

APP STORE INFORMATION SYSTEM

GROUP - 3

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QUOTE OF THE DAY

“IT DEPENDS”

-Joseph William Ledet

a.k.a. Most handsome teacher on the world

WHAT IS OUR PROJECT ?

- Database Project For Managing an app Store
- Focused on Admin Operations, not user-side browsing
- Tracks apps, publishers, users ,purchases, and payments



OUR GOALS

- Centralize all app store data for easy management
- Support the full lifecycle of apps: publish, update, track
- Enable admin control over reviews, ratings, and purchases
- Freedom of design. Custom user interface

TARGET CUSTOMER

- Phone companies who wants native app store
- Game companies who want to distribute their games

TARGET CUSTOMER

- Phone companies who wants native app store
- Game companies who want to distribute their games
- Evil galactic empires who chase some rebel scum

FEATURES

- Central Admin Panel: Control every aspect of your system
- Freedom of Design: Best interface for your business
- User Feedback: admins can view ratings & reviews
- Multiple Payment Options: supports various card formats
- Country Control: define which apps are available where
- Secure & Organized: every user and transaction is traceable

FUTURE DIRECTIONS *(it depends on your investment)*

- User interface design templates
- More details about apps
- More details about user
- Hierarchical categories
- Multiple versions providing
- Habitat bundles
- Recommendation system

HOW WE DESIGN OUR SYSTEM

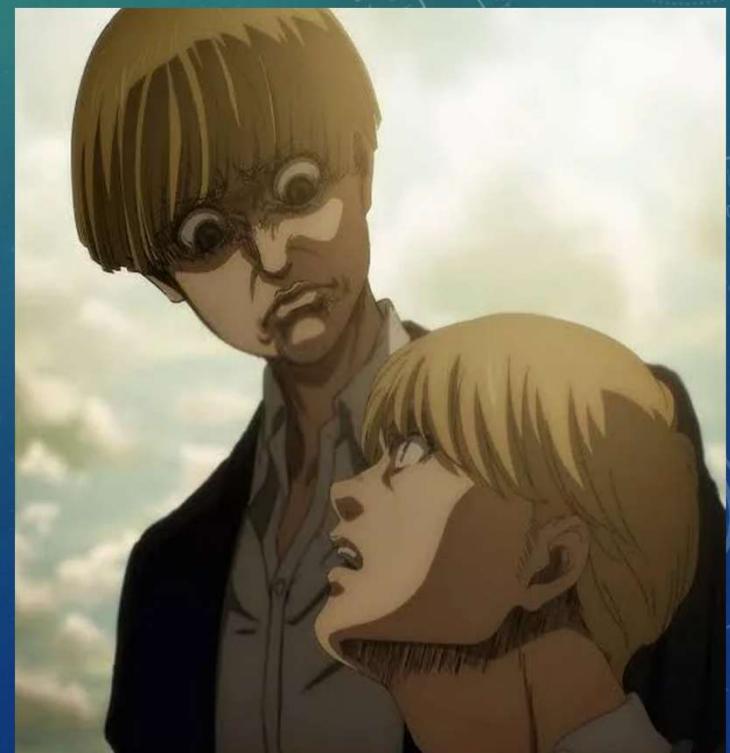


FACT FINDING TECHNIQUES

Fact-finding techniques in database design are methods used to gather information about a system's data requirements. These techniques help database designers understand how the data is used.

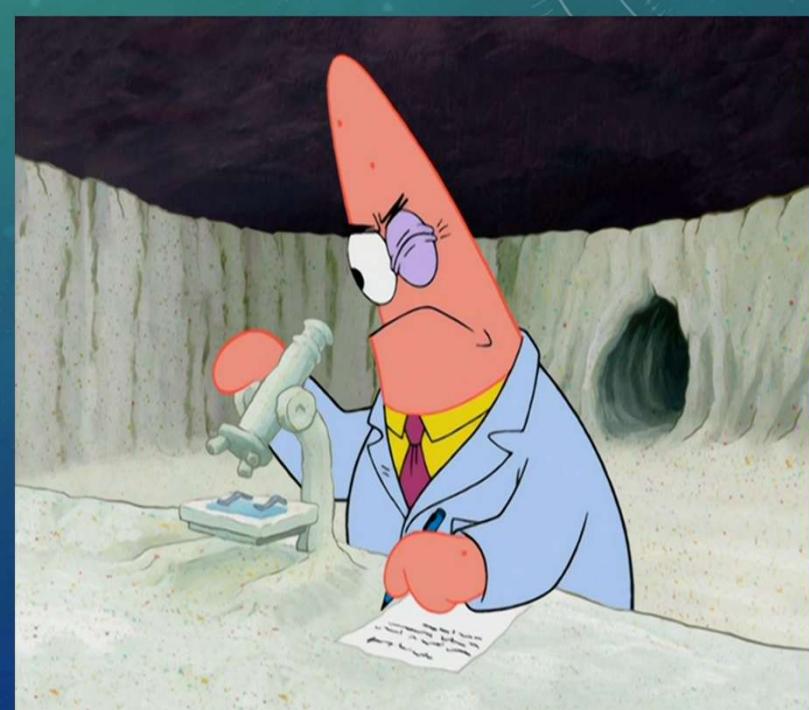
OBSERVATION

Watching users interact with the current system to understand workflows, bottlenecks, and data usage



RESEARCH

Consulting external sources, such as textbooks, manuals, or case studies, to understand standard practices or legal requirements.

