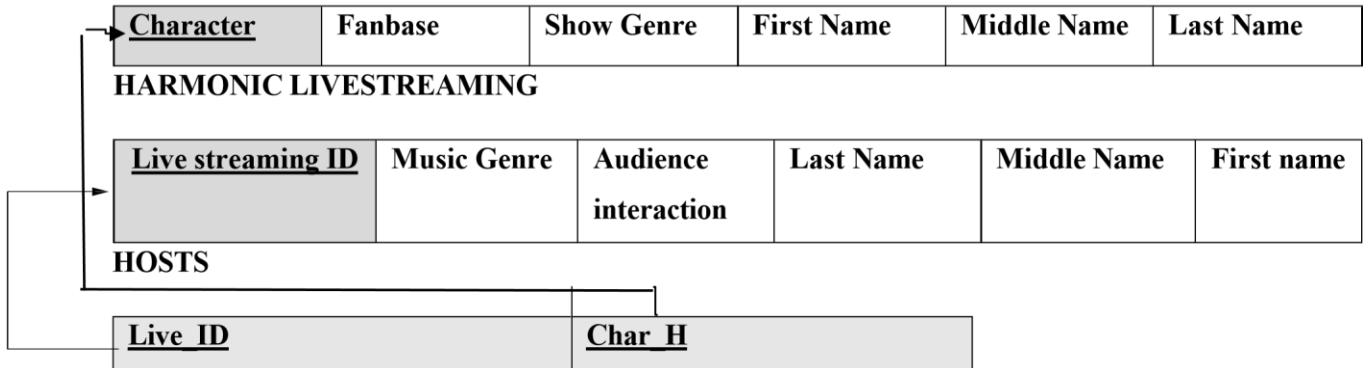


Many super-world radio hosts support many miraculous employees. Hence, the relationship SUPPORTS requires the creation of a new relation, where both the primary keys of the two participating are included as two foreign keys. We added the primary key of the SUPER- WORLD RADIO HOST entity (Character) and renamed it (Char_ID), as well as the primary key of the MIRACULOUS EMPLOYEE entity (E_ID), as well as the primary key of the

MIRACULOUS EMPLOYEE entity (Employee ID) and renamed it (E_ID). The combination of both foreign keys represents the primary key of the relation hence both are underlined.

7.5.5.

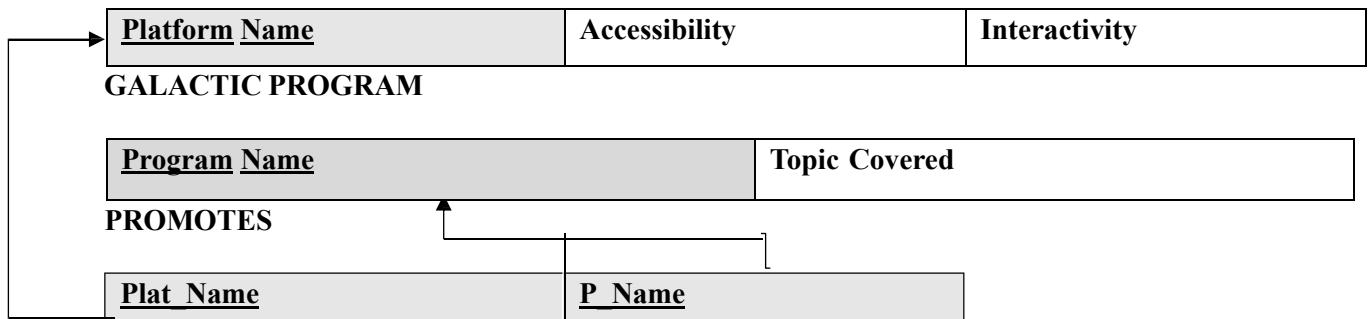
SUPERWORLD RADIO HOST



Many super-world radio hosts host many harmonic livestreaming many broadcast schedule. Hence, the relationship HOSTS requires the creation of a new relation, where both the primary keys of the two participating are included as two foreign keys. We added the primary key of the SUPER-WORLD RADIO HOST entity (Character) and renamed it (Char_H), as well as the primary key of the HARMONIC LIVESTREAMING entity (Livestreaming ID) and renamed it (Live_ID). The combination of both foreign keys represents the primary key of the relation hence both are underlined.

7.5.6.

EXELSIOR SOCIAL MEDIA

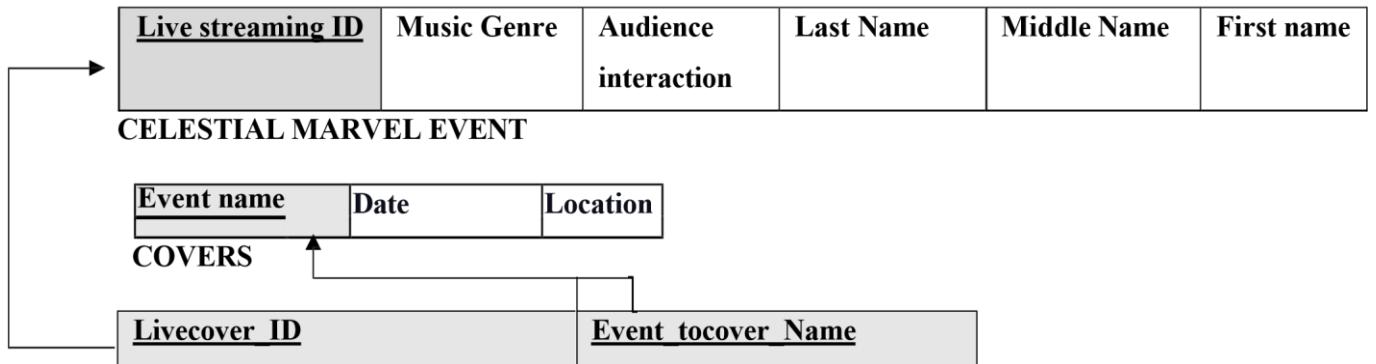


Excelsior social media promotes many galactic programs. Hence, the relationship PROMOTES requires the creation of a new relation, where both the primary keys of the two participating are included as two foreign keys. We added the primary key of the GALACTIC PROGRAM entity (Program Name) and renamed it (P_Name), as well as the primary key of the EXCELSIOR (Platform Name).

SOCIAL MEDIA entity (Platform Name) and renamed it (Plat_Name). The combination of both foreign keys represents the primary key of the relation hence both are underlined.

7.5.7.

HARMONIC LIVESTREAMING



Many harmonic livestreaming covers many celestial marvel event. Hence, the relationship COVERS requires the creation of a new relation, where both the primary keys of the two participating are included as two foreign keys. We added the primary key of the CELESTIAL MARVEL EVENT entity (Event Name) and renamed it (Event_tocover_Name), as well as the primary key of the HARMONIC LIVESTREAMING entity (Livestreaming ID) and renamed it (Livecover_ID). The combination of both foreign keys represents the primary key of the relation hence both are underlined.

7.5.8.

GALACTIC PROGRAM

<u>Program Name</u>	<u>Topic Covered</u>
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ADVENTEROUS NEW:

<u>Program Name</u>	<u>Topic Covered</u>	Reporting Style	Frequency	Anchor
---------------------	----------------------	-----------------	-----------	--------

UPDATES

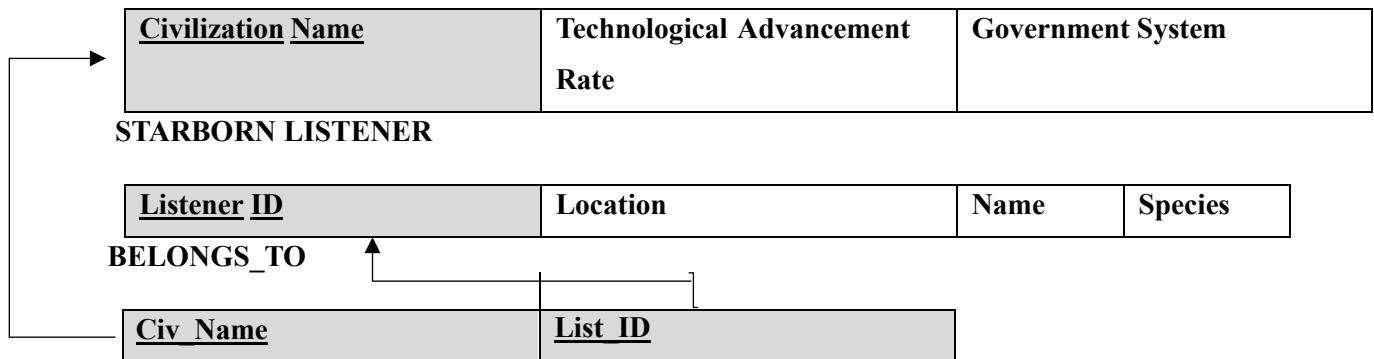
<u>Adv Prog Name</u>	<u>TC</u>
----------------------	-----------

Many galactic programs update many adventurous news. Hence, the weak relationship

UPDATES requires the creation of a new relation, in which we include the primary key of Galactic Program entity and the partial key of the adventurous news weak entity included as two foreign keys in the table. We added the primary key of the Galactic Program entity (Program Name) and renamed it (Adv_Prog_Name), as well as the partial key of the Adventurous News weak entity (Topic Covered) and renamed it (TC). The combination of both foreign keys represents the primary key of the relation hence both are underlined.

7.5.9.

GALACTIC CIVILIZATION



Many galactic civilizations belong to many stars born listener. Hence, the relationship BELONGS TO requires the creation of a new relation, where both the primary keys of the two participating are included as two foreign keys. We added the primary key of the Galactic Civilization entity (Civilization Name) and renamed it (CivName), as well as the primary key of the STARS BORN LISTENER entity (Listener ID) and renamed it (Lis_ID). The combination of both foreign keys represents the primary key of the relation hence both are underlined.

7.6 – Step 6- Mapping of Multi-valued Attributes

Multivalued attributes are often managed by creating an independent table. This table incorporates the primary key of the main entity as a foreign key and stores the diverse attribute values. This process establishes a connection between multiple attribute values and the main entity, linking them to specific tuples through the foreign key.

7.6.1. Streaming Platforms

HARMONIC LIVE STREAMING:

Livestreaming ID	Music Genre	Artist	Audience Interaction
------------------	-------------	--------	----------------------

STREAMING PLATFORMS:

<u>Livestreaming ID</u>	<u>Harmonic Streaming Platform</u>

The multivalued attribute Harmonic Streaming Platform belongs to the HARMONIC LIVE STREAMING entity. It is represented by creating a relation called **Streaming Platforms**. We added the primary key of the HARMONIC LIVE STREAMING entity as a foreign key (**Livestreaming ID**).

7.6.2. BROADCAST SCHEDULE _DAY, BROADCAST SCHEDULE _TIME:

BROADCAST SCHEDULE:

<u>Broadcast Schedule ID</u>

BROADCAST SCHEDULE _DAY:

<u>Broadcast Schedule ID</u>	<u>B_day</u>

The multivalued attribute **BROADCAST SCHEDULE _DAY**, belongs to the HARMONIC LIVE STREAMING entity. It is represented by creating a relation called **Streaming Platforms**.

We added the primary key of the HARMONIC LIVE STREAMING entity as a foreign key (**Livestreaming ID**).The multivalued attribute B_day belongs to the BROADCAST SCHEDULE entity. It is represented by creating a relation called BROADCAST SCHEDULE _DAY. We added the primary key of the BROADCAST SCHEDULE entity as a foreign key (**Broadcast Schedule ID**).

BROADCAST SCHEDULE _TIME:

<u>Broadcast Schedule ID</u>	<u>B_time</u>

The multivalued attribute B_time belongs to the **BROADCAST SCHEDULE** entity. It is represented by creating a relation called **BROADCAST SCHEDULE _TIME**. We added the

primary key of the **BROADCAST SCHEDULE** entity as a foreign key (**Broadcast Schedule ID**).

7.6.3. EQUIPMENT CAPABILITY:

HYPERDIMENSIONAL EQUIPMENT:

<u>Serial Number</u>	<u>Purpose</u>	<u>Technology</u>	<u>Dimension Supported</u>
EQUIPMENT CAPABILITY			

<u>Serial Number</u>	<u>Eq-Capability</u>

The multivalued attribute Eq-Capability belongs to the **HYPERDIMENSIONAL EQUIPMENT** entity. It is represented by creating a relation called **EQUIPMENT CAPABILIT**. We added the primary key of the **HYPERDIMENSIONAL EQUIPMENT** entity as a foreign key (**Serial Number**). -

7.6.4. EXCELSIOR _ FEATURE, EXCELSIOR _ USER BASE:

EXCELSIOR SOCIAL MEDIA:

<u>Platform Name</u>	<u>Interactivity</u>	<u>Accessibility</u>
EXCELSIOR _ FEATURE:		

<u>Platform Name</u>	<u>E _ Feature</u>

The multivalued attribute E _ Feature belongs to the **EXCELSIOR SOCIAL MEDIA** entity. It is represented by creating a relation called **EXCELSIOR _ FEATURE**. We added the primary key of the **EXCELSIOR SOCIAL MEDIA** entity as a foreign key (**Platform Name**).

EXCELSIOR _ USER BASE:

<u>Platform Name</u>	<u>E _ User Base</u>

The multivalued attribute E _ User Base belongs to the **EXCELSIOR SOCIAL MEDIA** entity. It is represented by creating a relation called **EXCELSIOR _ USER BASE**. We added the primary key of the **EXCELSIOR SOCIAL MEDIA** entity as a foreign key (**Platform Name**).

7.6.5. EXCLUSIVE FEATURE:

ICONIC MUSIC SERVICE:

<u>Music Service ID</u>	<u>Music Catalog</u>	<u>Subscription Tier</u>
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EXCLUSIVE FEATURE:

<u>Music Service ID</u>	<u>Exclusive Feature</u>
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The multivalued attribute **Exclusive Feature** belongs to the **ICONIC MUSIC SERVICE** entity. It is represented by creating a relation called **EXCLUSIVE FEATURE**. We added the primary key of the **ICONIC MUSIC SERVICE** entity as a foreign key (**Music Service ID**).

7.7 – Step 7 – Mapping of N-ary attributes

In case a relationship encompasses more than two participating entities, a new relation must be created to represent it. The primary key of the relation of each participating entity type is included as a foreign key attribute in the new relation. The relation should also include any simple or composite attributes that the N-ary relationship type might have.

Our ER diagram did not require the implementation of any N-ary relationship types. Thus, this step was not used.

7.8 – Step 8 – Mapping aggregation, specialization relationships

We didn't use this step in our mapping process.

8.Final Display – all tables HARMONIC LIVESTREAMING

<u>Live streaming ID</u>	<u>Music Genre</u>	<u>Audience interaction</u>	<u>Last Name</u>	<u>Middle Name</u>	<u>First name</u>
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CELESTIAL MARVEL EVENT

<u>Event name</u>	<u>Galaxy</u>	<u>Planet</u>	<u>Date</u>
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HOSTS

<u>Live ID</u>	<u>Char H</u>
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<u>COVERS</u>	[]
<u>Livcover_ID</u>	<u>Event_tocover_Name</u>

STREAMING PLATFORM

<u>Livestreaming ID</u>	<u>Harmonic Streaming Platform</u>
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GALACTIC CIVILIZATION

<u>Civilization Name</u>	<u>Technological Advancement Rate</u>	<u>Government System</u>
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BELONGS_TO

<u>CIV_NAME</u>	<u>List_ID</u>
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MARVELEOUS QUEST

<u>SQ_ID</u>	<u>Quest Name</u>	<u>Difficulty</u>	<u>Reward</u>	<u>Duration</u>	<u>AI_Name</u>
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STAR BORN LISTENER

<u>Listener ID</u>	<u>Galaxy</u>	<u>Planet</u>	<u>Last Name</u>	<u>Middle Name</u>	<u>First Name</u>	<u>Species</u>
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CONNECTS

<u>Lis_ID</u>	<u>Plt_Name</u>
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EXELSIOR SOCIAL MEDIA

<u>Platform Name</u>	<u>Accessibility</u>	<u>Interactivity</u>
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PROMOTES

<u>Plat_Name</u>	<u>P_Name</u>
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GALACTIC PROGRAM

<u>Program Name</u>	<u>Topic Covered</u>

UPDATES

<u>Adv Prog Name</u>	<u>TC</u>

SHAPESHIP

<u>VIN</u>	<u>Max Speed</u>	<u>Class</u>	<u>Captain</u>

TRANSPORTS

<u>Ser NO</u>	<u>VIN S</u>	<u>Duration</u>

SUPERWORLD RADIO HOST

<u>Character</u>	<u>Fanbase</u>	<u>Show Genre</u>	<u>First Name</u>	<u>Middle Name</u>	<u>Last Name</u>

SUPPORTS

<u>E ID</u>	<u>Char S</u>

MIRACULOUS EMPLOYEE

<u>Employee ID</u>	<u>First Name</u>	<u>Middle Name</u>	<u>Last Name</u>	<u>Role</u>	<u>Birthdate</u>

HYPERMODERN EQUIPMENT

<u>Serial Number</u>	<u>Purpose</u>	<u>Technology</u>	<u>Dimension Supported</u>

MARVELEOUS_MIXTAPE

<u>Mixtape ID</u>	First Name	Middle Name	Last Name	Genre	Track list	Release Date	MID	CharM

BROADCAST SCHEDULE

<u>Broadcast schedule ID</u>

HAS

<u>Prog Name</u>	<u>Broadsched ID</u>
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ICONIC MUSIC SERVICE

<u>Music Service ID</u>	Subscription Teir	Music Catalog
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MARVEL AI ASSISTANT

<u>Name</u>	Integration With Device	Voice	Function
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GALACTIC AD

<u>EA Name</u>	<u>Ad ID</u>	Product/Service	Target Audience	Slogan	Duration
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DYNAMIC SHOW

<u>Show ID</u>	Viewer Rating	Genre	Show Name
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ADVENTEROUS NEW

<u>Program Name</u>	<u>Topic Covered</u>	Reporting Style	Frequency	Anchor
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BROADCAST SCHEDULE _DAY

<u>Broadcast Schedule ID</u>	<u>B_day</u>
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BROADCAST SCHEDULE_TIME

<u>Broadcast Schedule ID</u>	B_Time
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EQUIPMENT CAPABILITY

<u>Serial Number</u>	<u>Eq-Capability</u>
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EXCELSIOR _ FEATURE

<u>Platform Name</u>	<u>E_Feature</u>
<u>Platform Name</u>	<u>E_User Base</u>

EXCELSIOR _ USER BASE:

EXCLUSIVE FEATURE:

<u>Music Service ID</u>	<u>Exclusive Feature</u>
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9. Tables States

9.1

HARMONIC LIVESTREAMING

<u>Livestreaming_ID</u>	<u>Music_Genre</u>	<u>Audience_interaction</u>	<u>First_name</u>	<u>Middle_Name</u>	<u>Last_Name</u>
001	Space Ambient	High	Johnson	Andrew	David
002	Sci-Fi Rock	Medium	Smith	Benjamin	Emily
003	Galactic Jazz	Low	Anderson	Carter	Michael
004	Alien Pop	High	Davis	Daniel	Sophia
005	Cosmic EDM	Medium	Patel	Elijah	Aiden

006	Astro Metal	Low	Wang	Finn	Olivia
007	Intergalactic	High	Kim	Grace	Ethan
008	Nebula Blues	Medium	Rodriguez	Rodriguez	Mia
009	Star Pop	Low	Lee	Isabella	Liam
010	Quantum Rock	High	Turner	Turner	Ava

9.2

CELESTIAL MARVEL EVENT

<u>Universal Ceremony</u>	<u>Occurrence_date</u>	<u>Galaxy</u>	<u>Planet</u>
Cosmic Convergence	11/15/2023	Andromeda	Nova Prime
Galactic Nexus	03/02/2024	Triangulum	Celestoria
Starfall Spectacle	07/20/2024	Milky Way	Earth
Nebula Unveiling	10/12/2024	Centaurus A	Zenithar
Celestial Harmony	02/05/2025	Magellanic Cloud	Seraphion
Quantum Revelation	09/09/2025	Pegasus	Astralis
Infinity Eclipse	06/18/2025	Virgo Supercluster	Galactica
Stellar Odyssey	01/22/2026	Hercules	Starhaven
Nebula Fusion	08/07/2026	Hydra	Nebulon
Cosmic Ascendance	05/14/2026	Phoenix Cluster	Celestialis

