# **Advertising Media System**

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## **Abstract:**

In the realm of advertising, understanding the effectiveness of various media channels is crucial for optimizing campaigns and maximizing return on investment. This SQL project focuses on organizing and analyzing data related to advertising media, including advertisers, campaigns, media outlets, advertisements, and performance metrics.

The database schema comprises several interconnected tables, including Advertisers, Campaigns, Media Outlets, Advertisements, Impressions, Clicks, and Views. Each table captures essential information such as advertiser details, campaign specifics, media outlet characteristics, advertisement content, and performance metrics like views and clicks. Through the utilization of SQL queries, this project aims to extract valuable insights regarding advertising media effectiveness. By joining relevant tables and aggregating data, various analyses can be performed, including assessing campaign performance, identifying top-performing media outlets, understanding audience engagement through impressions, clicks, and views, and evaluating return on investment for advertisers.

This project offers a structured approach to analyzing advertising media data, providing advertisers and marketers with actionable insights to enhance their advertising strategies and optimize resource allocation across different media channels.

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## ADVERTISING MEDIA SYSTEM

## Project for SQL Module

This project appears to be a database schema for managing advertisements, campaigns, media outlets, and related metrics such as impressions, clicks, and views. Here's a brief description:

#### **Objective:**

The objective of this project is to create a database system to manage advertising campaigns, track their performance, and analyze metrics related to impressions, clicks, and views.

#### **Components:**

- Advertisements: This table stores information about individual advertisements, including their ID, associated campaign ID, type, content, placement, and cost.
- **MediaOutlets:** This table contains details about various media outlets where advertisements are placed, such as websites, social media platforms, or other advertising channels.
- Campaigns: The campaigns table holds data regarding advertising campaigns, including their ID, associated advertiser, name, start date, end date, budget, and status.
- Advertisers: This table stores information about advertisers, including their ID, name, email address, industry, and budget allocated for advertising.
- **Impressions:** Impressions are recorded in this table, capturing details such as the impression ID, associated advertisement ID, date, and the number of views.
- Clicks: Clicks on advertisements are logged in this table, containing data such as click ID, associated impression ID, click time, and the IP address of the device that clicked the ad.
- **Views:** Views of advertisements are tracked in this table, storing information such as view ID, associated impression ID, view time, and the IP address of the device that viewed the ad.

#### **Functionality:**

- The database facilitates the management of advertising campaigns, including creating, updating, and monitoring campaign performance.
- It enables tracking and analysis of key metrics such as impressions, clicks, and views to assess the effectiveness of advertising efforts.
- Advertisers can be associated with multiple campaigns, and campaigns can contain multiple advertisements.
- Media outlets are defined to specify where advertisements are placed, helping to target specific audiences.

#### **Analysis and Reporting:**

- The database supports reporting and analysis features to generate insights into campaign performance, ROI, and audience engagement.
- Advertisers can assess the success of their campaigns based on metrics such as impressions, click-through rates, and conversion rates.
- Data from impressions, clicks, and views can be aggregated and analyzed to identify trends, optimize campaigns, and make data-driven decisions.

Overall, this project aims to provide a comprehensive solution for managing advertising campaigns and tracking their performance to maximize the effectiveness of advertising efforts.

#### Database name - Ad\_Media

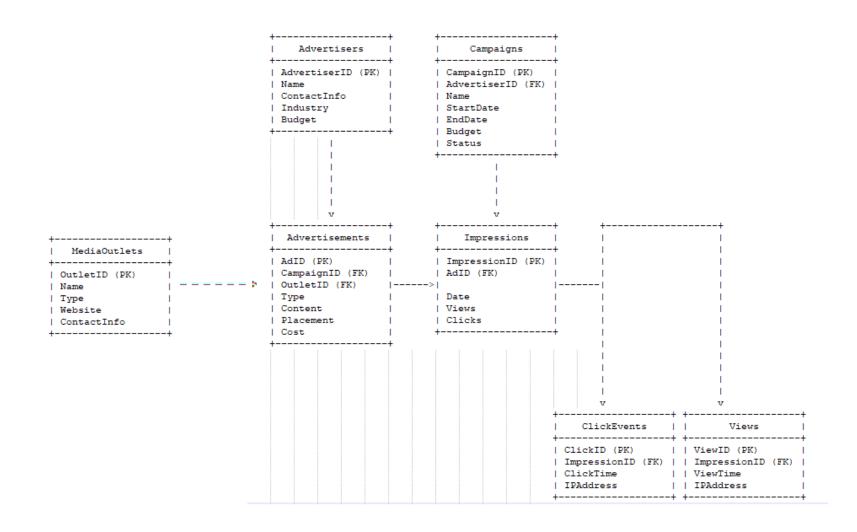
#### Schema name - advertising\_data

Here are the table names corresponding to the schemas:

- 1. Advertisers
- 2. Campaigns
- 3. MediaOutlets
- 4. Advertisements
- 5. Impressions
- 6. Clicks
- 7. Views

How these tables/entities are related to each other is shown pictorially onnext page throughER diagram, i.e., Entity Relationship Diagram.

## 2. ER-Diagram (Entity Relation – Diagram) for Advertising Media System:



## 3. Table Descriptions:

## 1. Advertisers:

| Field        | Туре          | Null | Key |
|--------------|---------------|------|-----|
| AdvertiserID | int(11)       | NO   | PRI |
| Name         | varchar(255)  | YES  |     |
| ContactInfo  | varchar(255)  | YES  |     |
| Industry     | varchar(255)  | YES  |     |
| Budget       | decimal(10,2) | YES  |     |

2. Campaigns:

| Campaigns.   |               |      |     |
|--------------|---------------|------|-----|
| Field        | Туре          | Null | Key |
| CampaignID   | int(11)       | NO   | PRI |
| AdvertiserID | int(11)       | YES  | MUL |
| Name         | varchar(255)  | YES  |     |
| StartDate    | date          | YES  |     |
| EndDate      | date          | YES  |     |
| Budget       | decimal(10,2) | YES  |     |
| Status       | varchar(50)   | YES  |     |

## 3. MediaOutlets:

| Field       | Туре         | Null | Key |
|-------------|--------------|------|-----|
| OutletID    | int(11)      | NO   | PRI |
| Name        | varchar(255) | YES  |     |
| Туре        | varchar(100) | YES  |     |
| Website     | varchar(255) | YES  |     |
| ContactInfo | varchar(255) | YES  |     |

## 4. Advertisements:

| Field      | Туре          | Null | Key |
|------------|---------------|------|-----|
| AdID       | int(11)       | NO   | PRI |
| CampaignID | int(11)       | YES  | MUL |
| OutletID   | int(11)       | YES  | MUL |
| Туре       | varchar(100)  | YES  |     |
| Content    | text          | YES  |     |
| Placement  | varchar(100)  | YES  |     |
| Cost       | decimal(10,2) | YES  |     |

5. Impressions:

| Field        | Туре    | Null | Key |
|--------------|---------|------|-----|
| ImpressionID | int(11) | NO   | PRI |
| AdID         | int(11) | YES  | MUL |
| Date         | date    | YES  |     |
| Views        | int(11) | YES  |     |

## 6. Clicks:

| Field        | Туре         | Null | Key |
|--------------|--------------|------|-----|
| ClickID      | int(11)      | NO   | PRI |
| ImpressionID | int(11)      | YES  | MUL |
| ClickTime    | datetime     | YES  |     |
| IPAddress    | varchar(255) | YES  |     |

## 7. Views:

| Field        | Туре         | Null | Key |
|--------------|--------------|------|-----|
| ViewID       | int(11)      | NO   | PRI |
| ImpressionID | int(11)      | YES  | MUL |
| ViewTime     | datetime     | YES  |     |
| IPAddress    | varchar(255) | YES  |     |

#### 4. Commands:

- CREATE database ad\_media;
- USE ad media;
- CREATE SCHEMA IF NOT EXISTS advertising\_data;
- USE advertising\_data;

#### • Create the Advertisers table

```
CREATE TABLE Advertisers (
AdvertiserID INT PRIMARY KEY,
Name VARCHAR(255),
ContactInfo VARCHAR(255),
Industry VARCHAR(255),
Budget DECIMAL(10, 2)
);
```

#### • Create the Campaigns table

```
CREATE TABLE Campaigns (
CampaignID INT PRIMARY KEY,
AdvertiserID INT,
Name VARCHAR(255),
StartDate DATE,
EndDate DATE,
Budget DECIMAL(10, 2),
Status VARCHAR(50),
FOREIGN KEY (AdvertiserID) REFERENCES Advertisers(AdvertiserID)
);
```

#### • Create the MediaOutlets table

```
CREATE TABLE MediaOutlets (
OutletID INT PRIMARY KEY,
Name VARCHAR(255),
Type VARCHAR(100),
Website VARCHAR(255),
ContactInfo VARCHAR(255)
```

);

);

