GLOBAL GREEN VISA PROJECT

SUMMATIVE GROUP 7
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Samuel Wanza

Global_green_visa_holders

holder_ID first_name last_name	passport_no	email	Passport expiry
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Participating Countries

G-20_Nation - boolean(True/False)

Country_ID	Country_name	Region	G-20_Nation
<u>-</u>	I		_

Partners

partner id	organisation	address	years_in_partnership
' -	0		'

Participating_countries_partners

partner id	country ID

GGV_fee_for_participant_countries

GGV fee ID	Country_ID	fee_for_neighbo uring	fee for non-G-20_Natio
			n

Payment_details

QR_code - in the form of a URL

Preferred_investment(eg megafauna,bioconservation,watershed protection etc)

payment _ID	GGV_fee _ID	holder_I D	amount_ paid	QR_code	_investm	l ' . '	expiry_da te
					ent		

Escrow_account

Each country will have its own escrow account. This table assigns an ID for each country's escrow account

Escrow_account_transaction

Payment from the user goes into the country's specific escrow account. This table keeps track of the payments into each of the escrow accounts. If one wants to know, for instance, the transactions into Kenya's escrow account, they will find the escrow_ID for Kenya, then filter this table to have records with escrow_ID for Kenya.

Transaction_id	payment_ID	escrow_ID

Customer_travel_history

cth_ID	payment_ID	arrival_date	departure_date
1	4		4

National_manager

manager country_ GGV_F ID chases or_country_	f Visitorsd	g_visit GGV_visit ss_per_vi sa	revenue_ per_year	Total Bond Revenue Expendit ures (per week month year)
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manager ID first_name last_name email_address country_ID
--

Beneficiaries

Beneficiary type could be NGO, etc

Trustfund_ID helps to know which country's trustfund they received money from

Bond

bond_ID	country_ID	face_value	maturity_p	start_date	end_date	coupon_ra
			eriod			te

Investor_bond_buyer

An investore could be a person or organization

investor_I	organizatio	first_name	last_name	address	passport_	country_of
D	n				no	_origin

Trust_fund_country

Each country will have it's own trust fund monitored by its board of directors. This table assigns an ID to each country's trust fund

Trust fund ID	country ID
) <u> </u>

Investment_ purchase - Trust_fund(country specific) - connects investor and Bond

investment_I	Trust_fund_I	investor_ID	bond_ID	date_purchas	amount_rece
<u>D</u>	D			ed	ived

auditors_identification

Auditors for countries

Conservation_results_report - URL - Assumes only the most recent report will be stored

auditor ID	country_ID	conservation_results	escrow_ID
		_report	

Directors

director_ID first_name last_name	passport _no	_	ı .	email_addr ess
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Trust_fund_a_board_manages

board_ID	Trust_fund_ID
I — — —	

Board_a_director_belongs_to

BD ID	board ID	director ID

Advisor

advisor_ID	First_nam	Last_name	Field_of	years_of_e	passport_	email_add
	е		specializati	xperience	no	ress
			on			

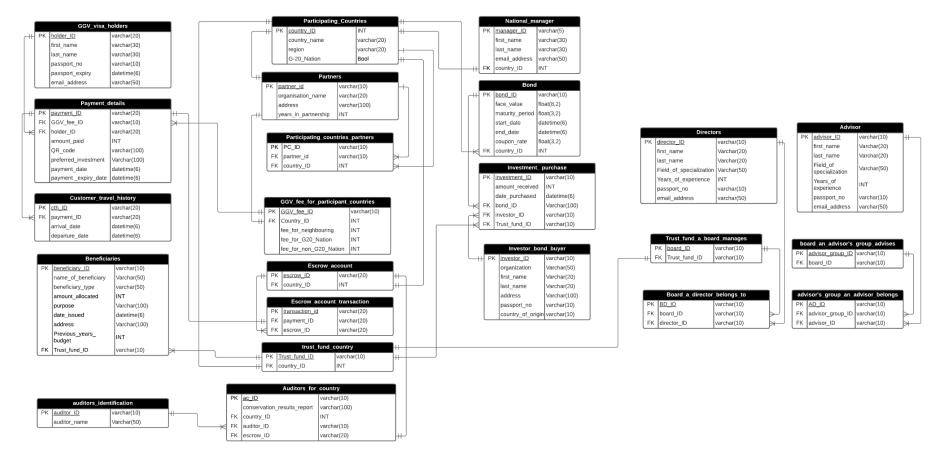
board_an_advisor's_group_advises

advisor group ID	board_ID
· · · · · · · · · · · · · · · · · · ·	_

advisor's_group_an_advisor_belongs

AD_ID	advisor_group_ID	advisor_ID
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Global Green Visa ERD:



