

# CPSC 304 Project Cover Page

Milestone #: 04

Date: 2025/07/26

Group Number: 4

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

## Final Project Description

With a focus on social media influencer marketing, this project provides users with the ability to view, edit, and analyze data related to social media influencer economy. The primary functionality allows users to add, delete, and update the values stored in the database. In addition, users are able to filter out the data based on certain conditions so they can view only the part of the data that they are interested in. Moreover, the application provides some interesting analytical data for users to find out more information from the database.

## Schema Change (if applicable)

- We changed any data type that is MONEY, TEXT, and BIGINT as they are not build-in data types in Oracle. The changes are as follows, based on data type matching documentation of Oracle:
  - MONEY -> NUMBER(19,4)
  - TEXT -> LONG
  - BIGINT -> NUMBER(20)
  - Documentation reference:  
<https://docs.oracle.com/en/database/oracle/oracle-database/18/gmswn/databa-se-gateway-sqlserver-data-type-conversion.html>
- We removed UPDATE ON CASCADE because Oracle doesn't support it

## Relational Model & Instances

Note:

1. For relational model, primary key is underlined and foreign key is bolded
2. The instance screenshot is taken from a local db for better visual effect (postgresql - pdAdmin4). Thus, column data type still says money, text, bigint (which is equivalent to those type we updated to in Oracle)

Relational Model	Instance Screenshot																																																																																																																								
<p>Influencer(<u>influencerID</u>: int, influencerName: varchar(50), location: varchar(100), age: int, niche: varchar(50))</p>	<table><tr><th>influencerid [PK] integer</th><th>influencername character varying (50)</th><th>location character varying (100)</th><th>age integer</th><th>niche character varying (50)</th></tr><tr><td>1</td><td>Addison Rae</td><td>USA</td><td>24</td><td>Music</td></tr><tr><td>2</td><td>Kylie Jenner</td><td>USA</td><td>27</td><td>Beauty</td></tr><tr><td>3</td><td>Kendall Jenner</td><td>USA</td><td>29</td><td>Wine</td></tr><tr><td>4</td><td>Kim Kardashian</td><td>USA</td><td>44</td><td>TV</td></tr><tr><td>5</td><td>Shawn Mendes</td><td>CAN</td><td>26</td><td>Music</td></tr><tr><td>6</td><td>Justin Bieber</td><td>CAN</td><td>31</td><td>Music</td></tr><tr><td>11</td><td>Bang Chan</td><td>AUS</td><td>28</td><td>Idol</td></tr><tr><td>12</td><td>Lee Minho</td><td>KOR</td><td>27</td><td>Dance</td></tr><tr><td>13</td><td>Seo Changbin</td><td>KOR</td><td>26</td><td>Rap</td></tr><tr><td>14</td><td>Hwang Hyunjin</td><td>KOR</td><td>25</td><td>Dance</td></tr><tr><td>15</td><td>Han Jisung</td><td>MAL</td><td>25</td><td>Rap</td></tr><tr><td>16</td><td>Lee Yongbok</td><td>AUS</td><td>25</td><td>Dance</td></tr><tr><td>17</td><td>Kim Seungmin</td><td>KOR</td><td>25</td><td>Vocal</td></tr><tr><td>18</td><td>Yang Jeongin</td><td>KOR</td><td>24</td><td>Vocal</td></tr><tr><td>21</td><td>Kim Minji</td><td>BUN</td><td>20</td><td>Idol</td></tr><tr><td>22</td><td>Phan Hanni</td><td>BUN</td><td>19</td><td>Idol</td></tr><tr><td>23</td><td>Danille Marsh</td><td>BUN</td><td>18</td><td>Idol</td></tr><tr><td>24</td><td>Kang Haerin</td><td>BUN</td><td>17</td><td>Idol</td></tr><tr><td>25</td><td>Lee Hyein</td><td>BUN</td><td>16</td><td>Idol</td></tr></table>	influencerid [PK] integer	influencername character varying (50)	location character varying (100)	age integer	niche character varying (50)	1	Addison Rae	USA	24	Music	2	Kylie Jenner	USA	27	Beauty	3	Kendall Jenner	USA	29	Wine	4	Kim Kardashian	USA	44	TV	5	Shawn Mendes	CAN	26	Music	6	Justin Bieber	CAN	31	Music	11	Bang Chan	AUS	28	Idol	12	Lee Minho	KOR	27	Dance	13	Seo Changbin	KOR	26	Rap	14	Hwang Hyunjin	KOR	25	Dance	15	Han Jisung	MAL	25	Rap	16	Lee Yongbok	AUS	25	Dance	17	Kim Seungmin	KOR	25	Vocal	18	Yang Jeongin	KOR	24	Vocal	21	Kim Minji	BUN	20	Idol	22	Phan Hanni	BUN	19	Idol	23	Danille Marsh	BUN	18	Idol	24	Kang Haerin	BUN	17	Idol	25	Lee Hyein	BUN	16	Idol																				
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PostOne(postID: int,  
timeStamp: timestamp,  
productionCost: money,  
**views**: int, **likes**: int,  
**comments**: int)

