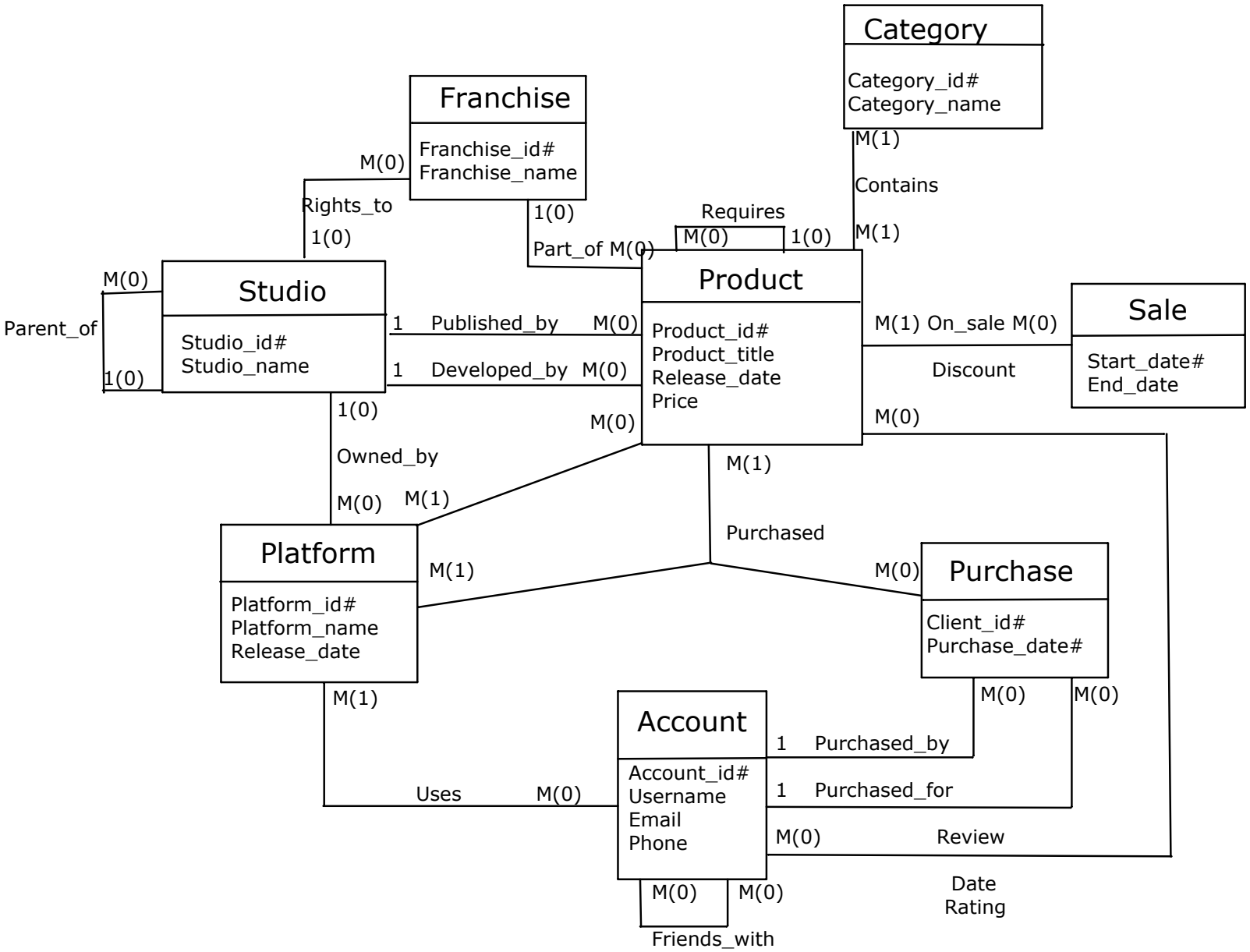