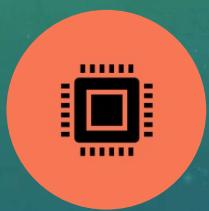


BRAINSTORMING

A group creativity technique where stakeholders, designers, and users generate a wide range of ideas or data needs without immediate evaluation or criticism



TOOLS WE USED



ER DIAGRAM: DRAW.IO



DATABASE: MYSQL



MANAGEMENT:
PHP MY ADMIN



TEAMWORK:
GITHUB
GOOGLE DOCS



UI DESIGN:
SPRING BOOT
ANGULAR
VS CODE

WHAT OUR SYSTEM MANAGES



Apps: versions,
categories, price,
update history



Publishers: name,
contact info, linked
apps



Users: basic info,
country,
registration date



Bought Items:
purchase history,
reviews, ratings



Payment Methods:
cards, formats,
expiration



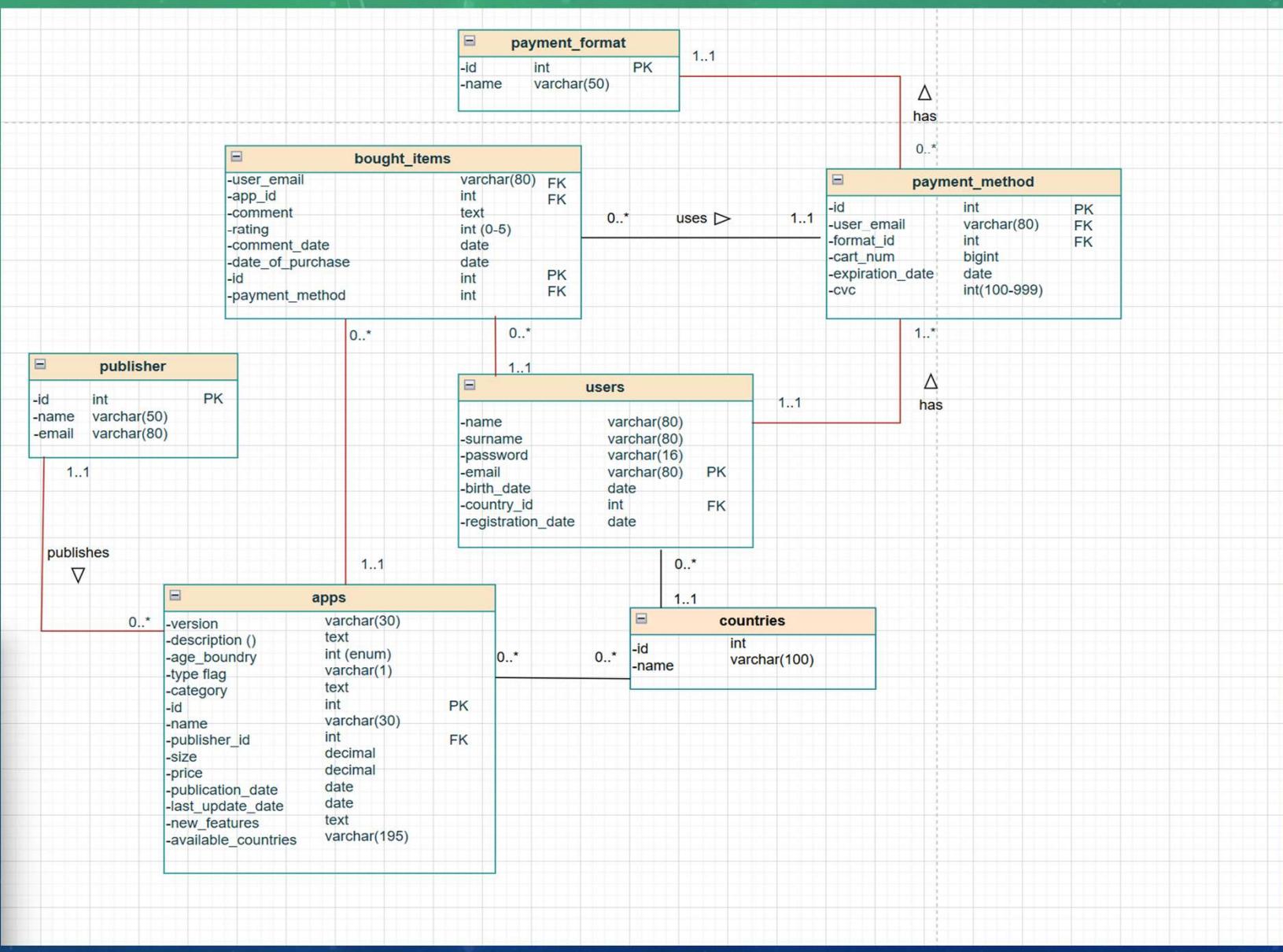
Countries: manage
app availability by
region

NOW TO THE TECHNICAL PART

- Also known as the boring part

FUNCTIONAL DEPENDENCIES

- (oh this one is special) V-> E, H, AC, AD, AG, W, AE
- E-> A, B, C, D, F, G
- H-> J, K, L, M, N, I, AF, O, P, Q, R, S, AH
- AF-> T, U
- AE-> H, X, Z, AA, AB
- X -> Y
- G -> AI