9.3

HOSTS

<u>Char_H</u>	<u>Live_ID</u>
Galaxy Explorer	001
Nebula Navigator	002
Cosmic DJ	003
Astro Ambassador	004
Galactic Guru	005

Celestial Choreographer	006
Orbiting Oracle	007
Space Siren	008
Cosmic Communicator	009
Solar Serenader	010

9.4

COVERS

<u>Livecover ID</u>	<u>Event tocover Name</u>
001	Cosmic Convergence
002	Galactic Nexus
003	Starfall Spectacle
004	Nebula Unveiling
005	Celestial Harmony
006	Quantum Revelation
007	Infinity Eclipse
008	Stellar Odyssey
009	Nebula Fusion
010	Cosmic Ascendance

9.5

GALACTIC CIVILIZATION

<u>Civilization Name</u>	<u>Technological_Advancement_Rate</u>	<u>Government_System</u>
Celestial Alliance	High	Federal Republic
Quantum Dominion	Medium	Technocratic Oligarchy
Starlight Consortium	Very High	Democratic Confederation
Nebula Empire	Low	Authoritarian Monarchy
Cosmic Federation	Very High	Parliamentary Democracy
Galactic Union	Medium	Unitary Socialist State
Interstellar Republic	High	Federal Parliamentary Republic
Astral Hegemony	Low	Totalitarian Oligarchy
Nova Commonwealth	Very High	Democratic Federalism

Nebula Ascendancy	Medium	Corporate Plutocracy
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9.6

STREAMING PLATFORM

<u>Livestreaming ID</u>	<u>Harmonic Streaming Platform</u>
001	Spotify
002	Apple Music
003	Slacker Radio
004	SoundCloud
005	Deezer
006	Tidal
007	Amazon Music
008	Last.fm
009	Angami
010	Google Play Music

9.7

BELONGS_TO

<u>CivName</u>	<u>List ID</u>
Celestial Alliance	7532
Quantum Dominion	4198
Starlight Consortium	1265
Nebula Empire	8954
Cosmic Federation	6321
Galactic Union	3076
Interstellar Republic	5489
Astral Hegemony	1823
Nova Commonwealth	9743
Nebula Ascendancy	6904

9.8

CONNECTS

Lis_ID	Plt_Name
7532	Galactic Tunes
4198	Astro Podcast Network
1265	Cosmic Chatter
8954	Star Jams Radio
6321	Nebula News Feed
3076	Interstellar Gram
5489	Space Book
1823	Celestial Snap
9743	Galaxy Pods
6904	Stellar Social

9.9

STAR BORN LISTENER

Listener_ID	Galaxy	Planet	First_Name	Middle_Name	Last_Name	Species
7532	Andromeda	Nova Prime	Johnson	Amelia	Sophia	Human
4198	Triangulum	Celestoria	Smith	Benjamin	Ethan	Xelion
1265	Milky Way	Earth	Anderson	Carter	Liam	Terran
8954	Centaurus A	Zenithar	Davis	Daniel	Ava	Zepharian
6321	Magellanic Cloud	Seraphion	Patel	Elijah	Olivia	Celestian
3076	Pegasus	Astralis	Wang	Finn	Noah	Aquarian
5489	Virgo Supercluster	Galactica	Kim	Grace	Mia	Lumarian
1823	Hercules	Starhaven	Rodriguez	Henry	Elijah	Solarian
9743	Hydra	Nebulon	Lee	Isabella	Draconian	Draconian
6904	Phoenix Cluster	Celestialis	Turner	James	Aiden	Orionian

9.10

MARVELEOUS QUEST

SQ_ID	Quest Name	Difficulty	Reward	Duration	AI_Name
101	Cosmic Conundrum	Medium	150 Galactic Credits	2.5 hours	Puzzle Master AI
102	Starship Racing Challenge	Easy	120 Galactic Credits	2 hours	Racer Bot
103	Exoplanet Exploration	Hard	250 Galactic Credits	3.5 hours	Explorer AI
104	Astrobiology Adventure	Medium	180 Galactic Credits	2.5 hours	Bio Bot
105	Cosmic Art Gallery Tour	Easy	100 Galactic Credits	1.5 hours	Art Guide AI
106	Galactic Codebreaker Challenge	Hard	300 Galactic Credits	4 hours	Code breaker AI
107	Nebula Navigation Quest	Medium	200 Galactic Credits	3 hours	Navigator Bot
108	Star Wars Simulation	Easy	500 Galactic Credits	5 hours	Simulation Master AI
109	Quantum Physics Expedition	Hard	280 Galactic Credits	4 hours	Quantum Explorer AI
110	Black Hole Mysteries	Hard	400 Galactic Credits	4.5 hours	Astro Physici

9.11

EXELSIOR SOCIAL MEDIA

Platform Name	Accessibility	Interactivity
Galactic Tunes	Inclusive	High
Astro Podcast Network	Accessible	Medium
Cosmic Chatter	Universal	Very High
Star Jams Radio	Inclusive	High
Nebula News Feed	Accessible	Medium
Interstellar Gram	Universal	Very High
Space Book	Inclusive	High

Celestial Snap	Accessible	Medium
Galaxy Pods	Universal	Very High
Stellar Social	Inclusive	High

9.12

PROMOTES

<u>Plat Name</u>	<u>P Name</u>
Galactic Tunes	Stellar Exploration
Astro Podcast Network	Alien Jams
Cosmic Chatter	Space Talk
Star Jams Radio	Astro Sounds
Nebula News Feed	Cosmic Conversations
Interstellar Gram	Galactic Grooves
Space Book	Universal News
Celestial Snap	Quantum Quasar
Galaxy Pods	Solar Sermons
Stellar Social	Interstellar Interviews

9.13

GALACTIC PROGRAM

<u>Program Name</u>	<u>Topic_Covered</u>
Stellar Exploration	Space Exploration
Alien Jams	Extraterrestrial Music
Space Talk	Celestial Conversations
Astro Sounds	Space-Themed Music
Cosmic Conversations	General Cosmic Discussions
Galactic Grooves	Funky Beats from the Cosmos
Universal News	Interstellar News Updates
Quantum Quasar	Quantum Physics Exploration
Solar Sermons	Sun and Solar System Topics
Interstellar Interviews	Interviews with Space Experts

9.14

UPDATES

<u>Adv_Prog_Name</u>	<u>TC</u>
Stellar Exploration	Space Exploration
Alien Jams	Extraterrestrial Music
Space Talk	Celestial Conversations
Astro Sounds	Space-Themed Music
Cosmic Conversations	General Cosmic Discussions
Galactic Grooves	Funky Beats from the Cosmos
Universal News	Interstellar News Updates
Quantum Quasar	Quantum Physics Exploration
Solar Sermons	Sun and Solar System Topics
Interstellar Interviews	Interviews with Space Experts

9.15

SUPERWORLD RADIO HOST

<u>Character</u>	<u>Fanbase</u>	<u>Show_Genre</u>	<u>First_Name</u>	<u>Middle_Name</u>	<u>Last_Name</u>
Galaxy Explorer	Galaxy Explorer	Exploration Jams	Galax	Epsilon	Explorer
Nebula Navigator	Nebula Navigator	Celestial Beats	Nebula	Nova	Navigator
Cosmic DJ	Cosmic DJ	Cosmic Mixology	Cosmic	Delta	DJ
Astro Ambassador	Solar Serenader	Solar Serenades	Solar	Sigma	Serenader
Galactic Guru	Quantum Quasar	Quantum Waves	Quantum	Quasar	Quasar
Celestial Choreographer	Celestial DJ	Starry Rhythms	Celestial	-	DJ
Orbiting Oracle	Astro Ambassador	Space Diplomacy	Astro	Alpha	Ambassador
Space Siren	Starlight Serenade	29	Non-binary	Pluto	108

Cosmic Communicator	Orion Observer	41	Male	Neptune	109
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9.16

SUPPORTS

<u>E ID</u>	<u>Char ID</u>
7823	Galaxy Explorer
5981	Nebula Navigator
2345	Cosmic DJ
8762	Astro Ambassador
1098	Galactic Guru
4567	Celestial Choreographer
3210	Orbiting Oracle
7890	Space Siren
5432	Cosmic Communicator
9876	Solar Serenader

9.17

BROADCAST SCHEDULE

<u>Broadcast Schedule ID</u>
101
102
103
104
105
106
107
108
109
110

9.18

MARVELEOUS_MIXTAPE

<u>Mixtape_ID</u>	<u>First_Name</u>	<u>Middle_Name</u>	<u>Last_Name</u>	<u>Genre</u>	<u>Track_List</u>	<u>Release_Date</u>	<u>MID</u>	<u>CharM</u>
301	Cosmic	Harmony	Explorer	Space Beats	Celestial Groove	2023-05-15	101	Galaxy Explorer
302	Nebula	Stellar	Serenader	Astro Jazz	Nebula Nights	2023-04-20	102	Nebula Navigator
303	Galactic	Rhythms	Voyager	Cosmic EDM	Interstellar Vibes	2023-03-10	103	Cosmic DJ
304	Solar	Harmony	Melodies	Solar Pop	Solar Serenade	2023-06-05	104	Astro Ambassador
305	Quantum	Sonic	Quasar	Quantum Beats	Quantum Leap	2023-02-25	105	Galactic Guru
306	Celestial	Radiance	DJ	Celestial Mix	Celestial Harmony	2023-07-12	106	Celestial Choreographer
307	Astro	Ambiance	Ambassador	Galactic Lounge	Cosmic Chill	2023-08-18	107	Orbiting Oracle
308	Starlight	Serenade	DJ	Cosmic Ballads	Starry Serenity	2023-09-29	108	Space Siren
309	Orion	Cosmic	Observer	Stellar Rock	Orion's Odyssey	2023-11-05	109	Cosmic Communicator
310	Galactic	Grooves	Guru	Space Funk	Galactic Groove	2023-10-15	110	Solar Serenader

9.19

SHAPESHIP

<u>VIN</u>	<u>Max_Speed</u>	<u>Class</u>	<u>Captain</u>
123456789	9.5	Cruiser	Stellar
987654321	8.2	Fighter	Nebula
456789012	7.1	Explorer	Galaxy
789012345	9.0	Frigate	Orion
234567890	8.8	Transporter	Celestial
567890123	6.5	Scout	Nova

890123456	9.7	Battleship	Cosmic
345678901	7.9	Corvette	Astro
678901234	8.5	Carrier	Stardust
012345678	9.3	Dreadnought	Infinity

9.20

TRANSPORTS

<u>Ser_No</u>	<u>VIN_S</u>	<u>Duration</u>
123456	123456789	2 hours
789012	987654321	3 hours
345678	456789012	1.5 hours
901234	789012345	4 hours
567890	234567890	2.5 hours
234567	567890123	1 hour
890123	890123456	3.5 hours
456789	345678901	2 hours
012345	678901234	5 hours
678901	012345678	4.5 hours

9.21

MIRACULOUS EMPLOYEE

<u>Employee_ID</u>	<u>FirstName</u>	<u>MiddleName</u>	<u>LastName</u>	<u>Role</u>	<u>Birthday_Date</u>
7823	John	Alexander	Doe	Manager	05/15/90
5981	Jane	Benjamin	Smith	Engineer	09/20/85
2345	Robert	Charles	Johnson	Analyst	03/12/88
8762	Emily	Daniel	Davis	Designer	11/28/92
1098	Michael	Elijah	Anderson	Developer	07/05/84
4567	Olivia	Finn	Wilson	Manager	02/18/95
3210	Ethan	Gabriel	Brown	Engineer	06/30/87
7890	Sophia	Henry	Miller	Analyst	09/14/93
5432	Liam	Isaac	Taylor	Designer	12/03/89
9876	Ava	James	Martinez	Developer	04/22/98

9.22

MARVEL AI ASSISTANT

Name	Integration_With_Device	Voice	Function
Jarvis 2.0	Smartphones, Smart Homes	Yes	Personal Assistant
Stark AI	Wearables, IoT Devices	Yes	Home Automation, Alerts
Thor's Companion	Smart Glasses, Vehicles	Yes	Navigation, Assistance
Black Widow Helper	Laptops, Smartphones	Yes	Security, Information
Hulk Voice	Smart Speakers, TVs	Yes	Entertainment, Control
Spider AI	Smartwatches, Cameras	Yes	Surveillance, Reminders
Captain Command	Tablets, Smart Appliances	Yes	Task Management
Doctor Strange Voice	VR Headsets, AR Devices	Yes	Virtual Assistance
Black Panther AI	Gaming Consoles, Cars	Yes	Gaming Tips, Driving
Iron Man Innovator	Smart Wearables, Drones	Yes	Innovation, Exploration

9.23

GALACTIC AD

EA	Ad ID	Product_Service	Target_Audience	Slogan	Duration
Cosmic Convergence	123001	Hyperdrive Engines	Hyperdrive Engines	"Zoom Across the Cosmos!"	30 seconds
Galactic Nexus	456002	Alien Cuisine	Alien Cuisine	"Taste the Flavors of Vega!"	15 seconds
Starfall Spectacle	789003	Celestial Fashion	Celestial Fashion	"Dress like a Star!"	45 seconds
Nebula Unveiling	234004	Quantum Computers	Quantum Computers	"Empowering Your Galaxy!"	60 seconds
Celestial Harmony	567005	Nebula Cruise Lines	Nebula Cruise Lines	"Sail Through Nebulae!"	90 seconds
Quantum Revelation	890006	Astro Photography	Astro Photography	"Capture the Beauty Beyond!"	20 seconds
Infinity Eclipse	123007	Galactic Fitness Gear	Galactic Fitness Gear	"Train Like a Cosmic Warrior"	40 seconds
Stellar Odyssey	456008	Starlight Resorts	Starlight Resorts	"Experience Stellar Luxury!"	75 seconds
Nebula Fusion	789009	Alien Pet Supplies	Alien Pet Supplies	"Spoil Your Space"	30 seconds

				Companions!"	
Cosmic Ascendance	234010	Quantum Music Streaming	Quantum Music Streaming	"Harmonies Across Galaxies!"	45 seconds

9.24

ICONIC MUSIC SERVICE

<u>Music_Service_ID</u>	<u>Subscription_Tier</u>	<u>Music_Catalog</u>
101	001	Celestial Sounds Collection
102	002	Galactic Grooves Playlist
103	003	Nebula Beats Mixtape
104	004	Solar Serenades Selection
105	005	Quantum Quasar Jams
106	006	Cosmic Harmony Library
107	007	Stellar Serenade Playlist
108	008	Astro Ambient Melodies
109	009	Lunar Lullabies Collection
110	010	Universal Uplift Mix

9.25

DYNAMIC SHOW

<u>Show_ID</u>	<u>Viewer_Rating</u>	<u>Genre</u>	<u>Show_Name</u>
101	4.5	Space Exploration	"Galactic Odyssey"
102	4.2	Cosmic Talk	"Celestial Conversations"
103	4.8	Intergalactic Beats	"Quantum Groove Lounge"
104	4.0	Sci-Fi Comedy	"Astro Laughs"
105	4.6	Alien Adventures	"Stellar Encounters"
106	4.3	Astro Educational	"Cosmic Insights"
107	4.9	Galactic Mysteries	"Orion's Enigma"
108	4.1	Cosmic Fitness	"Galaxy Fit Workout"
109	4.7	Space News Update	"Universal Briefing"
110	4.4	Celestial Cooking	"Galactic Gastronomy"

9.26

ADVENTEROUS NEW

<u>Program Name</u>	<u>Topic Covered</u>	<u>Reporting Style</u>	<u>Frequency</u>	<u>Anchor</u>
Stellar Exploration	Space Exploration	Space Explorations	Daily	Stella Starlight
Alien Jams	Extraterrestrial Music	Alien Discoveries	Weekly	Nova Navigator
Space Talk	Celestial Conversations	Cosmic Wonders	Bi-weekly	Celestial Voyager
Astro Sounds	Space-Themed Music	Intergalactic Mysteries	Daily	Orion Observer
Cosmic Conversations	General Cosmic Discussions	Stellar Events	Monthly	Solar Serenader
Galactic Groove	Funky Beats from the Cosmos	Galactic Expeditions	Weekly	Nebula Navigator
Universal News	Interstellar News Updates	Astro Highlights	Daily	Astro Ambassador
Quantum Quasar	Quantum Physics Exploration	Celestial Phenomena	Bi-weekly	Starlight Serenade
Solar Sermons	Sun and Solar System Topics	Universal Discoveries	Weekly	Quantum Quasar
Interstellar Interviews	Interviews with Space Experts	Cosmic Chronicles	Monthly	Celestial DJ

9.27 EXCLUSIVE FEATURE

<u>Music Service ID</u>	<u>Exclusive Feature</u>
101	Artist Collaborations, High-Fidelity Audio
102	Personalized Playlists, Offline Listening
103	Live Concert Streaming, Exclusive Interviews
104	AI-generated Playlists, Lyrics Integration
105	Customizable Radio Stations, Early Releases
106	Virtual Reality Concerts, Enhanced Lyrics
107	Curated Theme Playlists, Behind-the-Scenes
108	Social Music Sharing, Immersive Soundscapes
109	Playlist Recommendations, 360° Audio
110	AI-driven Music Discovery, Limited Editions

9.28

EXCELSIOR _ USER BASE

<u>Platform Name</u>	<u>E User Base</u>
Galactic Tunes	500,000
Astro Podcast Network	300,000
Cosmic Chatter	700,000
Star Jams Radio	1,200,000
Nebula News Feed	800,000
Interstellar Gram	1,500,000
Space Book	2,000,000
Celestial Snap	1,000,000
Galaxy Pods	400,000
Stellar Social	1,800,000

9.29

HAS

<u>Prog Name</u>	<u>BroadSched ID</u>
Stellar Exploration	101
Alien Jams	102
Space Talk	103

Astro Sounds	104
Cosmic Conversations	105
Galactic Grooves	106
Universal News	107
Quantum Quasar	108
Solar Sermons	109
Interstellar Interviews	110

9.30

BROADCAST SCHEDULE_DAY

<u>Broadcast Schedule ID</u>	<u>B_day</u>
101	Monday
102	Tuesday
103	Wednesday
104	Thursday
105	Friday
106	Saturday
107	Sunday
108	Monday
109	Tuesday
110	Wednesday

9.31

BROADCAST SCHEDULE_TIME

<u>Broadcast Schedule ID</u>	<u>B_Time</u>
101	08:00 AM
102	02:30 PM
103	11:00 AM
104	06:45 PM
105	04:15 PM
106	10:30 AM
107	09:00 AM

108	07:30 PM
109	05:45 AM
110	03:00 PM

9.32

EQUIPMENT CAPABILITY

<u>Serial Number</u>	<u>Eq Capability</u>
123456	Hyperdimensional Scanner
789012	Quantum Data Processor
345678	Celestial Audio Mixer
901234	Nebula Visualizer
567890	Astro Frequency Analyzer
234567	Galactic Communication Array
890123	Solar Energy Converter
456789	Quantum Entanglement Transmitter
012345	Celestial Imaging Device
678901	Stellar Navigation System