postid [PK] integer	timestamp timestamp without time zone	productioncost money	views integer	likes integer	comments integer
1	2023-10-02 00:00:00	\$102.30	24	4	1
2	2023-01-02 00:00:00	\$302.40	2804	1000	15
3	2022-02-02 00:00:00	\$10.00	100004	3894	1233
4	2020-01-10 00:00:00	\$1,099.00	12	1	0
5	2023-12-22 00:00:00	\$80.00	9238	2399	123
6	2022-06-14 00:00:00	\$150.00	502	120	15
7	2022-07-01 00:00:00	\$250.00	745	230	34
8	2022-08-12 00:00:00	\$95.00	823	300	45
9	2022-09-20 00:00:00	\$180.00	1200	450	56
10	2022-10-05 00:00:00	\$210.00	1350	520	62
11	2022-11-15 00:00:00	\$70.00	400	150	20
12	2022-12-01 00:00:00	\$85.00	520	200	25
13	2023-01-25 00:00:00	\$120.00	600	250	30
14	2023-02-10 00:00:00	\$140.00	700	280	35
15	2023-03-05 00:00:00	\$160.00	800	300	40
16	2013-03-25 00:00:00	\$2,160.00	1800	520	130

PostTwo(views: int, likes:  
int, comments: int,  
engagementRate: float)

views [PK] integer	likes [PK] integer	comments [PK] integer	engagementrate double precision
24	4	1	0.2083
2804	1000	15	0.362
100004	3894	1233	0.0513
12	1	0	0.0833
9238	2399	123	0.273
502	120	15	0.2689
745	230	34	0.3544
823	300	45	0.4192
1200	450	56	0.4217
1350	520	62	0.4311
400	150	20	0.425
520	200	25	0.4327
600	250	30	0.4667
700	280	35	0.45
800	300	40	0.425
1800	520	130	0.3611