QUERIES TO CONVERT UNF INTO 3NF WITHOUT MAGIC

```
80
81 -- 0) countries
82 CREATE TABLE countries (
83     id INT PRIMARY KEY,
84     name VARCHAR(195) NOT NULL
85 );
86
87 -- 1) payment_format
88 CREATE TABLE payment_format (
89     id      INT          NOT NULL,
90     name   VARCHAR(50)    NOT NULL,
91     PRIMARY KEY (id)
92 );
93
94 -- 2) publisher
95 CREATE TABLE publisher (
96     id      INT          NOT NULL,
97     name   VARCHAR(50)    NOT NULL,
98     email  VARCHAR(80)    NOT NULL,
99     PRIMARY KEY (id)
100 );
```

```
119 -- 4) apps
120 CREATE TABLE apps (
121     id          INT          NOT NULL,
122     name        VARCHAR(30)  NOT NULL,
123     version     VARCHAR(30),
124     description TEXT,
125     age_boundary INT,
126     type_flag   VARCHAR(1),
127     category    TEXT,
128     publisher_id INT,
129     size        DECIMAL(10,2),
130     price       DECIMAL(10,2),
131     publication_date DATE,
132     last_update_date DATE,
133     new_features TEXT,
134     available_countries VARCHAR(195),
135     PRIMARY KEY (id),
136     CONSTRAINT fk_apps_publisher
137         FOREIGN KEY (publisher_id)
138         REFERENCES publisher(id)
139 );
140
```

```
141 -- 5) payment_method
142 CREATE TABLE payment_method (
143     id          INT          NOT NULL,
144     user_email  VARCHAR(80)  NOT NULL,
145     format_id   INT          NOT NULL,
146     cart_num    BIGINT,
147     expiration_date DATE,
148     cvc         SMALLINT,
149     PRIMARY KEY (id),
150     CONSTRAINT fk_payment_method_user
151         FOREIGN KEY (user_email)
152             REFERENCES users(email),
153     CONSTRAINT fk_payment_method_format
154         FOREIGN KEY (format_id)
155             REFERENCES payment_format(id),
156     CHECK (cvc BETWEEN 100 AND 999)
157 );
```

```
159 -- 6) bought_items
160 CREATE TABLE bought_items (
161     id          INT          NOT NULL,
162     date_of_purchase DATE      NOT NULL,
163     user_email   VARCHAR(80) NOT NULL,
164     app_id       INT          NOT NULL,
165     comment      TEXT,
166     rating       TINYINT,
167     comment_date DATE,
168     payment_method_id INT,
169     PRIMARY KEY (id),
170     CONSTRAINT fk_bought_items_user
171         FOREIGN KEY (user_email)
172             REFERENCES users(email),
173     CONSTRAINT fk_bought_items_app
174         FOREIGN KEY (app_id)
175             REFERENCES apps(id),
176     CONSTRAINT fk_bought_items_method
177         FOREIGN KEY (payment_method_id)
178             REFERENCES payment_method(id),
179     CHECK (rating BETWEEN 0 AND 5)
180 );
181 );
```

```
185  
186 -- 0) countries  
187 INSERT INTO countries (id, name) VALUES (1, 'Türkiye');  
188  
189 -- 1) payment_format  
190 INSERT INTO payment_format (id, name)  
191 SELECT DISTINCT  
192     Format_ID,  
193     format_name  
194 FROM unf  
195 WHERE Format_ID IS NOT NULL;  
196  
197 -- 2) publisher  
198 INSERT INTO publisher (id, name, email)  
199 SELECT DISTINCT  
200     Publisher_Id,  
201     Publisher_Name,  
202     Publisher_Email  
203 FROM unf  
204 WHERE Publisher_Id IS NOT NULL;  
205
```

```
407 -- 3) users
408 INSERT INTO users (
409   email,
410   name,
411   surname,
412   password,
413   birth_date,
414   country_id,
415   registration_date
416 )
417 SELECT DISTINCT
418   User_Email,
419   User_Name,
420   User_Surname,
421   User_Password,
422   User_birth_date,
423   User_country_id,
424   Registration_Date
425 FROM unf
426 WHERE User_Email IS NOT NULL;
```

```
466 -- 4) payment_method
467 INSERT INTO payment_method (
468   id,
469   user_email,
470   format_id,
471   cart_num,
472   expiration_date,
473   cvc
474 )
475 SELECT DISTINCT
476   payment_method_id,
477   User_Email,
478   Format_ID,
479   Cart_Number,
480   STR_TO_DATE(Expaire_DATE, '%Y-%m-%d'),
481   CVC
482 FROM unf
483 WHERE payment_method_id IS NOT NULL;
```

```
430 -- 5) apps
431 INSERT INTO apps (
432   id,
433   name,
434   version,
435   description,
436   age_boundary,
437   type_flag,
438   category,
439   publisher_id,
440   size,
441   price,
442   publication_date,
443   last_update_date,
444   new_features,
445   available_countries
446 )
447 SELECT DISTINCT|
448   App_Id
449   MIN(App_Name)
450   MIN(Version)
451   MIN(App_Description)
452   MIN(Age_Boundary)
453   MIN(Type_Flag)
454   MIN(Category)
455   MIN(Publisher_Id)
456   MIN(Size)
457   MIN(Price)
458   MIN(Publication_Date)
459   MIN(Last_Update_Date)
460   MIN(New_Features)
461   MIN(available_Countries) AS available_countries
462 FROM unf
463 WHERE App_Id IS NOT NULL
464 GROUP BY App_Id;
```

```
484  
485 -- 6) bought_items  
486 INSERT INTO bought_items (  
487     id,  
488     user_email,  
489     app_id,  
490     comment,  
491     rating,  
492     comment_date,  
493     date_of_purchase,  
494     payment_method_id  
495 )  
496 SELECT DISTINCT  
497     bought_item_Id,  
498     User_Email,  
499     App_Id,  
500     Comment,  
501     Rating,  
502     comment_date,  
503     Payment_Date,  
504     payment_method_id  
505 FROM unf  
506 WHERE User_Email IS NOT NULL  
507     AND App_Id IS NOT NULL;  
508
```

```
512 DROP TABLE IF EXISTS unf;|  
513
```