9.33

EXCELSIOR_FEATURE

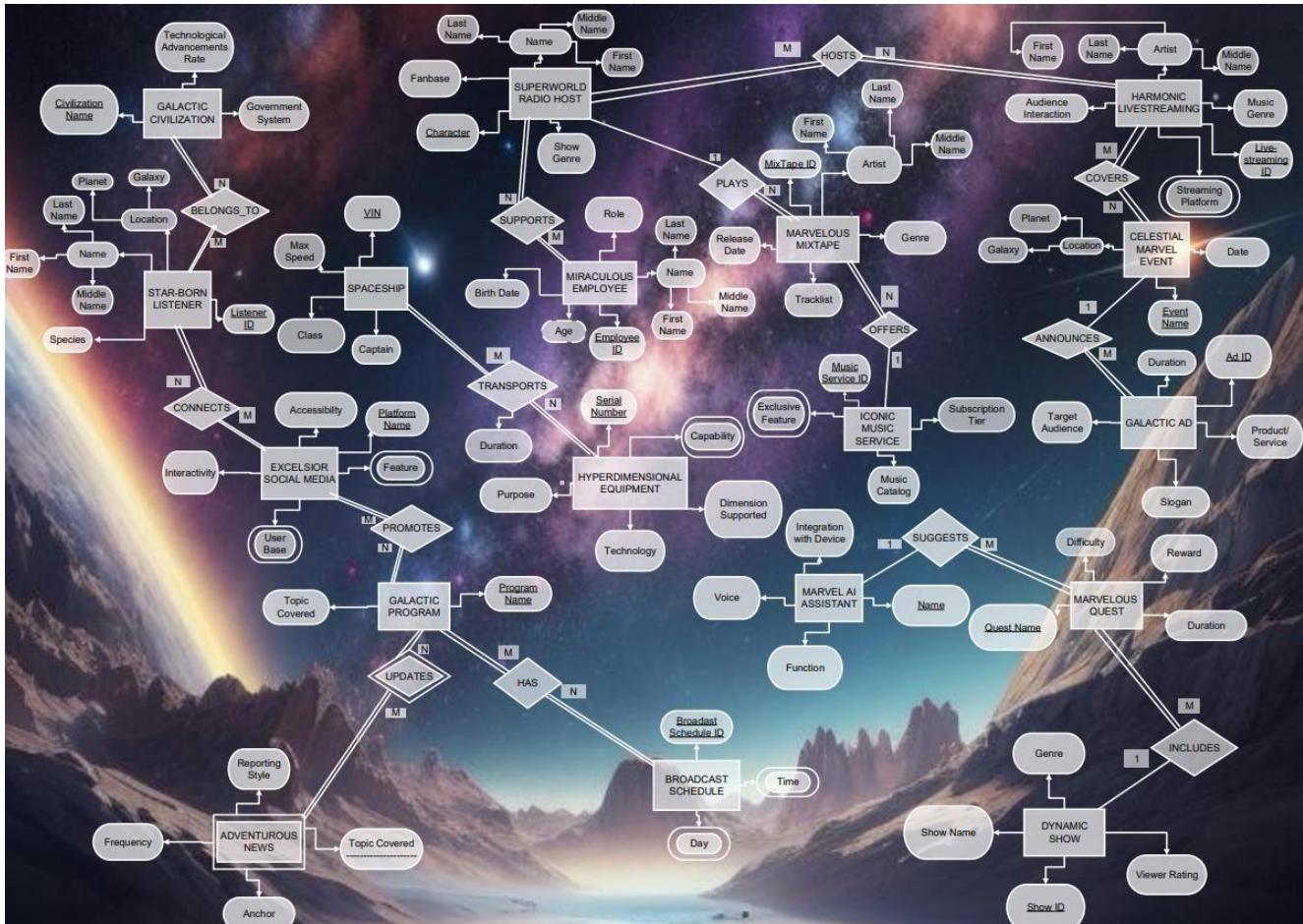
<u>Platform Name</u>	<u>E Feature</u>
Galactic Tunes	Customized Space Playlists
Astro Podcast Network	In-Depth Astrological Discussions
Cosmic Chatter	Live Cosmic Conversations
Star Jams Radio	Celestial Music Discoveries
Nebula News Feed	Real-Time Galactic Updates
Interstellar Gram	Stunning Space Photography
Space Book	Interconnected Galactic Community
Celestial Snap	Instant Cosmic Moments Sharing
Galaxy Pods	Interstellar Podcast Streaming
Stellar Social	Dynamic Cosmic Social Hub

9.34

HYPERDIMENSIONAL EQUIPMENT

<u>Serial Number</u>	Purpose	Technology	Dimension_Supported
123456	Quantum Communication	Entanglement Transceiver	4D
789012	Interdimensional Gateway	Spatial Warping Module	5D
345678	Temporal Manipulation	Chrono-Sync Processor	6D
901234	Multiverse Exploration	Hyperphase Resonator	7D
567890	Dimensional Energy Harvesting	Quantum Flux Extractor	3D
234567	Parallel Reality Viewer	Holographic Interface	5D
890123	Cosmic Energy Amplification	Quantum Infusion Core	6D
456789	Hyperdimensional Defense	Reality Shield Generator	5D
012345	Infinite Knowledge Matrix	Neural Quantum Processor	7D
678901	Intergalactic Teleportation	Wormhole Generator	6D

10. Edited ER Diagram for Phase III



11. Database Creation and Queries for “Marvel Sounds of the Universe” database

We will now use SQL to build the database tables on the Oracle Database Server after designing the ER diagram and transforming it into a relational schema. Following the creation of the tables, we will load each table with relevant data and then run some queries against the database that represent the database's use in "The Marvel Sounds of the Universe" as well as the database's importance in supplying critical information in a convenient and efficient manner.

11.1. Creation of the Database Tables and their Descriptions

The tables were created in a specific order so that every foreign key in a relation is referencing to a preexisting referenced primary key. Also, to ensure that we have not made any mistakes, we may use the “Object Browser” on the Oracle database server to review the description of the tables once we have completed the creation of the table structures.

HARMONIC_LIVESTREAMING

```
CREATE TABLE HARMONIC_LIVESTREAMING (
    Livestreaming_ID CHAR (3) NOT NULL,
    Music_Genre VARCHAR (50) NOT NULL,
    Audience_interaction VARCHAR (15) NOT NULL,
    First_name VARCHAR (50) NOT NULL,
    Middle_Name VARCHAR (50),
    Last_Name VARCHAR (50) NOT NULL,
    PRIMARY KEY (Livestreaming_ID)
);
```

Object Type	TABLE	Object	HARMONIC_LIVESTREAMING						
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
HARMONIC_LIVESTREAMING	LIVESTREAMING_ID	CHAR	3	-	-	1	-	-	-
	MUSIC_GENRE	VARCHAR2	50	-	-	-	-	-	-
	AUDIENCE_INTERACTION	VARCHAR2	15	-	-	-	-	-	-
	FIRST_NAME	VARCHAR2	50	-	-	-	-	-	-
	MIDDLE_NAME	VARCHAR2	50	-	-	-	✓	-	-
	LAST_NAME	VARCHAR2	50	-	-	-	-	-	-

1 - 6

CELESTIAL_MARVEL_EVENT

```
CREATE TABLE CELESTIAL_MARVEL_EVENT (
    Universal_Ceremony VARCHAR (50) NOT NULL,
    Occurrence_date DATE NOT NULL,
    Galaxy VARCHAR (50) NOT NULL,
    Planet VARCHAR (50) NOT NULL,
    PRIMARY KEY (Universal_Ceremony)
);
```

Object Type TABLE Object CELESTIAL_MARVEL_EVENT

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CELESTIAL_MARVEL_EVENT	UNIVERSAL_CEREMONY	VARCHAR2	50	-	-	1	-	-	-
	OCCURRENCE_DATE	DATE	7	-	-	-	-	-	-
	GALAXY	VARCHAR2	50	-	-	-	-	-	-
	PLANET	VARCHAR2	50	-	-	-	-	-	-

1 - 4

HOSTS

CREATE TABLE HOSTS (

```
Char_H VARCHAR (50) NOT NULL,
Live_ID CHAR (3) NOT NULL,
PRIMARY KEY (Char_H, Live_ID),
FOREIGN KEY (Char_H) REFERENCES SUPERWORLD _RADIO_HOST(Character),
FOREIGN KEY (Live_ID) REFERENCES HARMONIC_LIVESTREAMING(Livestreaming_ID)
);
```

Object Type TABLE Object HOSTS

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
HOSTS	CHAR_H	VARCHAR2	50	-	-	1	-	-	-
	LIVE_ID	CHAR	3	-	-	2	-	-	-

1 - 2

COVERS

CREATE TABLE COVERS (

```
Livecover_ID CHAR (3) NOT NULL,
Event_tocover_Name VARCHAR (50) NOT NULL,
PRIMARY KEY (Livecover_ID, Event_tocover_Name)
FOREIGN KEY (Livecover_ID) REFERENCES HARMONIC_LIVESTREAMING(Livestreaming_ID),
FOREIGN KEY (Event_tocover_Name) REFERENCES CELESTIAL_MARVEL_EVENT(Universal_Ceremony)
);
```

Object Type TABLE Object COVERS

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
COVERS	LIVECOVER_ID	CHAR	3	-	-	1	-	-	-
	EVENT_TOCOVER_NAME	VARCHAR2	50	-	-	2	-	-	-

1 - 2

GALACTIC_CIVILIZATION

```
CREATE TABLE GALACTIC_CIVILIZATION (
    Civilization_Name VARCHAR (50) PRIMARY KEY,
    Technological_Advancement_Rate VARCHAR (15) NOT NULL,
    Government_System VARCHAR (50) NOT NULL
);
```

Object Type TABLE Object GALACTIC_CIVILIZATION									
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
GALACTIC_CIVILIZATION	CIVILIZATION_NAME	VARCHAR2	50	-	-	1	-	-	-
	TECHNOLOGICAL_ADVANCEMENT_RATE	VARCHAR2	15	-	-	-	-	-	-
	GOVERNMENT_SYSTEM	VARCHAR2	50	-	-	-	-	-	-

1 - 3

STREAMING_PLATFORM

```
CREATE TABLE STREAMING_PLATFORM (
    Livestreaming_ID CHAR (3) NOT NULL,
    Harmonic_Streaming_Platform VARCHAR (50) NOT NULL,
    PRIMARY KEY (Livestreaming_ID, Harmonic_Streaming_Platform),
    FOREIGN KEY (Livestreaming_ID) REFERENCES HARMONIC_LIVESTREAMING(Livestreaming_ID)
);
```

Object Type TABLE Object STREAMING_PLATFORM									
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STREAMING_PLATFORM	LIVESTREAMING_ID	CHAR	3	-	-	1	-	-	-
	HARMONIC_STREAMING_PLATFORM	VARCHAR2	50	-	-	2	-	-	-
1 - 2									

BELONGS_TO

```
CREATE TABLE BELONGS_TO (
    CivName VARCHAR (50) NOT NULL,
    Lis_ID CHAR (4) NOT NULL,
    PRIMARY KEY (CivName, Lis_ID),
    FOREIGN KEY (CivName) REFERENCES GALACTIC_CIVILIZATION(Civilization_Name),
    FOREIGN KEY (Lis_ID) REFERENCES STARS_BORN_LISTENER(Listener_ID)
);
```

Object Type TABLE Object BELONGS_TO

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BELONGS_TO	CIVNAME	VARCHAR2	50	-	-	1	-	-	-
	LIS_ID	CHAR	4	-	-	2	-	-	-
1 - 2									

CONNECTS

CREATE TABLE CONNECTS (

```
Lis_ID CHAR(4) NOT NULL,
Plt_Name VARCHAR(50) NOT NULL,
PRIMARY KEY (Lis_ID, Plt_Name),
FOREIGN KEY (Lis_ID) REFERENCES STARS_BORN_LISTENER(Listener_ID),
FOREIGN KEY (Plt_Name) REFERENCES EXCELSIOR_SOCIAL_MEDIA(Platform_Name)
);
```

Object Type TABLE Object CONNECTS

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CONNECTS	LIS_ID	CHAR	4	-	-	1	-	-	-
	PLT_NAME	VARCHAR2	50	-	-	2	-	-	-
1 - 2									

STARS_BORN_LISTENER

CREATE TABLE STARS_BORN_LISTENER (

```
Listener_ID CHAR(4) PRIMARY KEY,
Galaxy VARCHAR(50) NOT NULL,
Planet VARCHAR(50) NOT NULL,
First_Name VARCHAR(50) NOT NULL,
Middle_Name VARCHAR(50),
Last_Name VARCHAR(50) NOT NULL,
Species VARCHAR(50) NOT NULL,
CONSTRAINT chk_species CHECK (Species IN ('Human', 'Xelion', 'Terran', 'Zepharian', 'Celestian', 'Aquarian',
'Lumarian', 'Solarian', 'Draconian', 'Orionian'))
);
```

Object Type TABLE Object STARS_BORN_LISTENER

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STARS_BORN_LISTENER	LISTENER_ID	CHAR	4	-	-	1	-	-	-
	GALAXY	VARCHAR2	50	-	-	-	-	-	-
	PLANET	VARCHAR2	50	-	-	-	-	-	-
	FIRST_NAME	VARCHAR2	50	-	-	-	-	-	-
	MIDDLE_NAME	VARCHAR2	50	-	-	-	✓	-	-
	LAST_NAME	VARCHAR2	50	-	-	-	-	-	-
	SPECIES	VARCHAR2	50	-	-	-	-	-	-

1 - 7

MARVELEOUS_QUEST

```
CREATE TABLE MARVELEOUS_QUEST (
    SQ_ID CHAR (4) NOT NULL,
    Quest_Name VARCHAR (50) NOT NULL,
    Difficulty VARCHAR (20) NOT NULL,
    Reward VARCHAR (50) NOT NULL,
    Duration VARCHAR (20),
    AI_Name VARCHAR (50) NOT NULL,
    FOREIGN KEY (SQ_ID) REFERENCES DYNAMIC_SHOW(Show_ID)
);
```

Object Type TABLE Object MARVELEOUS_QUEST

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
MARVELEOUS_QUEST	SQ_ID	CHAR	3	-	-	-	-	-	-
	QUEST_NAME	VARCHAR2	50	-	-	-	-	-	-
	DIFFICULTY	VARCHAR2	20	-	-	-	-	-	-
	REWARD	VARCHAR2	50	-	-	-	-	-	-
	DURATION	VARCHAR2	20	-	-	-	✓	-	-
	AI_NAME	VARCHAR2	50	-	-	-	-	-	-

1 - 6

EXCELSIOR_SOCIAL MEDIA

```
CREATE TABLE EXCELSIOR_SOCIAL_MEDIA (
    Platform_Name VARCHAR (50) PRIMARY KEY,
    Accessibility VARCHAR (20) NOT NULL,
    Interactivity VARCHAR (20)
);
```

Object Type TABLE Object EXCELSIOR_SOCIAL_MEDIA

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EXCELSIOR_SOCIAL_MEDIA	PLATFORM_NAME	VARCHAR2	50	-	-	1	-	-	-
	ACCESSIBILITY	VARCHAR2	20	-	-	-	-	-	-
	INTERACTIVITY	VARCHAR2	20	-	-	-	✓	-	-
1 - 3									

PROMOTES

CREATE TABLE PROMOTES (

Plat_Name VARCHAR (50) NOT NULL,
 P_Name VARCHAR (50) NOT NULL,
 PRIMARY KEY (Plat_Name, P_Name),
 FOREIGN KEY (Plat_Name) REFERENCES EXCELSIOR_SOCIAL_MEDIA(Platform_Name),
 FOREIGN KEY (P_Name) REFERENCES GALACTIC_PROGRAM(Program_Name)
);

Object Type TABLE Object PROMOTES

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PROMOTES	PLAT_NAME	VARCHAR2	50	-	-	1	-	-	-
	P_NAME	VARCHAR2	50	-	-	2	-	-	-
1 - 2									

GALACTIC_PROGRAM

CREATE TABLE GALACTIC_PROGRAM (

Program_Name VARCHAR (50) PRIMARY KEY,
 Topic_Covered VARCHAR (50) NOT NULL
);

Object Type TABLE Object GALACTIC_PROGRAM

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
GALACTIC_PROGRAM	PROGRAM_NAME	VARCHAR2	50	-	-	1	-	-	-
	TOPIC_COVERED	VARCHAR2	50	-	-	-	-	-	-
1 - 2									

UPDATES

CREATE TABLE UPDATES (

Adv_Prog_Name VARCHAR (50) NOT NULL,
 TC VARCHAR (50) NOT NULL,
 PRIMARY KEY (Adv_Prog_Name, TC),
 FOREIGN KEY (Adv_Prog_Name) REFERENCES GALACTIC_PROGRAM(Program_Name),

);

Object Type TABLE Object UPDATES

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
UPDATES	ADV_PROG_NAME	VARCHAR2	50	-	-	1	-	-	-
	TC	VARCHAR2	50	-	-	2	-	-	-

1 - 2

SUPERWORLD_RADIO_HOST

CREATE TABLE SUPERWORLD_RADIO_HOST (

Character VARCHAR (50) PRIMARY KEY,
Fanbase VARCHAR (50) NOT NULL,
Show_Genre VARCHAR (50) NOT NULL,
First_Name VARCHAR (50) NOT NULL,
Middle_Name VARCHAR (50),
Last_Name VARCHAR (50) NOT NULL,
UNIQUE (Fanbase)

);

Object Type TABLE Object SUPERWORLD_RADIO_HOST

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
SUPERWORLD_RADIO_HOST	CHARACTER	VARCHAR2	50	-	-	1	-	-	-
	FANBASE	VARCHAR2	50	-	-	-	-	-	-
	SHOW_GENRE	VARCHAR2	50	-	-	-	-	-	-
	FIRST_NAME	VARCHAR2	50	-	-	-	-	-	-
	MIDDLE_NAME	VARCHAR2	50	-	-	-	✓	-	-
	LAST_NAME	VARCHAR2	50	-	-	-	-	-	-

1 - 6

HYPERSIMENSIONAL_EQUIPMENT

CREATE TABLE HYPERDIMENSIONAL_EQUIPMENT (

Serial_Number CHAR(6) PRIMARY KEY,
Purpose VARCHAR(255) NOT NULL,
Technology VARCHAR(255) NOT NULL,
Dimension_Supported VARCHAR(2) NOT NULL

);

Object Type TABLE Object HYPERDIMENSIONAL_EQUIPMENT

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
HYPERSIMENSIONAL_EQUIPMENT	SERIAL_NUMBER	CHAR	6	-	-	1	-	-	-
	PURPOSE	VARCHAR2	255	-	-	-	-	-	-
	TECHNOLOGY	VARCHAR2	255	-	-	-	-	-	-
	DIMENSION_SUPPORTED	VARCHAR2	2	-	-	-	-	-	-
1 - 4									

SUPPORTS

CREATE TABLE SUPPORTS (

E_ID CHAR (4) NOT NULL ,
 Char_ID VARCHAR(30) NOT NULL ,
 PRIMARY KEY (E_ID, Char_ID),
 FOREIGN KEY (E_ID) REFERENCES MIRACULOUS_EMPLOYEE (Employee_ID),
 FOREIGN KEY (Char_ID) REFERENCES SUPER_WORLD_RADIO_HOST (Character)
);

Object Type TABLE Object SUPPORTS

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
SUPPORTS	E_ID	CHAR	4	-	-	1	-	-	-
	CHAR_ID	VARCHAR2	30	-	-	2	-	-	-
1 - 2									

BROADCAST SCHEDULE

CREATE TABLE BROADCAST_SCHEDULE (

Broadcast_Schedule_ID CHAR (3) PRIMARY KEY
);

Object Type TABLE Object BROADCAST_SCHEDULE

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BROADCAST_SCHEDULE	BROADCAST_SCHEDULE_ID	CHAR	3	-	-	1	-	-	-
									1 - 1

MARVELEOUS MIXTAPE

CREATE TABLE MARVELOUS_MIXTAPE (

Mixtape_ID CHAR (3) PRIMARY KEY,
 First_Name VARCHAR (50) NOT NULL,
 Middle_Name VARCHAR(50),
 Last_Name VARCHAR(50) NOT NULL,

```

Genre VARCHAR(50) NOT NULL,
Track_List VARCHAR(255) NOT NULL,
Release_Date DATE NOT NULL,
MID CHAR (3) NOT NULL,
CharM VARCHAR(30) NOT NULL,
FOREIGN KEY (MID) REFERENCES ICONIC_MUSIC_SERVICE (Music_Service_ID),
FOREIGN KEY (CharM) REFERENCES SUPERWORLD_RADIO_HOST (Character)

);

```

Object Type TABLE Object MARVELOUS_MIXTAPE										
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment	
MARVELOUS_MIXTAPE	MIXTAPE_ID	CHAR	3	-	-	1	-	-	-	
	FIRST_NAME	VARCHAR2	50	-	-	-	-	-	-	
	MIDDLE_NAME	VARCHAR2	50	-	-	-	✓	-	-	
	LAST_NAME	VARCHAR2	50	-	-	-	-	-	-	
	GENRE	VARCHAR2	50	-	-	-	-	-	-	
	TRACK_LIST	VARCHAR2	255	-	-	-	-	-	-	
	RELEASE_DATE	DATE	7	-	-	-	-	-	-	
	MID	CHAR	3	-	-	-	-	-	-	
	CHARM	VARCHAR2	30	-	-	-	-	-	-	
1 - 9										