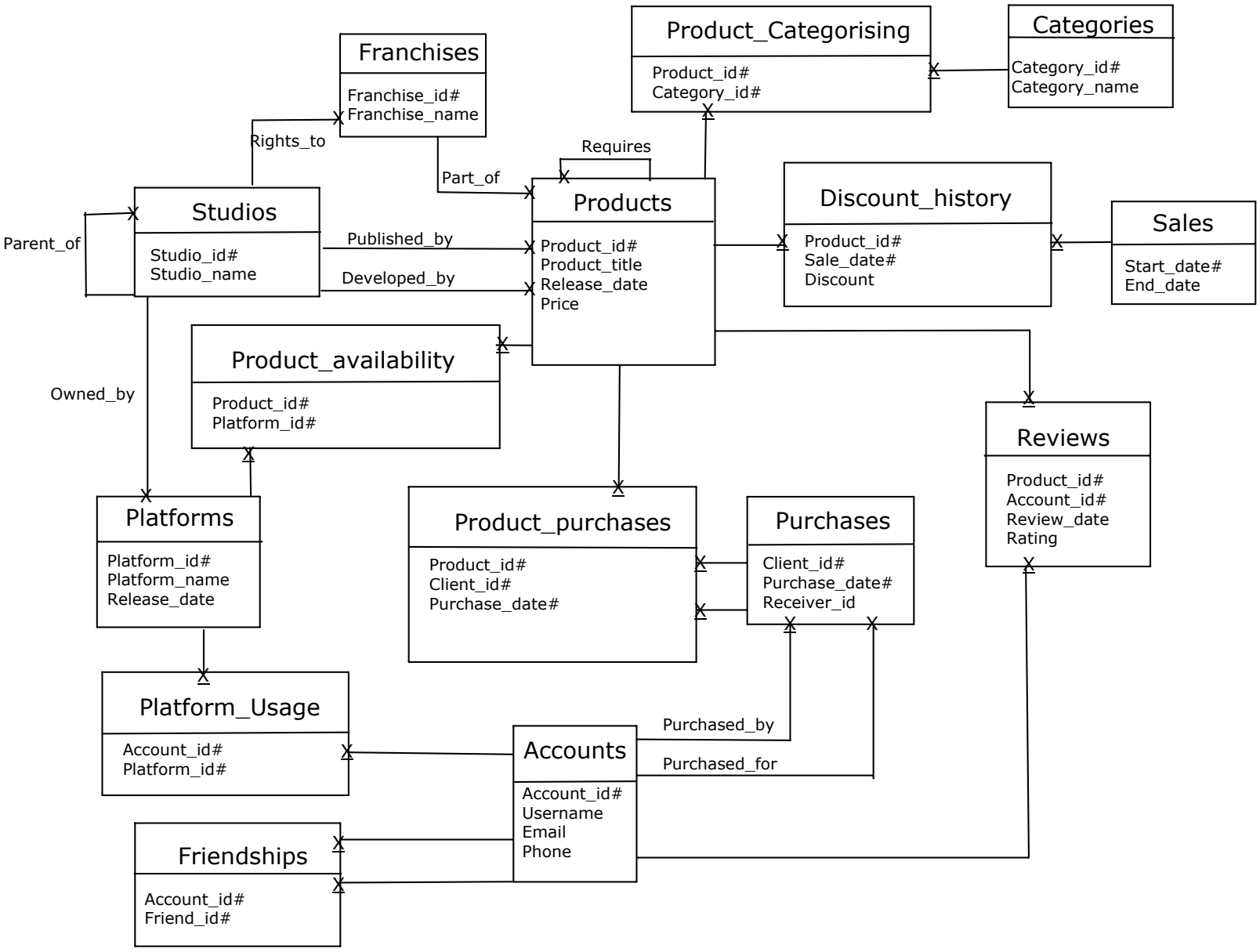
E/R Diagram