STARTER DATA AMOUNT IS 1190 CELL
NOW IT IS 869 CELL

```
518 CREATE VIEW unf_data_view AS
519 SELECT
520     u.name          AS User_Name,
521     u.surname       AS User_Surname,
522     u.password      AS User_Password,
523     u.registration_date AS Registration_Date,
524     u.email         AS User_Email,
525     u.birth_date    AS User_birth_date,
526     u.country_id   AS User_country_id,
527     a.id            AS App_Id,
528     a.name          AS App_Name,
529     a.version       AS Version,
530     a.description   AS App_Description,
531     a.age_boundary  AS Age_Boundary,
532     a.type_flag     AS Type_Flag,
533     a.category      AS Category,
534     a.size          AS Size,
535     a.price         AS Price,
536     a.publication_date AS Publication_Date,
537     a.last_update_date AS Last_Update_Date,
538     a.new_features  AS New_Features,
539     p.id            AS Publisher_Id,
540     p.name          AS Company_Name,
541     p.email         AS Company_Email,
```

```
542     bi.id           AS bought_item_Id_Id,
543     bi.date_of_purchase AS Payment_Date,
544     pmeth.id        AS payment_method_id,
545     pf.id           AS Format_ID,
546     pf.name         AS format_name,
547     pmeth.cart_num  AS Cart_Number,
548     pmeth.expiration_date AS Expaire_DATE,
549     pmeth.cvc       AS CVC,
550     bi.rating       AS Rating,
551     bi.comment      AS Comment,
552     bi.comment_date AS comment_date,
553     a.available_countries AS available_countries
554 FROM users u
555 LEFT JOIN bought_items bi
556 ON u.email = bi.user_email
557 LEFT JOIN apps a
558 ON bi.app_id = a.id
559 LEFT JOIN publisher p
560 ON a.publisher_id = p.id
561 LEFT JOIN payment_method pmeth
562 ON bi.payment_method_id = pmeth.id
563 LEFT JOIN payment_format pf
564 ON pmeth.format_id = pf.id;
565
```

DEMO AND FUNCTIONAL QUERIES

LISTING THE USERS:

User List

Search Users

Name	Surname	Email	Password	Birth Date	Country	Registered	Actions
Jennifer	Jensen	20220758045@ogr.akdeniz.edu.us	*****	20/12/2004	Afghanistan	22/05/2022	Delete
Donald	Simpson	darkKiNG@gmail.com	*****	05/12/2007	Afghanistan	31/12/2016	Delete
Erwin	Rommel	Erwin_Rommel@GermanMilitart.du	*****	20/10/1895	Afghanistan	26/04/2017	Delete
George	Green	GorgeGreen1934@hotmail.com	*****	16/01/1934	Afghanistan	30/06/2018	Delete
Jamie	Miller	jamieTorat@gmail.com	*****	06/03/1974	Afghanistan	14/07/2003	Delete
Katherina	Clover	katherine_clover@gmail.com	*****	08/11/1983	Afghanistan	04/12/2000	Delete

THIS IS THE QUERY FOR LISTING THE USERS

```
1 SELECT *
2 FROM users
```

(You might guess this)

IF YOU WANT TO SEARCH FOR A USER BY THE NAME OR THE EMAIL

User List

Search Users

er

Name	Surname	Email	Password	Birth Date
Jennifer	Jensen	20220758045@ogr.akdeniz.edu.us	*****	20/12/2004
Erwin	Rommel	Erwin_Rommel@GermanMilitart.du	*****	20/10/1895
Jamie	Miller	jamieTorat@gmail.com	*****	06/03/1974
Katherina	Clover	katherine_clover@gmail.com	*****	08/11/1983

```
1 SELECT *
2 FROM users
3 WHERE name LIKE '%er%'
4 Or email LIKE '%er%'
```