SPACESHIP

```

CREATE TABLE SHAPESHIP (
    VIN VARCHAR(9) PRIMARY KEY,
    Max_Speed DECIMAL(3, 1) NOT NULL,
    Class VARCHAR(20) NOT NULL,
    Captain VARCHAR(50) NULL
);

```

Object Type TABLE Object SHAPESHIP										
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment	
SHAPESHIP	VIN	VARCHAR2	9	-	-	1	-	-	-	
	MAX_SPEED	NUMBER	-	3	1	-	-	-	-	
	CLASS	VARCHAR2	20	-	-	-	-	-	-	
	CAPTAIN	VARCHAR2	50	-	-	-	✓	-	-	
1 - 4										

TRANSPORTS

```

CREATE TABLE TRANSPORTS (

```

Ser_No CHAR(6),
 VIN_S VARCHAR(9),
 Duration VARCHAR(50) NOT NULL,
PRIMARY KEY (Ser_No, VIN_S),
FOREIGN KEY (VIN_S) REFERENCES SHAPESHIP (VIN),
FOREIGN KEY (Ser_No) REFERENCES HYPERDIMENSIONAL_EQUIPMENT (Serial_Number)
);

Object Type TABLE Object TRANSPORTS									
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
TRANSPORTS	SER_NO	CHAR	6	-	-	1	-	-	-
	VIN_S	VARCHAR2	9	-	-	2	-	-	-
	DURATION	VARCHAR2	50	-	-	-	-	-	-
1 - 3									

MIRACULOUS EMPLOYEE

CREATE TABLE MIRACULOUS_EMPLOYEE (

 Employee_ID CHAR (4) **PRIMARY KEY**,

 FirstName VARCHAR(50) NOT NULL,

 MiddleName VARCHAR(50),

 LastName VARCHAR(50) NOT NULL,

 Role VARCHAR(50) NOT NULL,

 Birthday_Date DATE NOT NULL,

CONSTRAINT valid_role **CHECK** (Role IN ('Manager', 'Engineer', 'Analyst', 'Designer', 'Developer'))

);

Object Type TABLE Object MIRACULOUS_EMPLOYEE									
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
MIRACULOUS_EMPLOYEE	EMPLOYEE_ID	CHAR	4	-	-	1	-	-	-
	FIRSTNAME	VARCHAR2	50	-	-	-	-	-	-
	MIDDLENAME	VARCHAR2	50	-	-	-	✓	-	-
	LASTNAME	VARCHAR2	50	-	-	-	-	-	-
	ROLE	VARCHAR2	50	-	-	-	-	-	-
	BIRTHDAY_DATE	DATE	7	-	-	-	-	-	-
1 - 6									

MARVEL AI ASSISTANT

```
CREATE TABLE MARVEL_AI_ASSISTANT (
    Name VARCHAR(50) PRIMARY KEY,
    Integration_With_Device VARCHAR(255) NOT NULL,
    Voice VARCHAR(3) CHECK (Voice IN ('Yes', 'No')) NOT NULL,
    Function VARCHAR(255) NOT NULL
);
```

Object Type TABLE Object MARVEL_AI_ASSISTANT										
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment	
MARVEL_AI_ASSISTANT	NAME	VARCHAR2	50	-	-	1	-	-	-	
	INTEGRATION_WITH_DEVICE	VARCHAR2	255	-	-	-	-	-	-	
	VOICE	VARCHAR2	3	-	-	-	-	-	-	
	FUNCTION	VARCHAR2	255	-	-	-	-	-	-	
							1 - 4			

GALACTIC AD

```
CREATE TABLE GALACTIC_AD (
    EA VARCHAR(50) NOT NULL,
    Ad_ID CHAR(6) PRIMARY KEY,
    Product_Service VARCHAR(255) NOT NULL,
    Target_Audience VARCHAR(255) NOT NULL,
    Slogan VARCHAR(255) NOT NULL,
    Duration VARCHAR(50) NOT NULL,
    FOREIGN KEY (EA) REFERENCES CELESTIAL_MARVEL_EVENT(Universal_Ceremony)
);
```

Object Type TABLE Object GALACTIC_AD										
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment	
GALACTIC_AD	EA	VARCHAR2	50	-	-	-	-	-	-	
	AD_ID	CHAR	6	-	-	1	-	-	-	
	PRODUCT_SERVICE	VARCHAR2	255	-	-	-	-	-	-	
	TARGET_AUDIENCE	VARCHAR2	255	-	-	-	-	-	-	
	SLOGAN	VARCHAR2	255	-	-	-	-	-	-	
	DURATION	VARCHAR2	50	-	-	-	-	-	-	
						1 - 6				

ICONIC MUSIC SERVICE

```
CREATE TABLE ICONIC_MUSIC_SERVICES (
    Music_Service_ID CHAR(3) PRIMARY KEY,
    Subscription_Tier VARCHAR(3) NOT NULL,
    Music_Catalog VARCHAR(255) NOT NULL
);
```

Table: ICONIC_MUSIC_SERVICES						
Column	Data Type	Length	Precision	Scale	Nullable	
MUSIC_SERVICE_ID	CHAR	3	-	-	No	
SUBSCRIPTION_TIER	VARCHAR2	3	-	-	No	
MUSIC_CATALOG	VARCHAR2	255	-	-	No	
						1 - 3

DYNAMIC SHOW

```
CREATE TABLE DYNAMIC_SHOW (
    Show_ID CHAR(3) PRIMARY KEY,
    Viewer_Rating DECIMAL(3, 1) NOT NULL CHECK (Viewer_Rating >= 0 AND Viewer_Rating <= 5),
    Genre VARCHAR(50) NOT NULL,
    Show_Name VARCHAR(255) NOT NULL,
    UNIQUE(Show_Name)
);
```

Object Type: TABLE Object: DYNAMIC_SHOW									
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DYNAMIC_SHOW	SHOW_ID	CHAR	3	-	-	1	-	-	-
	VIEWER_RATING	NUMBER	-	3	1	-	-	-	-
	GENRE	VARCHAR2	50	-	-	-	-	-	-
	SHOW_NAME	VARCHAR2	255	-	-	-	-	-	-
									1 - 4

ADVENTUROUS NEW

```
CREATE TABLE ADVENTUROUS_NEW (
    PN VARCHAR(50),
    Topic VARCHAR(50),
    Reporting_Style VARCHAR(50),
    Frequency VARCHAR(20),
    Anchor VARCHAR(50),
    PRIMARY KEY (PN, topic),
    FOREIGN KEY (PN) REFERENCES GALACTIC_PROGRAM(Program_Name)
);
```

Object Type TABLE Object ADVENTUROUS_NEW

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ADVENTUROUS_NEW	PN	VARCHAR2	50	-	-	1	-	-	-
	TOPIC	VARCHAR2	50	-	-	2	-	-	-
	REPORTING_STYLE	VARCHAR2	50	-	-	-	✓	-	-
	FREQUENCY	VARCHAR2	20	-	-	-	✓	-	-
	ANCHOR	VARCHAR2	50	-	-	-	✓	-	-

1 - 5

EXCLUSIVE FEATURES

CREATE TABLE EXCLUSIVE_FEATURE (

Music_Service_ID CHAR(3) NOT NULL,
 Exclusive_Feature VARCHAR(255) NOT NULL,
 PRIMARY KEY (Music_Service_ID, Exclusive_Feature),
 FOREIGN KEY (Music_Service_ID) REFERENCES ICONIC_MUSIC_SERVICES (Music_Service_ID)
);

Object Type TABLE Object EXCLUSIVE_FEATURE

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EXCLUSIVE_FEATURE	MUSIC_SERVICE_ID	CHAR	3	-	-	1	-	-	-
	EXCLUSIVE_FEATURE	VARCHAR2	255	-	-	2	-	-	-

1 - 2

EXCELSIOR_USERBASE

CREATE TABLE EXCELSIOR_USER_BASE (

Platform_Name VARCHAR(50) NOT NULL,
 E_User_Base INT NOT NULL,
 PRIMARY KEY (Platform_Name, E_User_Base),
 FOREIGN KEY (Platform_Name) REFERENCES EXCELSIOR_SOCIAL_MEDIA (Platform_Name),
 CONSTRAINT chk_E_User_Base CHECK (E_User_Base >= 0)
);

Object Type TABLE Object EXCELSIOR_USER_BASE

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EXCELSIOR_USER_BASE	PLATFORM_NAME	VARCHAR2	50	-	-	1	-	-	-
	E_USER_BASE	NUMBER	22	-	0	2	-	-	-

1 - 2

HAS

```
CREATE TABLE HAS (
    Prog_Name VARCHAR(50) NOT NULL,
    Brodsched_ID CHAR(3) NOT NULL,
    PRIMARY KEY (Prog_Name, Brodsched_ID),
    FOREIGN KEY (Prog_Name) REFERENCES GALACTIC_PROGRAM (Program_Name),
    FOREIGN KEY (Brodsched_ID) REFERENCES BROADCAST_SCHEDULE (Broadcast_Schedule_ID)
);
```

Object Type	TABLE	Object	HAS						
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
HAS	PROG_NAME	VARCHAR2	50	-	-	1	-	-	-
	BRODSCHED_ID	CHAR	3	-	-	2	-	-	-
1 - 2									

BROADCAST SCHEDULE_DAY

```
CREATE TABLE BROADCAST_SCHEDULE_DAY (
    Broadcast_Schedule_ID CHAR(3) NOT NULL,
    B_day VARCHAR(15) NOT NULL,
    PRIMARY KEY (Broadcast_Schedule_ID, B_day),
    FOREIGN KEY (Broadcast_Schedule_ID) REFERENCES BROADCAST_SCHEDULE (Broadcast_Schedule_ID)
);
```

Object Type TABLE Object BROADCAST_SCHEDULE_DAY

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BROADCAST_SCHEDULE_DAY	BROADCAST_SCHEDULE_ID	CHAR	3	-	-	1	-	-	-
	B_DAY	VARCHAR2	15	-	-	2	-	-	-
1 - 2									

BROADCAST SCHEDULE_TIME

```
CREATE TABLE BROADCAST_SCHEDULE_TIME (
    Broadcast_Schedule_ID CHAR(3) NOT NULL,
    B_Time TIMESTAMP NOT NULL,
    PRIMARY KEY (Broadcast_Schedule_ID, B_Time),
    FOREIGN KEY (Broadcast_Schedule_ID) REFERENCES BROADCAST_SCHEDULE (Broadcast_Schedule_ID)
);
```

Object Type TABLE Object BROADCAST_SCHEDULE_TIME

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BROADCAST_SCHEDULE_TIME	BROADCAST_SCHEDULE_ID	CHAR	3	-	-	1	-	-	-
	B_TIME	TIMESTAMP(6)	11	-	6	2	-	-	-
1 - 2									

EQUIPMENT

CAPABILITY

CREATE TABLE

EQUIPMENT_CAPABILITY (

Serial_Number CHAR(6) NOT NULL,

Eq_Capability VARCHAR(50) NOT NULL,

PRIMARY KEY (Serial_Number, Eq_Capability),

FOREIGN KEY (Serial_Number) REFERENCES HYPERDIMENSIONAL_EQUIPMENT (Serial_Number)

);

Object Type TABLE Object EQUIPMENT_CAPABILITY

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EQUIPMENT_CAPABILITY	SERIAL_NUMBER	CHAR	6	-	-	1	-	-	-
	EQ_CAPABILITY	VARCHAR2	50	-	-	2	-	-	-
1 - 2									

EXCELSIOR_FEATURE

CREATE TABLE EXCELSIOR_FEATURE (

Platform_Name VARCHAR(50) NOT NULL,

E_Feature VARCHAR(225) NOT NULL,

PRIMARY KEY (Platform_Name, E_Feature),

FOREIGN KEY (Platform_Name) REFERENCES EXCELSIOR_SOCIAL_MEDIA (Platform_Name)

);

Object Type TABLE Object EXCELSIOR_FEATURE

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EXCELSIOR_FEATURE	PLATFORM_NAME	VARCHAR2	50	-	-	1	-	-	-
	E_FEATURE	VARCHAR2	225	-	-	2	-	-	-
1 - 2									

11.2. Insertion of Data into the Database Tables

HARMONIC LIVESTREAMING

```
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('001', 'Space Ambient', 'High', 'Johnson', 'Andrew', 'David');
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('002', 'Sci-Fi Rock', 'Medium', 'Smith', 'Benjamin', 'Emily');
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('003', 'Galactic Jazz', 'Low', 'Anderson', 'Carter', 'Michael');
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('004', 'Alien Pop', 'High', 'Davis', 'Daniel', 'Sophia');
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('005', 'Cosmic EDM', 'Medium', 'Patel', 'Elijah', 'Aiden');
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('006', 'Astro Metal', 'Low', 'Wang', 'Finn', 'Olivia');
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('007', 'Intergalactic', 'High', 'Kim', 'Grace', 'Ethan');
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('008', 'Nebula Blues', 'Medium', 'Rodriguez', 'Rodriguez', 'Mia'),
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('009', 'Star Pop', 'Low', 'Lee', 'Isabella', 'Liam'),
INSERT INTO HARMONIC_LIVESTREAMING VALUES ('010', 'Quantum Rock', 'High', 'Turner', 'Turner', 'Ava');
```

LIVESTREAMING_ID	MUSIC_GENRE	AUDIENCE_INTERACTION	FIRST_NAME	MIDDLE_NAME	LAST_NAME
001	Space Ambient	High	Johnson	Andrew	David
002	Sci-Fi Rock	Medium	Smith	Benjamin	Emily
003	Galactic Jazz	Low	Anderson	Carter	Michael
004	Alien Pop	High	Davis	Daniel	Sophia
005	Cosmic EDM	Medium	Patel	Elijah	Aiden
006	Astro Metal	Low	Wang	Finn	Olivia
007	Intergalactic	High	Kim	Grace	Ethan
008	Nebula Blues	Medium	Rodriguez	Rodriguez	Mia
009	Star Pop	Low	Lee	Isabella	Liam
010	Quantum Rock	High	Turner	Turner	Ava

10 rows returned in 0.01 seconds [Download](#)

CELESTIAL_MARVEL_EVENT

```
INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Cosmic Convergence', TO_DATE('15/11/2023', 'DD/MM/YYYY'), 'Andromeda', 'Nova Prime');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Galactic Nexus', TO_DATE('02/03/2024', 'DD/MM/YYYY'), 'Triangulum', 'Celestoria');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Starfall Spectacle', TO_DATE('20/07/2024', 'D/MM/YYYY'), 'Milky Way', 'Earth');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Nebula Unveiling', TO_DATE('12/10/2024', 'DD/MM/YYYY'), 'Centaurus A', 'Zenithar');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Celestial Harmony', TO_DATE('05/02/2025',
```

'DD/MM/YYYY'), 'Magellanic Cloud', 'Seraphion');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Quantum Revelation', TO_DATE('09/09/2025', 'DD/MM/YYYY'), 'Pegasus', 'Astralis');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Infinity Eclipse', TO_DATE('18/06/2025', 'DD/MM/YYYY'), 'Virgo Supercluster', 'Galactica');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Stellar Odyssey', TO_DATE('22/01/2026', 'DD/MM/YYYY'), 'Hercules', 'Starhaven');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Nebula Fusion', TO_DATE('07/08/2026', 'DD/MM/YYYY'), 'Hydra', 'Nebulon');

INSERT INTO CELESTIAL_MARVEL_EVENT VALUES ('Cosmic Ascendance', TO_DATE('14/05/2026', 'DD/MM/YYYY'), 'Phoenix Cluster', 'Celestialis');

UNIVERSAL_CEREMONY	OCCURRENCE_DATE	GALAXY	PLANET
Cosmic Convergence	11/15/2023	Andromeda	Nova Prime
Galactic Nexus	03/02/2024	Triangulum	Celestoria
Starfall Spectacle	07/20/2024	Milky Way	Earth
Nebula Unveiling	10/12/2024	Centaurus A	Zenithar
Celestial Harmony	02/05/2025	Magellanic Cloud	Seraphion
Quantum Revelation	09/09/2025	Pegasus	Astralis
Infinity Eclipse	06/18/2025	Virgo Supercluster	Galactica
Stellar Odyssey	01/22/2026	Hercules	Starhaven
Nebula Fusion	08/07/2026	Hydra	Nebulon
Cosmic Ascendance	05/14/2026	Phoenix Cluster	Celestialis

10 rows returned in 0.01 seconds [Download](#)

HOSTS

INSERT INTO HOSTS VALUES ('Galaxy Explorer', '001'),

INSERT INTO HOSTS VALUES ('Nebula Navigator', '002'),

INSERT INTO HOSTS VALUES ('Cosmic DJ', '003'),

INSERT INTO HOSTS VALUES ('Astro Ambassador', '004'),

INSERT INTO HOSTS VALUES ('Galactic Guru', '005'),

INSERT INTO HOSTS VALUES ('Celestial Choreographer', '006'),

INSERT INTO HOSTS VALUES ('Orbiting Oracle', '007'),

INSERT INTO HOSTS VALUES ('Space Siren', '008'),

INSERT INTO HOSTS VALUES ('Cosmic Communicator', '009'),

INSERT INTO HOSTS VALUES ('Solar Serenader', '010');

CHAR_H	LIVE_ID
Astro Ambassador	004
Celestial Choreographer	006
Cosmic Communicator	009
Cosmic DJ	003
Galactic Guru	005
Galaxy Explorer	001
Nebula Navigator	002
Orbiting Oracle	007
Solar Serenader	010
Space Siren	008

10 rows returned in 0.01 seconds

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COVERS

```
INSERT INTO COVERS VALUES ('001', 'Cosmic Convergence');
INSERT INTO COVERS VALUES ('002', 'Galactic Nexus');
INSERT INTO COVERS VALUES ('003', 'Starfall Spectacle');
INSERT INTO COVERS VALUES ('004', 'Nebula Unveiling');
INSERT INTO COVERS VALUES ('005', 'Celestial Harmony');
INSERT INTO COVERS VALUES ('006', 'Quantum Revelation');
INSERT INTO COVERS VALUES ('007', 'Infinity Eclipse');
INSERT INTO COVERS VALUES ('008', 'Stellar Odyssey');
INSERT INTO COVERS VALUES ('009', 'Nebula Fusion');
INSERT INTO COVERS VALUES ('010', 'Cosmic Ascendance');
```

LIVECOVER_ID	EVENT_TOCOVER_NAME
001	Cosmic Convergence
002	Galactic Nexus
003	Starfall Spectacle
004	Nebula Unveiling
005	Celestial Harmony
006	Quantum Revelation
007	Infinity Eclipse
008	Stellar Odyssey
009	Nebula Fusion
010	Cosmic Ascendance

10 rows returned in 0.01 seconds

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GALACTIC_CIVILIZATION

```
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Celestial Alliance', 'High', 'Federal Republic');
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Quantum Dominion', 'Medium', 'Technocratic Oligarchy');
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Starlight Consortium', 'Very High', 'Democratic
Confederation');
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Nebula Empire', 'Low', 'Authoritarian Monarchy');
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Cosmic Federation', 'Very High', 'Parliamentary Democracy');
```

```

INSERT INTO GALACTIC_CIVILIZATION VALUES ('Galactic Union', 'Medium', 'Unitary Socialist State');
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Interstellar Republic', 'High', 'Federal Parliamentary Republic');
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Astral Hegemony', 'Low', 'Totalitarian Oligarchy');
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Nova Commonwealth', 'Very High', 'Democratic Federalism');
INSERT INTO GALACTIC_CIVILIZATION VALUES ('Nebula Ascendancy', 'Medium', 'Corporate Plutocracy');

```

CIVILIZATION_NAME	TECHNOLOGICAL_ADVANCEMENT RATE	GOVERNMENT_SYSTEM
Celestial Alliance	High	Federal Republic
Quantum Dominion	Medium	Technocratic Oligarchy
Starlight Consortium	Very High	Democratic Confederation
Nebula Empire	Low	Authoritarian Monarchy
Cosmic Federation	Very High	Parliamentary Democracy
Galactic Union	Medium	Unitary Socialist State
Interstellar Republic	High	Federal Parliamentary Republic
Astral Hegemony	Low	Totalitarian Oligarchy
Nova Commonwealth	Very High	Democratic Federalism
Nebula Ascendancy	Medium	Corporate Plutocracy