#### • Create the Advertisements table

```
CREATE TABLE Advertisements (
AdID INT PRIMARY KEY,
CampaignID INT,
OutletID INT,
Type VARCHAR(100),
Content TEXT,
Placement VARCHAR(100),
Cost DECIMAL(10, 2),
FOREIGN KEY (CampaignID) REFERENCES Campaigns(CampaignID),
FOREIGN KEY (OutletID) REFERENCES MediaOutlets(OutletID)
```

```
Create the Impressions table
       CREATE TABLE Impressions (
          ImpressionID INT PRIMARY KEY,
          AdID INT,
          Date DATE,
          Views INT,
          FOREIGN KEY (AdID) REFERENCES Advertisements(AdID)
 );
        Create the Clicks table
       CREATE TABLE Clicks (
          ClickID INT PRIMARY KEY,
          ImpressionID INT,
          ClickTime DATETIME,
          IPAddress VARCHAR(255),
          FOREIGN KEY (ImpressionID) REFERENCES Impressions(ImpressionID)
);

    Create the Views table

       CREATE TABLE Views (
          ViewID INT PRIMARY KEY,
          ImpressionID INT,
          ViewTime DATETIME,
          IPAddress VARCHAR(255),
          FOREIGN KEY (ImpressionID) REFERENCES Impressions(ImpressionID)
);
      • Insert queries for Advertisers table
       INSERT INTO Advertisers (AdvertiserID, Name, ContactInfo, Industry, Budget) VALUES
       (1001, 'Omkar Battaries', 'omkar@example.com', 'Retail', 10000.00),
       (1002, 'Dream11', 'dream11@example.com', 'Technology', 15000.00),
       (1003, 'Green Gardens', 'gg@example.com', 'Home & Garden', 8000.00),
       (1004, 'Sunset Resorts', 'sunset@example.com', 'Hospitality', 20000.00),
       (1005, 'Tech Innovations', 'tech@example.com', 'Technology', 12000.00),
       (1006, 'Fashion Trends', 'fashion@example.com', 'Fashion', 9000.00),
       (1007, 'Global Logistics', 'logistics@example.com', 'Transportation', 18000.00),
       (1008, 'Healthy Living', 'health@example.com', 'Health & Wellness', 7000.00),
       (1009, 'Bright Ideas', 'ideas@example.com', 'Education', 11000.00),
       (1010, 'Creative Minds', 'creative@example.com', 'Arts & Entertainment', 13000.00),
       (1011, 'Innovative Solutions', 'solutions@example.com', 'Technology', 14000.00),
       (1012, 'Luxury Living', 'luxury@example.com', 'Real Estate', 25000.00),
       (1013, 'Digital Dreams', 'digitaldreams@example.com', 'Technology', 11500.00),
       (1014, 'Healthy Habits', 'habits@example.com', 'Health & Wellness', 7500.00),
       (1015, 'Artisan Creations', 'artisan@example.com', 'Arts & Crafts', 8500.00),
       (1016, 'Eco-Friendly Solutions', 'eco@example.com', 'Environmental', 16000.00),
       (1017, 'Fashion Forward', 'forward@example.com', 'Fashion', 9200.00),
       (1018, 'Home Decor', 'homedecor@example.com', 'Home & Garden', 8000.00),
       (1019, 'Travel Adventures', 'adventures@example.com', 'Travel & Tourism', 17000.00),
       (1020, 'Financial Freedom', 'freedom@example.com', 'Finance', 19000.00),
       (1021, 'Pet Paradise', 'petparadise@example.com', 'Pets & Animals', 8500.00),
       (1022, 'Innovative Tech Solutions', 'innovative@example.com', 'Technology', 12500.00),
       (1023, 'Wellness Works', 'wellnessworks@example.com', 'Health & Wellness', 7800.00),
       (1024, 'Artistic Expressions', 'expressions@example.com', 'Arts & Crafts', 8700.00),
       (1025, 'Sustainable Living', 'sustainable@example.com', 'Environmental', 15500.00),
       (1026, 'Fashion Finds', 'fashionfinds@example.com', 'Fashion', 9400.00),
       (1027, 'Home Improvement', 'homeimprovement@example.com', 'Home & Garden', 8200.00),
```

```
(1028, 'Travel Trends', 'traveltrends@example.com', 'Travel & Tourism', 17500.00),
(1029, 'Financial Planning', 'planning@example.com', 'Finance', 19500.00),
(1030, 'Pet Care', 'petcare@example.com', 'Pets & Animals', 8700.00),
(1031, 'Tech Innovators', 'innovators@example.com', 'Technology', 12800.00),
(1032, 'Fitness Fusion', 'fitnessfusion@example.com', 'Health & Wellness', 7600.00),
(1033, 'Creative Kids', 'creativekids@example.com', 'Children', 9000.00),
(1034, 'Artisan Crafts', 'artisancrafts@example.com', 'Arts & Crafts', 8800.00),
(1035, 'Green Energy', 'greenenergy@example.com', 'Environmental', 16500.00),
(1036, 'Healthy Habits', 'healthyhabits@example.com', 'Health & Wellness', 7700.00),
(1037, 'Tech Solutions', 'techsolutions@example.com', 'Technology', 12300.00),
(1038, 'Fashion Forward', 'fashionforward@example.com', 'Fashion', 9300.00),
(1039, 'Home Decor', 'homedecor@example.com', 'Home & Garden', 8050.00),
(1040, 'Travel Essentials', 'essentials@example.com', 'Travel & Tourism', 16800.00),
(1041, 'Financial Solutions', 'financial solutions@example.com', 'Finance', 19200.00),
(1042, 'Pet Lovers', 'petlovers@example.com', 'Pets & Animals', 8800.00),
(1043, 'Tech Experts', 'techexperts@example.com', 'Technology', 12700.00),
(1044, 'Fitness Fanatics', 'fitnessfanatics@example.com', 'Health & Wellness', 7900.00),
(1045, 'Foodie Finds', 'foodiefinds@example.com', 'Food & Beverage', 14800.00),
(1046, 'Creative Concepts', 'creativeconcepts@example.com', 'Arts & Crafts', 9100.00),
(1047, 'Green Living', 'greenliving@example.com', 'Environmental', 16300.00),
(1048, 'Healthy Lifestyle', 'healthylifestyle@example.com', 'Health & Wellness', 8000.00),
(1049, 'Tech Gurus', 'techgurus@example.com', 'Technology', 13000.00),
(1050, 'Fashionistas', 'fashionistas@example.com', 'Fashion', 9500.00),
(1051, 'Home Essentials', 'homeessentials@example.com', 'Home & Garden', 8100.00),
(1052, 'Travel Enthusiasts', 'travelenthusiasts@example.com', 'Travel & Tourism', 17400.00),
(1053, 'Financial Advisors', 'financial advisors@example.com', 'Finance', 19800.00),
(1054, 'Pet Care Essentials', 'petcareessentials@example.com', 'Pets & Animals', 8900.00),
(1055, 'Tech Wizards', 'techwizards@example.com', 'Technology', 13200.00),
(1056, 'Fitness Freaks', 'fitnessfreaks@example.com', 'Health & Wellness', 8000.00),
(1057, 'Foodie Delights', 'foodiedelights@example.com', 'Food & Beverage', 15100.00),
(1058, 'Creative Crafters', 'creativecrafters@example.com', 'Arts & Crafts', 9200.00),
(1059, 'Green Solutions', 'green solutions@example.com', 'Environmental', 16700.00),
(1060, 'Healthy Living Hub', 'healthylivinghub@example.com', 'Health & Wellness', 8100.00);
   Insert queries for Campaigns table
(11001, 1001, 'Summer Sale', '2024-06-01', '2024-08-31', 5000.00, 'Active'),
```

```
INSERT INTO Campaigns (CampaignID, AdvertiserID, Name, StartDate, EndDate, Budget, Status) VALUES
(11002, 1002, 'Back to School Promotion', '2024-08-01', '2024-09-30', 7000.00, 'Active'),
(11003, 1003, 'Spring Cleaning Event', '2024-04-01', '2024-05-31', 4000.00, 'Active'),
(11004, 1004, 'Winter Wonderland Campaign', '2024-11-01', '2024-12-31', 6000.00, 'Active'),
(11005, 1005, 'Holiday Gift Guide', '2024-11-15', '2024-12-25', 8000.00, 'Active'),
(11006, 1006, 'Tech Expo', '2024-09-01', '2024-09-05', 3000.00, 'Active'),
(11007, 1007, 'Grand Opening Celebration', '2024-07-01', '2024-07-31', 2000.00, 'Active'),
(11008, 1008, 'New Year New You', '2025-01-01', '2025-01-31', 3500.00, 'Active'),
(11009, 1009, 'Fall Fashion Week', '2024-10-01', '2024-10-07', 2500.00, 'Active'),
(11010, 1010, 'Summer Travel Deals', '2024-06-15', '2024-08-15', 5500.00, 'Active'),
(11011, 1001, 'Spring Clearance Sale', '2024-03-01', '2024-04-15', 4500.00, 'Inactive'),
(11012, 1002, 'Tech Innovation Conference', '2024-09-10', '2024-09-12', 4000.00, 'Active'),
(11013, 1003, 'Summer Outdoor Adventure', '2024-07-15', '2024-08-30', 6000.00, 'Active'),
(11014, 1004, 'Holiday Travel Specials', '2024-12-10', '2025-01-05', 7500.00, 'Active'),
(11015, 1005, 'Backyard BBQ Bash', '2024-05-20', '2024-06-30', 3000.00, 'Active'),
(11016, 1006, 'Fitness Challenge', '2024-08-15', '2024-09-30', 5000.00, 'Active'),
(11017, 1007, 'Tech Gear Giveaway', '2024-11-05', '2024-12-15', 6500.00, 'Active'),
(11018, 1008, 'New Year New Home', '2025-01-15', '2025-02-28', 7000.00, 'Active'),
(11019, 1009, 'Winter Wellness Workshop', '2024-12-01', '2024-12-31', 3500.00, 'Active'),
(11020, 1010, 'Spring Break Travel Deals', '2024-03-15', '2024-04-15', 4800.00, 'Inactive'),
(11021, 1001, 'Fall Fashion Preview', '2024-09-01', '2024-09-30', 4200.00, 'Active'),
(11022, 1002, 'Holiday Tech Gifts Guide', '2024-11-20', '2024-12-25', 6800.00, 'Active'),
(11023, 1003, 'Spring Cleaning Workshop', '2024-04-15', '2024-05-15', 3200.00, 'Active'),
(11024, 1004, 'Winter Wellness Retreat', '2024-12-15', '2024-12-31', 5000.00, 'Active'),
(11025, 1005, 'Holiday Home Decor Sale', '2024-11-01', '2024-12-15', 5500.00, 'Active'),
```

```
(11026, 1006, 'Summer Fitness Challenge', '2024-06-15', '2024-08-31', 6000.00, 'Active'),
(11027, 1007, 'Grand Opening Weekend', '2024-07-15', '2024-07-17', 2000.00, 'Active'),
(11028, 1008, 'New Year Nutrition Workshop', '2025-01-05', '2025-01-10', 2500.00, 'Active'),
(11029, 1009, 'Fall Fashion Runway Show', '2024-10-10', '2024-10-15', 4800.00, 'Active'),
(11030, 1010, 'Holiday Travel Bonanza', '2024-12-20', '2025-01-05', 7200.00, 'Active'),
(11031, 1001, 'Spring Style Revival', '2024-04-01', '2024-05-15', 4000.00, 'Active'),
(11032, 1002, 'Tech Summit', '2024-09-20', '2024-09-22', 6500.00, 'Active'),
(11033, 1003, 'Summer Outdoor Gear Sale', '2024-07-01', '2024-07-31', 3800.00, 'Active'),
(11034, 1004, 'Holiday Travel Planning Workshop', '2024-11-10', '2024-11-15', 4200.00, 'Active'),
(11035, 1005, 'Backyard BBQ Essentials Sale', '2024-05-10', '2024-05-31', 3200.00, 'Active'),
(11036, 1006, 'Fitness Bootcamp', '2024-08-01', '2024-09-15', 5500.00, 'Active'),
(11037, 1007, 'Tech Product Launch', '2024-11-15', '2024-12-15', 7000.00, 'Active'),
(11038, 1008, 'New Year Home Decor Clearance', '2025-01-20', '2025-02-28', 4800.00, 'Active'),
(11039, 1009, 'Winter Wellness Webinar', '2024-12-05', '2024-12-10', 3500.00, 'Active'),
(11040, 1010, 'Spring Break Adventure Packages', '2024-03-20', '2024-04-15', 6000.00, 'Inactive'),
(11041, 1001, 'Fall Fashion Trends Workshop', '2024-09-15', '2024-09-20', 4200.00, 'Active'),
(11042, 1002, 'Holiday Tech Gadgets Showcase', '2024-11-25', '2024-12-31', 7200.00, 'Active'),
(11043, 1003, 'Spring Home Cleaning Sale', '2024-01-20', '2024-03-05', 3800.00, 'Inactive'),
(11044, 1004, 'Winter Wellness Seminar', '2024-12-20', '2024-12-30', 4800.00, 'Active'),
(11045, 1005, 'Holiday Home Decor Workshop', '2024-11-05', '2024-12-05', 5500.00, 'Active'),
(11046, 1006, 'Summer Fitness Festival', '2024-06-01', '2024-08-31', 7000.00, 'Active'),
(11047, 1007, 'Grand Reopening Celebration', '2024-07-20', '2024-07-25', 2500.00, 'Active'),
(11048, 1008, 'New Year New Fitness Challenge', '2025-01-10', '2025-01-31', 3500.00, 'Active'),
(11049, 1009, 'Fall Fashion Pop-Up Shop', '2024-10-20', '2024-10-25', 4800.00, 'Active'),
(11050, 1010, 'Holiday Travel Tips Webinar', '2024-12-01', '2024-12-10', 5500.00, 'Active'),
(11051, 1001, 'Spring Fashion Preview', '2024-03-15', '2024-04-15', 4200.00, 'Active'),
(11052, 1002, 'Tech Product Showcase', '2024-09-25', '2024-09-27', 6800.00, 'Active'),
(11053, 1003, 'Summer Outdoor Gear Demo', '2024-07-05', '2024-07-10', 3800.00, 'Active'),
(11054, 1004, 'Holiday Travel Deals Expo', '2024-11-15', '2024-12-15', 6500.00, 'Active'),
(11055, 1005, 'Backyard BBQ Recipe Contest', '2024-05-15', '2024-06-15', 3200.00, 'Active'),
(11056, 1006, 'Fitness Challenge Kickoff', '2024-08-05', '2024-08-15', 5000.00, 'Active'),
(11057, 1007, 'Tech Trends Seminar', '2024-11-10', '2024-11-20', 7000.00, 'Active'),
(11058, 1008, 'New Year Home Improvement Sale', '2025-01-05', '2025-01-15', 4800.00, 'Active'),
(11059, 1009, 'Winter Wellness Workshop Series', '2024-12-01', '2024-12-10', 3500.00, 'Active'),
(11060, 1010, 'Spring Break Travel Bonanza', '2024-03-25', '2024-04-25', 6000.00, 'Active');
```