Link to image: https://drive.google.com/file/d/1QqIvdkAE2ZCZgyGoLnTEYYGA8OpVeJPX/view?usp=sharing

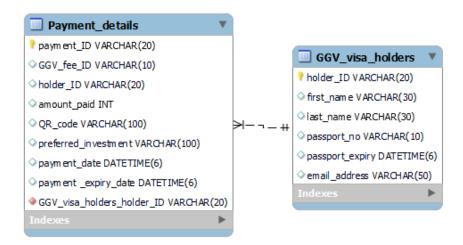
The Individual Relationships of our database is as the following: -

NO	Entity 01	Entity 02	Relation type		
1	GGV_visa_holders	Payment_details	one to many relationship		
2	Payment_details	Customer_travel_history	one to many relationship		
3	Payment_details	Escrow_account_transaction	one to one relationship		
4	GGV_fee_for_participant_cou Payment_details ntries		one to many relationship		
5	trust_fund_country	Beneficiaries	one to many relationship		
6	auditors_identification	Auditors_for_country	one to many relationship		
7	Escrow_account	Auditors_for_country	one to one relationship		
8	trust_fund_country	Investment_purchase	one to many relationship		
9	trust_fund_country	Trust_fund_a_board_manages	one to one relationship		
10	Escrow_account	Escrow_account_transaction	one to many relationship		
11	GGV_fee_for_participant_cou ntries	Partners	one to one relationship		
12	Participating_Countries	Partners	one to one relationship		
13	Participating_Countries	National_manager	one to one relationship		
14	Participating_Countries	Bond	one to many		

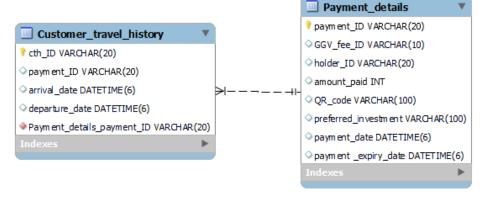
			relationship
15	Bond	Investment_purchase	one to many relationship
16	Investor_bond_buyer	Investment_purchase	one to many relationship
17	Participating_Countries	Partners	Many to many Relationship
18	Advisor	board_an_advisor's_group_ad vises	Many to many Relationship
19	Directors	Trust_fund_a_board_manages	Many to many Relationship

ER Diagrams of the relations by number is as the following:

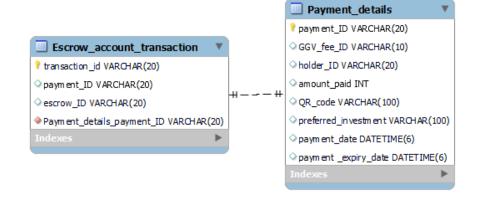
Relation 01:



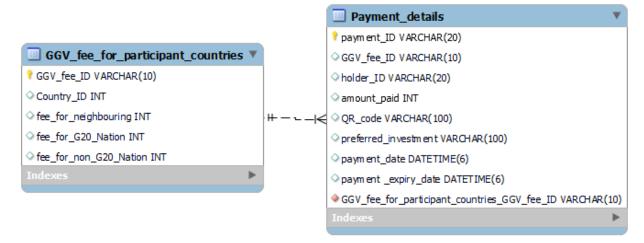
Relation 02:



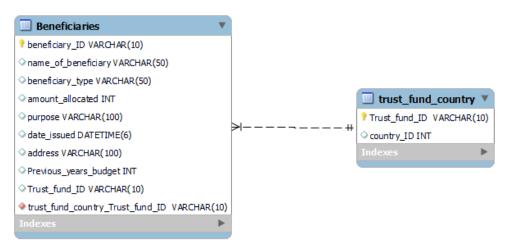
Relation 03:



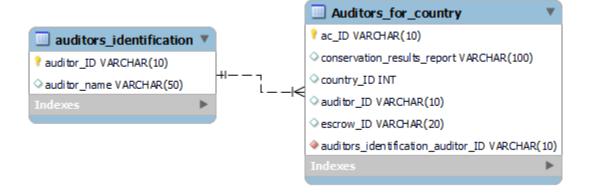
Relation 04:



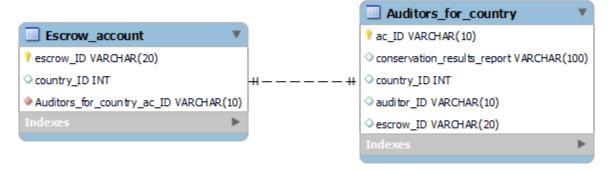
Relation 05:



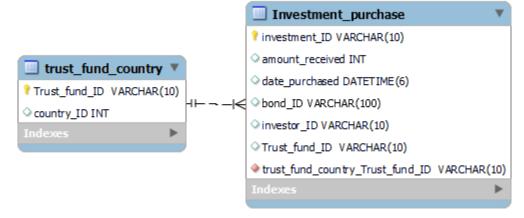
Relation 06:



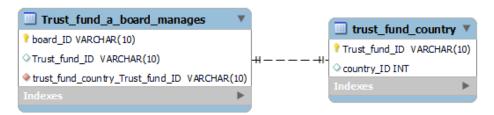
Relation 07:



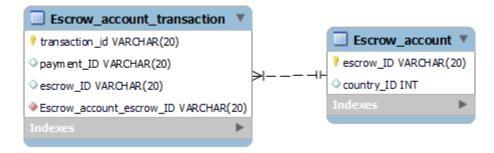
Relation 08:



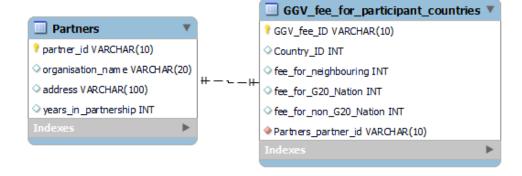
Relation 09:



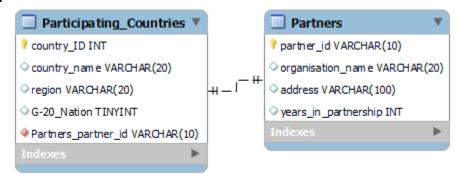
Relation 10:



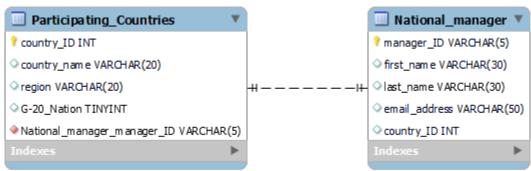
Relation 11:



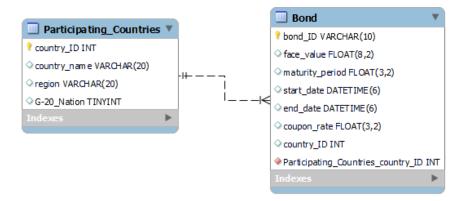
Relation 12:



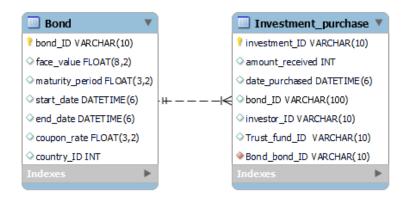
Relation 13:



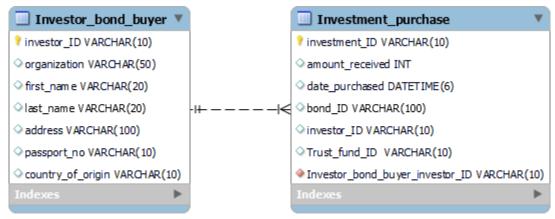
Relation 14:



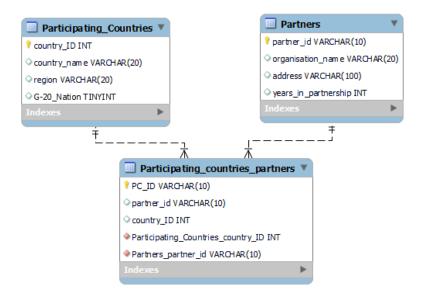
Relation 15:



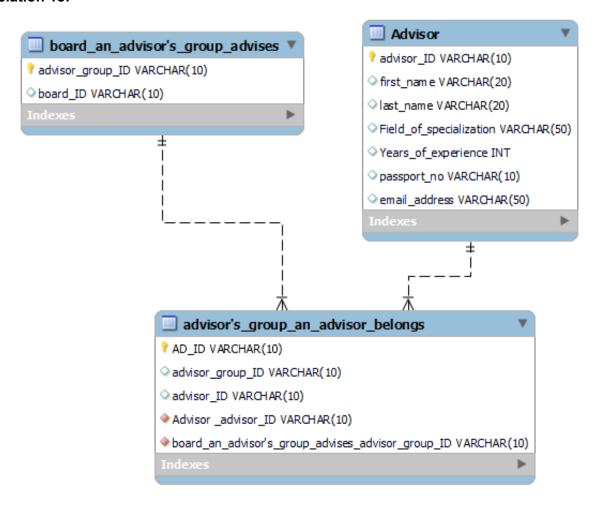
Relation 16:



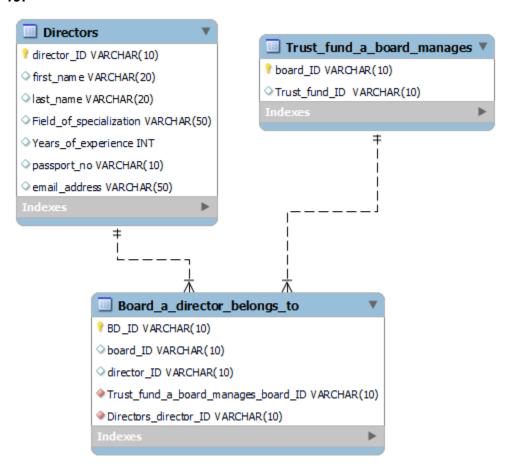
Relation 17:



Relation 18:



Relation 19:



THE SQL CODE ..

