CREATE TABLE YoutubeLiveStream (

VirtualIdolID INT,

StreamID INT PRIMARY KEY,

Title VARCHAR(255),

Duration INT,

Date DATE,

FOREIGN KEY (VirtualIdolID) REFERENCES VirtualIdol(VirtualIdolID)

);

CREATE TABLE Topic (

TopicName VARCHAR(255) PRIMARY KEY,

TopicDuration INT

);

CREATE TABLE YoutubeLiveStream\_Topic (

TopicName VARCHAR(255),

StreamID INT,

PRIMARY KEY (TopicName, StreamID),

FOREIGN KEY (TopicName) REFERENCES Topic(TopicName),

FOREIGN KEY (StreamID) REFERENCES YoutubeLiveStream(StreamID)

);

CREATE TABLE Advertisements (

AdID INT PRIMARY KEY,

StreamID INT,

ProductName VARCHAR(255),

StartTime TIME,

EndTime TIME,

MerchID INT,

FOREIGN KEY (StreamID) REFERENCES YoutubeLiveStream(StreamID),

FOREIGN KEY (MerchID) REFERENCES Merchandise(MerchID)

);

CREATE TABLE Merchandise (

MerchID INT PRIMARY KEY,

SponsorID INT,

Brand VARCHAR(255),

ProductName VARCHAR(255),

Price DECIMAL(10, 2),

ReleaseDate DATE,

FOREIGN KEY (SponsorID) REFERENCES Sponsor(SponsorID)

);

-- YoutubeLiveStream data

INSERT INTO YoutubeLiveStream (VirtualIdolID, StreamID, Title, Duration, Date) VALUES

(1, 101, 'Live Art Session', 120, '2024-11-01'),

(2, 102, 'Gaming Session', 90, '2024-11-02'),

(1, 103, 'Q&A with Fans', 60, '2024-11-03'),

(3, 104, 'Music Livestream', 150, '2024-11-04'),

(4, 105, 'Cooking Show', 110, '2024-11-05'),

(1, 106, 'Dance Performance', 95, '2024-11-06'),

(2, 107, 'Film Discussion', 100, '2024-11-07'),

(3, 108, 'Podcast Live', 130, '2024-11-08'),

(4, 109, 'Tech Talk', 80, '2024-11-09'),

(5, 110, 'Book Club', 75, '2024-11-10');

-- Topic data

INSERT INTO Topic (TopicName, TopicDuration) VALUES

('Art', 45),

('Gaming', 60),

('Q&A', 30),

('Music', 50),

('Cooking', 40),

('Dance', 35),

('Film', 50),

('Podcast', 70),

('Tech', 45),

('Books', 55);

-- YoutubeLiveStream\_Topic data

INSERT INTO YoutubeLiveStream\_Topic (TopicName, StreamID) VALUES

('Art', 101),

('Gaming', 102),

('Q&A', 103),

('Music', 104),

('Cooking', 105),

('Dance', 106),

('Film', 107),

('Podcast', 108),

('Tech', 109),

('Books', 110);

-- Advertisements data

INSERT INTO Advertisements (AdID, StreamID, ProductName, StartTime, EndTime, MerchID) VALUES

(201, 101, 'Art Supplies', '10:00', '10:05', 301),

(202, 102, 'Gaming Headset', '12:00', '12:05', 302),

(203, 103, 'Q&A Mic', '14:00', '14:05', 303),

(204, 104, 'Concert Tickets', '15:00', '15:05', 304),

(205, 105, 'Cooking Utensils', '16:00', '16:05', 305),

(206, 106, 'Dance Shoes', '11:00', '11:05', 306),

(207, 107, 'Film Subscription', '17:00', '17:05', 307),

(208, 108, 'Podcast Service', '18:00', '18:05', 308),

(209, 109, 'Tech Gadgets', '19:00', '19:05', 309),

(210, 110, 'Books Collection', '20:00', '20:05', 310);

-- Merchandise data

INSERT INTO Merchandise (MerchID, SponsorID, Brand, ProductName, Price, ReleaseDate) VALUES

(301, 401, 'ArtBrand', 'Art Supplies', 25.99, '2024-11-01'),

(302, 402, 'GameGear', 'Gaming Headset', 79.99, '2024-11-02'),

(303, 403, 'SoundPro', 'Q&A Mic', 49.99, '2024-11-03'),

(304, 404, 'TicketMaster', 'Concert Tickets', 150.00, '2024-11-04'),

(305, 405, 'CookWare', 'Cooking Utensils', 30.50, '2024-11-05'),

(306, 406, 'DanceMarket', 'Dance Shoes', 90.00, '2024-11-06'),

(307, 407, 'FilmHouse', 'Film Subscription', 15.00, '2024-11-07'),

(308, 408, 'PodcastWorld', 'Podcast Service', 9.99, '2024-11-08'),

(309, 409, 'Techies', 'Tech Gadgets', 199.99, '2024-11-09'),

(310, 410, 'BookHaven', 'Books Collection', 60.00, '2024-11-10');

-- Adding constraints to YoutubeLiveStream

ALTER TABLE YoutubeLiveStream

ADD CONSTRAINT check\_duration CHECK (Duration > 0),

ADD CONSTRAINT check\_date CHECK (Date <= CURRENT\_DATE);

-- Adding constraints to Topic

ALTER TABLE Topic

ADD CONSTRAINT check\_topic\_duration CHECK (TopicDuration > 0);

-- Adding constraints to Advertisements

ALTER TABLE Advertisements

ADD CONSTRAINT check\_ad\_time CHECK (StartTime < EndTime),

ADD CONSTRAINT unique\_ad\_time UNIQUE (StreamID, StartTime);

-- Adding constraints to Merchandise

ALTER TABLE Merchandise

ADD CONSTRAINT check\_price CHECK (Price > 0),

ADD CONSTRAINT check\_release CHECK (ReleaseDate <= CURRENT\_DATE),

ADD CONSTRAINT unique\_product UNIQUE (Brand, ProductName);