STREAMING_PLATFORM

```

INSERT INTO STREAMING_PLATFORM VALUES ('001', 'Spotify');
INSERT INTO STREAMING_PLATFORM VALUES ('002', 'Apple Music');
INSERT INTO STREAMING_PLATFORM VALUES ('003', 'Slacker Radio');
INSERT INTO STREAMING_PLATFORM VALUES ('004', 'SoundCloud');
INSERT INTO STREAMING_PLATFORM VALUES ('005', 'Deezer');
INSERT INTO STREAMING_PLATFORM VALUES ('006', 'Tidal');
INSERT INTO STREAMING_PLATFORM VALUES ('007', 'Amazon Music');
INSERT INTO STREAMING_PLATFORM VALUES ('008', 'Last.fm');
INSERT INTO STREAMING_PLATFORM VALUES ('009', 'Angami');
INSERT INTO STREAMING_PLATFORM VALUES ('010', 'Google Play Music');

```

LIVESTREAMING_ID	HARMONIC_STREAMING_PLATFORM
001	Spotify
002	Apple Music
003	Slacker Radio
004	SoundCloud
005	Deezer
006	Tidal
007	Amazon Music
008	Last.fm
009	Angami
010	Google Play Music

10 rows returned in 0.00 seconds [Download](#)

BELONGS_TO

```
INSERT INTO BELONGSTO VALUES ('Celestial Alliance', '7532');
INSERT INTO BELONGSTO VALUES ('Quantum Dominion', '4198');
INSERT INTO BELONGSTO VALUES ('Starlight Consortium', '1265');
INSERT INTO BELONGSTO VALUES ('Nebula Empire', '8954');
INSERT INTO BELONGSTO VALUES ('Cosmic Federation', '6321');
INSERT INTO BELONGSTO VALUES ('Galactic Union', '3076');
INSERT INTO BELONGSTO VALUES ('Interstellar Republic', '5489');
INSERT INTO BELONGSTO VALUES ('Astral Hegemony', '1823');
INSERT INTO BELONGSTO VALUES ('Nova Commonwealth', '9743');
INSERT INTO BELONGSTO VALUES ('Nebula Ascendancy', '6904');
```

CIVNAME	LIS_ID
Astral Hegemony	1823
Celestial Alliance	7532
Cosmic Federation	6321
Galactic Union	3076
Interstellar Republic	5489
Nebula Ascendancy	6904
Nebula Empire	8954
Nova Commonwealth	9743
Quantum Dominion	4198
Starlight Consortium	1265

10 rows returned in 0.00 seconds [Download](#)

CONNECTS

```
INSERT INTO CONNECTS VALUES ('7532', 'Galactic Tunes');  
INSERT INTO CONNECTS VALUES ('4198', 'Astro Podcast Network');  
INSERT INTO CONNECTS VALUES ('1265', 'Cosmic Chatter');  
INSERT INTO CONNECTS VALUES ('8954', 'Star Jams Radio');  
INSERT INTO CONNECTS VALUES ('6321', 'Nebula News Feed');  
INSERT INTO CONNECTS VALUES ('3076', 'Interstellar Gram');  
INSERT INTO CONNECTS VALUES ('5489', 'Space Book');  
INSERT INTO CONNECTS VALUES ('1823', 'Celestial Snap');  
INSERT INTO CONNECTS VALUES ('9743', 'Galaxy Pods');  
INSERT INTO CONNECTS VALUES ('6904', 'Stellar Social');
```

LIS_ID	PLT_NAME
1265	Cosmic Chatter
1823	Celestial Snap
3076	Interstellar Gram
4198	Astro Podcast Network
5489	Space Book
6321	Nebula News Feed
6904	Stellar Social
7532	Galactic Tunes
8954	Star Jams Radio
9743	Galaxy Pods

10 rows returned in 0.01 seconds

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STAR BORN LISTENER

```
INSERT INTO STARBORN_LISTENERS VALUES (7532, 'Andromeda', 'Nova Prime', 'Johnson', 'Amelia', 'Sophia', 'Human');

INSERT INTO STARBORN_LISTENERS VALUES (4198, 'Triangulum', 'Celestoria', 'Smith', 'Benjamin', 'Ethan', 'Xelion');

INSERT INTO STARBORN_LISTENERS VALUES (1265, 'Milky Way', 'Earth', 'Anderson', 'Carter', 'Liam', 'Terran');

INSERT INTO STARBORN_LISTENERS VALUES (8954, 'Centaurus A', 'Zenithar', 'Davis', 'Daniel', 'Ava', 'Zepharian');

INSERT INTO STARBORN_LISTENERS VALUES (6321, 'Magellanic Cloud', 'Seraphion', 'Patel', 'Elijah', 'Olivia', 'Celestian');

INSERT INTO STARBORN_LISTENERS VALUES (3076, 'Pegasus', 'Astralis', 'Wang', 'Finn', 'Noah', 'Aquarian');

INSERT INTO STARBORN_LISTENERS VALUES (5489, 'Virgo Supercluster', 'Galactica', 'Kim', 'Grace', 'Mia', 'Lumarian');

INSERT INTO STARBORN_LISTENERS VALUES (1823, 'Hercules', 'Starhaven', 'Rodriguez', 'Henry', 'Elijah', 'Solarian');

INSERT INTO STARBORN_LISTENERS VALUES (9743, 'Hydra', 'Nebulon', 'Lee', 'Isabella', 'Draconian', 'Draconian');

INSERT INTO STARBORN_LISTENERS VALUES (6904, 'Phoenix Cluster', 'Celestialis', 'Turner', 'James', 'Aiden', 'Orionian');
```

LISTENER_ID	GALAXY	PLANET	FIRST_NAME	MIDDLE_NAME	LAST_NAME	SPECIES
7532	Andromeda	Nova Prime	Johnson	Amelia	Sophia	Human
4198	Triangulum	Celestoria	Smith	Benjamin	Ethan	Xelion
1265	Milky Way	Earth	Anderson	Carter	Liam	Terran
8954	Centaurus A	Zenithar	Davis	Daniel	Ava	Zepharian
6321	Magellanic Cloud	Seraphion	Patel	Elijah	Olivia	Celestian
3076	Pegasus	Astralis	Wang	Finn	Noah	Aquarian
5489	Virgo Supercluster	Galactica	Kim	Grace	Mia	Lumarian
1823	Hercules	Starhaven	Rodriguez	Henry	Elijah	Solarian
9743	Hydra	Nebulon	Lee	Isabella	Draconian	Draconian
6904	Phoenix Cluster	Celestialis	Turner	James	Aiden	Orionian

10 rows returned in 0.01 seconds [Download](#)

MARVELEOUS QUEST

```
INSERT INTO MARVELEOUS_QUEST VALUES (101, 'Cosmic Conundrum', 'Medium', '150 Galactic Credits', '2.5 hours', 'Puzzle Master AI');
```

INSERT INTO MARVELEOUS_QUEST VALUES ((102, 'Starship Racing Challenge', 'Easy', '120 Galactic Credits', '2 hours', 'Racer Bot');
 MARVELEOUS_QUEST VALUES ((103, 'Exoplanet Exploration', 'Hard ', '250 Galactic Credits', '3.5 hours', 'Explorer AI');
 INSERT INTO MARVELEOUS_QUEST VALUES ((104, 'Astrobiology Adventure', 'Medium', '180 Galactic Credits', '2.5 hours', 'Bio Bot');
 INSERT INTO MARVELEOUS_QUEST VALUES ((105, 'Cosmic Art Gallery Tour', 'Easy', '100 Galactic Credits', 'NULL', 'Art Guide AI');
 INSERT INTO MARVELEOUS_QUEST VALUES ((106, 'Galactic Codebreaker Challenge', 'Hard', '300 Galactic Credits', '4 hours', 'Code breaker AI');
 INSERT INTO MARVELEOUS_QUEST VALUES ((107, 'Nebula Navigation Quest', 'Medium', '200 Galactic Credits', '3 hours', 'Navigator Bot');
 INSERT INTO MARVELEOUS_QUEST VALUES ((108, 'Star Wars Simulation', ' Easy', '500 Galactic Credits', 'NULL', 'Simulation Master AI');
 INSERT INTO MARVELEOUS_QUEST VALUES ((109, 'Quantum Physics Expedition', 'Hard', '280 Galactic Credits', '4 hours', 'Quantum Explorer AI');
 INSERT INTO MARVELEOUS_QUEST VALUES ((110, ' Black Hole Mysteries', 'Hard', ' 400 Galactic Credits', '4.5 hours', 'Astro Physici');

SQ_ID	QUEST_NAME	DIFFICULTY	RWARD	DURATION	AI_NAME
101	Cosmic Conundrum	Medium	150 Galactic Credits	2.5 hours	Puzzle Master AI
102	Starship Racing Challenge	Easy	120 Galactic Credits	2 hours	Racer Bot
103	Exoplanet Exploration	Hard	250 Galactic Credits	3.5 hours	Explorer AI
104	Astrobiology Adventure	Medium	180 Galactic Credits	2.5 hours	Bio Bot
105	Cosmic Art Gallery Tour	Easy	100 Galactic Credits	-	Art Guide AI
106	Galactic Codebreaker Challenge	Hard	300 Galactic Credits	4 hours	Code breaker AI
107	Nebula Navigation Quest	Medium	200 Galactic Credits	3 hours	Navigator Bot
108	Star Wars Simulation	Easy	500 Galactic Credits	-	Simulation Master AI
109	Quantum Physics Expedition	Hard	280 Galactic Credits	4 hours	Quantum Explorer AI
110	Black Hole Mysteries	M	400 Galactic Credits	4.5 hours	Astro Physici

10 rows returned in 0.01 seconds [Download](#)

EXELSIOR SOCIAL MEDIA

INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Galactic Tunes', 'Inclusive', 'High');
 INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Astro Podcast Network', 'Accessible', 'Medium');
 INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Cosmic Chatter', 'Universal', 'Very High');
 INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Star Jams Radio', 'Inclusive', 'High');

```

INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Nebula News Feed', 'Accessible', 'Medium');
INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Interstellar Gram', 'Universal', 'Very High');
INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Space Book', 'Inclusive', 'High');
INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Celestial Snap', 'Accessible', 'NULL');
INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Galaxy Pods', 'Universal', 'Very High');
INSERT INTO EXELSIOR_SOCIAL_MEDIA VALUES ('Stellar Social', 'Inclusive', 'High');

```

PLATFORM_NAME	ACCESSIBILITY	INTERACTIVITY
Galactic Tunes	Inclusive	High
Astro Podcast Network	Accessible	Medium
Cosmic Chatter	Universal	Very High
Star Jams Radio	Inclusive	High
Nebula News Feed	Accessible	Medium
Interstellar Gram	Universal	Very High
Space Book	Inclusive	High
Celestial Snap	Accessible	-
Galaxy Pods	Universal	Very High
Stellar Social	Inclusive	High

10 rows returned in 0.00 seconds [Download](#)

PROMOTES

```

INSERT INTO PROMOTES VALUES ('Galactic Tunes', 'Stellar Exploration');
INSERT INTO PROMOTES VALUES ('Astro Podcast Network', 'Alien Jams');
INSERT INTO PROMOTES VALUES ('Cosmic Chatter', 'Space Talk');
INSERT INTO PROMOTES VALUES ('Star Jams Radio', 'Astro Sounds');
INSERT INTO PROMOTES VALUES ('Nebula News Feed', 'Cosmic Conversations');
INSERT INTO PROMOTES VALUES ('Interstellar Gram', 'Galactic Grooves');
INSERT INTO PROMOTES VALUES ('Space Book', 'Universal News');
INSERT INTO PROMOTES VALUES ('Celestial Snap', 'Quantum Quasar');
INSERT INTO PROMOTES VALUES ('Galaxy Pods', 'Solar Sermons');
INSERT INTO PROMOTES VALUES ('Stellar Social', 'Interstellar Interviews');

```

PLAT_NAME	P_NAME
Astro Podcast Network	Alien Jams
Celestial Snap	Quantum Quasar
Cosmic Chatter	Space Talk
Galactic Tunes	Stellar Exploration
Galaxy Pods	Solar Sermons
Interstellar Gram	Galactic Grooves
Nebula News Feed	Cosmic Conversations
Space Book	Universal News
Star Jams Radio	Astro Sounds
Stellar Social	Interstellar Interviews

10 rows returned in 0.00 seconds [Download](#)

GALACTIC PROGRAM

```
INSERT INTO GALACTIC_PROGRAM VALUES ('Stellar Exploration', 'Space Exploration');
INSERT INTO GALACTIC_PROGRAM VALUES ('Alien Jams', 'Extraterrestrial Music');
INSERT INTO GALACTIC_PROGRAM VALUES ('Space Talk', 'Celestial Conversations');
INSERT INTO GALACTIC_PROGRAM VALUES ('Astro Sounds', 'Space-Themed Music');
INSERT INTO GALACTIC_PROGRAM VALUES ('Cosmic Conversations', 'General Cosmic Discussions');
INSERT INTO GALACTIC_PROGRAM VALUES ('Galactic Grooves', 'Funky Beats from the Cosmos');
INSERT INTO GALACTIC_PROGRAM VALUES ('Universal News', 'Interstellar News Updates');
INSERT INTO GALACTIC_PROGRAM VALUES ('Quantum Quasar', 'Quantum Physics Exploration');
INSERT INTO GALACTIC_PROGRAM VALUES ('Solar Sermons', 'Sun and Solar System Topics');
INSERT INTO GALACTIC_PROGRAM VALUES ('Interstellar Interviews', 'Interviews with Space Experts');
```

PROGRAM_NAME	TOPIC_COVERED
Stellar Exploration	Space Exploration
Alien Jams	Extraterrestrial Music
Space Talk	Celestial Conversations
Astro Sounds	Space-Themed Music
Cosmic Conversations	General Cosmic Discussions
Galactic Grooves	Funky Beats from the Cosmos
Universal News	Interstellar News Updates
Quantum Quasar	Quantum Physics Exploration
Solar Sermons	Sun and Solar System Topics
Interstellar Interviews	Interviews with Space Experts

10 rows returned in 0.00 seconds [Download](#)

UPDATES

```
INSERT INTO UPDATES VALUES ('Stellar Exploration', 'Space Exploration');
INSERT INTO UPDATES VALUES ('Alien Jams', 'Extraterrestrial Music');
INSERT INTO UPDATES VALUES ('Space Talk', 'Celestial Conversations');
INSERT INTO UPDATES VALUES ('Astro Sounds', 'Space-Themed Music');
INSERT INTO UPDATES VALUES ('Cosmic Conversations', 'General Cosmic Discussions');
INSERT INTO UPDATES VALUES ('Galactic Grooves', 'Funky Beats from the Cosmos');
INSERT INTO UPDATES VALUES ('Universal News', 'Interstellar News Updates');
INSERT INTO UPDATES VALUES ('Quantum Quasar', 'Quantum Physics Exploration');
INSERT INTO UPDATES VALUES ('Solar Sermons', 'Sun and Solar System Topics');
INSERT INTO UPDATES VALUES ('Interstellar Interviews', 'Interviews with Space Experts');
```

ADV_PROG_NAME	TC
Alien Jams	Extraterrestrial Music
Astro Sounds	Space-Themed Music
Cosmic Conversations	General Cosmic Discussions
Galactic Grooves	Funky Beats from the Cosmos
Interstellar Interviews	Interviews with Space Experts
Quantum Quasar	Quantum Physics Exploration
Solar Sermons	Sun and Solar System Topics
Space Talk	Celestial Conversations
Stellar Exploration	Space Exploration
Universal News	Interstellar News Updates

10 rows returned in 0.00 seconds [Download](#)

SUPERWORLD RADIO HOST

```

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Galaxy Explorer', 'Galaxy Explorer', 'Exploration Jams',
'Galax', 'Epsilon', 'Explorer');

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Nebula Navigator', 'Nebula Navigator', 'Celestial Beats',
'Nebula', 'Nova', 'Navigator')

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Cosmic DJ', 'Cosmic DJ', 'Cosmic Mixology', 'Cosmic',
'Delta', 'DJ');

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Astro Ambassador', 'Solar Serenader', 'Solar Serenades',
'Solar', 'Sigma', 'Serenader');

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Galactic Guru', 'Quantum Quasar', 'Quantum Waves',
'Quantum', 'Quasar', 'Quasar');

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Celestial Choreographer', 'Celestial DJ', 'Starry Rhythms',
'Celestial', 'Marvelous', 'DJ');

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Orbiting Oracle', 'Astro Ambassador', 'Space Diplomacy',
'Astro', 'Alpha', 'Ambassador');

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Space Siren', 'Starlight Serenade', '29', 'Non-binary', 'Pluto',
'108');

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Cosmic Communicator', 'Orion Observer', '41', 'Male',
'Neptune', '109');

INSERT INTO SUPERWORLD_RADIO_HOST VALUES ('Solar Serenader', 'Galactic Guru', '36', 'Female', 'Mars',
'110');

```

CHARACTER	FANBASE	SHOW_GENRE	FIRST_NAME	MIDDLE_NAME	LAST_NAME
Galaxy Explorer	Galaxy Explorer	Exploration Jams	Galax	Epsilon	Explorer
Nebula Navigator	Nebula Navigator	Celestial Beats	Nebula	Nova	Navigator
Cosmic DJ	Cosmic DJ	Cosmic Mixology	Cosmic	Delta	DJ
Astro Ambassador	Solar Serenader	Solar Serenades	Solar	Sigma	Serenader
Galactic Guru	Quantum Quasar	Quantum Waves	Quantum	Quasar	Quasar
Celestial Choreographer	Celestial DJ	Starry Rhythms	Celestial	Marvelous	DJ
Orbiting Oracle	Astro Ambassador	Space Diplomacy	Astro	Alpha	Ambassador
Space Siren	Starlight Serenade	29	Non-binary	Pluto	108
Cosmic Communicator	Orion Observer	41	Male	Neptune	109
Solar Serenader	Galactic Guru	36	Female	Mars	110

10 rows returned in 0.01 seconds [Download](#)

SUPPORTS

```

INSERT INTO SUPPORTS VALUES (7823, 'Galaxy Explorer');
INSERT INTO SUPPORTS VALUES (5981, 'Nebula Navigator');
INSERT INTO SUPPORTS VALUES (2345, 'Cosmic DJ');
INSERT INTO SUPPORTS VALUES (8762, 'Astro Ambassador');
INSERT INTO SUPPORTS VALUES (1098, 'Galactic Guru');
INSERT INTO SUPPORTS VALUES (4567, 'Celestial Choreographer');
INSERT INTO SUPPORTS VALUES (3210, 'Orbiting Oracle');
INSERT INTO SUPPORTS VALUES (7890, 'Space Siren');
INSERT INTO SUPPORTS VALUES (5432, 'Cosmic Communicator');
INSERT INTO SUPPORTS VALUES (9876, 'Solar Serenader');

```

E_ID	CHAR_ID
1098	Galactic Guru
2345	Cosmic DJ
3210	Orbiting Oracle
4567	Celestial Choreographer
5432	Cosmic Communicator
5981	Nebula Navigator
7823	Galaxy Explorer
7890	Space Siren
8762	Astro Ambassador
9876	Solar Serenader

10 rows returned in 0.00 seconds [Download](#)

BROADCAST SCHEDULE

```
INSERT INTO BROADCAST_SCHEDULE VALUES (101);
INSERT INTO BROADCAST_SCHEDULE VALUES (102);
INSERT INTO BROADCAST_SCHEDULE VALUES (103);
INSERT INTO BROADCAST_SCHEDULE VALUES (104);
INSERT INTO BROADCAST_SCHEDULE VALUES (105);
INSERT INTO BROADCAST_SCHEDULE VALUES (106);
INSERT INTO BROADCAST_SCHEDULE VALUES (107);
INSERT INTO BROADCAST_SCHEDULE VALUES (108);
INSERT INTO BROADCAST_SCHEDULE VALUES (109);
INSERT INTO BROADCAST_SCHEDULE VALUES (110);
```