AccountHoldsPost( <u>postID</u> : int, <u>username</u> : varchar(100), <u>platformName</u> : varchar(50))	<table><tr><th>postid [PK] integer</th><th>username [PK] character varying (100)</th><th>platformname [PK] character varying (50)</th></tr><tr><td>1</td><td>addrae</td><td>TikTok</td></tr><tr><td>2</td><td>addrae</td><td>TikTok</td></tr><tr><td>16</td><td>addrae</td><td>TikTok</td></tr><tr><td>3</td><td>kyljen</td><td>Instagram</td></tr><tr><td>4</td><td>lilbieber</td><td>Instagram</td></tr><tr><td>5</td><td>kenjen</td><td>YouTube</td></tr><tr><td>6</td><td>lilbieber</td><td>Instagram</td></tr><tr><td>7</td><td>addraeins</td><td>Instagram</td></tr><tr><td>8</td><td>kenjen</td><td>Instagram</td></tr><tr><td>9</td><td>kenjen</td><td>Instagram</td></tr><tr><td>10</td><td>kenjen</td><td>Instagram</td></tr><tr><td>11</td><td>justinx</td><td>Twitter</td></tr><tr><td>12</td><td>kimxkim</td><td>Twitter</td></tr><tr><td>13</td><td>justinx</td><td>Twitter</td></tr><tr><td>14</td><td>jennerxky</td><td>Twitter</td></tr><tr><td>15</td><td>jennerxky</td><td>Twitter</td></tr></table>	postid [PK] integer	username [PK] character varying (100)	platformname [PK] character varying (50)	1	addrae	TikTok	2	addrae	TikTok	16	addrae	TikTok	3	kyljen	Instagram	4	lilbieber	Instagram	5	kenjen	YouTube	6	lilbieber	Instagram	7	addraeins	Instagram	8	kenjen	Instagram	9	kenjen	Instagram	10	kenjen	Instagram	11	justinx	Twitter	12	kimxkim	Twitter	13	justinx	Twitter	14	jennerxky	Twitter	15	jennerxky	Twitter
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TextPost( <u>postID</u> : int, wordCount: int, textContent: text)	<table><tr><th>postid [PK] integer</th><th>wordcount integer</th><th>textcontent text</th></tr><tr><td>11</td><td>120</td><td>Excited to announce my new partnership!</td></tr><tr><td>12</td><td>80</td><td>Check out my latest review of the smartwatch.</td></tr><tr><td>13</td><td>200</td><td>Tips on healthy lifestyle and meal prep.</td></tr><tr><td>14</td><td>150</td><td>Behind the scenes of my recent campaign.</td></tr><tr><td>15</td><td>90</td><td>Thank you all for your support!</td></tr></table>	postid [PK] integer	wordcount integer	textcontent text	11	120	Excited to announce my new partnership!	12	80	Check out my latest review of the smartwatch.	13	200	Tips on healthy lifestyle and meal prep.	14	150	Behind the scenes of my recent campaign.	15	90	Thank you all for your support!						
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Facebook	4500000000																								
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4	1200																								
5	75																								
Product( <u>productName</u> : varchar(100), <u>companyId</u> : int, price: money, category: varchar(50))	<table><tr><th>productname [PK] character varying (100)</th><th>companyId [PK] integer</th><th>price money</th><th>category character varying (50)</th></tr><tr><td>Monster Energy Drink</td><td>1</td><td>\$2.99</td><td>Beverage</td></tr><tr><td>Smartwatch Alpha</td><td>2</td><td>\$199.99</td><td>Electronics</td></tr><tr><td>Choco Protein Bar</td><td>3</td><td>\$1.50</td><td>Food</td></tr><tr><td>Silent Keyboard</td><td>4</td><td>\$79.99</td><td>Gaming</td></tr><tr><td>Dove Shampoo</td><td>5</td><td>\$8.99</td><td>Personal Care</td></tr></table>	productname [PK] character varying (100)	companyId [PK] integer	price money	category character varying (50)	Monster Energy Drink	1	\$2.99	Beverage	Smartwatch Alpha	2	\$199.99	Electronics	Choco Protein Bar	3	\$1.50	Food	Silent Keyboard	4	\$79.99	Gaming	Dove Shampoo	5	\$8.99	Personal Care
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BrandDealOne( <u>brandDealID</u> : int, <b>adType</b> : varchar(50), paymentRate: money, <b>companyID</b> : int, <b>postID</b> : int)	<table><tr><th>branddealid [PK] integer</th><th>adtype character varying (50)</th><th>paymentrate money</th><th>companyid integer</th><th>postid integer</th></tr><tr><td>1</td><td>Sponsored Post</td><td>\$500.00</td><td>1</td><td>1</td></tr><tr><td>2</td><td>Shoutout</td><td>\$300.00</td><td>2</td><td>2</td></tr><tr><td>3</td><td>Giveaway Collaboration</td><td>\$750.00</td><td>3</td><td>3</td></tr><tr><td>4</td><td>Review</td><td>\$0.05</td><td>4</td><td>4</td></tr><tr><td>5</td><td>Product Placement</td><td>\$0.10</td><td>5</td><td>16</td></tr><tr><td>6</td><td>Review</td><td>\$0.30</td><td>1</td><td>13</td></tr><tr><td>7</td><td>Shoutout</td><td>\$100.00</td><td>1</td><td>15</td></tr></table>	branddealid [PK] integer	adtype character varying (50)	paymentrate money	companyid integer	postid integer	1	Sponsored Post	\$500.00	1	1	2	Shoutout	\$300.00	2	2	3	Giveaway Collaboration	\$750.00	3	3	4	Review	\$0.05	4	4	5	Product Placement	\$0.10	5	16	6	Review	\$0.30	1	13	7	Shoutout	\$100.00	1	15