#### Insert queries for MediaOutlets table

```
INSERT INTO MediaOutlets (OutletID, Name, Type, Website, ContactInfo) VALUES
(2001, 'Facebook', 'Social Media', 'www.facebook.com', 'contact@facebook.com'),
(2002, 'Instagram', 'Social Media', 'www.instagram.com', 'contact@instagram.com'),
(2003, 'YouTube', 'Social Media', 'www.youtube.com', 'contact@youtube.com'),
(2004, 'Twitter', 'Social Media', 'www.twitter.com', 'contact@twitter.com'),
(2005, 'LinkedIn', 'Social Media', 'www.linkedin.com', 'contact@linkedin.com'),
(2006, 'Pinterest', 'Social Media', 'www.pinterest.com', 'contact@pinterest.com'),
(2007, 'Snapchat', 'Social Media', 'www.snapchat.com', 'contact@snapchat.com'),
(2008, 'TikTok', 'Social Media', 'www.tiktok.com', 'contact@tiktok.com'),
(2009, 'Reddit', 'Social Media', 'www.reddit.com', 'contact@reddit.com'),
(2010, 'Tumblr', 'Social Media', 'www.tumblr.com', 'contact@tumblr.com'),
(2011, 'WhatsApp', 'Messaging App', 'www.whatsapp.com', 'contact@whatsapp.com'),
(2012, 'Messenger', 'Messaging App', 'www.messenger.com', 'contact@messenger.com'),
(2013, 'WeChat', 'Messaging App', 'www.wechat.com', 'contact@wechat.com'),
(2014, 'Line', 'Messaging App', 'www.line.me', 'contact@line.me'),
(2015, 'Telegram', 'Messaging App', 'www.telegram.com', 'contact@telegram.com'),
(2016, 'Viber', 'Messaging App', 'www.viber.com', 'contact@viber.com'),
(2017, 'Skype', 'Messaging App', 'www.skype.com', 'contact@skype.com'),
(2018, 'Zoom', 'Video Conferencing', 'www.zoom.us', 'contact@zoom.us'),
(2019, 'Google Meet', 'Video Conferencing', 'meet.google.com', 'contact@google.com'),
(2020, 'Microsoft Teams', 'Video Conferencing', 'www.microsoft.com/teams', 'contact@microsoft.com'),
(2021, 'Webex', 'Video Conferencing', 'www.webex.com', 'contact@webex.com'),
(2022, 'GoToMeeting', 'Video Conferencing', 'www.gotomeeting.com', 'contact@gotomeeting.com'),
(2023, 'BlueJeans', 'Video Conferencing', 'www.bluejeans.com', 'contact@bluejeans.com'),
```

```
(2024, 'Slack', 'Collaboration Tool', 'www.slack.com', 'contact@slack.com'),
(2025, 'Asana', 'Collaboration Tool', 'www.asana.com', 'contact@asana.com'),
(2026, 'Trello', 'Collaboration Tool', 'www.trello.com', 'contact@trello.com'),
(2027, 'Monday.com', 'Collaboration Tool', 'www.monday.com', 'contact@monday.com'),
(2028, 'Notion', 'Collaboration Tool', 'www.notion.so', 'contact@notion.so'),
(2029, 'Basecamp', 'Project Management', 'www.basecamp.com', 'contact@basecamp.com'),
(2030, 'Jira', 'Project Management', 'www.atlassian.com/software/jira', 'contact@jira.com'),
(2031, 'Toggl', 'Time Tracking', 'www.toggl.com', 'contact@toggl.com'),
(2032, 'Clockify', 'Time Tracking', 'www.clockify.me', 'contact@clockify.com'),
(2033, 'Harvest', 'Time Tracking', 'www.getharvest.com', 'contact@harvest.com'),
(2034, 'RescueTime', 'Time Tracking', 'www.rescuetime.com', 'contact@rescuetime.com'),
(2035, 'Todoist', 'Task Management', 'www.todoist.com', 'contact@todoist.com'),
(2036, 'Wunderlist', 'Task Management', 'www.wunderlist.com', 'contact@wunderlist.com'),
(2037, 'Any.do', 'Task Management', 'www.any.do', 'contact@any.do'),
(2038, 'Microsoft To Do', 'Task Management', 'www.microsoft.com/en-us/microsoft-365/microsoft-to-do-list-app',
'contact@microsoft.com'),
(2039, 'Google Tasks', 'Task Management', 'tasks.google.com', 'contact@google.com'),
(2040, 'Evernote', 'Note Taking', 'www.evernote.com', 'contact@evernote.com'),
(2041, 'OneNote', 'Note Taking', 'www.onenote.com', 'contact@microsoft.com'),
(2042, 'Bear', 'Note Taking', 'www.bear.app', 'contact@bear.app'),
(2043, 'Simplenote', 'Note Taking', 'simplenote.com', 'contact@simplenote.com'),
(2044, 'Zoho Notebook', 'Note Taking', 'www.zoho.com/notebook', 'contact@zoho.com'),
(2045, 'Google Keep', 'Note Taking', 'keep.google.com', 'contact@google.com'),
(2046, 'Pocket', 'Bookmarking', 'www.getpocket.com', 'contact@getpocket.com'),
(2047, 'Instapaper', 'Bookmarking', 'www.instapaper.com', 'contact@instapaper.com'),
(2048, 'Raindrop.io', 'Bookmarking', 'raindrop.io', 'contact@raindrop.io'),
(2049, 'Diigo', 'Bookmarking', 'www.diigo.com', 'contact@diigo.com'),
(2050, 'Pearltrees', 'Bookmarking', 'www.pearltrees.com', 'contact@pearltrees.com'),
(2051, 'Pocket Casts', 'Podcast', 'www.pocketcasts.com', 'contact@pocketcasts.com'),
(2052, 'Overcast', 'Podcast', 'overcast.fm', 'contact@overcast.fm'),
(2053, 'Spotify', 'Podcast', 'www.spotify.com', 'contact@spotify.com'),
(2054, 'Apple Podcasts', 'Podcast', 'podcasts.apple.com', 'contact@apple.com'),
(2055, 'Google Podcasts', 'Podcast', 'podcasts.google.com', 'contact@google.com'),
(2056, 'Stitcher', 'Podcast', 'www.stitcher.com', 'contact@stitcher.com'),
(2057, 'Castbox', 'Podcast', 'castbox.fm', 'contact@castbox.fm'),
(2058, 'Anchor', 'Podcast', 'www.anchor.fm', 'contact@anchor.fm'),
(2059, 'SoundCloud', 'Music Streaming', 'soundcloud.com', 'contact@soundcloud.com'),
(2060, 'Bandcamp', 'Music Streaming', 'bandcamp.com', 'contact@bandcamp.com');
 Insert queries for Advertisements table
INSERT INTO Advertisements (AdID, CampaignID, OutletID, Type, Content, Placement, Cost) VALUES
(240001, 11001, 2001, 'Picture', 'RUMMY Circle - Play Now!', 'Stories', 500.00),
(240002, 11002, 2002, 'Video', 'My 11 Circle - Play Now', 'Stories', 700.00),
(240003, 11003, 2003, 'Picture', 'RUMMY Circle - Play Now!', 'Website Sidebar', 400.00),
(240004, 11004, 2004, 'Picture', 'Winter Wonderland - Shop now!', 'Sponsored Posts', 600.00),
(240005, 11005, 2005, 'Video', 'Holiday Gift Guide - Watch now!', 'News Feed', 800.00),
(240006, 11006, 2006, 'Picture', 'Tech Expo - Register today!', 'In-stream videos', 300.00),
(240007, 11007, 2007, 'Picture', 'RUMMY Circle - Play Now!', 'In-stream videos', 200.00),
(240008, 11008, 2008, 'Video', 'New Year New You - Transform yourself!', 'Stories', 350.00),
(240009, 11009, 2009, 'Picture', 'Fall Fashion Week - Get ready!', 'In-stream videos', 250.00),
(240010, 11010, 2010, 'Picture', 'Summer Travel Deals - Book now!', 'In-stream videos', 550.00),
(240011, 11011, 2011, 'Video', 'Spring Clearance Sale - Limited time offer!', 'News Feed', 450.00),
(240012, 11012, 2012, 'Picture', 'Tech Innovation Conference - Register now!', 'Sponsored Posts', 400.00),
(240013, 11013, 2013, 'Picture', 'Summer Outdoor Adventure - Explore now!', 'In-stream videos', 600.00),
(240014, 11014, 2014, 'Video', 'Holiday Travel Specials - Book your trip!', 'Stories', 750.00),
(240015, 11015, 2015, 'Picture', 'Backyard BBQ Bash - Join us!', 'In-stream videos', 300.00),
(240016, 11016, 2016, 'Picture', 'Fitness Challenge - Sign up now!', 'In-stream videos', 500.00),
(240017, 11017, 2017, 'Video', 'Tech Gear Giveaway - Enter to win!', 'Stories', 650.00),
(240018, 11018, 2018, 'Picture', 'New Year New Home - Find your dream home!', 'In-stream videos', 700.00),
(240019, 11019, 2019, 'Picture', 'Winter Wellness Workshop - Join us!', 'In-stream videos', 350.00),
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(240020, 11020, 2020, 'Video', 'Spring Break Travel Deals - Book now!', 'News Feed', 480.00),

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(240021, 11021, 2021, 'Picture', 'Fall Fashion Preview - See the latest trends!', 'Sponsored Posts', 420.00),
(240022, 11022, 2022, 'Picture', 'DREAM 11 - Play Now', 'In-stream videos', 680.00),
(240023, 11023, 2023, 'Video', 'Spring Cleaning Workshop - Register today!', 'Stories', 320.00),
(240024, 11024, 2024, 'Picture', 'Winter Wellness Retreat - Relax and rejuvenate!', 'Sponsored Posts', 500.00),
(240025, 11025, 2025, 'Picture', 'Holiday Home Decor Sale - Save big!', 'In-stream videos', 550.00),
(240026, 11026, 2026, 'Video', 'Summer Fitness Challenge - Join now!', 'Stories', 600.00),
(240027, 11027, 2027, 'Picture', 'Grand Opening Weekend - Celebrate with us!', 'In-stream videos', 200.00),
(240028, 11028, 2028, 'Picture', 'New Year Nutrition Workshop - Learn more!', 'Website Sidebar', 250.00),
(240029, 11029, 2029, 'Video', 'Fall Fashion Runway Show - Watch now!', 'News Feed', 480.00),
(240030, 11030, 2030, 'Picture', 'Holiday Travel Bonanza - Book your trip!', 'In-stream videos', 720.00),
(240031, 11031, 2031, 'Picture', 'Spring Style Revival - Update your wardrobe!', 'In-stream videos', 400.00),
(240032, 11032, 2032, 'Video', 'Tech Summit - Reserve your spot!', 'Stories', 650.00),
(240033, 11033, 2033, 'Picture', 'Summer Outdoor Gear Sale - Save now!', 'In-stream videos', 380.00),
(240034, 11034, 2034, 'Picture', 'Holiday Travel Planning Workshop - Register now!', 'In-stream videos', 420.00),
(240035, 11035, 2035, 'Video', 'Backyard BBQ Essentials Sale - Shop now!', 'News Feed', 320.00),
(240036, 11036, 2036, 'Picture', 'Fitness Bootcamp - Get in shape!', 'In-stream videos', 550.00),
(240037, 11037, 2037, 'Picture', 'Tech Product Launch - Discover the latest innovations!', 'In-stream videos', 700.00),
(240038, 11038, 2038, 'Video', 'New Year Home Decor Clearance - Save big!', 'Stories', 480.00),
(240039, 11039, 2039, 'Picture', 'Winter Wellness Webinar - Learn how to stay healthy!', 'In-stream videos', 350.00),
(240040, 11040, 2040, 'Picture', 'Spring Break Adventure Packages - Book your trip!', 'Website Sidebar', 600.00),
(240041, 11041, 2041, 'Video', 'Fall Fashion Trends Workshop - Register now!', 'Stories', 420.00),
(240042, 11042, 2042, 'Picture', 'DREAM 11 - Play Now', 'In-stream videos', 720.00),
(240043, 11043, 2043, 'Picture', 'Spring Home Cleaning Sale - Shop now and save!', 'Sponsored Posts', 380.00),
(240044, 11044, 2044, 'Video', 'Winter Wellness Seminar - Improve your well-being!', 'Stories', 480.00),
(240045, 11045, 2045, 'Picture', 'Holiday Home Decor Workshop - Get inspired!', 'Sponsored Posts', 550.00),
(240046, 11046, 2046, 'Picture', 'Summer Fitness Festival - Join us for a fun workout!', 'In-stream videos', 700.00),
(240047, 11047, 2047, 'Video', 'Grand Reopening Celebration - Watch the highlights!', 'Instant Articles', 250.00),
(240048, 11048, 2048, 'Picture', 'New Year New Fitness Challenge - Get fit in the new year!', 'Instant Articles', 350.00),
(240049, 11049, 2049, 'Picture', 'Fall Fashion Pop-Up Shop - Discover the latest trends!', 'In-stream videos', 480.00),