Tuesday, 3 May, 2022 8:03 PM



Conceptual Diagram

Thursday, 5 May, 2022 11:37 AM



Normal Forms

Monday, 16 May, 2022 6:30 PM

Products

Product	Categories
Isaac	Singleplayer Roguelike
TF2	Multiplayer
Terraria	Singleplayer Sandbox

Products

Product
Isaac
TF2
Terraria

Product_categorising

Product	Category
Isaac	Singleplayer
Isaac	Roguelike
TF2	Multiplayer
Terraria	Singleplayer
Terraria	Sandbox

Product_availability

Product	Platform	Price
Rocket	PC	9.99
Turnip	PC	20
Rocket	PS4	9.99
Spire	PS4	20

Product_availability

Product	Platform
Rocket	PC
Turnip	PC
Rocket	PS4
Terraria	PS4

Product_prices

Product	Price
Rocket	9.99
Turnip	20
Spire	20

Products

Product	Franchise	Franchise_owner
SMB1	Mario	Nintendo
STH1	Sonic	Sega
SMB3	Mario	Nintendo
STH3&K	Sonic	Sega

Products

Product	Franchise
SMB1	Mario
STH1	Sonic
SMB3	Mario
STH3&K	Sonic

Franchises

Franchise	Franchise_Owner
Mario	Nintendo
Sonic	Sega

Discount_history

Product	Sale_start	Sale_end
Minecraft	01-AUG-2017	03-AUG-2017
Terraria	01-AUG-2017	03-AUG-2017
Minecraft	19-NOV-2019	29-NOV-2019
Celeste	19-NOV-2019	29-NOV-2019

Discount_history

Product	Sale_start
Minecraft	01-AUG-2017
Terraria	01-AUG-2017
Minecraft	19-NOV-2019
Celeste	19-NOV-2019

Sales

Start_date	End_date
01-AUG-2017	03-AUG-2017
19-NOV-2019	29-NOV-2019

Reviews

Product	Platform	Account
TF2	PC	uzzy
TF2	PS3	uzzy
TF2	XB360	uzzer
TF2	PC	acker
TF2	PS3	acker
TF2	XB360	acker
PokeS&S	NS	acker
PokeS&S	NS	tillot

Product_availability

Product	Platform
TF2	PC
TF2	PS3
TF2	XB360
PokeS&S	NS

Product_reviews

Product	Account
TF2	uzzy
TF2	acker
PokeS&S	acker
PokeS&S	tillot

Product_purchases

Product	Platform	Account
Rocket	PC	uzzy
Rocket	PS4	uzzy
Rocket	XB1	tillot
Hollow	NS	uzzy
Hollow	NS	tillot

Product_availability

Product	Platform
Rocket	PC
Rocket	PS4
Rocket	XB1
Hollow	NS

Platform_Usage

Account	Platform
uzzy	PC
uzzy	PS4
uzzy	NS
tillot	XB1
tillot	NS

Product_purchases

Account	Product
uzzy	Rocket
uzzy	Hollow
tillot	Rocket
tillot	Hollow

Optimization

Friday, 20 May, 2022 5:44 PM

Să se afișeze toate produsele reduse în anul 2019 sau care sunt deținute de utilizatori ce folosesc platforma PlayStation 4 și au făcut cel puțin un review.