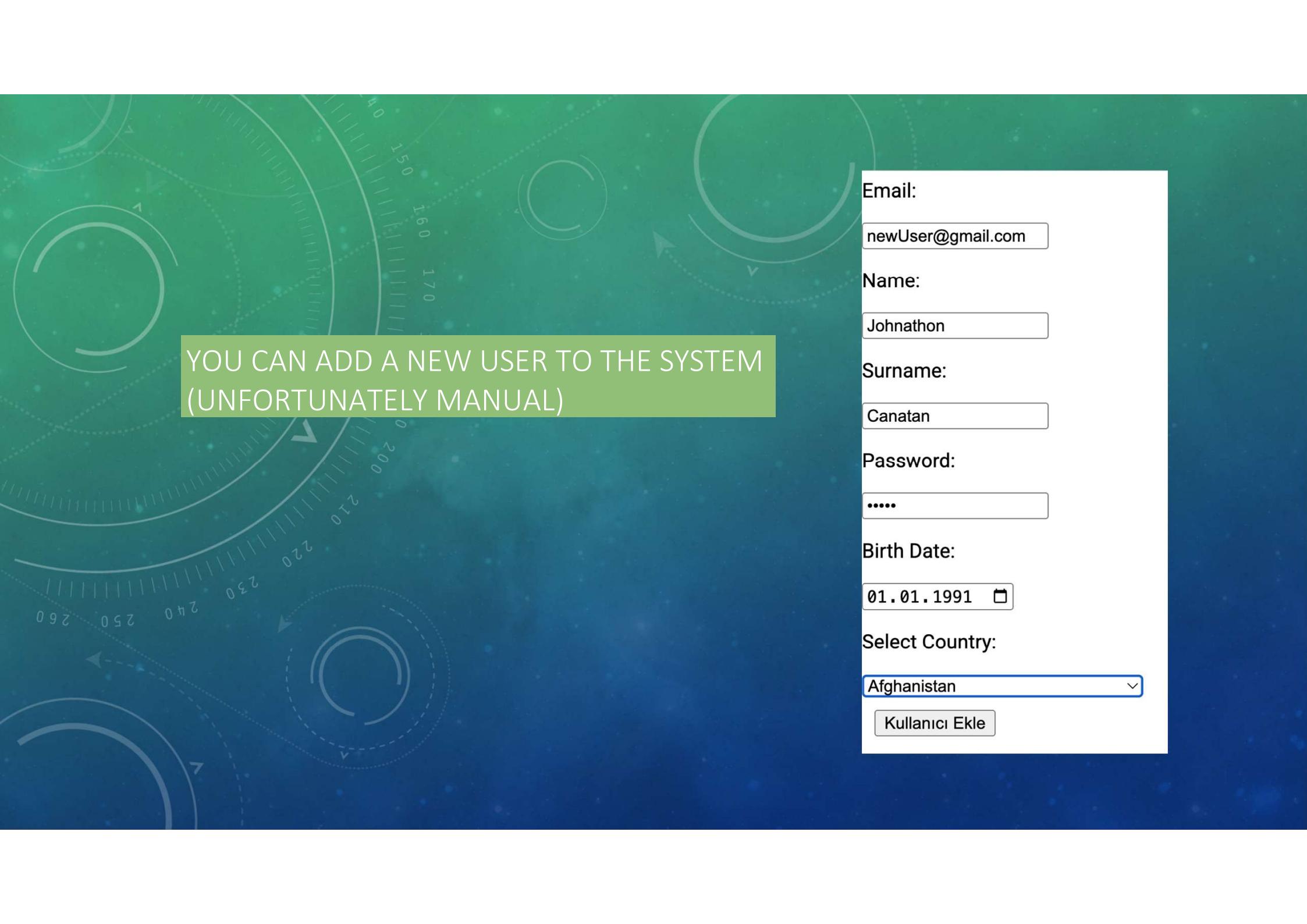
AND THIS IS HOW YOU CAN DELETE A USER

Name	Surname	Email	Password	Birth Date	Country	Registered	Actions
Jennifer	Jensen	20220758045@ogr.akdeniz.edu.us	*****	20/12/2004	Afghanistan	22/05/2022	Delete
Donald	Simpson	darkKING@gmail.com	*****	05/12/2007	Afghanistan	31/12/2016	Delete
Erwin	Rommel	Erwin_Rommel@GermanMilitart.du	*****	20/10/1895	Afghanistan	26/04/2017	Delete
George	Green	GorgeGreen1934@hotmail.com	*****	16/01/1934	Afghanistan	30/06/2018	Delete
Jamie	Miller	jamieTorat@gmail.com	*****	06/03/1974	Afghanistan	14/07/2003	Delete
Katherina	Clover	katherine_clover@gmail.com	*****	08/11/1983	Afghanistan	04/12/2000	Delete

```
1 DELETE  
2 FROM users  
3 WHERE email = "20220758045@ogr.akdeniz.edu.us"
```

No more Jennifer

Name	Surname	Email	Password	Birth Date	Country	Registered	Actions
Donald	Simpson	darkKiNG@gmail.com	*****	05/12/2007	Afghanistan	31/12/2016	Delete
Erwin	Rommel	Erwin_Rommel@GermanMilitart.du	*****	20/10/1895	Afghanistan	26/04/2017	Delete
George	Green	GorgeGreen1934@hotmail.com	*****	16/01/1934	Afghanistan	30/06/2018	Delete
Jamie	Miller	jamiTorat@gmail.com	*****	06/03/1974	Afghanistan	14/07/2003	Delete
Katherina	Clover	katherine_clover@gmail.com	*****	08/11/1983	Afghanistan	04/12/2000	Delete



YOU CAN ADD A NEW USER TO THE SYSTEM
(UNFORTUNATELY MANUAL)

Email:

Name:

Surname:

Password:

Birth Date:

Select Country:

```
1 INSERT INTO users (email, name, surname, password,  
birth_date, country_id, registration_date)  
2 VALUES ('newUser@gmail.com', 'Johnathon', 'Canatan',  
'12345', '1991-01-01', 1, '2025-05-07');
```

Backend fills the registration date and matches the country id

Johnathon

Canatan

newUser@gmail.com

01/01/1991

Afghanistan

07/05/2025

Delete

THIS IS THE APP LIST

(I KNOW THERE ARE TOO MANY TEXT)