BROADCAST_SCHEDULE_ID
101
102
103
104
105
106
107
108
109
110

10 rows returned in 0.00 seconds

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MARVELEOUS_MIXTAPE

```
INSERT INTO MARVELEOUS_MIXTAPE VALUES (301, 'Cosmic', 'Harmony', 'Explorer', 'Space Beats', 'Celestial Groove', TO_DATE ('15/05/2023','DD/MM/YYYY'), 101, 'Galaxy Explorer');
INSERT INTO MARVELEOUS_MIXTAPE VALUES (302, 'Nebula', 'Stellar', 'Serenader', 'Astro Jazz', 'Nebula Nights', TO_DATE('20/04/2023','DD/MM/YYYY'), 102, 'Nebula Navigator');
INSERT INTO MARVELEOUS_MIXTAPE VALUES (303, 'Galactic', 'Rhythms', 'Voyager', 'Cosmic EDM', 'Interstellar Vibes', TO_DATE'10/03/2023','DD/MM/YYYY'), 103, 'Cosmic DJ');
INSERT INTO MARVELEOUS_MIXTAPE VALUES (304, 'Solar', 'Harmony', 'Melodies', 'Solar Pop', 'Solar Serenade', TO_DATE ('05/06/2023','DD/MM/YYYY'), 104, 'Astro Ambassador');
INSERT INTO MARVELEOUS_MIXTAPE VALUES (305, 'Quantum', 'Sonic', 'Quasar', 'Quantum Beats', 'Quantum Leap', TO_DATE('25/02/2023','DD/MM/YYYY'), 105, 'Galactic Guru');
INSERT INTO MARVELEOUS_MIXTAPE VALUES (306, 'Celestial', 'Radiance', 'DJ', 'Celestial Mix', 'Celestial
```

Harmony', TO_DATE('12/07/2023','DD/MM/YYYY'), 106, 'Celestial Choreographer');

INSERT INTO MARVELEOUS_MIXTAPE VALUES (307, 'Astro', 'Ambiance', 'Ambassador', 'Galactic Lounge', 'Cosmic Chill', TO_DATE('18/08/2023','DD/MM/YYYY'), 107, 'Orbiting Oracle')

INSERT INTO MARVELEOUS_MIXTAPE VALUES (308, 'Starlight', 'Serenade', 'DJ', 'Cosmic Ballads', 'Starry Serenity', TO_DATE ('29/09/2023', 'DD/MM/YYYY'), 108, 'Space Siren');

INSERT INTO MARVELEOUS_MIXTAPE VALUES (309, 'Orion', 'Cosmic', 'Observer', 'Stellar Rock', 'Orion''s Odyssey', TO_DATE('05/11/2023', 'DD/MM/YYYY'), 109, 'Cosmic Communicator');

INSERT INTO MARVELEOUS_MIXTAPE VALUES (310, 'Galactic', 'Grooves', 'Guru', 'Space Funk', 'Galactic Groove',

TO_DATE('15/10/2023','DD/MM/YYYY'), 110, 'Solar Serenader');

MIXTAPE_ID	FIRST_NAME	MIDDLE_NAME	LAST_NAME	GENRE	TRACK_LIST	RELEASE_DATE	MID	CHARM
301	Cosmic	Harmony	Explorer	Space Beats	Celestial Groove	05/15/2023	101	Galaxy Explorer
302	Nebula	Stellar	Serenader	Astro Jazz	Nebula Nights	04/20/2023	102	Nebula Navigator
303	Galactic	Rhythms	Voyager	Cosmic EDM	Interstellar Vibes	03/10/2023	103	Cosmic DJ
304	Solar	Harmony	Melodies	Solar Pop	Solar Serenade	06/05/2023	104	Astro Ambassador
305	Quantum	Sonic	Quasar	Quantum Beats	Quantum Leap	02/25/2023	105	Galactic Guru
306	Celestial	Radiance	DJ	Celestial Mix	Celestial Harmony	07/12/2023	106	Celestial Choreographer
307	Astro	Ambiance	Ambassador	Galactic Lounge	Cosmic Chill	08/18/2023	107	Orbiting Oracle
308	Starlight	Serenade	DJ	Cosmic Ballads	Starry Serenity	09/29/2023	108	Space Siren
309	Orion	Cosmic	Observer	Stellar Rock	Orion's Odyssey	11/05/2023	109	Cosmic Communicator
310	Galactic	Grooves	Guru	Space Funk	Galactic Groove	10/15/2023	110	Solar Serenader

10 rows returned in 0.00 seconds [Download](#)

SHAPESHIP

INSERT INTO SPACESHIP VALUES (123456789, 9.5, 'Cruiser', 'Stellar');

INSERT INTO SPACESHIP VALUES (987654321, 8.2, 'Fighter', 'Nebula');

INSERT INTO SPACESHIP VALUES (456789012, 7.1, 'Explorer', 'Galaxy');

INSERT INTO SPACESHIP VALUES (789012345, 9.0, 'Frigate', 'Orion');

INSERT INTO SPACESHIP VALUES (234567890, 8.8, 'Transporter', 'Celestial');

INSERT INTO SPACESHIP VALUES (567890123, 6.5, 'Scout', 'Nova');

INSERT INTO SPACESHIP VALUES (890123456, 9.7, 'Battleship', 'Cosmic');

INSERT INTO SPACESHIP VALUES (345678901, 7.9, 'Corvette', 'Astro');

INSERT INTO SPACESHIP VALUES (678901234, 8.5, 'Carrier', 'Stardust');

INSERT INTO SPACESHIP VALUES (012345678, 9.3, 'Dreadnought', 'Infinity');

VIN	MAX_SPEED	CLASS	CAPTAIN
123456789	9.5	Cruiser	Stellar
987654321	8.2	Fighter	Nebula
456789012	7.1	Explorer	Galaxy
789012345	9	Frigate	Orion
234567890	8.8	Transporter	Celestial
567890123	6.5	Scout	Nova
890123456	9.7	Battleship	Cosmic
345678901	7.9	Corvette	Astro
678901234	8.5	Carrier	Stardust
12345678	9.3	Dreadnought	Infinity

10 rows returned in 0.00 seconds [Download](#)

TRANSPORTS

```
INSERT INTO TRANSPORTS VALUES (123456, 123456789, '2 hours');
INSERT INTO TRANSPORTS VALUES (789012, 987654321, '3 hours');
INSERT INTO TRANSPORTS VALUES (345678, 456789012, '1.5 hours');
INSERT INTO TRANSPORTS VALUES (901234, 789012345, '4 hours');
INSERT INTO TRANSPORTS VALUES (567890, 234567890, '2.5 hours');
INSERT INTO TRANSPORTS VALUES (234567, 567890123, '1 hour');
INSERT INTO TRANSPORTS VALUES (890123, 890123456, '3.5 hours');
INSERT INTO TRANSPORTS VALUES (456789, 345678901, '2 hours');
INSERT INTO TRANSPORTS VALUES (012345, 678901234, '5 hours');
INSERT INTO TRANSPORTS VALUES (678901, 012345678, '4.5 hours');
```

SER_NO	VIN_S	DURATION
123456	123456789	2 hours
789012	987654321	3 hours
345678	456789012	1.5 hours
901234	789012345	4 hours
567890	234567890	2.5 hours
234567	567890123	1 hour
890123	890123456	3.5 hours
456789	345678901	2 hours
12345	678901234	5 hours
678901	12345678	4.5 hours

10 rows returned in 0.00 seconds [Download](#)

MIRACULOUS_EMPLOYEE

```
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (7823, 'John', 'Alexander', 'Doe', 'Manager', TO_DATE
('15/05/1990', 'DD/MM/YYYY')),
```

```

INSERT INTO MIRACULOUS_EMPLOYEE VALUES (5981, 'Jane', 'Benjamin', 'Smith', 'Engineer', TO_DATE
('20/09/1985', 'DD/MM/YYYY'))),
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (2345, 'Robert', 'Charles', 'Johnson', 'Analyst', TO_DATE
('12/03/1988', 'DD/MM/YYYY'))),
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (8762, 'Emily', 'Daniel', 'Davis', 'Designer', TO_DATE
('28/11/1992', 'DD/MM/YYYY'))),
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (1098, 'Michael', 'Elijah', 'Anderson', 'Developer', TO_DATE
('05/07/1984', 'DD/MM/YYYY'))),
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (4567, 'Olivia', 'Finn', 'Wilson', 'Manager', TO_DATE
('18/02/1995', 'DD/MM/YYYY'))),
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (3210, 'Ethan', 'Gabriel', 'Brown', 'Engineer', TO_DATE
('30/06/1987', 'DD/MM/YYYY'))),
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (7890, 'Sophia', 'Henry', 'Miller', 'Analyst', TO_DATE
('14/09/1993', 'DD/MM/YYYY'))),
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (5432, 'Liam', 'Isaac', 'Taylor', 'Designer', TO_DATE
('03/12/1989', 'DD/MM/YYYY'))),
INSERT INTO MIRACULOUS_EMPLOYEE VALUES (9876, 'Ava', 'James', 'Martinez', 'Developer', TO_DATE
('22/04/1998', 'DD/MM/YYYY'));

```

EMPLOYEE_ID	FIRSTNAME	MIDDLENAME	LASTNAME	ROLE	BIRTHDAY_DATE
7823	John	Alexander	Doe	Manager	05/15/1990
5981	Jane	Benjamin	Smith	Engineer	09/20/1985
2345	Robert	Charles	Johnson	Analyst	03/12/1988
8762	Emily	Daniel	Davis	Designer	11/28/1992
1098	Michael	Elijah	Anderson	Developer	07/05/1984
4567	Olivia	Finn	Wilson	Manager	02/18/1995
3210	Ethan	Gabriel	Brown	Engineer	06/30/1987
7890	Sophia	Henry	Miller	Analyst	09/14/1993
5432	Liam	Isaac	Taylor	Designer	12/03/1989
9876	Ava	James	Martinez	Developer	04/22/1998

10 rows returned in 0.00 seconds [Download](#)

MARVEL AI ASSISTANT

```

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Jarvis 2.0', 'Smartphones, Smart Homes', 'Yes', 'Personal
Assistant');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Stark AI', 'Wearables, IoT Devices', 'Yes', 'Home Automation,
Alerts');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Thor''s Companion', 'Smart Glasses, Vehicles', 'Yes', 'Navigation,

```

Assistance');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Black Widow Helper', 'Laptops, Smartphones', 'Yes', 'Security, Information');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Hulk Voice', 'Smart Speakers, TVs', 'Yes', 'Entertainment, Control');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Spider AI', 'Smartwatches, Cameras', 'Yes', 'Surveillance, Reminders');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Captain Command', 'Tablets, Smart Appliances', 'Yes', 'Task Management');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Doctor Strange Voice', 'VR Headsets, AR Devices', 'Yes', 'Virtual Assistance');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Black Panther AI', 'Gaming Consoles, Cars', 'Yes', 'Gaming Tips, Driving');

INSERT INTO MARVEL_AI_ASSISTANT VALUES ('Iron Man Innovator', 'Smart Wearables, Drones', 'Yes', 'Innovation, Exploration');

NAME	INTEGRATION_WITH_DEVICE	VOICE	FUNCTION
Jarvis 2.0	Smartphones, Smart Homes	Yes	Personal Assistant
Stark AI	Wearables, IoT Devices	Yes	Home Automation, Alerts
Thor's Companion	Smart Glasses, Vehicles	Yes	Navigation, Assistance
Black Widow Helper	Laptops, Smartphones	Yes	Security, Information
Hulk Voice	Smart Speakers, TVs	Yes	Entertainment, Control
Spider AI	Smartwatches, Cameras	Yes	Surveillance, Reminders
Captain Command	Tablets, Smart Appliances	Yes	Task Management
Doctor Strange Voice	VR Headsets, AR Devices	Yes	Virtual Assistance
Black Panther AI	Gaming Consoles, Cars	Yes	Gaming Tips, Driving
Iron Man Innovator	Smart Wearables, Drones	Yes	Innovation, Exploration

10 rows returned in 0.04 seconds [Download](#)

GALACTIC_AD

INSERT INTO GALACTIC_AD VALUES ('Cosmic Convergence', 123001, 'Hyperdrive Engines', 'Hyperdrive Engines', 'Zoom Across the Cosmos!', '30 seconds');

INSERT INTO GALACTIC_AD VALUES ('Galactic Nexus', 456002, 'Alien Cuisine', 'Alien Cuisine', 'Taste the Flavors of

Vega!', '15 seconds');

INSERT INTO GALACTIC_AD VALUES ('Starfall Spectacle', 789003, 'Celestial Fashion', 'Celestial Fashion', 'Dress like a Star!', '45 seconds');

INSERT INTO GALACTIC_AD VALUES ('Nebula Unveiling', 234004, 'Quantum Computers', 'Quantum Computers', 'Empowering Your Galaxy!', '60 seconds');

INSERT INTO GALACTIC_AD VALUES ('Celestial Harmony', 567005, 'Nebula Cruise Lines', 'Nebula Cruise Lines', 'Sail Through Nebulae!', '90 seconds');

INSERT INTO GALACTIC_AD VALUES ('Quantum Revelation', 890006, 'Astro Photography', 'Astro Photography', 'Capture the Beauty Beyond!', '20 seconds');

INSERT INTO GALACTIC_AD VALUES ('Infinity Eclipse', 123007, 'Galactic Fitness Gear', 'Galactic Fitness Gear', 'Train Like a Cosmic Warrior', '40 seconds');

INSERT INTO GALACTIC_AD VALUES ('Stellar Odyssey', 456008, 'Starlight Resorts', 'Starlight Resorts', 'Experience Stellar Luxury!', '75 seconds');

INSERT INTO GALACTIC_AD VALUES ('Nebula Fusion', 789009, 'Alien Pet Supplies', 'Alien Pet Supplies', 'Spoil Your Space Companions!', '30 seconds');

INSERT INTO GALACTIC_AD VALUES ('Cosmic Ascendance', 234010, 'Quantum Music Streaming', 'Quantum Music Streaming', 'Harmonies Across Galaxies!', '45 seconds');

EA	AD_ID	PRODUCT_SERVICE	TARGET_AUDIENCE	SLOGAN	DURATION
Cosmic Convergence	123001	Hyperdrive Engines	Hyperdrive Engines	Zoom Across the Cosmos!	30 seconds
Galactic Nexus	456002	Alien Cuisine	Alien Cuisine	Taste the Flavors of Vega!	15 seconds
Starfall Spectacle	789003	Celestial Fashion	Celestial Fashion	Dress like a Star!	45 seconds
Nebula Unveiling	234004	Quantum Computers	Quantum Computers	Empowering Your Galaxy!	60 seconds
Celestial Harmony	567005	Nebula Cruise Lines	Nebula Cruise Lines	Sail Through Nebulae!	90 seconds
Quantum Revelation	890006	Astro Photography	Astro Photography	Capture the Beauty Beyond!	20 seconds
Infinity Eclipse	123007	Galactic Fitness Gear	Galactic Fitness Gear	Train Like a Cosmic Warrior	40 seconds
Stellar Odyssey	456008	Starlight Resorts	Starlight Resorts	Experience Stellar Luxury!	75 seconds
Nebula Fusion	789009	Alien Pet Supplies	Alien Pet Supplies	Spoil Your Space Companions!	30 seconds
Cosmic Ascendance	234010	Quantum Music Streaming	Quantum Music Streaming	Harmonies Across Galaxies!	45 seconds

10 rows returned in 0.00 seconds

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ICONIC MUSIC SERVICES

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (101, '001', 'Celestial Sounds Collection');

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (102, '002', 'Galactic Grooves Playlist')

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (103, '003', 'Nebula Beats Mixtape');

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (104, '004', 'Solar Serenades Selection');

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (105, '005', 'Quantum Quasar Jams');

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (106, '006', 'Cosmic Harmony Library');

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (107, '007', 'Stellar Serenade Playlist');

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (108, '008', 'Astro Ambient Melodies');

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (109, '009', 'Lunar Lullabies Collection');

INSERT INTO ICONIC_MUSIC_SERVICES VALUES (110, '010', 'Universal Uplift Mix');

MUSIC_SERVICE_ID	SUBSCRIPTION_TIER	MUSIC_CATALOG
101	001	Celestial Sounds Collection
102	002	Galactic Grooves Playlist
103	003	Nebula Beats Mixtape
104	004	Solar Serenades Selection
105	005	Quantum Quasar Jams
106	006	Cosmic Harmony Library
107	007	Stellar Serenade Playlist
108	008	Astro Ambient Melodies
109	009	Lunar Lullabies Collection
110	010	Universal Uplift Mix

10 rows returned in 0.01 seconds

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DYNAMIC_SHOW

```
INSERT INTO DYNAMIC_SHOW VALUES (101, 4.5, 'Space Exploration', 'Galactic Odyssey');
INSERT INTO DYNAMIC_SHOW VALUES (102, 4.2, 'Cosmic Talk', 'Celestial Conversations');
INSERT INTO DYNAMIC_SHOW VALUES (103, 4.8, 'Intergalactic Beats', 'Quantum Groove Lounge');
INSERT INTO DYNAMIC_SHOW VALUES (104, 4.0, 'Sci-Fi Comedy', 'Astro Laughs');
INSERT INTO DYNAMIC_SHOW VALUES (105, 4.6, 'Alien Adventures', 'Stellar Encounters');
INSERT INTO DYNAMIC_SHOW VALUES (106, 4.3, 'Astro Educational', 'Cosmic Insights');
INSERT INTO DYNAMIC_SHOW VALUES (107, 4.9, 'Galactic Mysteries', 'Orion\'s Enigma');
INSERT INTO DYNAMIC_SHOW VALUES (108, 4.1, 'Cosmic Fitness', 'Galaxy Fit Workout');
INSERT INTO DYNAMIC_SHOW VALUES (109, 4.7, 'Space News Update', 'Universal Briefing');
INSERT INTO DYNAMIC_SHOW VALUES (110, 4.4, 'Celestial Cooking', 'Galactic Gastronomy');
```

SHOW_ID	VIEWER_RATING	GENRE	SHOW_NAME
101	4.5	Space Exploration	Galactic Odyssey
102	4.2	Cosmic Talk	Celestial Conversations
103	4.8	Intergalactic Beats	Quantum Groove Lounge
104	4	Sci-Fi Comedy	Astro Laughs
105	4.6	Alien Adventures	Stellar Encounters
106	4.3	Astro Educational	Cosmic Insights
107	4.9	Galactic Mysteries	Orion's Enigma
108	4.1	Cosmic Fitness	Galaxy Fit Workout
109	4.7	Space News Update	Universal Briefing
110	4.4	Celestial Cooking	Galactic Gastronomy

10 rows returned in 0.00 seconds

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ADVENTEROUS_NEW

```
INSERT INTO ADVENTEROUS_NEW VALUES ('Stellar Exploration', 'Space Exploration', 'Space Explorations', 'Daily',
'Stella Starlight');
INSERT INTO ADVENTEROUS_NEW VALUES ('Alien Jams', 'Extraterrestrial Music', 'Alien Discoveries', 'Weekly',
'Nova Navigator');
INSERT INTO ADVENTEROUS_NEW VALUES ('Space Talk', 'Celestial Conversations', 'Cosmic Wonders', 'Bi-weekly');
```

'Celestial Voyager');

INSERT INTO ADVENTEROUS_NEW_VALUES ('Astro Sounds', 'Space-Themed Music', 'Intergalactic Mysteries', 'Daily', 'Orion Observer');

INSERT INTO ADVENTEROUS_NEW_VALUES ('Cosmic Conversations', 'General Cosmic Discussions', 'Stellar Events', 'Monthly', 'Solar Serenader');

INSERT INTO ADVENTEROUS_NEW_VALUES ('Galactic Grooves', 'Funky Beats from the Cosmos', 'Galactic Expeditions', 'Weekly', 'Nebula Navigator');

INSERT INTO ADVENTEROUS_NEW_VALUES ('Universal News', 'Interstellar News Updates', 'Astro Highlights', 'Daily', 'Astro Ambassador');

INSERT INTO ADVENTEROUS_NEW_VALUES ('Quantum Quasar', 'Quantum Physics Exploration', 'Celestial Phenomena', 'Bi-weekly', 'Starlight Serenade');