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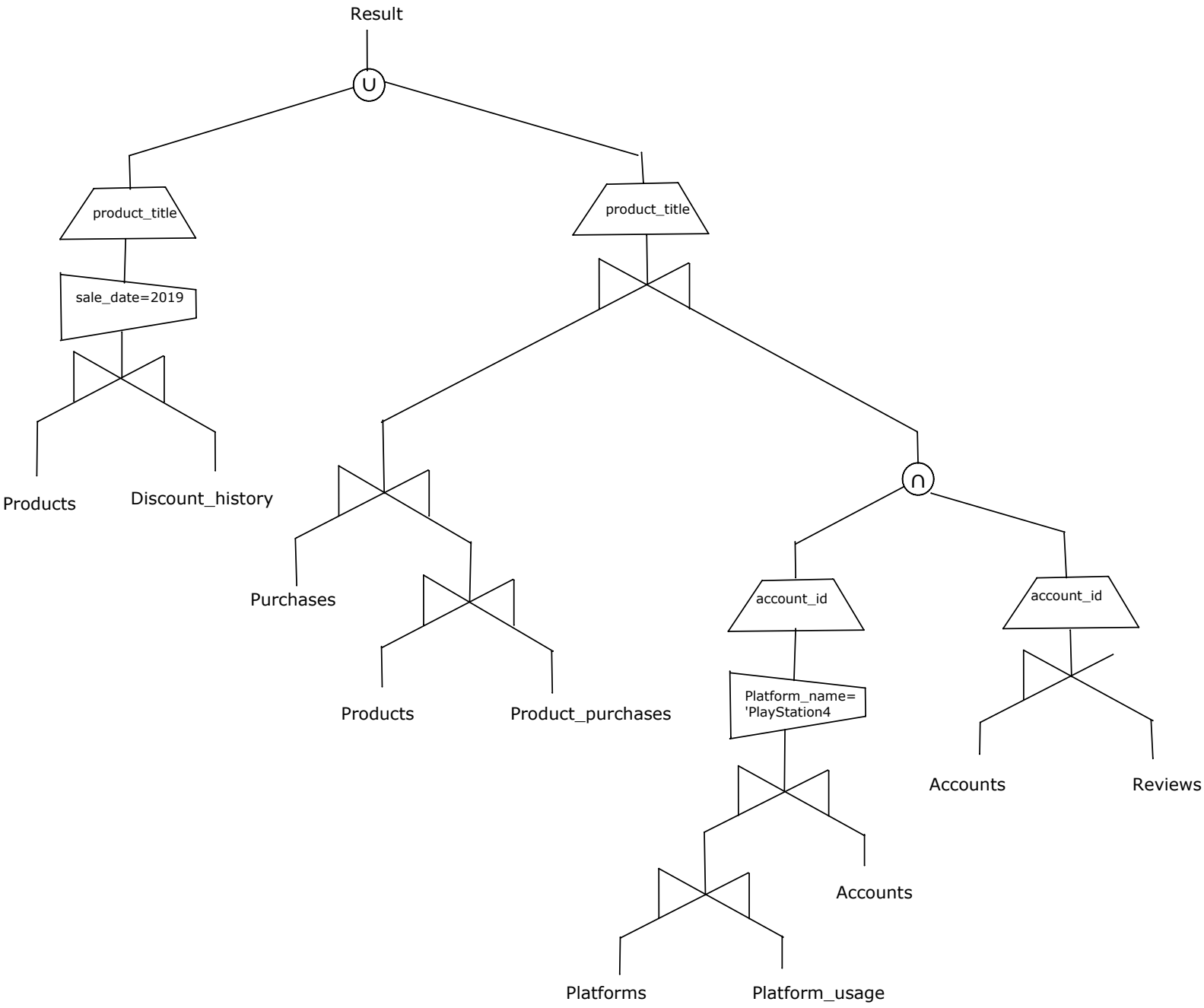
```
R1 = JOIN(PRODUCTS,DISCOUNT_HISTORY)
R2 = SELECT(R1, start_date=2019)
R3 = PROJECT(R2,product_title)
R4 = JOIN(PLATFORMS,PLATFORM_USAGE)
R5 = JOIN(R4,ACCOUNTS)
R6 = SELECT(R5, platform_name='PlayStation 4')
R7 = PROJECT(R6,account_id)
R8 = SEMIJOIN(REVIEWS,ACCOUNTS)
R9 = PROJECT(R8,account_id)
R10 = INTERSECT(R7,R9)
R11 = JOIN(PRODUCTS,PRODUCT_PURCHASES)
R12 = JOIN(R11,PURCHASES)
R13 = JOIN(R12,R10)
R14 = PROJECT(R13,product_title)
R15 = UNION(R3,R14)
```