You can find a complete version of the sql code here at that DOC

```
CREATE DATABASE GLOBAL_GREEN_VISA; USE GLOBAL_GREEN_VISA;
```

```
CREATE TABLE `GGV_visa_holders` (
holder_ID varchar(20) NOT NULL,
first_name varchar(30),
last_name varchar(30),
passport_no varchar(10),
```

```
passport_expiry datetime(6),
 email_address varchar(50),
 PRIMARY KEY (holder_ID)
);
CREATE TABLE Participating_Countries (
country_ID INT NOT NULL,
country_name varchar(20),
region varchar(20),
G_20_Nation BOOLEAN,
PRIMARY KEY (`country_ID`)
);
CREATE TABLE Partners (
 partner id varchar(10) NOT NULL,
organisation_name varchar(20),
 address varchar(100),
years_in_partnership INT,
 PRIMARY KEY (partner_id)
);
CREATE TABLE Participating_countries_partners (
 PC_ID varchar(10) NOT NULL,
 partner_id varchar(10),
country_ID INT,
 PRIMARY KEY (PC_ID),
 CONSTRAINT PC_FK FOREIGN KEY(partner_id) REFERENCES Partners(partner_id),
 CONSTRAINT PC_FK1 FOREIGN KEY(country_ID) REFERENCES
Participating Countries(country ID)
);
CREATE TABLE GGV_fee_for_participant_countries (
 GGV_fee_ID varchar(10) NOT NULL,
Country_ID INT,
fee_for_neighbouring INT,
fee_for_G20_Nation INT,
fee_for_non_G20_Nation INT,
 PRIMARY KEY (GGV_fee_ID),
```

```
CONSTRAINT FK FOREIGN KEY(country_ID) REFERENCES
Participating_Countries(country_ID)
);
CREATE TABLE Payment_details (
 payment_ID varchar(20) NOT NULL,
GGV_fee_ID varchar(10),
holder_ID varchar(20),
amount_paid INT,
 QR_code varchar(100),
 preferred_investment Varchar(100),
 payment_date datetime(6),
 payment_expiry_date datetime(6),
 PRIMARY KEY (payment_ID),
 CONSTRAINT PD_FK FOREIGN KEY(GGV_fee_ID) REFERENCES
GGV_fee_for_participant_countries(GGV_fee_ID),
 CONSTRAINT PD_FK1 FOREIGN KEY(holder_ID) REFERENCES
`GGV_visa_holders`(holder_ID)
);
CREATE TABLE Escrow_account (
escrow_ID varchar(20) NOT NULL,
country_ID INT,
 PRIMARY KEY (escrow ID),
 CONSTRAINT EA_FK FOREIGN KEY(country_ID) REFERENCES
Participating_Countries(country_ID)
);
CREATE TABLE Escrow_account_transaction (
transaction_id varchar(20) NOT NULL,
 payment_ID varchar(20),
escrow_ID varchar(20),
 PRIMARY KEY (transaction_id),
 CONSTRAINT ET_FK FOREIGN KEY(escrow_ID) REFERENCES Escrow_account(escrow_ID),
 CONSTRAINT ET_FK1 FOREIGN KEY(payment_ID) REFERENCES
Payment_details(payment_ID)
```

```
);
CREATE TABLE Customer_travel_history (
cth_ID varchar(20) NOT NULL,
 payment_ID varchar(20),
arrival_date datetime(6),
departure_date datetime(6),
 PRIMARY KEY (cth_ID),
CONSTRAINT CT_FK FOREIGN KEY(payment_ID) REFERENCES
Payment_details(payment_ID)
);
CREATE TABLE National_manager (
 manager_ID varchar(5),
first name varchar(30),
last name varchar(30),
email_address varchar(50),
country_ID INT,
PRIMARY KEY (manager_ID),
CONSTRAINT NM_FK FOREIGN KEY(country_ID) REFERENCES
Participating_Countries(country_ID)
);
CREATE TABLE trust_fund_country (
Trust_fund_ID varchar(10) NOT NULL,
country_ID INT,
PRIMARY KEY (Trust_fund_ID),
CONSTRAINT TC_FK FOREIGN KEY(country_ID) REFERENCES
Participating_Countries(country_ID)
);
CREATE TABLE Beneficiaries (
 beneficiary_ID varchar(10) NOT NULL,