INSERT INTO ADVENTEROUS_NEW_VALUES ('Solar Sermons', 'Sun and Solar System Topics', 'Universal Discoveries', 'Weekly', 'Quantum Quasar');

INSERT INTO ADVENTEROUS_NEW_VALUES ('Interstellar Interviews', 'Interviews with Space Experts', 'Cosmic Chronicles', 'Monthly', 'Celestial DJ');

PN	TOPIC	REPORTING_STYLE	FREQUENCY	ANCHOR
Stellar Exploration	Space Exploration	Space Explorations	Daily	Stella Starlight
Alien Jams	Extraterrestrial Music	Alien Discoveries	Weekly	Nova Navigator
Space Talk	Celestial Conversations	Cosmic Wonders	Bi-weekly	Celestial Voyager
Astro Sounds	Space-Themed Music	Intergalactic Mysteries	Daily	Orion Observer
Cosmic Conversations	General Cosmic Discussions	Stellar Events	Monthly	Solar Serenader
Galactic Grooves	Funky Beats from the Cosmos	Galactic Expeditions	Weekly	Nebula Navigator
Universal News	Interstellar News Updates	Astro Highlights	Daily	Astro Ambassador
Quantum Quasar	Quantum Physics Exploration	Celestial Phenomena	Bi-weekly	Starlight Serenade
Solar Sermons	Sun and Solar System Topics	Universal Discoveries	Weekly	Quantum Quasar
Interstellar Interviews	Interviews with Space Experts	Cosmic Chronicles	Monthly	Celestial DJ

10 rows returned in 0.00 seconds [Download](#)

EXCLUSIVE_FEATURES

INSERT INTO EXCLUSIVE_FEATURES VALUES (101, 'Artist Collaborations, High-Fidelity Audio');

INSERT INTO EXCLUSIVE_FEATURES VALUES (102, 'Personalized Playlists, Offline Listening');

INSERT INTO EXCLUSIVE_FEATURES VALUES (103, 'Live Concert Streaming, Exclusive Interviews');

INSERT INTO EXCLUSIVE_FEATURES VALUES (104, 'AI-generated Playlists, Lyrics Integration');

INSERT INTO EXCLUSIVE_FEATURES VALUES (105, 'Customizable Radio Stations, Early Releases');

INSERT INTO EXCLUSIVE_FEATURES VALUES (106, 'Virtual Reality Concerts, Enhanced Lyrics');

INSERT INTO EXCLUSIVE_FEATURES VALUES (107, 'Curated Theme Playlists, Behind-the-Scenes');

INSERT INTO EXCLUSIVE_FEATURES VALUES (108, 'Social Music Sharing, Immersive Soundscapes');

INSERT INTO EXCLUSIVE_FEATURES VALUES (109, 'Playlist Recommendations, 360° Audio');
INSERT INTO EXCLUSIVE_FEATURES VALUES (110, 'AI-driven Music Discovery, Limited Editions');

MUSIC_SERVICE_ID	EXCLUSIVE_FEATURE
101	Artist Collaborations, High-Fidelity Audio
102	Personalized Playlists, Offline Listening
103	Live Concert Streaming, Exclusive Interviews
104	AI-generated Playlists, Lyrics Integration
105	Customizable Radio Stations, Early Releases
106	Virtual Reality Concerts, Enhanced Lyrics
107	Curated Theme Playlists, Behind-the-Scenes
108	Social Music Sharing, Immersive Soundscapes
109	Playlist Recommendations, 360° Audio
110	AI-driven Music Discovery, Limited Editions

10 rows returned in 0.01 seconds [Download](#)

EXCELSIOR_USER_BASES

INSERT INTO EXCELSIOR_USER_BASES VALUES ('Galactic Tunes', 500000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Astro Podcast Network', 300000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Cosmic Chatter', 700000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Star Jams Radio', 1200000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Nebula News Feed', 800000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Interstellar Gram', 1500000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Space Book', 2000000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Celestial Snap', 1000000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Galaxy Pods', 400000);
INSERT INTO EXCELSIOR_USER_BASES VALUES ('Stellar Social', 1800000);

PLATFORM_NAME	E_USER_BASE
Astro Podcast Network	300000
Celestial Snap	1000000
Cosmic Chatter	700000
Galactic Tunes	500000
Galaxy Pods	400000
Interstellar Gram	1500000
Nebula News Feed	800000
Space Book	2000000
Star Jams Radio	1200000
Stellar Social	1800000

10 rows returned in 0.01 seconds [Download](#)

HAS

INSERT INTO HAS VALUES ('Stellar Exploration', 101);
INSERT INTO HAS VALUES ('Alien Jams', 102);

```

INSERT INTO HAS VALUES ('Space Talk', 103);
INSERT INTO HAS VALUES ('Astro Sounds', 104);
INSERT INTO HAS VALUES ('Cosmic Conversations', 105);
INSERT INTO HAS VALUES ('Galactic Grooves', 106);
INSERT INTO HAS VALUES ('Universal News', 107);
INSERT INTO HAS VALUES ('Quantum Quasar', 108);
INSERT INTO HAS VALUES ('Solar Sermons', 109);
INSERT INTO HAS VALUES ('Interstellar Interviews', 110);

```

PROG_NAME	BRODSCHED_ID
Alien Jams	102
Astro Sounds	104
Cosmic Conversations	105
Galactic Grooves	106
Interstellar Interviews	110
Quantum Quasar	108
Solar Sermons	109
Space Talk	103
Stellar Exploration	101
Universal News	107

10 rows returned in 0.00 seconds [Download](#)

BROADCAST_SCHEDULE_DAY

```

INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (101, 'Monday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (102, 'Tuesday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (103, 'Wednesday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (104, 'Thursday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (105, 'Friday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (106, 'Saturday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (107, 'Sunday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (108, 'Monday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (109, 'Tuesday');
INSERT INTO BROADCAST_SCHEDULE_DAY VALUES (110, 'Wednesday');

```

BROADCAST_SCHEDULE_ID	B_DAY
101	Monday
102	Tuesday
103	Wednesday
104	Thursday
105	Friday
106	Saturday
107	Sunday
108	Monday
109	Tuesday
110	Wednesday

10 rows returned in 0.01 seconds [Download](#)

BROADCAST_SCHEDULE_TIME

```
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (101, TO_TIME('08:00 AM', 'HH:MI AM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (102, TO_TIME('02:30 PM', 'HH:MI PM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (103, TO_TIME ('11:00 AM', 'HH:MI AM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (104, TO_TIME('06:45 PM', 'HH:MI PM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (105, TO_TIME ('04:15 PM', 'HH:MI PM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (106, TO_TIME ('10:30 AM', 'HH:MI AM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (107, TO_TIME ('09:00 AM', 'HH:MI AM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (108, TO_TIME ('07:30 PM', 'HH:MI PM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (109, TO_TIME ('05:45 AM', 'HH:MI AM'));
INSERT INTO BROADCAST_SCHEDULE_TIME VALUES (110, TO_TIME ('03:00 PM', 'HH:MI PM'));
```

BROADCAST_SCHEDULE_ID	B_TIME
101	01-NOV-23 08.00.00.000000 AM
102	01-NOV-23 02.30.00.000000 PM
103	01-NOV-23 11.00.00.000000 AM
104	01-NOV-23 06.45.00.000000 PM
105	01-NOV-23 04.15.00.000000 PM
106	01-NOV-23 10.30.00.000000 AM
107	01-NOV-23 09.00.00.000000 AM
108	01-NOV-23 07.30.00.000000 PM
109	01-NOV-23 05.45.00.000000 AM
110	01-NOV-23 03.00.00.000000 PM

10 rows returned in 0.03 seconds

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EQUIPMENT_CAPABILITY

```
INSERT INTO EQUIPMENT_CAPABILITY VALUES (123456, 'Hyperdimensional Scanner');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (789012, 'Quantum Data Processor');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (345678, 'Celestial Audio Mixer');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (901234, 'Nebula Visualizer');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (567890, 'Astro Frequency Analyzer');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (234567, 'Galactic Communication Array');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (890123, 'Solar Energy Converter');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (456789, 'Quantum Entanglement Transmitter');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (012345, 'Celestial Imaging Device');
INSERT INTO EQUIPMENT_CAPABILITY VALUES (678901, 'Stellar Navigation System');
```

SERIAL_NUMBER	EQ_CAPABILITY
12345	Celestial Imaging Device
123456	Hyperdimensional Scanner
234567	Galactic Communication Array
345678	Celestial Audio Mixer
456789	Quantum Entanglement Transmitter
567890	Astro Frequency Analyzer
678901	Stellar Navigation System
789012	Quantum Data Processor
890123	Solar Energy Converter
901234	Nebula Visualizer

10 rows returned in 0.01 seconds [Download](#)

EXCELSIOR_FEATURE

```
INSERT INTO EXCELSIOR_FEATURE VALUES ('Galactic Tunes', 'Customized Space Playlists');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Astro Podcast Network', 'In-Depth Astrological Discussions');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Cosmic Chatter', 'Live Cosmic Conversations');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Star Jams Radio', 'Celestial Music Discoveries');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Nebula News Feed', 'Real-Time Galactic Updates');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Interstellar Gram', 'Stunning Space Photography');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Space Book', 'Interconnected Galactic Community');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Celestial Snap', 'Instant Cosmic Moments Sharing');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Galaxy Pods', 'Interstellar Podcast Streaming');
INSERT INTO EXCELSIOR_FEATURE VALUES ('Stellar Social', 'Dynamic Cosmic Social Hub');
```

PLATFORM_NAME	E_FEATURE
Astro Podcast Network	In-Depth Astrological Discussions
Celestial Snap	Instant Cosmic Moments Sharing
Cosmic Chatter	Live Cosmic Conversations
Galactic Tunes	Customized Space Playlists
Galaxy Pods	Interstellar Podcast Streaming
Interstellar Gram	Stunning Space Photography
Nebula News Feed	Real-Time Galactic Updates
Space Book	Interconnected Galactic Community
Star Jams Radio	Celestial Music Discoveries
Stellar Social	Dynamic Cosmic Social Hub

10 rows returned in 0.00 seconds [Download](#)

HYPERMIMENTIONAL EQUIPMENT

```
INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (123456, 'Quantum Communication', 'Entanglement Transceiver', '4D');
```

```

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (789012, 'Interdimensional Gateway', 'Spatial Warping Module', '5D');

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (345678, 'Temporal Manipulation', 'Chrono-Sync Processor', '6D');

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (901234, 'Multiverse Exploration', 'Hyperphase Resonator', '7D');

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (567890, 'Dimensional Energy Harvesting', 'Quantum Flux Extractor', '3D');

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (234567, 'Parallel Reality Viewer', 'Holographic Interface', '5D');

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (890123, 'Cosmic Energy Amplification', 'Quantum Infusion Core', '6D');

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (456789, 'Hyperdimensional Defense', 'Reality Shield Generator', '5D');

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (012345, 'Infinite Knowledge Matrix', 'Neural Quantum Processor', '7D');

INSERT INTO HYPERDIMENTIONAL_EQUIPMENT VALUES (678901, 'Intergalactic Teleportation', 'Wormhole Generator', '6D');

```

SERIAL_NUMBER	PURPOSE	TECHNOLOGY	DIMENSION_SUPPORTED
123456	Quantum Communication	Entanglement Transceiver	4D
789012	Interdimensional Gateway	Spatial Warping Module	5D
345678	Temporal Manipulation	Chrono-Sync Processor	6D
901234	Multiverse Exploration	Hyperphase Resonator	7D
567890	Dimensional Energy Harvesting	Quantum Flux Extractor	3D
234567	Parallel Reality Viewer	Holographic Interface	5D
890123	Cosmic Energy Amplification	Quantum Infusion Core	6D
456789	Hyperdimensional Defense	Reality Shield Generator	5D
12345	Infinite Knowledge Matrix	Neural Quantum Processor	7D
678901	Intergalactic Teleportation	Wormhole Generator	6D

10 rows returned in 0.01 seconds [Download](#)

11.3. Complex Queries

11.3.1. Query for Harmonic Livestreaming Platform with the Most Listeners:

This query aims to identify the Harmonic Streaming Platform that has garnered the highest number of listeners during livestreams characterized by 'High' audience interaction. By selecting the Livestreaming_ID associated with the

maximum audience interaction level in the nested query, it pinpoints the platform delivering the most engaging content to the Star-Born Listeners. This information is valuable for assessing the popularity and effectiveness of different Harmonic Streaming Platforms, enabling strategic decisions to optimize content and engagement.

```
SELECT Harmonic_Streaming_Platform
FROM STREAMING_PLATFORM
WHERE Livestreaming_ID = (
    SELECT MAX(Livestreaming_ID)
    FROM HARMONIC_LIVESTREAMING
    WHERE Audience_interaction = 'High'
);
```



A screenshot of a database query results page. The results are displayed in a table with one row. The table has a header row labeled "HARMONIC_STREAMING_PLATFORM". The data row contains the value "Google Play Music". Below the table, the text "1 rows returned in 0.01 seconds" is displayed, followed by a "Download" link.

HARMONIC_STREAMING_PLATFORM
Google Play Music

1 rows returned in 0.01 seconds [Download](#)

11.3.2. Query for Listeners from Celestial Alliance with Exclusive Features:

Focused on the Celestial Alliance civilization, this query identifies Star-Born Listeners who enjoy exclusive features. By linking listener data with supporting characters associated with the Galactic Tunes platform, it provides insights into the preferences of listeners from specific civilizations. Understanding the demographics of listeners who engage with exclusive features aids in tailoring content and promotions for specific groups, fostering a sense of inclusivity within the Celestial Alliance community.

```
SELECT Listener_ID, First_Name, Last_Name
FROM STARS_BORN_LISTENER, GALACTIC_CIVILIZATION
WHERE CIVILIZATION_NAME = 'Celestial Alliance'
AND Listener_ID IN (
    SELECT Listener_ID
    FROM SUPERWORLD_RADIO_HOST, SUPPORTS
    WHERE Char_ID IN (
        SELECT Char_ID
        FROM SUPPORTS, EXCELSIOR_USER_BASE
        WHERE E_ID IN (
            SELECT E_ID
```

```

        FROM EXCELSIOR_USER_BASE, SUPPORTS
        WHERE Platform_Name = 'Galactic Tunes'
    )
)
);

```

LISTENER_ID	FIRST_NAME	LAST_NAME
7532	Johnson	Sophia
4198	Smith	Ethan
1265	Anderson	Liam
8954	Davis	Ava
6321	Patel	Olivia
3076	Wang	Noah
5489	Kim	Mia
1823	Rodriguez	Elijah
9743	Lee	Draconian
6904	Turner	Aiden

10 rows returned in 0.01 seconds [Download](#)

11.3.3. Query for Civilization with the Most High-Tech Rate:

This straightforward query seeks to determine the Galactic Civilization with the highest technological advancement rate. By comparing technological rates across civilizations, it allows for the identification of the most advanced society. This information is crucial for assessing the overall technological landscape and may influence strategic decisions related to technology-focused initiatives or collaborations.

```

SELECT Civilization_Name
FROM GALACTIC_CIVILIZATION
WHERE Technological_Advancement_Rate = (
    SELECT MAX(Technological_Advancement_Rate)
    FROM GALACTIC_CIVILIZATION
);

```

CIVILIZATION_NAME
Starlight Consortium
Cosmic Federation
Nova Commonwealth

3 rows returned in 0.00 seconds [Download](#)

11.3.4. Query for Excelsior Features Available on Platforms with Over 1 Million User Bases:

This query identifies excelsior features available on platforms with a substantial user base, exceeding one million. By connecting user base data with platform features, it provides a curated list of premium offerings available on widely adopted platforms. This information is valuable for users seeking enhanced experiences and for platform operators looking to highlight premium features that cater to a large audience.

```

SELECT EF.Platform_Name, EF.E_Feature
FROM EXCELSIOR_FEATURE EF
INNER JOIN EXCELSIOR_SOCIAL_MEDIA SM ON EF.Platform_Name = SM.Platform_Name WHERE
EF.Platform_Name IN (
    SELECT EUB.Platform_Name
    FROM EXCELSIOR_USER_BASE EUB
    WHERE EUB.E_USER_BASE > 1000000
);

```

PROGRAM_NAME	TOPIC_COVERED
Galactic Grooves	Funky Beats from the Cosmos
Solar Sermons	Sun and Solar System Topics
Space Talk	Celestial Conversations

3 rows returned in 0.01 seconds [Download](#)

11.3.5. Query for Programs Promoted on Platforms with Very High Interactivity:

Focusing on the interactivity level of Excelsior Social Media platforms, this query identifies programs promoted on platforms known for very high interactivity. The link between program promotion and social media engagement levels provides insights into the symbiotic relationship between content and audience interaction. This information is useful for tailoring promotional strategies to platforms that encourage active audience participation.

```

SELECT Program_Name, Topic_Covered
FROM GALACTIC_PROGRAM
WHERE Program_Name IN (
    SELECT P_Name
    FROM PROMOTES
    WHERE Plat_Name IN (
        SELECT Platform_Name
        FROM EXCELSIOR_SOCIAL_MEDIA
    )
);

```

```

WHERE Interactivity = 'Very High'
)
);

```

PLATFORM_NAME	E_FEATURE
Interstellar Gram	Stunning Space Photography
Space Book	Interconnected Galactic Community
Star Jams Radio	Celestial Music Discoveries
Stellar Social	Dynamic Cosmic Social Hub

4 rows returned in 0.00 seconds [Download](#)

11.3.6. Query for Retrieving Programs with Viewer Rating Above the Average:

This query retrieves programs with a viewer rating above the average. It involves nested queries to calculate the average viewer rating for programs and the overall average viewer rating for shows.

```

SELECT Program_Name
FROM GALACTIC_PROGRAM
WHERE Program_Name IN (
    SELECT Prog_Name
    FROM HAS
    GROUP BY Prog_Name
    HAVING AVG(Brodsched_ID) > (
        SELECT AVG(Viewer_Rating)
        FROM DYNAMIC_SHOW
    )):

```

PROGRAM_NAME
Interstellar Interviews
Solar Sermons
Universal News
Space Talk
Cosmic Conversations
Stellar Exploration
Alien Jams
Astro Sounds
Galactic Grooves
Quantum Quasar

10 rows returned in 0.06 seconds [Download](#)

11.3.7. Query for Retrieving Social Media Platforms with More Than 1 Million Excelsior User Base:

This query retrieves social media platforms with more than 1 million Excelsior user base. It involves nested queries to sum user bases for each platform and filter based on the total user count.

```
SELECT Platform_Name  
FROM EXCELSIOR_SOCIAL_MEDIA  
WHERE Platform_Name IN (  
    SELECT Platform_Name  
    FROM EXCELSIOR_USER_BASE  
    GROUP BY Platform_Name  
    HAVING SUM(E_User_Base) > 1000000  
);
```

PLATFORM_NAME
Space Book
Stellar Social
Star Jams Radio
Interstellar Gram

4 rows returned in 0.02 seconds [Download](#)

11.3.8. Query for Finding Hosts with the Same Reporting Style as 'Adventurous New' Program:

This query finds hosts with the same reporting style as the 'Adventurous New' program. It uses nested queries to match hosts based on reporting style with the anchor of the specified program.

```
SELECT CharM  
FROM MARVELOUS_MIXTAPE  
WHERE CharM IN (  
    SELECT Anchor  
    FROM ADVENTUROUS_NEW  
    WHERE Reporting_Style = (  
        SELECT Reporting_Style
```

```

        FROM ADVENTUROUS_NEW
        WHERE PN = 'Universal News'
    )
);

```

CHARM
Astro Ambassador
1 rows returned in 0.01 seconds [Download](#)

11.3.9. Evaluate the effectiveness of exclusive features in boosting music service subscriptions:

This query assesses the impact of exclusive features on music service subscriptions by calculating the percentage increase in subscription count for services that offer such features. By joining ICONIC_MUSIC_SERVICES and EXCLUSIVE_FEATURE tables, it provides a comprehensive view of how unique features contribute to the success of music services in attracting and retaining subscribers.

```

SELECT ims.Music_Service_ID, Subscription_Tier,
       (COUNT(*) / (SELECT COUNT(*) FROM ICONIC_MUSIC_SERVICES)) * 100 AS Subscription_Percentage
  FROM ICONIC_MUSIC_SERVICES ims
 JOIN EXCLUSIVE_FEATURE ef ON ims.Music_Service_ID = ef.Music_Service_ID GROUP
 BY ims.Music_Service_ID, Subscription_Tier;

```

MUSIC_SERVICE_ID	SUBSCRIPTION_TIER	SUBSCRIPTION_PERCENTAGE
102	002	10
107	007	10
108	008	10
110	010	10
106	006	10
103	003	10
104	004	10
105	005	10
109	009	10
101	001	10

10 rows returned in 0.02 seconds [Download](#)

11.3.10. Query for Civ_Listener_Count_View:

The Civ_Listener_Count_View provides the count of Star-Born Listeners for each Galactic Civilization. It selects the Civilization_Name and the count of Lis_ID from the GALACTIC_CIVILIZATION and BELONGS_TO tables, joining them on Civilization_Name and grouping the results by Civilization_Name. This helps in understanding the listener distribution across different civilizations.

```
CREATE VIEW Civ_Listener_Count_View AS
SELECT g.Civilization_Name, COUNT(sb.Listener_ID) AS Listener_Count
FROM GALACTIC_CIVILIZATION g
LEFT JOIN BELONGS_TO b ON g.Civilization_Name = b.CivName
LEFT JOIN STARS_BORN_LISTENER sb ON b.Lis_ID = sb.Listener_ID
GROUP BY g.Civilization_Name;
SELECT * FROM Civ_Listener_Count_View;
```

CIVILIZATION_NAME	LISTENER_COUNT
Cosmic Federation	1
Nebula Empire	1
Astral Hegemony	1
Starlight Consortium	1
Galactic Union	1
Interstellar Republic	1
Nebula Ascendancy	1
Nova Commonwealth	1
Quantum Dominion	1
Celestial Alliance	1

10 rows returned in 0.00 seconds [Download](#)

12. Normalization until the BCNF Normal Form

After the creation of our relations, it becomes crucial to adequately assess each relation by the standards of normalization. We will evaluate if each relation complies with each normal form, starting with the first normal form, until it satisfies the BCNF conditions. At every step, the necessary changes will be properly implemented.