branddealid [PK] integer	adtype character varying (50)	paymentrate money	companyid integer	postid integer																																					
1	Sponsored Post	\$500.00	1	1																																					
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3	Giveaway Collaboration	\$750.00	3	3																																					
4	Review	\$0.05	4	4																																					
5	Product Placement	\$0.10	5	16																																					
6	Review	\$0.30	1	13																																					
7	Shoutout	\$100.00	1	15																																					
BrandDealTwo( <u>adType</u> : varchar(50), paymentType: varchar(50))	<table><tr><th>adtype [PK] character varying (50)</th><th>paymenttype character varying (50)</th></tr><tr><td>Sponsored Post</td><td>Flat Fee</td></tr><tr><td>Shoutout</td><td>Flat Fee</td></tr><tr><td>Giveaway Collaboration</td><td>Flat Fee</td></tr><tr><td>Review</td><td>Per View</td></tr><tr><td>Product Placement</td><td>Per View</td></tr></table>	adtype [PK] character varying (50)	paymenttype character varying (50)	Sponsored Post	Flat Fee	Shoutout	Flat Fee	Giveaway Collaboration	Flat Fee	Review	Per View	Product Placement	Per View																												
adtype [PK] character varying (50)	paymenttype character varying (50)																																								
Sponsored Post	Flat Fee																																								
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Giveaway Collaboration	Flat Fee																																								
Review	Per View																																								
Product Placement	Per View																																								
Agency( <u>agencyID</u> : int, establishedDate: date, staffSize: int, location: varchar(100))	<table><tr><th>agencyid [PK] integer</th><th>establisheddate date</th><th>staffsize integer</th><th>location character varying (100)</th></tr><tr><td>1</td><td>2010-05-12</td><td>25</td><td>USA</td></tr><tr><td>2</td><td>2015-08-20</td><td>40</td><td>USA</td></tr><tr><td>3</td><td>2008-03-15</td><td>15</td><td>CAN</td></tr><tr><td>4</td><td>2020-11-01</td><td>10</td><td>CAN</td></tr><tr><td>5</td><td>2012-07-30</td><td>30</td><td>CAN</td></tr></table>	agencyid [PK] integer	establisheddate date	staffsize integer	location character varying (100)	1	2010-05-12	25	USA	2	2015-08-20	40	USA	3	2008-03-15	15	CAN	4	2020-11-01	10	CAN	5	2012-07-30	30	CAN																
agencyid [PK] integer	establisheddate date	staffsize integer	location character varying (100)																																						
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4	2020-11-01	10	CAN																																						
5	2012-07-30	30	CAN																																						
ManagementContractOne( <u>contractID</u> : int, influencerBaseSalary: money, <b>influencerPayout</b> : float, <b>influencerID</b> : int, <b>agencyID</b> : int)	<table><tr><th>contractid [PK] integer</th><th>influencerbasesalary money</th><th>influencerpayout double precision</th><th>influencerid integer</th><th>agencyid integer</th></tr><tr><td>1</td><td>\$50,000.00</td><td>0.7</td><td>4</td><td>1</td></tr><tr><td>2</td><td>\$60,000.00</td><td>0.75</td><td>5</td><td>2</td></tr><tr><td>3</td><td>\$55,000.00</td><td>0.8</td><td>3</td><td>3</td></tr><tr><td>4</td><td>\$70,000.00</td><td>0.85</td><td>1</td><td>4</td></tr><tr><td>5</td><td>\$65,000.00</td><td>0.9</td><td>2</td><td>5</td></tr></table>	contractid [PK] integer	influencerbasesalary money	influencerpayout double precision	influencerid integer	agencyid integer	1	\$50,000.00	0.7	4	1	2	\$60,000.00	0.75	5	2	3	\$55,000.00	0.8	3	3	4	\$70,000.00	0.85	1	4	5	\$65,000.00	0.9	2	5										
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4	\$70,000.00	0.85	1	4																																					
5	\$65,000.00	0.9	2	5																																					
ManagementContractTwo( <u>influencerPayout</u> : float, companyCommission: float)	<table><tr><th>influencerpayout [PK] double precision</th><th>companycommission double precision</th></tr><tr><td>0.7</td><td>0.3</td></tr><tr><td>0.75</td><td>0.25</td></tr><tr><td>0.8</td><td>0.2</td></tr><tr><td>0.85</td><td>0.15</td></tr><tr><td>0.9</td><td>0.1</td></tr></table>	influencerpayout [PK] double precision	companycommission double precision	0.7	0.3	0.75	0.25	0.8	0.2	0.85	0.15	0.9	0.1																												
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0.85	0.15																																								
0.9	0.1																																								