 name_of_beneficiary Varchar(50),
 beneficiary_type varchar(50),
 amount_allocated INT,
```

```
purpose Varchar(100),
 date_issued datetime(6),
 address Varchar(100),
 Previous_years_budget INT,
 Trust_fund_ID varchar(10),
 PRIMARY KEY (beneficiary_ID),
 CONSTRAINT BC_FK FOREIGN KEY(Trust_fund_ID) REFERENCES
trust_fund_country(Trust_fund_ID)
);
CREATE TABLE Bond (
 bond ID varchar(10),
 face_value float(8,2),
 maturity_period float(3,2),
 start_date datetime(6),
 end date datetime(6),
 coupon_rate float(3,2),
 country_ID INT,
 PRIMARY KEY (bond_ID),
 CONSTRAINT B_FK FOREIGN KEY(country_ID) REFERENCES
Participating_Countries(country_ID)
);
CREATE TABLE Investor_bond_buyer(
 investor_ID varchar(10),
 organization Varchar(50),
 first_name Varchar(20),
 last name Varchar(20),
 address Varchar(100),
 passport_no varchar(10),
 country_of_origin varchar(10),
 PRIMARY KEY (investor_ID)
);
CREATE TABLE Investment_purchase (
 investment_ID varchar(10) not null,
 amount_received INT,
 date_purchased datetime(6),
 bond_ID Varchar(100),
```

```
investor_ID varchar(10),
 Trust_fund_ID varchar(10),
 PRIMARY KEY (investment ID),
 CONSTRAINT IP FK FOREIGN KEY(bond ID) REFERENCES Bond(bond ID),
 CONSTRAINT IP_FK1 FOREIGN KEY(investor_ID) REFERENCES
Investor_bond_buyer(investor_ID),
CONSTRAINT IP_FK2 FOREIGN KEY(Trust_fund_ID) REFERENCES
trust_fund_country(Trust_fund_ID)
);
CREATE TABLE auditors identification (
 auditor ID varchar(10) NOT NULL,
auditor_name Varchar(50),
PRIMARY KEY (auditor_ID)
);
CREATE TABLE Auditors for country (
 ac_ID varchar(10) NOT NULL,
conservation_results_report varchar(100),
country_ID INT,
 auditor_ID varchar(10),
escrow_ID varchar(20),
 PRIMARY KEY (ac_ID),
 CONSTRAINT AC_FK FOREIGN KEY(country_ID) REFERENCES
Participating Countries(country ID),
 CONSTRAINT AC_FK1 FOREIGN KEY(auditor_ID) REFERENCES
auditors identification(auditor ID),
 CONSTRAINT AC FK2 FOREIGN KEY(escrow ID) REFERENCES Escrow account(escrow ID)
);
CREATE TABLE Directors(
 director_ID varchar(10),
first_name Varchar(20),
last_name Varchar(20),
 Field_of_specialization Varchar(50),
Years_of_experience INT,
 passport_no varchar(10),
```

```
email_address varchar(50),
 PRIMARY KEY (director_ID)
);
 CREATE TABLE Trust_fund_a_board_manages (
 board_ID varchar(10),
 Trust_fund_ID varchar(10),
 PRIMARY KEY (board_ID),
 CONSTRAINT TM_FK FOREIGN KEY(Trust_fund_ID) REFERENCES
trust_fund_country(Trust_fund_ID)
);
CREATE TABLE Board_a_director_belongs_to (
 BD ID varchar(10),
 board ID varchar(10),
 director ID varchar(10),
 PRIMARY KEY (BD ID),
 CONSTRAINT BD_FK FOREIGN KEY(board_ID) REFERENCES
Trust_fund_a_board_manages(board_ID),
 CONSTRAINT BD_FK1 FOREIGN KEY(director_ID) REFERENCES Directors(director_ID)
);
CREATE TABLE Advisor (
 advisor_ID varchar(10),
first name Varchar(20),
last_name Varchar(20),
 Field of specialization Varchar(50),
Years of experience INT,
 passport_no varchar(10),
email address varchar(50),
 PRIMARY KEY (advisor_ID)
);
CREATE TABLE `board_an_advisor's_group_advises` (
 advisor_group_ID varchar(10),
 board_ID varchar(10),
 PRIMARY KEY (advisor_group_ID),
```