(240050, 11050, 2050, 'Video', 'DREAM 11 - Play Now', 'Stories', 550.00),
(240051, 11051, 2051, 'Picture', 'Spring Fashion Preview - Get a sneak peek!', 'Instant Articles', 420.00),
(240052, 11052, 2052, 'Picture', 'Tech Product Showcase - See the latest innovations!', 'In-stream videos', 680.00),
(240053, 11053, 2053, 'Video', 'Summer Outdoor Gear Demo - See the gear in action!', 'Website Sidebar', 380.00),
(240054, 11054, 2054, 'Picture', 'Holiday Travel Deals Expo - Book your trip now!', 'In-stream videos', 650.00),
(240055, 11055, 2055, 'Picture', 'Backyard BBQ Recipe Contest - Enter to win!', 'Sponsored Posts', 320.00),
(240056, 11056, 2056, 'Video', 'Fitness Challenge Kickoff - Join the challenge!', 'Stories', 500.00),
(240057, 11057, 2057, 'Picture', 'Tech Trends Seminar - Learn about the latest tech trends!', 'Instant Articles', 700.00),
(240058, 11058, 2058, 'Picture', 'New Year Home Improvement Sale - Renovate your home!', 'Sponsored Posts', 480.00),
(240059, 11059, 2059, 'Video', 'Winter Wellness Workshop Series - Improve your well-being!', 'Stories', 350.00),
(240060, 11060, 2060, 'Picture', 'DREAM 11 - Play Now', 'Instant Articles', 600.00);
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#### **Insert queries for Impressions table**

(18, 240018, '2024-06-18', 1400),

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INSERT INTO Impressions (ImpressionID, AdID, Date, Views) VALUES
(1, 240001, '2024-06-01', 1500),
(2, 240002, '2024-06-02', 1700),
(3, 240003, '2024-06-03', 1200),
(4, 240004, '2024-06-04', 2000),
(5, 240005, '2024-06-05', 2200),
(6, 240006, '2024-06-06', 1300),
(7, 240007, '2024-06-07', 1100),
(8, 240008, '2024-06-08', 1800),
(9, 240009, '2024-06-09', 1000),
(10, 240010, '2024-06-10', 1900),
(11, 240011, '2024-06-11', 1400),
(12, 240012, '2024-06-12', 1600),
(13, 240013, '2024-06-13', 1200),
(14, 240014, '2024-06-14', 2100),
(15, 240015, '2024-06-15', 1300),
(16, 240016, '2024-06-16', 1700),
(17, 240017, '2024-06-17', 1900),
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(19, 240019, '2024-06-19', 1600),
(20, 240020, '2024-06-20', 2000),
(21, 240021, '2024-06-21', 1800),
(22, 240022, '2024-06-22', 1500),
(23, 240023, '2024-06-23', 1200),
(24, 240024, '2024-06-24', 1700),
(25, 240025, '2024-06-25', 1400),
(26, 240026, '2024-06-26', 1600),
(27, 240027, '2024-06-27', 1300),
(28, 240028, '2024-06-28', 1500),
(29, 240029, '2024-06-29', 1900),
(30, 240030, '2024-06-30', 1800),
(31, 240031, '2024-07-01', 1200),
(32, 240032, '2024-07-02', 1700),
(33, 240033, '2024-07-03', 1400),
(34, 240034, '2024-07-04', 2000),
(35, 240035, '2024-07-05', 2200),
(36, 240036, '2024-07-06', 1300),
(37, 240037, '2024-07-07', 1100),
(38, 240038, '2024-07-08', 1800),
(39, 240039, '2024-07-09', 1000),
(40, 240040, '2024-07-10', 1900),
(41, 240041, '2024-07-11', 1400),
(42, 240042, '2024-07-12', 1600),
(43, 240043, '2024-07-13', 1200),
(44, 240044, '2024-07-14', 2100),
(45, 240045, '2024-07-15', 1300),
(46, 240046, '2024-07-16', 1700),
(47, 240047, '2024-07-17', 1900),
(48, 240048, '2024-07-18', 1400),
(49, 240049, '2024-07-19', 1600),
(50, 240050, '2024-07-20', 2000),
(51, 240051, '2024-07-21', 1800),
(52, 240052, '2024-07-22', 1500),
(53, 240053, '2024-07-23', 1200),
(54, 240054, '2024-07-24', 1700),
(55, 240055, '2024-07-25', 1400),
(56, 240056, '2024-07-26', 1600),
(57, 240057, '2024-07-27', 1300),
(58, 240058, '2024-07-28', 1500),
(59, 240059, '2024-07-29', 1900),
(60, 240060, '2024-07-30', 1800);
Insert queries for Clicks table
INSERT INTO Clicks (ClickID, ImpressionID, ClickTime, IPAddress) VALUES
(101, 1, '2024-06-01 08:30:00', '192.168.0.1'),
(102, 2, '2024-06-02 09:15:00', '192.168.0.2'),
(103, 3, '2024-06-03 10:20:00', '192.168.0.3'),
(104, 4, '2024-06-04 11:45:00', '192.168.0.4'),
(105, 5, '2024-06-05 13:00:00', '192.168.0.5'),
(106, 6, '2024-06-06 14:30:00', '192.168.0.6'),
(107, 7, '2024-06-07 15:45:00', '192.168.0.7'),
(108, 8, '2024-06-08 16:20:00', '192.168.0.8'),
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(102, 2, '2024-06-02 09:15:00', '192.168.0.2'),
(103, 3, '2024-06-03 10:20:00', '192.168.0.3'),
(104, 4, '2024-06-04 11:45:00', '192.168.0.4'),
(105, 5, '2024-06-05 13:00:00', '192.168.0.5'),
(106, 6, '2024-06-06 14:30:00', '192.168.0.6'),
(107, 7, '2024-06-07 15:45:00', '192.168.0.7'),
(108, 8, '2024-06-08 16:20:00', '192.168.0.8'),
(109, 9, '2024-06-09 17:10:00', '192.168.0.9'),
(110, 10, '2024-06-10 18:00:00', '192.168.0.10'),
(111, 11, '2024-06-11 19:30:00', '192.168.0.11'),
(112, 12, '2024-06-12 20:45:00', '192.168.0.12'),
(113, 13, '2024-06-13 21:10:00', '192.168.0.13'),
(114, 14, '2024-06-14 22:20:00', '192.168.0.14'),
(115, 15, '2024-06-15 23:00:00', '192.168.0.15'),
(116, 16, '2024-06-16 00:30:00', '192.168.0.16'),

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(117, 17, '2024-06-17 01:45:00', '192.168.0.17'),
(118, 18, '2024-06-18 02:20:00', '192.168.0.18'),
(119, 19, '2024-06-19 03:10:00', '192.168.0.19'),
(120, 20, '2024-06-20 04:00:00', '192.168.0.20'),
(121, 21, '2024-06-21 05:30:00', '192.168.0.21'),
(122, 22, '2024-06-22 06:45:00', '192.168.0.22'),
(123, 23, '2024-06-23 07:10:00', '192.168.0.23'),
(124, 24, '2024-06-24 08:20:00', '192.168.0.24'),
(125, 25, '2024-06-25 09:00:00', '192.168.0.25'),
(126, 26, '2024-06-26 10:30:00', '192.168.0.26'),
(127, 27, '2024-06-27 11:45:00', '192.168.0.27'),
(128, 28, '2024-06-28 12:20:00', '192.168.0.28'),
(129, 29, '2024-06-29 13:10:00', '192.168.0.29'),
(130, 30, '2024-06-30 14:00:00', '192.168.0.30'),
(131, 31, '2024-07-01 15:30:00', '192.168.0.31'),
(132, 32, '2024-07-02 16:45:00', '192.168.0.32'),
(133, 33, '2024-07-03 17:10:00', '192.168.0.33'),
(134, 34, '2024-07-04 18:20:00', '192.168.0.34'),
(135, 35, '2024-07-05 19:00:00', '192.168.0.35'),
(136, 36, '2024-07-06 20:30:00', '192.168.0.36'),
(137, 37, '2024-07-07 21:45:00', '192.168.0.37'),
(138, 38, '2024-07-08 22:20:00', '192.168.0.38'),
(139, 39, '2024-07-09 23:10:00', '192.168.0.39'),
(140, 40, '2024-07-10 00:00:00', '192.168.0.40'),
(141, 41, '2024-07-11 01:30:00', '192.168.0.41'),
(142, 42, '2024-07-12 02:45:00', '192.168.0.42'),
(143, 43, '2024-07-13 03:10:00', '192.168.0.43'),
(144, 44, '2024-07-14 04:20:00', '192.168.0.44'),
(145, 45, '2024-07-15 05:00:00', '192.168.0.45'),
(146, 46, '2024-07-16 06:30:00', '192.168.0.46'),
(147, 47, '2024-07-17 07:45:00', '192.168.0.47'),
(148, 48, '2024-07-18 08:20:00', '192.168.0.48'),
(149, 49, '2024-07-19 09:10:00', '192.168.0.49'),
(150, 50, '2024-07-20 10:00:00', '192.168.0.50'),
(151, 51, '2024-07-21 11:30:00', '192.168.0.51'),
(152, 52, '2024-07-22 12:45:00', '192.168.0.52'),
(153, 53, '2024-07-23 13:10:00', '192.168.0.53'),
(154, 54, '2024-07-24 14:20:00', '192.168.0.54'),
(155, 55, '2024-07-25 15:00:00', '192.168.0.55'),
(156, 56, '2024-07-26 16:30:00', '192.168.0.56'),
(157, 57, '2024-07-27 17:45:00', '192.168.0.57'),
(158, 58, '2024-07-28 18:20:00', '192.168.0.58'),
(159, 59, '2024-07-29 19:10:00', '192.168.0.59'),
(160, 60, '2024-07-30 20:00:00', '192.168.0.60');
Insert queries for Views table
```

```
INSERT INTO Views (ViewID, ImpressionID, ViewTime, IPAddress) VALUES
(201, 1, '2024-06-01 08:30:00', '192.168.0.1'),
(202, 2, '2024-06-02 09:15:00', '192.168.0.2'),
(203, 3, '2024-06-03 10:20:00', '192.168.0.3'),
(204, 4, '2024-06-04 11:45:00', '192.168.0.4'),
(205, 5, '2024-06-05 13:00:00', '192.168.0.5'),
(206, 6, '2024-06-06 14:30:00', '192.168.0.6'),
(207, 7, '2024-06-07 15:45:00', '192.168.0.7'),
(208, 8, '2024-06-08 16:20:00', '192.168.0.8'),
(209, 9, '2024-06-09 17:10:00', '192.168.0.9'),
(210, 10, '2024-06-10 18:00:00', '192.168.0.10'),
(211, 11, '2024-06-11 19:30:00', '192.168.0.11'),
(212, 12, '2024-06-12 20:45:00', '192.168.0.12'),
(213, 13, '2024-06-13 21:10:00', '192.168.0.13'),
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(214, 14, '2024-06-14 22:20:00', '192.168.0.14'),
(215, 15, '2024-06-15 23:00:00', '192.168.0.15'),
(216, 16, '2024-06-16 00:30:00', '192.168.0.16'),
(217, 17, '2024-06-17 01:45:00', '192.168.0.17'),
(218, 18, '2024-06-18 02:20:00', '192.168.0.18'),
(219, 19, '2024-06-19 03:10:00', '192.168.0.19'),
(220, 20, '2024-06-20 04:15:00', '192.168.0.20'),
(221, 21, '2024-06-21 05:30:00', '192.168.0.21'),
(222, 22, '2024-06-22 06:45:00', '192.168.0.22'),
(223, 23, '2024-06-23 07:20:00', '192.168.0.23'),
(224, 24, '2024-06-24 08:10:00', '192.168.0.24'),
(225, 25, '2024-06-25 09:00:00', '192.168.0.25'),
(226, 26, '2024-06-26 10:30:00', '192.168.0.26'),
(227, 27, '2024-06-27 11:45:00', '192.168.0.27'),
(228, 28, '2024-06-28 12:20:00', '192.168.0.28'),
(229, 29, '2024-06-29 13:10:00', '192.168.0.29'),
(230, 30, '2024-06-30 14:00:00', '192.168.0.30'),
(231, 31, '2024-07-01 15:30:00', '192.168.0.31'),
(232, 32, '2024-07-02 16:45:00', '192.168.0.32'),
(233, 33, '2024-07-03 17:10:00', '192.168.0.33'),
(234, 34, '2024-07-04 18:20:00', '192.168.0.34'),
(235, 35, '2024-07-05 19:00:00', '192.168.0.35'),
(236, 36, '2024-07-06 20:30:00', '192.168.0.36'),
(237, 37, '2024-07-07 21:45:00', '192.168.0.37'),
(238, 38, '2024-07-08 22:20:00', '192.168.0.38'),
(239, 39, '2024-07-09 23:10:00', '192.168.0.39'),
(240, 40, '2024-07-10 00:00:00', '192.168.0.40'),
(241, 41, '2024-07-11 08:30:00', '192.168.0.41'),
(242, 42, '2024-07-12 09:15:00', '192.168.0.42'),
(243, 43, '2024-07-13 10:20:00', '192.168.0.43'),
(244, 44, '2024-07-14 11:45:00', '192.168.0.44'),
(245, 45, '2024-07-15 13:00:00', '192.168.0.45'),
(246, 46, '2024-07-16 14:30:00', '192.168.0.46'),
(247, 47, '2024-07-17 15:45:00', '192.168.0.47'),
(248, 48, '2024-07-18 16:20:00', '192.168.0.48'),
(249, 49, '2024-07-19 17:10:00', '192.168.0.49'),
(250, 50, '2024-07-20 18:00:00', '192.168.0.50'),
(251, 51, '2024-07-21 19:30:00', '192.168.0.51'),
(252, 52, '2024-07-22 20:45:00', '192.168.0.52'),
(253, 53, '2024-07-23 21:10:00', '192.168.0.53'),
(254, 54, '2024-07-24 22:20:00', '192.168.0.54'),
(255, 55, '2024-07-25 23:00:00', '192.168.0.55'),
(256, 56, '2024-07-26 00:30:00', '192.168.0.56'),
(257, 57, '2024-07-27 01:45:00', '192.168.0.57'),
(258, 58, '2024-07-28 02:20:00', '192.168.0.58'),
(259, 59, '2024-07-29 03:10:00', '192.168.0.59'),
(260, 60, '2024-07-30 04:15:00', '192.168.0.60');
```