Application List

ID	Name	Rating	Number of Downloads	Version	Description	Age Boundary	Type Flag	Category	Publisher ID	Size (MB)	Price	Change Price	Published	Last Update	New Features	Available In	Actions
1	Farm Knight	2.0	3	2.6.24	a knight who defeats enemy with crops it grows. Grow crops,fight against evil, get more land, grow more	3	G	settlement,gacha,farming	2	1205.35	\$15.00	Change Price	16/04/2017	16/04/2017	rescue land of remon from dracula new quest line:(when dark comes) new biome:(castle of dracula) new enemies(vampires ,bats) new crop:(garlic)	Go To Available Countries	Delete
2	Syncidate	4.0	2	2.4.12	find your best partner to resonate	13	U	Dating	4	145.64	\$10.99	Change Price	30/06/2012	30/06/2012	minor bug fixes	Go To Available Countries	Delete
3	Breaking Dance	2.0	2	1.9.13	became star of the stage, and Dance until break of the dawn	3	G	Ryhthm	2	120.14	\$4.99	Change Price	16/09/2020	16/09/2020	dance with song of 80's	Go To Available Countries	Delete
4	42 days	2.0	2	3.0.1	surviving is only option. Hunt, gather, hide, fight, build, survive	13	G	Survival,Action,Rpg	2	756.46	\$20.99	Change Price	31/10/2001	31/10/2001	minor bug fixes	Go To Available Countries	Delete
5	Fitne	2.3	3	1.1.34	get best fitness program just for you	5	U	Health,Fitness,Sport	5	89.25	\$5.99	Change Price	25/05/2016	25/05/2016	now you can manage all your gym membership here	Go To Available Countries	Delete

WE DON'T HAVE A FIELD FOR AVERAGE RATING

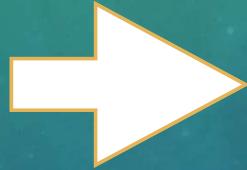
SO WE ARE CALCULATING IT FOR EXTRA INFO WHILE LISTING

```
1 SELECT
2     a.id AS app_id,
3     a.name AS app_name,
4     AVG(b.rating) AS average_rating
5 FROM
6     apps a
7 JOIN
8     bought_items b ON a.id = b.app_id
9 GROUP BY
10    a.id, a.name
11 ORDER BY
12    average_rating DESC;
```

(THIS IS A SIMPLE QUERY FOR
BETTER UNDERSTANDING)

ID FILTERING

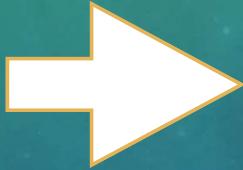
ID
ID ...



```
1 SELECT *  
2 FROM apps  
3 WHERE id = parameter
```

NAME FILTERING

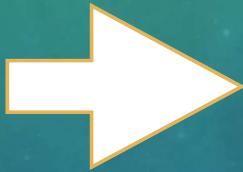
Name
 ...



```
1 SELECT *  
2 FROM apps  
3 WHERE name LIKE "%parameter%"
```

RATING FILTERING

Rating
Rating ...



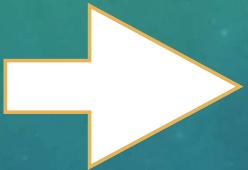
(The Apps which has more rating than parameter)

```
1 SELECT
2     a.id AS app_id,
3     a.name AS app_name,
4     AVG(b.rating) AS average_rating
5 FROM
6     apps a
7 JOIN
8     bought_items b ON a.id = b.app_id
9 GROUP BY
10    a.id, a.name
11 HAVING
12    average_rating > parameter
13 ORDER BY
14    average_rating DESC;
```

OF DOWNLOADS FILTERING

Number of
Downloads

NumberOfD...

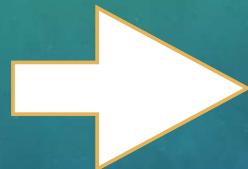


```
1 SELECT
2     a.id AS app_id,
3     a.name AS app_name,
4     COUNT(b.app_id) AS download_count
5 FROM
6     apps a
7 JOIN
8     bought_items b ON a.id = b.app_id
9 GROUP BY
10    a.id, a.name|
11 HAVING
12    download_count > 3
13 ORDER BY
14    download_count DESC;
15
```

AGE FILTERING

Age
Boundary

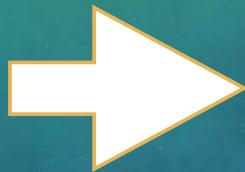
Age Bound...



```
1 SELECT *  
2 FROM apps  
3 WHERE age_boundary <= parameter  
4
```

TYPE FILTERING

Type
Flag



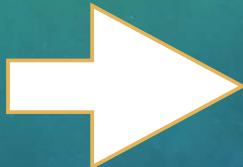
```
1 SELECT *  
2 FROM apps  
3 WHERE type_flag = "U"  
4
```

(U for utility)

(G for Game)

CATEGORY FILTERING

Category

...

```
1 SELECT *
2 FROM apps
3 WHERE category = "parameter"
4
```

Published Last Update

Published ... Last Update ...

THERE ARE SOME OTHER FILTERINGS BUT
I THINK IT IS ENOUGH

Publisher
ID

Size
(MB)

Price

Publisher ...

Size ...

Price ...

NOW SOME FUNCTIONS OF THE APP LIST

CHANGING THE PRICE

1	Farm Knight	2.0	3	2.6.24	a knight who defeats enemy with crops it grows. Grow crops,fight against evil, get more land, grow more	3	G	settlement,gacha,farming	2	1205.35	\$15.00	Change Price
---	-------------	-----	---	--------	--	---	---	--------------------------	---	---------	---------	------------------------------

localhost:4200 web sitesinin mesajı

Current price: 15

Enter new price:

30

İptal

Tamam



```
1 UPDATE apps  
2 SET price = 30  
3 WHERE id = 1;  
4
```

DONE!!!