CollaboratesWith( <u>agencyID</u> : int, <u>companyID</u> : int, numCollaborations: int)	<table><tr><th>agencyid [PK] integer</th><th>companyid [PK] integer</th><th>numcollaborations integer</th></tr><tr><td>1</td><td>1</td><td>5</td></tr><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>2</td><td>3</td><td>4</td></tr><tr><td>3</td><td>4</td><td>2</td></tr><tr><td>4</td><td>5</td><td>6</td></tr></table>	agencyid [PK] integer	companyid [PK] integer	numcollaborations integer	1	1	5	1	2	3	2	3	4	3	4	2	4	5	6
agencyid [PK] integer	companyid [PK] integer	numcollaborations integer																	
1	1	5																	
1	2	3																	
2	3	4																	
3	4	2																	
4	5	6																	
Advertise( <u>productName</u> : varchar(100), <u>companyID</u> : int, <u>postID</u> : int)	<table><tr><th>productname [PK] character varying (100)</th><th>companyid [PK] integer</th><th>postid [PK] integer</th></tr><tr><td>Monster Energy Drink</td><td>1</td><td>6</td></tr><tr><td>Smartwatch Alpha</td><td>2</td><td>2</td></tr><tr><td>Choco Protein Bar</td><td>3</td><td>11</td></tr><tr><td>Silent Keyboard</td><td>4</td><td>1</td></tr><tr><td>Dove Shampoo</td><td>5</td><td>16</td></tr></table>	productname [PK] character varying (100)	companyid [PK] integer	postid [PK] integer	Monster Energy Drink	1	6	Smartwatch Alpha	2	2	Choco Protein Bar	3	11	Silent Keyboard	4	1	Dove Shampoo	5	16
productname [PK] character varying (100)	companyid [PK] integer	postid [PK] integer																	
Monster Energy Drink	1	6																	
Smartwatch Alpha	2	2																	
Choco Protein Bar	3	11																	
Silent Keyboard	4	1																	
Dove Shampoo	5	16																	