## 5. Sub-queries:

#### • Subquery to find advertisements with the highest cost:

SELECT \*
FROM Advertisements
WHERE Cost = (SELECT MAX(Cost) FROM Advertisements);

#### Results 582 -- Subquery to find advertisements with the highest cost: SELECT \* 583 • FROM Advertisements 584 WHERE Cost = (SELECT MAX(Cost) FROM Advertisements); 585 Export/Import: Wrat Result Grid Filter Rows: AdID CampaignID Content Placement OutletID Type Cost 240005 11005 2005 Video Holiday Gift Guide - Watch now! News Feed 800.00 NULL NULL NULL NULL NULL NULL

• Subquery to find advertisements with a cost higher than the average cost:

**SELECT**\*

**FROM Advertisements** 

WHERE Cost > (SELECT AVG(Cost) FROM Advertisements);



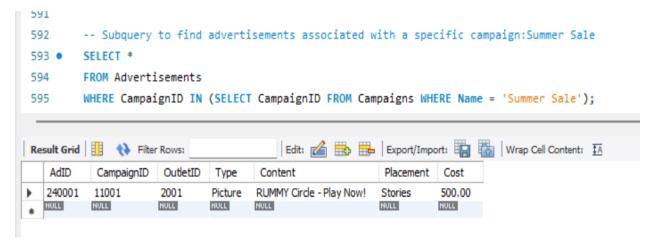
• Subquery to find advertisements associated with a specific campaign:Summer Sale:

SELECT \*

**FROM Advertisements** 

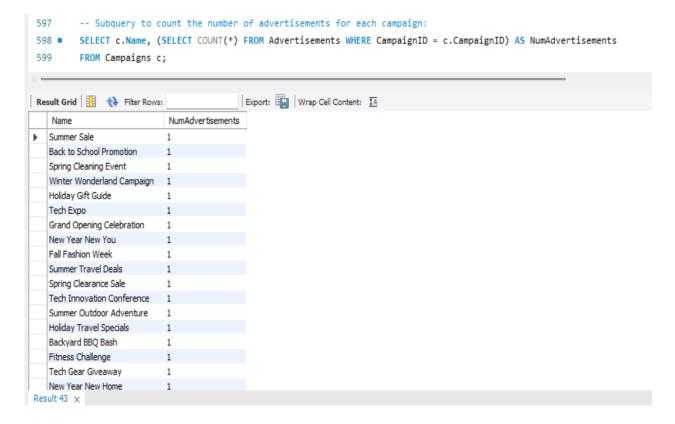
WHERE CampaignID IN (SELECT CampaignID FROM Campaigns WHERE Name = 'Summer Sale');