$$\text{Result} = \sigma_{\text{product_title}}(\prod_{\text{sale_date=2019}}(\text{Products} \bowtie \text{Discount_history}) \cup \sigma_{\text{product_title}}((\text{Products} \bowtie \text{Product_purchases} \bowtie \text{Purchases} \bowtie (\sigma_{\text{account_id}}(\prod_{\text{platform_name='PlayStation4}}(\text{Platforms} \bowtie \text{Platform_usage} \bowtie \text{Accounts})) \cap \sigma_{\text{account_id}}(\text{Reviews} \ltimes \text{Accounts}))$$

$$\text{Result} = \sigma_{\text{product_title}}(\sigma_{\text{product_title,product_id}}(\text{Products}) \ltimes \prod_{\text{sale_date=2019}}(\text{Discount_history}) \cup \sigma_{\text{product_title}}(\sigma_{\text{product_id}}(\text{Products}) \ltimes \sigma_{\text{product_title,product_id}}(\text{Product_purchases} \ltimes (\text{Purchases} \ltimes ((\sigma_{\text{account_id}}(\text{Accounts}) \ltimes (\text{Platform_usage} \ltimes \prod_{\text{platform_name='PlayStation4}}(\sigma_{\text{platform_id,platform_name}}(\text{Platforms})))) \ltimes \text{Reviews}))))$$