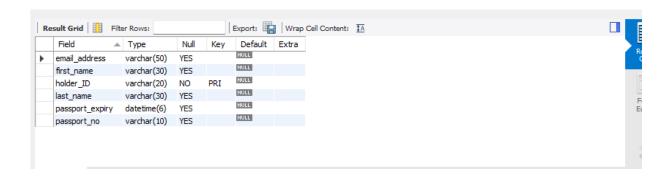
```
CONSTRAINT BA_FK FOREIGN KEY(board_ID) REFERENCES

Trust_fund_a_board_manages(board_ID)
);

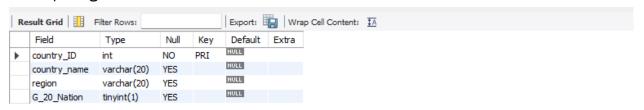
CREATE TABLE `advisor's_group_an_advisor_belongs` (
    AD_ID varchar(10),
    advisor_group_ID varchar(10),
    advisor_ID varchar(10),
    PRIMARY KEY (AD_ID),
    CONSTRAINT AA_FK FOREIGN KEY(advisor_group_ID) REFERENCES
`board_an_advisor's_group_advises` (advisor_group_ID),
    CONSTRAINT AA_FK1 FOREIGN KEY(advisor_ID) REFERENCES Advisor(advisor_ID)
);
```