1	Farm Knight	2.0	3	2.6.24	a knight who defeats enemy with crops it grows. Grow crops,fight against evil, get more land, grow more	3	G	settlement,gacha,farming	2	1205.35	\$30.00	Change Price
---	-------------	-----	---	--------	--	---	---	--------------------------	---	---------	---------	------------------------------

LISTING THE AVAILABLE COUNTRIES

Published	Last Update	New Features	Available In	Actions
Published ...	Last Update ...	rescue land of remon from dracula new quest line: (when dark comes) new biome:(castle of dracula) new enemies(vampires ,bats) new crop: (garlic)	Go To Available Countries	Delete

Available countries are stored as a bit string in database

So when we want to get the available countries we should do some extra work

But the backend does it for us 🙏

```
1 SELECT available_countries  
2 FROM apps  
3 WHERE id = 1
```

available_countries

```
110000011001010111110110101011010110100111110001  
000001101010111001000101110011011111001110011001110  
0100100010010110110111010010101101001010001110000100  
100110101011000010101001100000100,
```



Available Countries

- Armenia
- Afghanistan
- Australia
- Albania
- Bangladesh
- Bahamas
- Belarus
- Bhutan
- Bolivia
- Benin
- Belgium
- Belize
- Burundi
- Brazil
- Botswana
- Cameroon
- Cambodia
- Bulgaria
- Comoros
- Cyprus
- Central African Republic
- Chile
- China
- Costa Rica
- Denmark
- Djibouti

DELETING AN APP

Published	Last Update	New Features	Available In	Actions
Published ...	Last Update ...	rescue land of remon from dracula new quest line: (when dark comes) new biome:(castle of dracula) new enemies(vampires ,bats) new crop: (garlic)	Go To Available Countries	Delete

```

1 DELETE FROM bought_items
2 WHERE app_id = 1;
3
4 DELETE FROM apps
5 WHERE id = 1;
6

```

Foreign key stuff

ID	Name	Rating	Number of Downloads	Version	Description	Age Boundary	Type Flag	Category	Publisher ID	Size (MB)	Price	Change Price	Published	Last Update	New Features	Available In	Actions
2	Syncidate	4.0	2	2.4.12	find your best partner to resonate	13	U	Dating	4	145.64	\$10.99	Change Price	30/06/2012	30/06/2012	minor bug fixes	<button>Go To Available Countries</button>	<button>Delete</button>
3	Breaking Dance	2.0	2	1.9.13	became star of the stage, and Dance until break of the dawn	3	G	Ryhthm	2	120.14	\$4.99	Change Price	16/09/2020	16/09/2020	dance with song of 80's	<button>Go To Available Countries</button>	<button>Delete</button>
4	42 days	2.0	2	3.0.1	surviving is only option. Hunt, gather, hide, fight, build, survive	13	G	Survival,Action,Rpg	2	756.46	\$20.99	Change Price	31/10/2001	31/10/2001	minor bug fixes	<button>Go To Available Countries</button>	<button>Delete</button>

AND THIS IS APP ADDING

Fill the corresponding fields

Add New Application

App Name*	
App Store	
Price*	
10.00	
Category*	
Fun	
Description*	
App store for storing apps	
Age Boundary*	
3	
Type Flag*	
U	
Publisher ID*	
1	
Size (MB)*	
50	

CHOOSE THE AVAILABLE COUNTRIES

Available Countries:

Search Country

Select / Deselect All

- Afghanistan Albania Algeria Andorra Angola Antigua and Barbuda Argentina Armenia Australia Austria Azerbaijan Bahamas Bahrain Bangladesh Barbados Belarus Belgium
- Belize Benin Bhutan Bolivia Bosnia and Herzegovina Botswana Brazil Brunei Bulgaria Burkina Faso Burundi Cabo Verde Cambodia Cameroon Canada Central African Republic
- Chad Chile China Colombia Comoros Costa Rica Croatia Cuba Cyprus Czechia Côte d'Ivoire Democratic Republic of the Congo Denmark Djibouti Dominica Dominican Republic
- Ecuador Egypt El Salvador Equatorial Guinea Eritrea Estonia Eswatini Ethiopia Fiji Finland France Gabon Gambia Georgia Germany Ghana Greece Grenada Guatemala
- Guinea Guinea-Bissau Guyana Haiti Holy See (Vatican City) Honduras Hungary Iceland India Indonesia Iran Iraq Ireland Israel Italy Jamaica Japan Jordan Kazakhstan
- Kenya Kiribati Kuwait Kyrgyzstan Laos Latvia Lebanon Lesotho Liberia Libya Liechtenstein Lithuania Luxembourg Madagascar Malawi Malaysia Maldives Mali Malta
- Marshall Islands Mauritania Mauritius Mexico Micronesia Moldova Monaco Mongolia Montenegro Morocco Mozambique Myanmar Namibia Nauru Nepal Netherlands
- New Zealand Nicaragua Niger Nigeria North Korea North Macedonia Norway Oman Pakistan Palau Panama Papua New Guinea Paraguay Peru Philippines Poland Portugal
- Qatar Republic of the Congo Romania Russia Rwanda Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Samoa San Marino Sao Tome and Principe Saudi Arabia Senegal Serbia
- Seychelles Sierra Leone Singapore Slovakia Slovenia Solomon Islands Somalia South Korea South Africa South Sudan Spain Sri Lanka State of Palestine Sudan Suriname Sweden
- Switzerland Syria Tajikistan Tanzania Thailand Timor-Leste Togo Tonga Trinidad and Tobago Tunisia Türkiye Turkmenistan Tuvalu Uganda Ukraine United Arab Emirates
- United Kingdom United States Uruguay Uzbekistan Vanuatu Venezuela Vietnam Yemen Zambia Zimbabwe