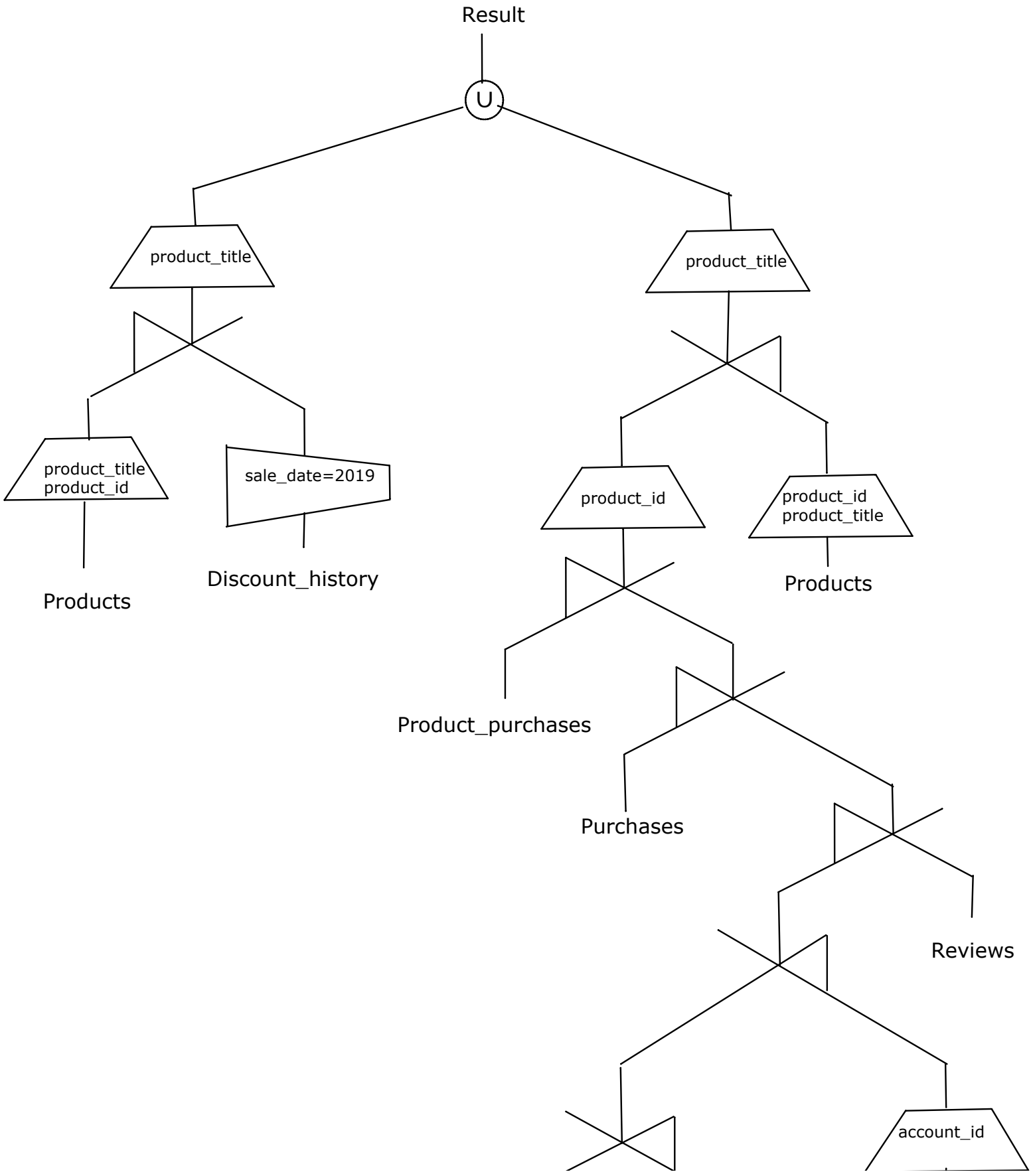
Tree

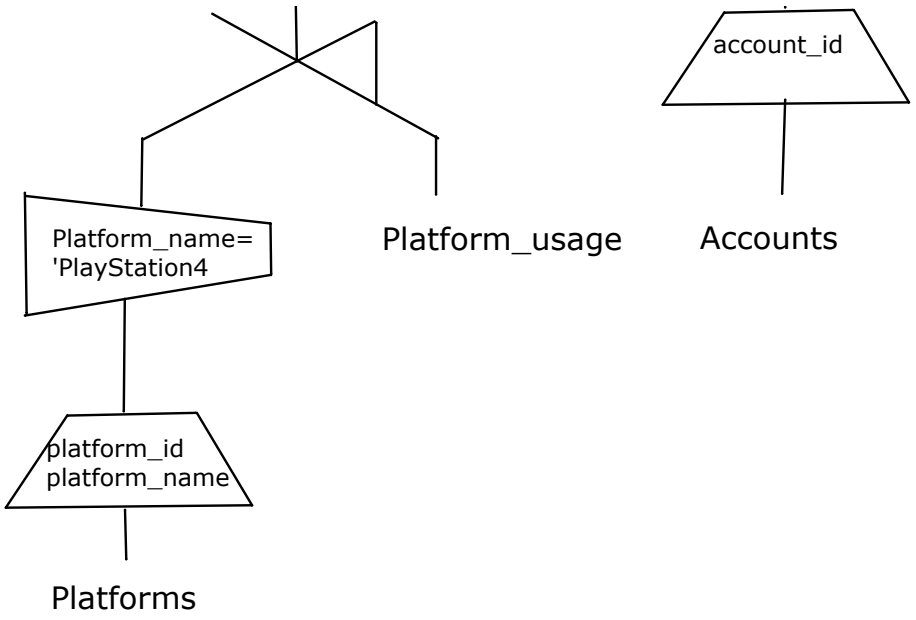
Saturday, 21 May, 2022 1:35 PM



Optimized Tree

Saturday, 21 May, 2022 1:35 PM




account_id
Platform_name=
'PlayStation4
Platform_usage
Accounts
platform_id
platform_name
Platforms