GENERATED TABLES

Global green visa holders



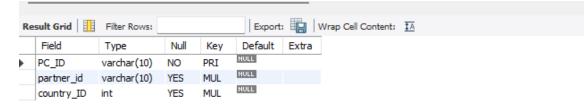
Participating countries



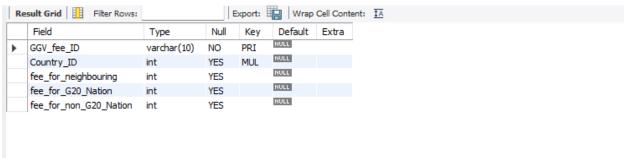
Partners



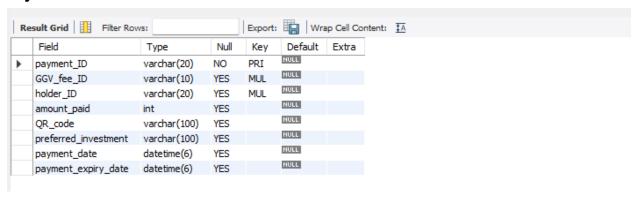
Participating_countries partners



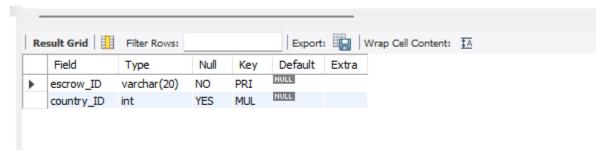
GGV_ fee_for_participant_countries



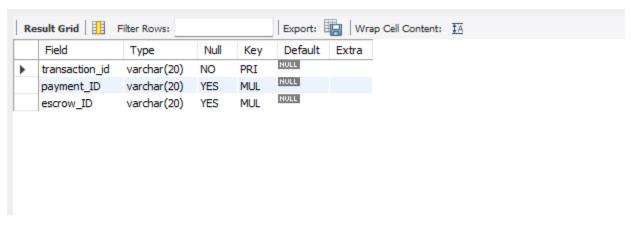
Payment details



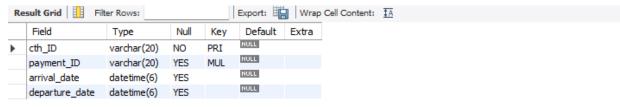
Escrow_account



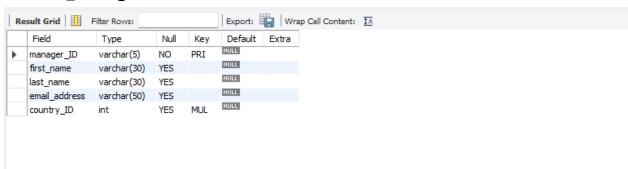
Escrow_account transaction



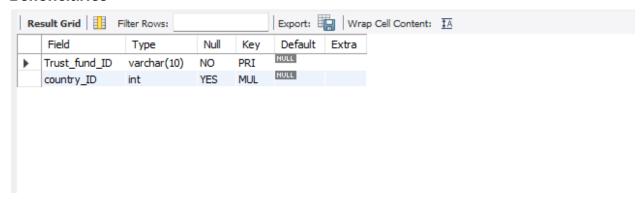
Customer_travel_history



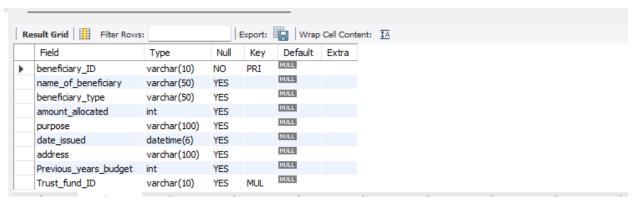
National_manager



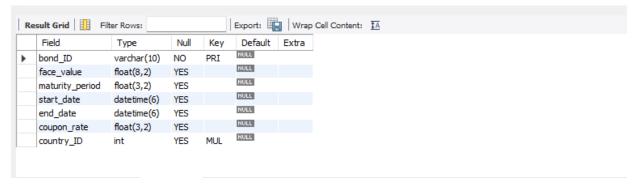
Beneficiaries



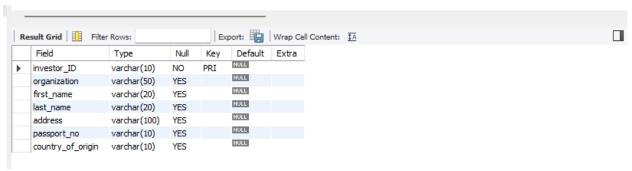
Bond



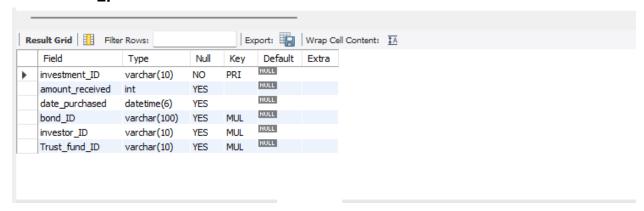
Investor_bond_buyer



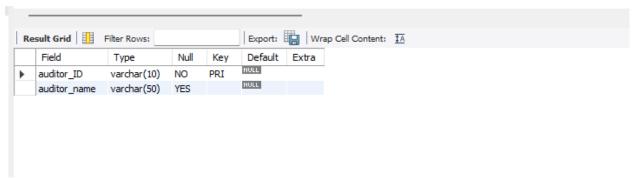
Trust_fund_country



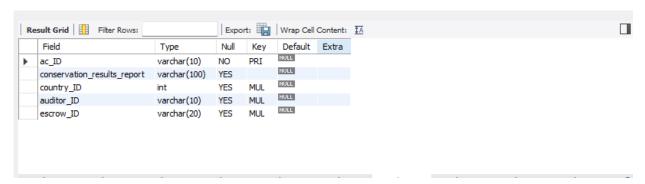
Investment_purchase



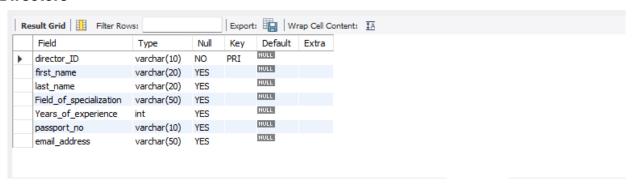
Auditor_identification



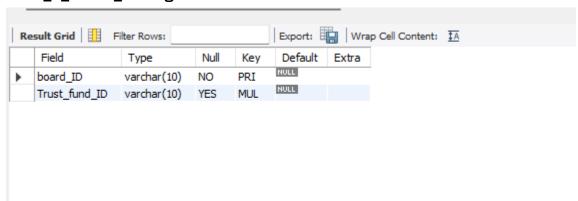
Auditor_for_countries



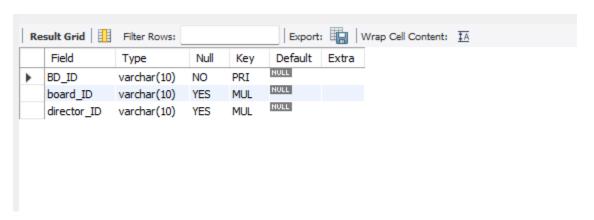
Directors



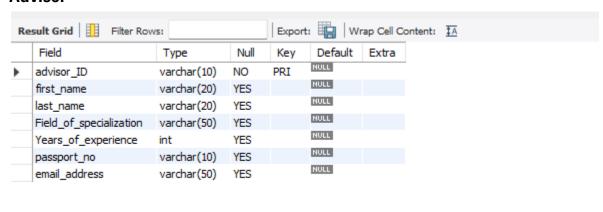
Trust_a_board_manages



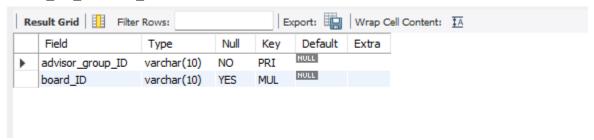
Board_a_director_belongs_to



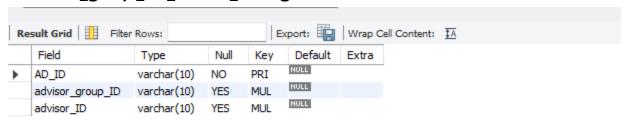
Advisor



Board_an_advisor_advises



Advisor's _group _an _advisor_belongs



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