The characteristics of each normal form are as follows:

First Normal Form (1NF):

In the first normal form, the presence of composite and multivalued attributes is not allowed. As such, the value of each attribute in a tuple must be an atomic value corresponding to the domain of the attribute, and not a set of values.

Second Normal Form (2NF):

As for the second normal form, it primarily depends on the primary key and the functional dependencies of a relation. A functional dependency is defined as a constraint between two sets of attributes X and Y. The expression $X \rightarrow Y$ illustrates that the values of the attributes of X functionally determine those of Y. As such, Y is said to be functionally dependent on X. An FD is said to be a fully functional dependency if the removal of any attribute from X means that the functional dependency does not hold anymore.

An attribute is said to be a prime attribute if it is a member of the primary key of a given relation. Conversely, a nonprime attribute is not part of said primary key. A relation is considered in the Second Normal Form if it follows the First Normal Form (1NF), and every non-prime attribute in the relation is fully functionally dependent on the primary key.

Third Normal Form (3NF):

When it comes to the Third Normal Form, we must first define a transitive functional dependency. An FD is said to be transitive for the expression $X \rightarrow Z$, if it can be derived from the two following expressions: $X \rightarrow Y$ and $Y \rightarrow Z$. A relation is in the Third Normal Form if it first complies with the 2NF, and no non-prime attribute in the relation is transitively dependent on the primary key. It is crucial to note that an issue only arises if X is a primary key, and Y is not a candidate key.

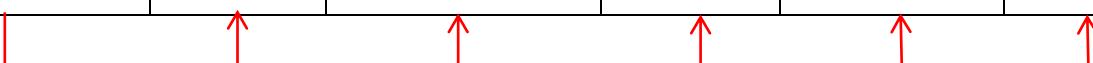
Boyce-Codd Normal Form (BCNF):

A relation is said to be in BCNF if for every functional dependency $X \rightarrow Y$, X is a super key of the given relation.

12.1. Normalization of each relation

HARMONIC LIVESTREAMING

Live streaming ID	Music Genre	Audience interaction	Last Name	Middle Name	First name



1NF: All the attributes of the **HARMONIC LIVESTREAMING** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **HARMONIC LIVESTREAMING** relation satisfies the conditions of 1NF. □

2NF: All non-prime attributes of the **HARMONIC LIVESTREAMING** relation are functionally dependent on the primary key (Live_Streaming_ID). Hence, the **HARMONIC LIVESTREAMING** relation satisfies the conditions of 2NF.

3NF: The **HARMONIC LIVESTREAMING** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary keys (Live_Streaming_ID). Therefore, the **HARMONIC LIVESTREAMING** relation satisfies all the conditions of 3NF. \square

BCNF: The **HARMONIC LIVESTREAMING** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, X is a superkey.

CELESTIAL MARVEL EVENT

<u>Event name</u>	Galaxy	Planet	Date
	↑	↑	↑

1NF: All the attributes of the **CELESTIAL MARVEL EVENT** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **CELESTIAL MARVEL EVENT** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **CELESTIAL MARVEL EVENT** relation are functionally dependent on the primary key (Event_name). Hence, the **CELESTIAL MARVEL EVENT** relation satisfies the conditions of 2NF

3NF: The **CELESTIAL MARVEL EVENT** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary keys (Event_name). Therefore, the **CELESTIAL MARVEL EVENT** relation satisfies all the conditions of 3NF.

BCNF: The **CELESTIAL MARVEL EVENT** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, X is a superkey.

GALACTIC CIVILIZATION

Civilization Name	Technological Advancement Rate	Government System

1NF: All the attributes of the **GALACTIC CIVILIZATION** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **GALACTIC CIVILIZATION** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **GALACTIC CIVILIZATION** relation are functionally dependent on the primary key (Civilization_Name). Hence, the **GALACTIC CIVILIZATION** relation satisfies the conditions of 2NF.

3NF: The **GALACTIC CIVILIZATION** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary keys (Civilization_Name). Therefore, the **GALACTIC CIVILIZATION** relation satisfies all the conditions of 3NF.

BCNF: The **GALACTIC CIVILIZATION** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, X is a superkey.

ADVENTEROUS NEW

Program Name	Topic Covered	Reporting Style	Frequency	Anchor

1NF: All the attributes of the **ADVENTEROUS NEW** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **ADVENTEROUS NEW** relation satisfies the conditions of 1NF.

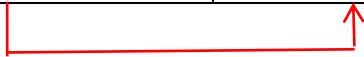
2NF: All non-prime attributes of the **ADVENTEROUS NEW** relation are functionally dependent on the primary key (program_Name, Topic Coverd). Hence, the **ADVENTEROUS NEW** relation satisfies the conditions of 2NF.

3NF: The **ADVENTEROUS NEW** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary keys (Program _Name, Topic_Coverd). Therefore, the **ADVENTEROUS NEW** relation satisfies all the conditions of 3NF.

BCNF: The **ADVENTEROUS NEW** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, X is a superkey.

BROADCAST SCHEDULE _DAY

Broadcast Schedule ID	B_day
------------------------------	-------



1NF: All the attributes of the **BROADCAST SCHEDULE _DAY** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **BROADCAST SCHEDULE _DAY** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **BROADCAST SCHEDULE _DAY** relation are functionally dependent on the primary key (Broadcast_Schedule_ID). Hence, the **BROADCAST SCHEDULE _DAY** relation satisfies the conditions of 2NF.

3NF: The **BROADCAST SCHEDULE _DAY** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Broadcast_Schedule_ID). Therefore, the **BROADCAST SCHEDULE _DAY** relation satisfies all the conditions of 3NF.

BCNF: The **BROADCAST SCHEDULE _DAY** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

BROADCAST SCHEDULE _TIME

Broadcast Schedule ID	B_Time
------------------------------	--------



1NF: All the attributes of the **BROADCAST SCHEDULE_TIME** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **BROADCAST SCHEDULE_TIME** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **BROADCAST SCHEDULE_TIME** relation are functionally dependent on the primary key (Broadcast_Schedule_ID). Hence, the **BROADCAST SCHEDULE_TIME** relation satisfies the conditions of 2NF.

3NF: The **BROADCAST SCHEDULE_TIME** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Broadcast_Schedule_ID). Therefore, the **BROADCAST SCHEDULE_TIME** relation satisfies all the conditions of 3NF.

BCNF: The **BROADCAST SCHEDULE_TIME** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

SHAPESHIP

VIN	Max Speed	Class	Captain



1NF: All the attributes of the **SHAPESHIP** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **SHAPESHIP** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the SHAPESHIP relation are functionally dependent on the primary key (VIN). Hence, the **SHAPESHIP** relation satisfies the conditions of 2NF.

3NF: The **SHAPESHIP** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (VIN). Therefore, the **SHAPESHIP** relation satisfies all the conditions of 3NF.

BCNF: The **SHAPESHIP** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a super key.

TRANSPORTS

<u>Ser_NO</u>	<u>VIN_S</u>	Duration

1NF: All the attributes of the TRANSPORTS relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the TRANSPORTS relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the TRANSPORTS relation are functionally dependent on the primary key (VIN_S,Ser_NO). Hence, the TRANSPORTS relation satisfies the conditions of 2NF.

3NF: The TRANSPORTS relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (VIN_S,Ser_NO). Therefore, the TRANSPORTS relation satisfies all the conditions of 3NF.

BCNF: The TRANSPORTS relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a super key.

SUPERWORLD RADIO HOST

<u>Character</u>	Fanbase	Show Genre	First Name	Middle Name	Last Name

1NF: All the attributes of the **SUPERWORLD RADIO HOST** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **SUPERWORLD RADIO HOST** relation satisfies the conditions of 1NF.

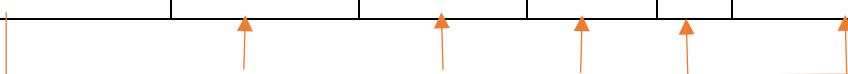
2NF: All non-prime attributes of the **SUPERWORLD RADIO HOST** relation are functionally dependent on the primary key (Character). Hence, the **SUPERWORLD RADIO HOST** relation satisfies the conditions of 2NF.

3NF: The **SUPERWORLD RADIO HOST** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Character). Therefore, the **SUPERWORLD RADIO HOST** relation satisfies all the conditions of 3NF.

BCNF: The **SUPERWORLD RADIO HOST** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a super key.

MIRACULOUS EMPLOYEE

<u>Employee ID</u>	First Name	Middle Name	Last Name	Role	Birthdate



1NF: All the attributes of the **MIRACULOUS EMPLOYEE** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **MIRACULOUS EMPLOYEE** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **MIRACULOUS EMPLOYEE** relation are functionally dependent on the primary key (Employee ID). Hence, the **MIRACULOUS EMPLOYEE** relation satisfies the conditions of 2NF.

3NF: The **MIRACULOUS EMPLOYEE** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Employee ID). Therefore, the **MIRACULOUS EMPLOYEE** relation satisfies all the conditions of 3NF.

BCNF: The **MIRACULOUS EMPLOYEE** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a super key.

HYPERDIMENSIONAL EQUIPMENT

<u>Serial Number</u>	Purpose	Technology	Dimension Supported

1NF: All the attributes of the **HYPERDIMENSIONAL EQUIPMENT** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **HYPERDIMENSIONAL EQUIPMENT** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **HYPERDIMENSIONAL EQUIPMENT** relation are functionally dependent on the primary key (Serial Number). Hence, the **HYPERDIMENSIONAL EQUIPMENT** relation satisfies the conditions of 2NF.

3NF: The **HYPERDIMENSIONAL EQUIPMENT** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Serial Number). Therefore, the **HYPERDIMENSIONAL EQUIPMENT** relation satisfies all the conditions of 3NF.

BCNF: The **HYPERDIMENSIONAL EQUIPMENT** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a super key.

MARVELEOUS QUEST

SQ ID	<u>Quest Name</u>	Difficulty	Reward	Duration	AI_Name

1NF: All the attributes of the **MARVELEOUS QUEST** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **MARVELEOUS QUEST** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **MARVELEOUS QUEST** relation are functionally dependent on the primary key (Quest Name). Hence, the **MARVELEOUS QUEST** relation satisfies the conditions of 2NF.

3NF: The **MARVELEOUS QUEST** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Quest Name). Therefore, the **MARVELEOUS QUEST** relation satisfies all the conditions of 3NF.

BCNF: The **MARVELEOUS QUEST** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

STAR BORN LISTENER

<u>Listener_ID</u>	Galaxy	Planet	Last Name	Middle Name	First Name	Species

1NF: All the attributes of the **STAR BORN LISTENER** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **STAR BORN LISTENER** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **STAR BORN LISTENER** relation are functionally dependent on the primary key (Listener_ID). Hence, the **STAR BORN LISTENER** relation satisfies the conditions of 2NF.

3NF: The **STAR BORN LISTENER** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Listener_ID). Therefore, the **STAR BORN LISTENER** relation satisfies all the conditions of 3NF.

BCNF: The **STAR BORN LISTENER** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

EXELSIOR SOCIAL MEDIA

<u>Platform Name</u>	Accessibility	Interactivity
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1NF: All the attributes of the **EXELSIOR SOCIAL MEDIA** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **EXELSIOR SOCIAL MEDIA** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **EXELSIOR SOCIAL MEDIA** relation are functionally dependent on the primary key (Platform_Name). Hence, the **EXELSIOR SOCIAL MEDIA** relation satisfies the conditions of 2NF.

3NF: The **EXELSIOR SOCIAL MEDIA** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Platform_Name). Therefore, the **EXELSIOR SOCIAL MEDIA** relation satisfies all the conditions of 3NF.

BCNF: The **EXELSIOR SOCIAL MEDIA** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

GALACTIC PROGRAM

<u>Program Name</u>	Topic Covered
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1NF: All the attributes of the **GALACTIC PROGRAM** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **GALACTIC PROGRAM** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **GALACTIC PROGRAM** relation are functionally dependent on the primary key (Program Name). Hence, the **GALACTIC PROGRAM** relation satisfies the conditions of 2NF.

3NF: The **GALACTIC PROGRAM** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (Program Name). Therefore, the **GALACTIC PROGRAM** relation satisfies all the conditions of 3NF.

BCNF: The **GALACTIC PROGRAM** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

MARVELEOUS MIXTAPE:

<u>Mixtape ID</u>	First Name	Middle Name	Last Name	Genre	Track list	Release Date	MID	CharM

1NF: All the attributes of the MARVELOUS MIXTAPES relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the MARVELOUS MIXTAPES ASSISTANT relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the MARVELOUS MIXTAPES relation are functionally dependent on the primary key (**Mixtape_ID**). Hence, the MARVELOUS MIXTAPES relation satisfies the conditions of 2NF.

3NF: The MARVELOUS MIXTAPES relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (**Mixtape_ID**). Therefore, the MARVEL AI ASSISTANT relation satisfies all the conditions of 3NF.

BCNF: The MARVELOUS MIXTAPES relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

ICONIC MUSIC SERVICE

<u>Music Service ID</u>	Subscription Teir	Music Catalog



1NF: All the attributes of the **ICONIC MUSIC SERVICE** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **ICONIC MUSIC SERVICE** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **ICONIC MUSIC SERVICE** relation are functionally dependent on the primary key (**Music_Service_ID**). Hence, the **ICONIC MUSIC SERVICE** relation satisfies the conditions of 2NF.

3NF: The **ICONIC MUSIC SERVICE** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (**Music_Service_ID**). Therefore, the **ICONIC MUSIC SERVICE** relation satisfies all the conditions of 3NF.

BCNF: The **ICONIC MUSIC SERVICE** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

MARVEL AI ASSISTANT

Name	Integration With Device	Voice	Function

1NF: All the attributes of the **MARVEL AI ASSISTANT** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **MARVEL AI ASSISTANT** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **MARVEL AI ASSISTANT** relation are functionally dependent on the primary key (**Name**). Hence, the **MARVEL AI ASSISTANT** relation satisfies the conditions of 2NF.

3NF: The **MARVEL AI ASSISTANT** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (**Name**). Therefore, the **MARVEL AI ASSISTANT** relation satisfies all the conditions of 3NF.

BCNF: The **MARVEL AI ASSISTANT** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

GALACTIC AD

EA Name	Ad ID	Product/Service	Target Audience	Slogan	Duration

1NF: All the attributes of the **GALACTIC AD** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **GALACTIC AD** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **GALACTIC AD** relation are functionally dependent on the primary key (**Ad ID**). Hence, the **GALACTIC AD** relation satisfies the conditions of 2NF.

3NF: The **GALACTIC AD** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (**Ad ID**). Therefore, the **GALACTIC AD** relation satisfies all the conditions of 3NF.

BCNF: The **GALACTIC AD** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

DYNAMIC SHOW

Show ID	Viewer Rating	Genre	Show Name

1NF: All the attributes of the **DYNAMIC SHOW** relation are single and atomic. It does not contain any multivalued or composite attributes or any nested relations. Hence, the **DYNAMIC SHOW** relation satisfies the conditions of 1NF.

2NF: All non-prime attributes of the **DYNAMIC SHOW** relation are functionally dependent on the primary key (**Show_ID**). Hence, the **DYNAMIC SHOW** relation satisfies the conditions of 2NF.

3NF: The **DYNAMIC SHOW** relation is already in 2NF, and all the non-prime attributes of the relation are NOT transitively determined by the primary key (**Show_ID**). Therefore, the **DYNAMIC SHOW** relation satisfies all the conditions of 3NF.

BCNF: The **DYNAMIC SHOW** relation schema is in Boyce-Codd Normal Form (BCNF) since whenever a functional dependency $X \rightarrow A$ holds in this relation schema, then X is a superkey.

12.2. Relation Schemas without non-prime attributes

All the relations schemas that have no non-prime attributes have only two attributes. Their combination represents the primary key of the relation. Therefore, all those relations are in BCNF already (since they do not have any non-prime attributes). Some of those relations have functional dependencies among the parts of the primary key.

EQUIPMENT CAPABILITY

<u>Serial Number</u>	<u>Eq-Capability</u>
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EXCELSIOR _ FEATURE

<u>Platform Name</u>	<u>E_Feature</u>
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EXCELSIOR _ USER BASE:

<u>Platform Name</u>	<u>E_User Base</u>
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EXCLUSIVE EATURE:

<u>Music Service ID</u>	<u>Exclusive Feature</u>
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HOSTS

<u>Live ID</u>	<u>Char H</u>
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COVERS

<u>Livecover ID</u>	<u>Event_tocover_Name</u>
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STREAMING PLATROFM

<u>Livestreaming ID</u>	<u>Harmonic Streaming Platform</u>
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BELONGS_TO

<u>CIV NAME</u>	<u>List ID</u>
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CONNECTS

<u>Lis ID</u>	<u>Plt Name</u>
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PROMOTES

<u>Plat Name</u>	<u>Plt Name</u>
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BROADCAST SCHEULE

<u>Broadcast schedule ID</u>

HAS

<u>Prog Name</u>	<u>Broadsched ID</u>
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UPDATES

<u>Adv Prog Name</u>	<u>TC</u>
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SUPPORTS

<u>E ID</u>	<u>Char S</u>
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13. CONCLUSION

In conclusion, the creation of a MARVELOUS database design for the Marvel Galactic Radio Station stands as a pivotal step in ensuring the seamless operation and success of this innovative addition to the radio broadcasting landscape. As with any radio station, the key to delivering a captivating and immersive experience lies in the organization and accessibility of content. Our database design aims to efficiently categorize and manage a diverse range of elements, including space-themed music, original radio dramas, educational programs, space exploration features, and expert interviews. The Marvel Galactic Radio Station's database holds the responsibility of properly assigning and documenting each piece of content. Whether it's the musical journey through distant galaxies, encounters with alien species, or witnessing celestial events, our database design is tailored to ensure that every listener's experience is not only seamless but also enchanting. In the dynamic world of radio broadcasting, where entertainment, education, and imagination converge, the database becomes the backbone of operations. The success of the Marvel Galactic Radio Station hinges on its ability to transport listeners into a universe of wonders through the power of sound. By merging the unique requirements of this innovative project with our expertise in database design, we have crafted a finalized database that is poised to elevate the Galactic Marvel Radio Station to new heights, offering an interstellar journey that captivates and engages audiences across the cosmos.