Submit

(You might not notice but all our customers was from Afghanistan so I didn't choose it. Also Türkiye (why not))

THIS IS THE QUERY

```
1 INSERT INTO apps( name, version, description, age_boundary, type_flag, category, publisher_id, size, price,  
publication_date, last_update_date, new_features, available_countries)  
2 VALUES ('App Store','1.0','App store for storing apps','3','U','fun',1,50,10,'2025-05-07','2025-05-07','First  
publition','backend fills here')
```

YOU CAN LIST THE COUNTRIES WITH ID

```
1 SELECT *
2 FROM `countries`
```

All Countries

Search Country

ID	Name
1	Afghanistan
2	Albania
3	Algeria
4	Andorra
5	Angola
6	Antigua and Barbuda
7	Argentina
8	Armenia
9	Australia
10	Austria
11	Azerbaijan

FILTER THEM

```
1 SELECT *  
2 FROM `countries`  
3 WHERE name LIKE "%Türkiye%"
```

Search Country	
Türkiye	
ID	Name
180	Türkiye

(NOT TURKEY)

REVIEWS AND BOUGHT ITEMS

Bought Applications

Select User

All Purchases

User	App	Rating	Comment	Comment Date	Purchase Date
GorgeGreen1934@hotmail.com	Boron	1	Watch thousand loss traditional establish.	08/03/2025	18/11/2024
jamieTorat@gmail.com	PiggyBank Mobile	5	Deep idea design chair society stay enjoy.	17/09/2024	10/02/2025
darkKiNG@gmail.com	Supportify	4	Beautiful indicate glass land then idea.	02/09/2024	06/07/2024
katherine_clover@gmail.com	Fitne	2	Debate thing remain quality who.	16/03/2025	18/10/2024

THE QUERY

```
1 SELECT
2     b.user_email AS User,
3     a.name AS App,
4     b.rating AS Rating,
5     b.comment AS Comment,
6     DATE_FORMAT(b.comment_date, '%d/%m/%Y') AS `Comment Date`,
7     DATE_FORMAT(b.date_of_purchase, '%d/%m/%Y') AS `Purchase Date`
8 FROM
9     bought_items b
10 JOIN
11     apps a ON b.app_id = a.id
12 ORDER BY
13     b.date_of_purchase DESC;
14
```

CAN BE FILTERED BY USER

Bought Applications

Select User

All Purchases

User	App	Rating	Comment	Comment Date	Purchase Date
GorgeGreen1934@hotmail.com	Boron	1	Watch thousand loss traditional establish.	08/03/2025	18/11/2024
jamieTorat@gmail.com	PiggyBank Mobile	5	Deep idea design chair society stay enjoy.	17/09/2024	10/02/2025
darkKiNG@gmail.com	Supportify	4	Beautiful indicate glass land then idea.	02/09/2024	06/07/2024
katherine_clover@gmail.com	Fitne	2	Debate thing remain quality who.	16/03/2025	18/10/2024

Select User

GorgeGreen1934@hotmail.com

All Purchases

User	App	Rating	Comment	Comment Date	Purchase Date
GorgeGreen1934@hotmail.com	Boron	1	Watch thousand loss traditional establish.	08/03/2025	18/11/2024
GorgeGreen1934@hotmail.com	PiggyBank Mobile	2	Happen remain civil.	14/08/2024	12/11/2024
GorgeGreen1934@hotmail.com	Babici	1	Issue eight budget difficult.	25/04/2024	05/10/2024

THIS IS THE USED QUERY

```
1 SELECT
2     b.user_email AS User,
3     a.name AS App,
4     b.rating AS Rating,
5     b.comment AS Comment,
6     DATE_FORMAT(b.comment_date, '%d/%m/%Y') AS `Comment Date`,
7     DATE_FORMAT(b.date_of_purchase, '%d/%m/%Y') AS `Purchase Date`
8 FROM
9     bought_items b
10 JOIN
11     apps a ON b.app_id = a.id
12 WHERE
13     b.user_email = 'GorgeGreen1934@hotmail.com'
14 ORDER BY
15     b.date_of_purchase DESC;
```

QUERY FOR ADDING A PAYMENT METHOD

```
INSERT INTO `payment_method`(`user_email`, `format_id`, `cart_num`, `expiration_date`,  
`cvc`) VALUES ('newUser@gmail.com', 1, 1234567812345678, '2026-12-31', 123);
```

AND LASTLY YOU CAN ADD A REVIEW
(Again manually)

Submit a Review

Select User*

newUser@gmail.com

Select App*

App Store

Your Comment*

This the best app store app

Rating (0 to 5)*

4.9

Submit

QUERY FOR THE DARTH VADER TO ADD A REVIEW

```
1 INSERT INTO bought_items (user_email, app_id, comment, rating, comment_date,
2 date_of_purchase, payment_method_id, payment_method)
3 VALUES (
4     'newUser@gmail.com',
5     (SELECT id FROM apps WHERE name = 'App Store'),
6     'This the best app store app',
7     4.9,
8     NOW(),
9     NOW(),
10    1,(Default 1 for NOW)
11    1 (Default 1 for NOW)
12 );
```

IF THEY DECIDE TO ADD A REVIEW LATER ON

```
1 UPDATE bought_items
2 SET
3   rating = 4.5, -- your desired rating
4   comment = 'Very useful and well designed app.',
5   comment_date = NOW()
6 WHERE user_email = 'example@example.com';
7
```