Task 1:

Industry Trends:

1. Streaming Dominance: *Streaming services continue to dominate the entertainment industry, with platforms like Netflix, Amazon Prime Video, Disney+, and Hulu leading the way. Traditional cable TV is experiencing a decline in viewership as more consumers opt for on-demand content.*

2. Original Content Production: *Streaming platforms are heavily investing in original content production to differentiate themselves and attract subscribers. This trend has led to an increase in the quality and diversity of content available to viewers.*

3. Globalization of Content: *With the rise of streaming platforms, content distribution has become more globalized. Audiences now have access to a wide range of international movies and TV series, leading to greater cultural exchange and diversity in entertainment consumption.*

4. Technological Advancements: *Advancements in technology, such as high-speed internet and mobile devices, have made streaming more accessible to a larger audience. Additionally, innovations like 4K resolution and virtual reality are enhancing the viewing experience.*

Audience Preferences:

1. Personalization: *Viewers prefer personalized recommendations based on their viewing history and preferences. Streaming platforms are increasingly using algorithms and machine learning to curate content tailored to individual users.*

2. Binge-Watching Culture: *The binge-watching culture, where viewers consume multiple episodes or an entire series in one sitting, has become prevalent. This behaviour is supported by the availability of entire seasons on streaming platforms and the absence of traditional weekly episode releases.*

3. Genre Diversity: *Audiences have diverse preferences when it comes to genres, including but not limited to drama, comedy, action, thriller, sci-fi, fantasy, and romance. The popularity of specific genres may vary across demographics and regions.*

Popular Genres:

1. Drama: *Drama remains a perennial favourite among audiences, offering compelling storytelling and emotional depth. Sub-genres like crime drama, historical drama, and romantic drama attract a wide audience base.*

2. Comedy: *Comedy is another highly popular genre, appreciated for its ability to provide laughter and entertainment. Sub-genres include sitcoms, romantic comedies, dark comedies, and animated comedies.*

3. Action and Adventure: *Action-packed movies and TV series with thrilling sequences, intense battles, and adventurous plots appeal to audiences seeking excitement and adrenaline.*

4. Sci-Fi and Fantasy: *Sci-fi and fantasy genres transport viewers to imaginative worlds filled with futuristic technology, supernatural beings, and epic quests. These genres often explore complex themes and speculative concepts.*

5. Thriller and Mystery: *Thriller and mystery genres captivate audiences with suspenseful narratives, plot twists, and psychological tension. Sub-genres like crime thrillers, suspense thrillers, and detective mysteries are particularly popular.*

References:

- Variety: "How Streaming Is Changing the Entertainment Landscape"

- Nielsen: "The Gauge: Top Industry Trends Shaping the Future of Media and Entertainment"

- Deloitte: "Digital Media Trends Survey"

- Screenrant: "Audience Preferences: What People Watch and Why"

- Statista: "Genre Preferences of Streaming Service Subscribers"

Task 2:

Entities:

1. User: *Represents individual users of the streaming platform. Includes attributes such as UserID, Username, Email, and Password.*

2. Profile: *Stores additional information about users, such as ProfileID, Bio, Profile Picture, and Subscription Plan.*

3. Content: *Represents movies and TV series available on the platform. Includes attributes like ContentID, Title, Genre, Release Date, and Rating.*

4. Cast: *Stores information about actors/actresses. Includes attributes like CastID, Name, Date of Birth, and Nationality.*

5. Crew*: Represents crew members involved in the production of content (e.g., directors, writers, producers). Includes attributes such as CrewID, Name, and Role.*

6. Review: *Stores user reviews for content. Includes attributes like ReviewID, UserID (foreign key), ContentID (foreign key), Rating, and Comment.*

Relationships:

1. User-Profile (One-to-One): *Connects each User to their Profile. Each User has one Profile.*

2. User-Review (One-to-Many): *Relates each User to their Reviews. Each User can have multiple Reviews.*

3. Content-Review (One-to-Many): *Associates each Content with its Reviews. Each Content can have multiple Reviews.*

4. Content-Cast (Many-to-Many): *Links Content with Cast members. Each Content can have multiple Cast members, and each Cast member can appear in multiple Contents.*

5. Content-Crew (Many-to-Many): *Connects Content with Crew members. Each Content can have multiple Crew members, and each Crew member can work on multiple Contents.*

Assumptions:

1. Each user has only one profile.

2. Users can rate and review multiple titles, but each review is tied to one user and one title.

3. Each content can have multiple cast members and crew members.

4. The rating attribute in the Review entity represents the user's rating for a title (e.g., out of 5 stars).

5. Genre is represented as a single attribute in the Content entity, but a title can belong to multiple genres.

6. Additional attributes or entities can be added as the platform evolves, such as streaming history, watchlists, or recommendations.

Notes:

- The ER-diagram is designed to capture the core entities and relationships necessary for the streaming platform.

- It allows for efficient querying of user profiles, content details, and user reviews.

- The Many-to-Many relationships between Content-Cast and Content-Crew entities accommodate the varied involvement of actors, directors, writers, etc., in different titles.

Code:

```
-- Create User table
CREATE TABLE User (
    UserID INT PRIMARY KEY AUTO_INCREMENT,
    Username VARCHAR(255) NOT NULL,
    Email VARCHAR(255) NOT NULL UNIQUE,
    Password VARCHAR(255) NOT NULL
);

-- Create Profile table
CREATE TABLE Profile (
    ProfileID INT PRIMARY KEY AUTO_INCREMENT,
    UserID INT UNIQUE,
    Bio TEXT,
    ProfilePicture VARCHAR(255),
    SubscriptionPlan VARCHAR(50),
    FOREIGN KEY (UserID) REFERENCES User(UserID)
);

-- Create Content table
CREATE TABLE Content (
    ContentID INT PRIMARY KEY AUTO_INCREMENT,
    Title VARCHAR(255) NOT NULL,
    Genre VARCHAR(255) NOT NULL,
    ReleaseDate DATE,
    Rating DECIMAL(3,1)
);
```

```
-- Create Cast table
CREATE TABLE Cast (
    CastID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
    DateOfBirth DATE,
    Nationality VARCHAR(100)
);

-- Create Crew table
CREATE TABLE Crew (
    CrewID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
    Role VARCHAR(100)
);

-- Create Review table
CREATE TABLE Review (
    ReviewID INT PRIMARY KEY AUTO_INCREMENT,
    UserID INT,
    ContentID INT,
    Rating DECIMAL(3,1),
    Comment TEXT,
    FOREIGN KEY (UserID) REFERENCES User(UserID),
    FOREIGN KEY (ContentID) REFERENCES Content(ContentID)
);

-- Create ContentCast table (Many-to-Many relationship)
CREATE TABLE ContentCast (
    ContentID INT,
    CastID INT,
    PRIMARY KEY (ContentID, CastID),
    FOREIGN KEY (ContentID) REFERENCES Content(ContentID),
    FOREIGN KEY (CastID) REFERENCES Cast(CastID)
);

-- Create ContentCrew table (Many-to-Many relationship)
CREATE TABLE ContentCrew (
```

```
    ContentID INT,
    CrewID INT,
    PRIMARY KEY (ContentID, CrewID),
    FOREIGN KEY (ContentID) REFERENCES Content(ContentID),
    FOREIGN KEY (CrewID) REFERENCES Crew(CrewID)
);
```