#### **Results**



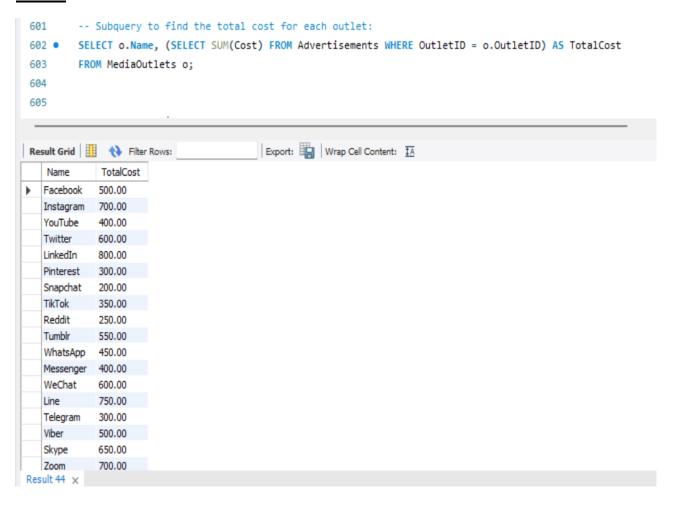
• Subquery to count the number of advertisements for each campaign:

SELECT c.Name, (SELECT COUNT(\*) FROM Advertisements WHERE CampaignID = c.CampaignID) AS NumAdvertisements FROM Campaigns c;



#### • Subquery to find the total cost for each outlet:

SELECT o.Name, (SELECT SUM(Cost) FROM Advertisements WHERE OutletID = o.OutletID) AS TotalCost FROM MediaOutlets o;



### 6. JOINS:

• Write query to join Advertisements, Campaigns, and Advertisers tables:

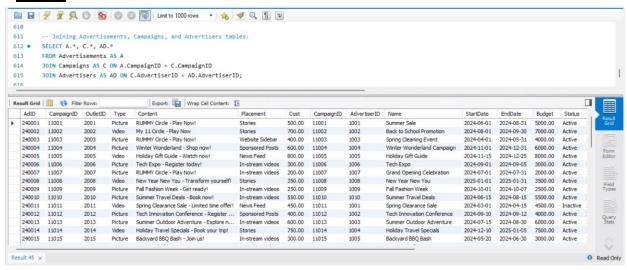
**SELECT A.\*, C.\*, AD.\*** 

FROM Advertisements AS A

JOIN Campaigns AS C ON A.CampaignID = C.CampaignID

JOIN Advertisers AS AD ON C.AdvertiserID = AD.AdvertiserID;

#### **Results**



• Write query retrieves data about advertisements and their associated media outlets for ads with a cost greater than 500 and placed as 'In-stream videos', joined with impressions, clicks, and views data.

SELECT MO.Name, MO.Type AS Outlet Type, A.AdID, A.CampaignID, A.Type, A.Content,

A.Placement, A.Cost, V.ViewTime

FROM Impressions AS I

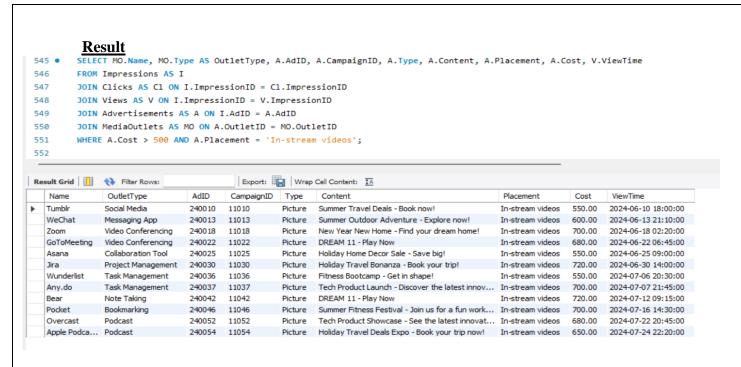
JOIN Clicks AS Cl ON I.ImpressionID = Cl.ImpressionID

JOIN Views AS V ON I.ImpressionID = V.ImpressionID

JOIN Advertisements AS A ON I.AdID = A.AdID

JOIN MediaOutlets AS MO ON A.OutletID = MO.OutletID

WHERE A.Cost > 500 AND A.Placement = 'In-stream videos';



• Write a query to retrieves data about media outlets along with advertisements meeting specific criteria, including ads with a type of 'Picture', cost greater than 500, and placed as 'In-stream videos'

```
SELECT MO.Name, MO.Type AS OutletType, A.AdID, A.CampaignID, A.Type, A.Content, A.Placement, A.Cost
FROM MediaOutlets AS MO
JOIN (
    SELECT AdID, CampaignID, Type, Content, Placement, Cost, OutletID
    FROM Advertisements
    WHERE Type = 'Picture'
    AND Cost > 500
    AND Placement = 'In-stream videos'
) AS A ON MO.OutletID = A.OutletID;
```

```
564
          SELECT MO.Name, MO.Type AS OutletType, A.AdID, A.CampaignID, A.Type, A.Content, A.Placement, A.Cost
          FROM MediaOutlets AS MO
565
       ○ JOTN (
566
              SELECT AdID, CampaignID, Type, Content, Placement, Cost, OutletID
567
568
              FROM Advertisements
569
              WHERE Type = 'Picture'
570
                AND Cost > 500
571
                 AND Placement = 'In-stream videos'
        ) AS A ON MO.OutletID = A.OutletID;
572
Export: Wrap Cell Content: IA
   Name
                 OutletType
                                    AdID
                                             CampaignID Type Content
                                                                                                            Placement
                                                                                                                            Cost
   Tumble
                Social Media
                                    240010
                                            11010
                                                         Picture Summer Travel Deals - Book now!
                                                                                                           In-stream videos
                                                                                                                            550.00
                                                                                                           In-stream videos
                                   240013 11013
                                                        Picture Summer Outdoor Adventure - Explore now!
                                                                                                                           600.00
   WeChat
                Messaging App
   Zoom
                Video Conferencing
                                    240018
                                            11018
                                                         Picture New Year New Home - Find your dream home!
                                                                                                           In-stream videos
                                                                                                                            700.00
   GoToMeeting Video Conferencing
                                   240022 11022
                                                        Picture DREAM 11 - Play Now
                                                                                                           In-stream videos
                                                                                                                           680.00
   Asana
                Collaboration Tool
                                    240025 11025
                                                         Picture Holiday Home Decor Sale - Save big!
                                                                                                           In-stream videos
                                                                                                                           550.00
                Project Management 240030
                                            11030
                                                         Picture Holiday Travel Bonanza - Book your trip!
                                                                                                           In-stream videos
   Wunderlist
                Task Management
                                    240036
                                            11036
                                                         Picture Fitness Bootcamp - Get in shape!
                                                                                                           In-stream videos
                                                                                                                            550.00
   Any.do
                Task Management
                                 240037 11037
                                                         Picture Tech Product Launch - Discover the latest innov... In-stream videos 700.00
                Note Taking
                                    240042
                                            11042
                                                         Picture DREAM 11 - Play Now
                                                                                                           In-stream videos
   Bear
                                                                                                                            720.00
                Bookmarking
   Pocket
                                   240046
                                            11046
                                                         Picture
                                                                 Summer Fitness Festival - Join us for a fun work... In-stream videos
                                                                                                                            700.00
                Podcast
                                    240052 11052
   Overcast
                                                         Picture
                                                                 Tech Product Showcase - See the latest innovat... In-stream videos
                                                                                                                           680.00
   Apple Podca... Podcast
                                   240054 11054
                                                         Picture Holiday Travel Deals Expo - Book your trip now! In-stream videos 650.00
```

Write query to retrieves data about advertisements and their associated media outlets, including the count of impressions for each advertisement, with a left join on the MediaOutlets table and an aggregate function applied to calculate the number of impressions

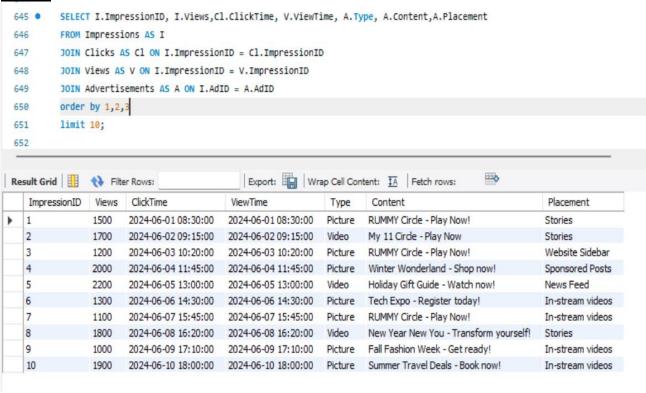
```
SELECT
 MO.Name,
 MO.Type AS OutletType,
 A.AdID,
  A.CampaignID,
  A.Type,
 A.Content,
 A.Placement,
 A.Cost,
  COUNT(I.ImpressionID) AS Impressions_Count
FROM
 MediaOutlets AS MO
LEFT JOIN
  Advertisements AS A ON MO.OutletID = A.OutletID
LEFT JOIN
  Impressions AS I ON A.AdID = I.AdID
GROUP BY
 MO.Name,
 MO.Type,
 A.AdID,
 A.CampaignID,
  A.Type,
  A.Content,
  A.Placement,
```