# SQL Queries & Code Position

## INSERT Operation

### SQL query:

```
INSERT INTO Account (username, platformName, influencerID,
followerCount, activationDate)
VALUES (:username, :platform, :influencer, :followers,
TO_DATE(:actDate, 'yyyy-mm-dd'));
```

### Code Position:

appService.js line 149-150

## DELETE Operation

### SQL query:

```
DELETE FROM Influencer WHERE influencerID=:deleteID
```

### Code Position:

appService.js line 126

## UPDATE Operation

### SQL query:

```
UPDATE BrandDealOne SET adType=:adType,
paymentRate=:paymentRate, companyID=:companyID, postID=:postID
WHERE brandDealID=:brandDealID
```

### Code Position:

appService.js line 164

## Selection AND

### SQL query:

```
SELECT * FROM Influencer WHERE ${whereClauses.join(' ')}
```

### Code Position:

appService.js line 194

## Selection OR

### SQL query:

```
SELECT * FROM Influencer WHERE ${whereClauses.join(' ')}
```

### Code Position:

appService.js line 255

## Projection

### SQL query:

```
SELECT table_name FROM user_tables
SELECT column_name FROM USER_TAB_COLUMNS WHERE table_name
=:tableName
SELECT ${attributes} FROM ${tableName}
```

### Code Position:

appService.js line 206, 216, 228

## Join

Find the advertisement type of a post whose production cost is above certain threshold

### SQL query:

```
SELECT BrandDealOne.adType, PostOne.productionCost
FROM BrandDealOne, PostOne
WHERE BrandDealOne.postID = PostOne.postID AND
PostOne.productionCost > :productionCost
```

### Code Position:

appService.js line 268-270

## Aggregation with group by

Find the average age of influencers on each platform

### SQL query:

```
SELECT A.platformName, AVG(I.age)
FROM Influencer I, Account A
WHERE I.influencerID = A.influencerID
GROUP BY A.platformName
```

### Code Position:

appService.js line 283-286

## Aggregation with having

Find the average post engagement rate for each category of advertised product with engagement rates above the lower bound

**SQL query:**

```
SELECT PR.category, AVG((P.likes + P.comments)/CAST(P.views AS
FLOAT)) AS avgEngagementRate
  FROM PostOne P, Advertise A, Product PR
  WHERE P.postID = A.postID AND A.productName = PR.productName
AND A.companyID = PR.companyID AND P.views > 0
  GROUP BY PR.category
  HAVING AVG((P.likes + P.comments)/CAST(P.views AS FLOAT)) >
:engagementRate
```

**Code Position:**

appService.js line 297-301

## Nested aggregation with group by

Find the account that has made the most sponsored posts under brand deals

**SQL query:**

```
CREATE OR REPLACE VIEW NumBDsPerAccount(username, platform,
numBDs) as
  SELECT A.username, A.platformName, COUNT(B.brandDealID) AS
numBDs
  FROM BrandDealOne B, PostOne P, AccountHoldsPost A
  WHERE B.postID = P.postID AND P.postID = A.postID
  GROUP BY A.username, A.platformName

SELECT *
  FROM NumBDsPerAccount N
  WHERE N.numBDs = (SELECT MAX(numBDs) FROM NumBDsPerAccount)
```

**Code Position:**

appService.js line 313-317, 320-322

## Division

Find all IDs of influencers who have accounts on every platform

**SQL query:**

```
CREATE OR REPLACE VIEW influencerAccount (influencerID,
username, platformName) as
    SELECT I.influencerID, A.username, A.platformName
    FROM Influencer I, Account A
    WHERE I.influencerID = A.influencerID

SELECT influencerID
    FROM influencerAccount
    GROUP BY influencerID
    HAVING COUNT (DISTINCT platformName) = (SELECT COUNT (*)
    FROM Platform)
```

**Code Position:**

appService.js line 333-336, 339-343

# Functionality GUI Screenshot Demo

## INSERT Operation

- Before:

Accounts				
User Name	Platform	Influencer ID	Follower Count	Account Activation Date
jennexky	Twitter	2	294000	2011-07-01T07:00:00.000Z
kyljen	Instagram	2	21700	2013-07-21T07:00:00.000Z
kenjen	Instagram	3	286000	2011-07-02T07:00:00.000Z
kenjen	YouTube	3	2230	2015-01-01T07:00:00.000Z
kimxkim	Twitter	4	294000	2011-07-01T07:00:00.000Z

- During:

### Create a New Account

Create a new account for a registered influencer on a registered platform.