| esult  |   |  |  |  |  |   |  |   |
|--|---|--|--|--|--|---|--|---|
| 627 • SELECT   |   |  |  |  |  |   |  |   |
| 628 MO.  | Name,   |  |  |  |  |   |  |   |
|  | Type AS OutletType,   |  |  |  |  |   |  |   |
|  |   |  |  |  |  |   |  |   |
| 630 A.A  | dID,  |  |  |  |  |   |  |   |
| 631 A.C  | ampaignID,  |  |  |  |  |   |  |   |
| 532 A.T  | ype,  |  |  |  |  |   |  |   |
|  |   |  |  |  |  |   |  |   |
| 533 A.C  | ontent,   |  |  |  |  |   |  |   |
| 534 A.P  | lacement,   |  |  |  |  |   |  |   |
| 335 A.C  | ost,  |  |  |  |  |   |  |   |
| 536 COU  | NT(I.ImpressionID) AS   | Tmnnacci   | one Count  |  |  |   |  |   |
|  |   | y Tilibi c221  | tons_count   |  |  |   |  |   |
| FROM Me  | diaOutlets AS MO  |  |  |  |  |   |  |   |
| 538 LEFT 30  | IN Advertisements AS  | A ON MO.C  | outletID = A.O   | utletID  |  |   |  |   |
| 39 LEFT 30   | TH Tonnessians AS T   |  |  |  |  |   |  |   |
| 40 GROUP B   |   |  |  | , A.Cont   | ent, A.Placement, A.Cost;  |   |  |   |
| 640 GROUP B  | Y   |  | eignID, A.Type   |  | State of the State |   |  |   |
| 40 GROUP B   | Name, MO.Type, A.AdIC   |  |  |  | ent, A.Placement, A.Cost;  sell Content: IA  Content   | Placement   | Cost   | Impressions_C   |
| 40 GROUP B 41 MO.  | Name, MO.Type, A.AdII   | D, A.Campa   | aignID, A.Type   | Wrap C   | iell Content: 1A   | Placement Sponsored Posts   | Cost 480.00  | Impressions_C   |
| 40 GROUP B 41 MO. esult Grid   | Name, MO.Type, A.AdII   | AdID   | Export: CampaignID   | Wrap C   | iell Content: ፲⊼<br>Content  |   |  |   |
| 40 GROUP B 41 MO. esult Grid   11  | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast   | AdID 240058  | Export: CampaignID   | Wrap C<br>Type<br>Picture  | iell Content: ፲⊼  Content  New Year Home Improvement Sale - Renovate   | Sponsored Posts   | 480.00   | 1   |
| 40 GROUP B 41 MO. esult Grid  Name Anchor Any.do Apple Podcasts Asana  | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast Task Management Podcast Collaboration Tool  | AdID<br>240058<br>240037<br>240054<br>240025   | Export: CampaignID, A.Type    Export: 11058 11037 11054 11025  | Type Picture Picture Picture Picture   | cell Content:   Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big!   | Sponsored Posts<br>In-stream videos<br>In-stream videos<br>In-stream videos   | 480.00<br>700.00<br>650.00<br>550.00   | 1<br>1<br>1<br>1  |
| 40 GROUP B 41 M0.  esult Grid  | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming  | AdID 240058 240037 240054 240025 240060  | Export: Export: 11058 11037 11054 11025 11060  | Type Picture Picture Picture Picture Picture Picture   | Itell Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big!  DREAM 11 - Play Now   | Sponsored Posts<br>In-stream videos<br>In-stream videos<br>In-stream videos<br>Instant Articles   | 480.00<br>700.00<br>650.00<br>550.00<br>600.00   | 1<br>1<br>1<br>1<br>1   |
| 40 GROUP B 41 MO. esuit Grid   | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management   | AdID 240058 240037 240054 240025 240060 240029   | Export: Export: 11058 11037 11054 11060 11029  | Type Picture Picture Picture Picture Picture Picture Video   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big!  DREAM 11 - Play Now Fall Fashion Runway Show - Watch now!   | Sponsored Posts<br>In-stream videos<br>In-stream videos<br>In-stream videos<br>Instant Articles<br>News Feed  | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00   | 1<br>1<br>1<br>1<br>1<br>1  |
| 40 GROUP B 41 MO. esult Grid Mame Anchor Any.do Apple Podcasts Asana Bandcamp Basecamp Bear  | Name, MO.Type, A.AdII  Filter Rows:  OutletType  Podcast  Task Management  Podcast  Collaboration Tool  Music Streaming  Project Management  Note Taking  | AdID<br>240058<br>240037<br>240054<br>240025<br>240060<br>240029<br>240042   | Export: Export: 11058 11037 11054 11025 11060 11029 11042  | Type Picture Picture Picture Picture Picture Video Picture   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now  | Sponsored Posts<br>In-stream videos<br>In-stream videos<br>In-stream videos<br>Instant Artides<br>News Feed<br>In-stream videos   | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00   | 1<br>1<br>1<br>1<br>1<br>1<br>1   |
| sult Grid Mo.  Name Anchor Any.do Apple Podcasts Asana Bandcamp Basecamp Bear Blue Jeans   | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing  | AdID<br>240058<br>240037<br>240054<br>240050<br>240060<br>240029<br>240042<br>240023   | Export: Export: 1058 11037 11054 11025 11060 11029 11042   | Type Picture Picture Picture Picture Picture Video Picture Video   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today!   | Sponsored Posts<br>In-stream videos<br>In-stream videos<br>In-stream videos<br>Instream videos<br>Instream videos<br>Stories  | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1  |
| 40 GROUP 8 41 M0.  esult Grid M Name Anchor Any.do Apple Podcasts Asana Bandcamp Basecamp Bear Blue Jeans Castbox  | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing Podcast  | AdID 240058 240058 240054 240052 240060 240029 240042 240023 240057  | Export: Export: 11058 11037 11054 11025 11060 11029 11042 11023 11057  | Type Picture Picture Picture Picture Picture Video Picture Video Picture   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te   | Sponsored Posts<br>In-stream videos<br>In-stream videos<br>In-stream videos<br>Instant Artides<br>News Feed<br>In-stream videos<br>Stories<br>Instant Artides   | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   |
| 40 GROUP B 41 M0.  esult Grid Mo.  Name Anchor Any.do Apple Podcasts Asana Bandcamp Basecamp Bear Blue Jeans Castbox Clockify  | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing Podcast Time Tracking  | AdID 240058 240037 240054 240029 240042 240023 240032  | Export: Export: 1058 11058 11054 11055 11060 11029 11042 11023 11057 11032   | Type Picture Picture Picture Picture Picture Video Picture Video Picture Video   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot!  | Sponsored Posts<br>In-stream videos<br>In-stream videos<br>In-stream videos<br>Instant Articles<br>News Feed<br>In-stream videos<br>Stories<br>Instant Articles<br>Stories  | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1  |
| And  | Name, MO.Type, A.AdII  Filter Rows:  OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing Podcast Time Tracking Bookmarking  | AdID 240058 240037 240054 240052 240060 240029 240042 240023 240057 240032 240049  | Export: CampaignID 11058 11037 11054 11025 11060 11029 11042 11023 11057 11049   | Type Picture Picture Picture Picture Picture Video Picture Video Picture Video Picture Video Picture   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot! Fall Fashion Pop-Up Shop - Discover the latest t   | Sponsored Posts In-stream videos In-stream videos In-stream videos In-stream videos Instant Articles News Feed In-stream videos Stories Instant Articles Stories In-stream videos   | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00<br>480.00   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1                               |
| Name Anchor Any.do Apple Podcasts Asana Bandcamp Basecamp Bear Blue Jeans Castbox Clockify Diigo Evernote  | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing Podcast Time Tracking Bookmarking Note Taking  | AdID 240058 240037 240054 240025 240060 240029 240023 240057 240039 240049   | Export: Export: 1058 11037 11054 11025 11060 11029 11042 11023 11057 11032 11049 11040                                     | Type Picture Picture Picture Picture Picture Video Picture Video Picture Video Picture Picture Video Picture Picture Picture Picture   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot! Fall Fashion Pop-Up Shop - Discover the latest t Spring Break Adventure Packages - Book your t   | Sponsored Posts In-stream videos In-stream videos In-stream videos Instant Articles News Feed In-stream videos Stories Instant Articles Stories Instant Articles Stories Un-stream videos Website Sidebar   | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00<br>480.00<br>600.00                               | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1                                    |
| Add GROUP B  An Mo.  Name  Anchor  Any.do  Apple Podcasts  Asana  Bandcamp  Basecamp  Basecamp  Bue-Jeans  Castbox  Clockify  Diigo  Evernote  Facebook  | Name, MO.Type, A.AdII Filter Rows: OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Podcast Time Tracking Bookmarking Note Taking Social Media  | AdID 240058 240037 240054 240025 240060 240029 240042 240023 240057 240032 240040 240040   | Export:  | Type Picture Picture Picture Picture Picture Video Picture Video Picture Video Picture Video Picture Picture Picture   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot! Fall Fashion Pop-Up Shop - Discover the latest t Spring Break Adventure Packages - Book your t RUMMY Circle - Play Now!  | Sponsored Posts<br>In-stream videos<br>In-stream videos<br>In-stream videos<br>In-stream videos<br>News Feed<br>In-stream videos<br>Stories<br>In-stream videos<br>Stories<br>In-stream videos<br>Website Sidebar<br>Stories  | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00<br>480.00<br>600.00<br>500.00                     | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| And the second of the second o | Name, MO.Type, A.AdII  Filter Rows:  OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing Podcast Time Tracking Bookmarking Note Taking Social Media Note Taking   | AdID<br>240058<br>240037<br>240054<br>240025<br>240060<br>240029<br>240042<br>240023<br>240057<br>240049<br>240040<br>240040<br>240040<br>240040<br>240040 | Export:  | Type Picture Picture Picture Picture Picture Picture Video Picture Video Picture Video Picture Picture Picture   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot! Fall Fashion Pop-Up Shop - Discover the latest t Spring Break Adventure Packages - Book your t RUMMY Circle - Play Now! Holiday Home Decor Workshop - Get inspired!  | Sponsored Posts In-stream videos In-stream videos In-stream videos In-stream videos Instant Articles News Feed In-stream videos Stories Instant Articles Stories In-stream videos Website Sidebar Stories Sponsored Posts   | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00<br>600.00<br>500.00<br>550.00                     | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| esult Grid Mo.  Name Anchor Any.do Apple Podcasts Asana Bandcamp Basecamp Bear Blue Jeans Castbox Clockify Diigo Evernote Facebook Google Keep Google Meet   | Name, MO.Type, A.AdII  Filter Rows:  OutletType  Podcast  Task Management  Podcast  Collaboration Tool  Music Streaming  Project Management  Note Taking  Video Conferencing  Podcast  Time Tracking  Bookmarking  Note Taking  Note Taking  Social Media  Note Taking  Video Conferencing  | AdID 240058 240057 240054 240025 240060 240022 240023 240057 240032 240040 240040 240040 240040 240040   | Export: CampaignID 11058 11037 11054 11025 11060 11029 11042 11023 11057 11040 11001 11045 11019                           | Type Picture Picture Picture Picture Picture Video Picture Video Picture Video Picture Video Picture   | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big!  DREAM 11 - Play Now Fall Fashion Runway Show - Watch now!  DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot! Fall Fashion Pop-Up Shop - Discover the latest t Spring Break Adventure Packages - Book your t RUMMY Circle - Play Now! Holiday Home Decor Workshop - Get inspired! Winter Wellness Workshop - Join us!  | Sponsored Posts In-stream videos In-stream videos In-stream videos In-stream videos Instant Articles News Feed In-stream videos Stories Stories Instant Articles Stories Un-stream videos Website Sidebar Stories Sponsored Posts In-stream videos                  | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00<br>480.00<br>600.00<br>550.00<br>350.00           | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| Add GROUP B  41 MO.  Sesuit Grid Mo.  Name Anchor Any.do Apple Podcasts Asana Bandcamp Basecamp Bear Blue Jeans Castbox Clodsfy Diligo Evernote Facebook Google Keep Google Meet Google Podcasts   | Name, MO.Type, A.AdII  Filter Rows:  OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing Podcast Time Tracking Bookmarking Note Taking Social Media Note Taking Video Conferencing  | AdID 240058 240037 240054 240025 240060 240029 240023 240057 240032 240040 240040 240040 240041 240045   | Export: Land CampaignID 11058 11037 11054 11025 11060 11029 11042 11023 11057 11032 11040 11001 11045 11019 11055          | Wrap Co Type Picture Picture Picture Picture Picture Video Picture Video Picture Video Picture         | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot! Fall Fashion Pop-Up Shop - Discover the latest t Spring Break Adventure Packages - Book your t RUMMY Circle - Play Now! Holiday Home Decor Workshop - Get inspired! Winter Wellness Workshop - Join us! Backyard BBQ Recipe Contest - Enter to win!  | Sponsored Posts In-stream videos In-stream videos In-stream videos In-stream videos In-stream videos Instant Articles News Feed In-stream videos Stories In-stream videos Website Sidebar Stories Sponsored Posts In-stream videos Sponsored Posts Sponsored Posts  | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00<br>480.00<br>600.00<br>550.00<br>350.00<br>320.00 | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| Add GROUP 8  A1 MO.  Sesult Grid Mo.  Name Anchor Any.do Apple Podcasts Asana Bandcamp Basecamp Bear Castbox Clockify Diigo Evernote Facebook Google Keep Google Meet Google Podcasts Google Tasks   | Name, MO.Type, A.AdII  Filter Rows:  OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing Podcast Time Tracking Bookmarking Note Taking Video Conferencing Podcast Note Taking Social Media Note Taking Video Conferencing Fodcast Task Management Task Management | AdID 240058 240037 240054 240025 240060 240029 240042 240023 240057 240032 240040 240001 240040 240001 240045 240015 240039                                | Export: Export: 1058 11037 11058 11037 11054 11025 11060 11029 11042 11023 11057 11032 11040 11001 11045 11019 11045 11019 | Wrap Co Type Picture Picture Picture Picture Picture Picture Video Picture Video Picture Video Picture | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot! Fall Fashion Pop-Up Shop - Discover the latest t Spring Break Adventure Packages - Book your t RUMMY Circle - Play Now! Holiday Home Decor Workshop - Get inspired! Winter Wellness Workshop - Join us! Backyard BBQ Recipe Contest - Enter to win! Winter Wellness Webinar - Learn how to stay h  | Sponsored Posts In-stream videos In-stream videos In-stream videos In-stream videos In-stream videos Instant Articles News Feed In-stream videos Stories In-stream videos Website Sidebar Stories Sponsored Posts In-stream videos Sponsored Posts In-stream videos | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00<br>480.00<br>500.00<br>550.00<br>350.00<br>320.00 | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| Asana Bandcamp Basecamp Basecamp Basecamp Basecamp Bear Blue Jeans Castbox Clockify Diigo Evernote Facebook Google Keep Google Meet Google Podcasts  | Name, MO.Type, A.AdII  Filter Rows:  OutletType Podcast Task Management Podcast Collaboration Tool Music Streaming Project Management Note Taking Video Conferencing Podcast Time Tracking Bookmarking Note Taking Social Media Note Taking Video Conferencing  | AdID 240058 240037 240054 240025 240060 240029 240023 240057 240032 240040 240040 240040 240041 240045   | Export: Land CampaignID 11058 11037 11054 11025 11060 11029 11042 11023 11057 11032 11040 11001 11045 11019 11055          | Wrap Co Type Picture Picture Picture Picture Picture Video Picture Video Picture Video Picture         | Content: IA  Content  New Year Home Improvement Sale - Renovate Tech Product Launch - Discover the latest innov Holiday Travel Deals Expo - Book your trip now! Holiday Home Decor Sale - Save big! DREAM 11 - Play Now Fall Fashion Runway Show - Watch now! DREAM 11 - Play Now Spring Cleaning Workshop - Register today! Tech Trends Seminar - Learn about the latest te Tech Summit - Reserve your spot! Fall Fashion Pop-Up Shop - Discover the latest t Spring Break Adventure Packages - Book your t RUMMY Circle - Play Now! Holiday Home Decor Workshop - Get inspired! Winter Wellness Workshop - Join us! Backyard BBQ Recipe Contest - Enter to win!  | Sponsored Posts In-stream videos In-stream videos In-stream videos In-stream videos In-stream videos Instant Articles News Feed In-stream videos Stories In-stream videos Website Sidebar Stories Sponsored Posts In-stream videos Sponsored Posts Sponsored Posts  | 480.00<br>700.00<br>650.00<br>550.00<br>600.00<br>480.00<br>720.00<br>320.00<br>700.00<br>650.00<br>480.00<br>600.00<br>550.00<br>350.00<br>320.00 | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |

• Write a query to retrieves impression data along with clicks and views, including details about advertisement type, content, and placement, sorted by impression ID, views, and click time, and limited to the top 10 records:

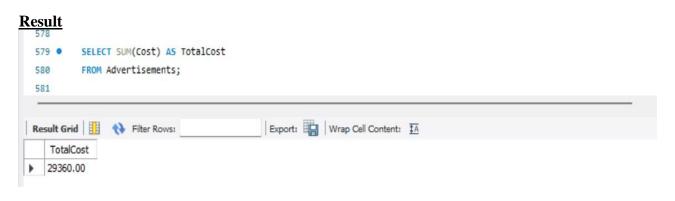
```
SELECT I.ImpressionID, I.Views,Cl.ClickTime, V.ViewTime, A.Type, A.Content,A.Placement FROM Impressions AS I
JOIN Clicks AS Cl ON I.ImpressionID = Cl.ImpressionID
JOIN Views AS V ON I.ImpressionID = V.ImpressionID
JOIN Advertisements AS A ON I.AdID = A.AdID
order by 1,2,3
limit 10;
```

#### **Results**



## 7. NORMAL QUERIES:

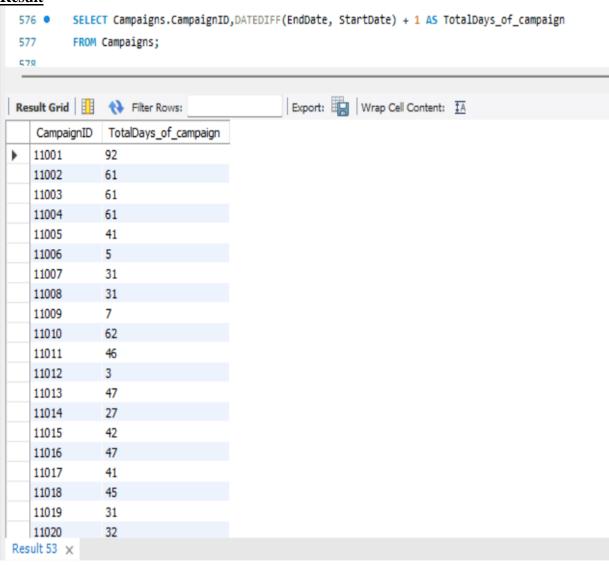
 Write query to calculates the total cost of all advertisements SELECT SUM(Cost) AS TotalCost FROM Advertisements;



• Write query to retrieves the campaign ID along with the total number of days for each campaign by calculating the difference between the end date and start date, including both start and end dates

 $SELECT\ Campaigns. CampaignID, DATEDIFF (EndDate,\ StartDate) + 1\ AS\ TotalDays\_of\_campaignFROM\ Campaigns;$ 

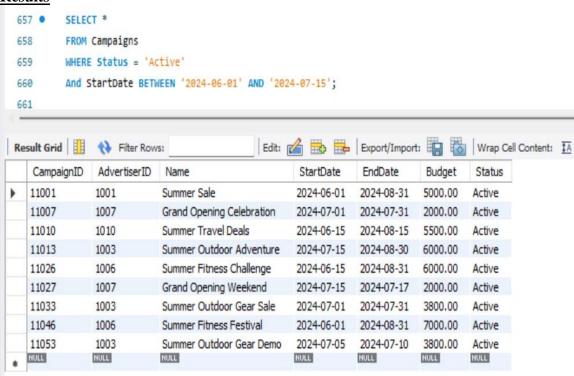




• Write query that will retrieve all records from the Campaigns table where the status is 'Active' and the StartDate falls between June 1, 2024, and July 15, 2024. Here's the SQL query

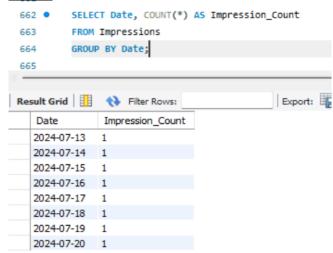
```
SELECT *
FROM Campaigns
WHERE Status = 'Active'
AND StartDate BETWEEN '2024-06-01' AND '2024-07-15';
```

#### Results



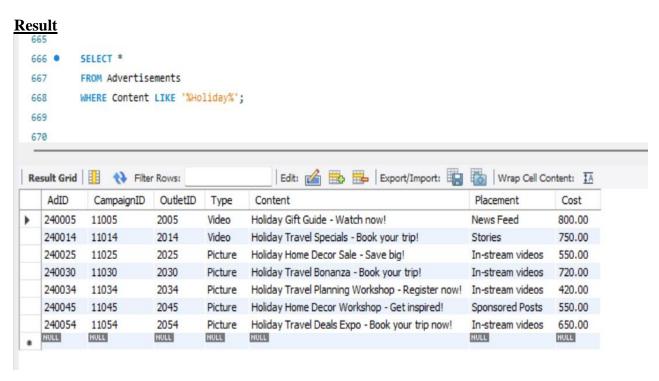
• Write query that selects the Date column from the Impressions table and counts the number of impressions for each date. It then groups the results by date using the GROUP BY clause

SELECT Date, COUNT(\*) AS Impression\_Count FROM Impressions GROUP BY Date;



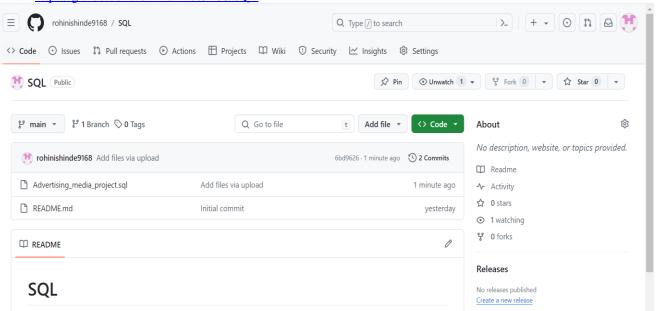
• write a query WHERE Content contains 'Holiday' filters the rows where the Content column contains the word ''Holiday'' anywhere in the text

SELECT \*
FROM Advertisements
WHERE Content LIKE '%Holiday%';



## 8. GIT REPOSITORY:

Link: - https://github.com/rohinishinde9168/SQL



# 9. CONCLUSION: The Advertising Media System Project has successfully met its goals to create a robust and integrated platform for managing advertising campaigns, advertisers, media outlets, advertisements, impressions, clicks, and views. It successfully integrated advertisers, media outlets, and related components, leading to enhanced collaboration and data-driven insights. The system's scalability and user-friendly design were key to its success, supporting future growth and flexibility. THANK YOU