Username:

Platform:

Influencer ID:

Follower Count:

Account Activation Date:

- After:

Accounts				
User Name	Platform	Influencer ID	Follower Count	Account Activation Date
jennexky	Twitter	2	294000	2011-07-01T07:00:00.000Z
kyliejenner	YouTube	2	0	2025-08-06T07:00:00.000Z
kyljen	Instagram	2	21700	2013-07-21T07:00:00.000Z
kenjen	Instagram	3	286000	2011-07-02T07:00:00.000Z
kenjen	YouTube	3	2230	2015-01-01T07:00:00.000Z

\*\* Table is scrollable, so not all tuples are currently in frame

## DELETE Operation

- Before:

### Influencers

ID	Name	Location	Age	Niche
1	Addison Rae	USA	24	Music
2	Kylie Jenner	USA	27	Beauty
3	Kendall Jenner	USA	29	Wine
4	Kim Kardashian	USA	44	TV
5	Shawn Mendes	CAN	26	Music

### Accounts

User Name	Platform	Influencer ID	Follower Count	Account Activation Date
addraeins	Instagram	1	980000	2025-01-01T07:00:00.000Z
jennexky	Twitter	2	294000	2011-07-01T07:00:00.000Z
kyljen	Instagram	2	21700	2013-07-21T07:00:00.000Z
kenjen	Instagram	3	286000	2011-07-02T07:00:00.000Z
kenjen	YouTube	3	2230	2015-01-01T07:00:00.000Z

- During:

### Delete Influencer

Enter the ID of the influencer you wish to remove from the database.

InfluencerID:

Delete

- After:

## Influencers

ID	Name	Location	Age	Niche
1	Addison Rae	USA	24	Music
3	Kendall Jenner	USA	29	Wine
4	Kim Kardashian	USA	44	TV
5	Shawn Mendes	CAN	26	Music
6	Justin Bieber	CAN	31	Music

## Accounts

User Name	Platform	Influencer ID	Follower Count	Account Activation Date
addraeins	Instagram	1	980000	2025-01-01T07:00:00.000Z
kenjen	Instagram	3	286000	2011-07-02T07:00:00.000Z
kenjen	YouTube	3	2230	2015-01-01T07:00:00.000Z
kimxkim	Twitter	4	294000	2011-07-01T07:00:00.000Z
shawn	Instagram	5	357	2016-10-09T07:00:00.000Z

\*\* Deleting Influencer cascades to Account

## UPDATE Operation

- Before:

### Brand Deals

ID	Ad Type	Payment Rate	Company ID	Post ID
1	Sponsored Post	500	1	1
2	Shoutout	300	2	2
3	Giveaway Collaboration	750	3	3
4	Review	0.05	4	4
5	Product Placement	0.1	5	16

- During:

### Update Brand Deal

Update the terms of a registered brand deal.

Note: A post can only be part of one brand deal.

Choose a Brand Deal to Update:

1

Ad Type:

Giveaway Collaboration

Payment Rate:

1000

Sponsor Company:

2

Post ID:

10

Update

- After:

### Brand Deals

ID	Ad Type	Payment Rate	Company ID	Post ID
1	Giveaway Collaboration	1000	2	10
2	Shoutout	300	2	2
3	Giveaway Collaboration	750	3	3
4	Review	0.05	4	4
5	Product Placement	0.1	5	16



## PROJECTION

- Before: no table(s)
- During:

### View Data

View any table from the database by specifying the table of choice and the fields to display.

Table:  

AGENCY

Please choose fields to include:

☒ AGENCYID   ☐ ESTABLISHEDDATE   ☒ STAFFSIZE   ☒ LOCATION

View

- After:

### View Data

View any table from the database by specifying the table of choice and the fields to display.

Table:  

AGENCY

Please choose fields to include:

☒ AGENCYID   ☐ ESTABLISHEDDATE   ☒ STAFFSIZE   ☒ LOCATION

View

AGENCYID	STAFFSIZE	LOCATION
1	25	USA
2	40	USA
3	15	CAN
4	10	CAN
5	30	CAN

## SELECTION (AND)

- Before: no table(s)
- During:

### Filter Influencers

Find influencers of interest by filtering your search.

**Match ALL Filters**

Influencer ID

<

20

Age

>

25

X

+

Search

- After:

### Filter Influencers

Find influencers of interest by filtering your search.

**Match ALL Filters**

Influencer ID

<

20

Age

>

25

X

+

Search

Influencer ID	Influencer Name	Location	Age	Niche
3	Kendall Jenner	USA	29	Wine
4	Kim Kardashian	USA	44	TV
5	Shawn Mendes	CAN	26	Music
6	Justin Bieber	CAN	31	Music
11	Bang Chan	AUS	28	Idol

\*\* Table is scrollable, so not all tuples are currently in frame

## SELECTION (OR)

- Before: no table(s)
- During:

**Match ANY Filters**

Influencer ID ▾ = ▾ 1

Influencer ID ▾ = ▾ 3 X

Age ▾ > ▾ 30 X

+

Search

- After:

**Match ANY Filters**

Influencer ID ▾ = ▾ 1

Influencer ID ▾ = ▾ 3 X

Age ▾ > ▾ 30 X

+

Search

Influencer ID	Influencer Name	Location	Age	Niche
1	Addison Rae	USA	24	Music
3	Kendall Jenner	USA	29	Wine
4	Kim Kardashian	USA	44	TV
6	Justin Bieber	CAN	31	Music

## JOIN

- Before: no table(s)
- During:

### Production Cost

*Find the advertisement type of posts with production cost above threshold.*

Production Cost threshold:

- After:

### Production Cost

*Find the advertisement type of posts with production cost above threshold.*

Production Cost threshold:

Advertisement Type	Production Cost
Review	1099
Product Placement	2160

## Aggregation with GROUP BY

- Before: no table(s)
- During:

### Platform Demographics

*Find the average age of influencers on each platform.*

Go

- After:

### Platform Demographics

*Find the average age of influencers on each platform.*

Go

Platform	Average Influncer Age
Facebook	26.333333333333333
YouTube	27
Twitter	30.8
TikTok	26.333333333333333
Instagram	27.5

## Aggregation with HAVING

- Before: no table(s)
- During:

### Post Engagement Rate

*Find the average post engagement rate for each category of advertised product with engagement rates above the lower bound.*

*We define engagement rate as (likes + comments)/views.*

Lower bound:

- After:

### Post Engagement Rate

*Find the average post engagement rate for each category of advertised product with engagement rates above the lower bound.*

*We define engagement rate as (likes + comments)/views.*

Lower bound:

Product Category	Average Engagement Rate
Electronics	0.3619828815977175
Food	0.42500000000000004
Personal Care	0.3611111111111111

## Nested aggregation with GROUP BY

- Before: no table(s)
- During:

### Popular Sponsored Influencers

*Find the account(s) with the most sponsored posts under brand deals.*

Go

- After:

### Popular Sponsored Influencers

*Find the account(s) with the most sponsored posts under brand deals.*

Go

Username	Platform	Number of Brand Deal Posts
addrae	TikTok	3

DIVISION

- Before: no table(s)
- During:

### Influencers With Reach

Find the IDs of all influencers who have accounts on every platform.

Go

- After:

### Influencers With Reach

Find the IDs of all influencers who have accounts on every platform.

Go

Influencer ID
1
11
12