TAXESCOLLECTION DB

General Description

Pablo Mombrú

Content

TaxesCollection DB – General Description

Entities, attributes and constraints

Based on customer's requirements, following entities/tables have been identified in order to fulfill the information needs.

Taxpayer

Who pays the taxes.

Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
taxpayer_id	Unique ID of the tax payer	Serial	Yes	Yes	No	taxpayer_pkey	No
type	Tax payer type	Varchar	Yes	No	No	Must be "I" for Individual or "C" for Company (CHK_Type)	No
email	Email address of the tax payer	Varchar	Yes	No	No	It must fulfill the rules for email format (CHK_Email)	No
created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

Individual

Person who pays the taxes. All individuals are current or potential tax payers. Individuals are also owners of one or more companies.

Entity	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Individual	taxpayer_id	Unique ID of the individual	Integer	Yes	Yes	Taxpayer	individual_pkey individual_taxpayer_id_fkey	No
Individual	doc_number	Document number of the individual	Varchar	Yes	No	No	No	No
Individual	first_name	First name of the individual	Varchar	Yes	No	No	No	No
Individual	last_name	Last name of the individual	Varchar	Yes	No	No	No	No
Individual	date_of_birth	Birth date of the individual	Date	Yes	No	No	Must not be after current date (CHK_Date_Of_Birth)	No
Individual	home_address	Address of the individual	Varchar	Yes	No	No	No	No
Individual	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Individual	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

TaxesCollection DB – General Description

Company

Enterprise that pays the taxes. All companies are tax payers. Companies are owned by individuals.

Entity	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Company	taxpayer_id	Unique ID of the company	Integer	Yes	Yes	Taxpayer	company_pkey company_taxpayer_id_fkey	No
Company	cuit_number	Company's CUIT number	Varchar	Yes	No	No	Must be unique (company_cuit_number_key)	No
Company	comencement_date	Company's operations starting date	Date	Yes	No	No	Must not be after current date time (CHK_Comencement_Date)	No
Company	website	Company's website	Varchar	No	No	No	No	No
Company	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Company	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

Own_Rel

Ownership relationships between individuals and companies. The relationship Individual_Id/Company_id must be unique (implemented by unique index **own_rel_u_1**)

Entity/Table	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Own_Rel	rel_id	Relationship's unique ID	Serial	Yes	Yes	No	own_rel_pkey	No
Own_Rel	individual_id	Individual's unique ID	Integer	Yes	No	Individual	own_rel_individual_id_fkey	No
Own_Rel	company_id	Company's unique ID	Integer	Yes	No	Company	own_rel_company_id_fkey	No
Own_Rel	start_date	Relationship's start date	Date Time	Yes	No	No	Must not be after current date time (CHK_Start_Date)	Current Datetime
Own_Rel	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Own_Rel	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

Agency

Office where the taxpayers pay taxes.

Entity	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Agency	agency_id	Agency's unique ID	Serial	Yes	Yes	No	agency_pkey	No
Agency	number	Agency's number	Varchar	Yes	No	No	Must be unique (agency_number_key)	No
Agency	address	Agency's address	Varchar	Yes	No	No	No	No
Agency	person_in_charge	Agency's responsable	Varchar	Yes	No	No	No	No
Agency	number_of_emp	Agency's employees quantity	Integer	Yes	No	No	No	No
Agency	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Agency	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

Tax_Payment

Payments done by a taxpayer (individual or company) to an agency. Payments must be unique by Agency_ID, Taxpayer_ID, Payment_Date and Tax_Type_ID (implemented by unique index **tax_payment_u_1**)

Entity	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Tax_Payment	payment_id	Payment's unique ID	Serial	Yes	Yes	No	tax_payment_pkey	No
Tax_Payment	agency_id	Payment's agency ID	Integer	Yes	No	Agency	tax_payment_agency_id_fkey	No
Tax_Payment	taxpayer_id	Payment's taxpayer ID	Integer	Yes	No	Taxpayer	tax_payment_taxpayer_id_fkey	No
Tax_Payment	amount	Payment's amount	numeric	Yes	No	No	Must be positive (CHK_Amount)	No
Tax_Payment	payment_date	Payment's date	Date Time	Yes	No	No	Must not be after current date time (CHK_Payment_Date)	Current Datetime
Tax_Payment	tax_type_id	Payment's tax type ID	Integer	Yes	No	Tax_Type	tax_payment_tax_type_id_fkey	No
Tax_Payment	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Tax_Payment	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

TaxesCollection DB – General Description

Tax_Type

Types of tax. The type description must be unique (implemented by constraint **tax_type_type_key**)

Entity	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Tax_Type	tax_type_id	Tax type's unique ID	Serial	Yes	Yes	No	tax_type_pkey	No
Tax_Type	type	Tax type's description	Varchar	Yes	No	No	Must be unique (tax_type_type_key)	No
Tax_Type	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Tax_Type	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

Phone_Type

Types of phone. The type description must be unique (implemented by constraint **phone_type_type_key**)

Entity	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Phone_Type	phone_type_id	Phone type's unique ID	Serial	Yes	Yes	No	phone_type_pkey	No
Phone_Type	type	Phone type's description	Varchar	Yes	No	No	Must be unique (phone_type_type_key)	No
Phone_Type	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Phone_Type	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

Taxpayer_Phone_Number

Taxpayer's phone numbers. The relationship taxpayer_id/pone_number must be unique
(implemented by the unique index **taxpayer_phone_number_u_1**)

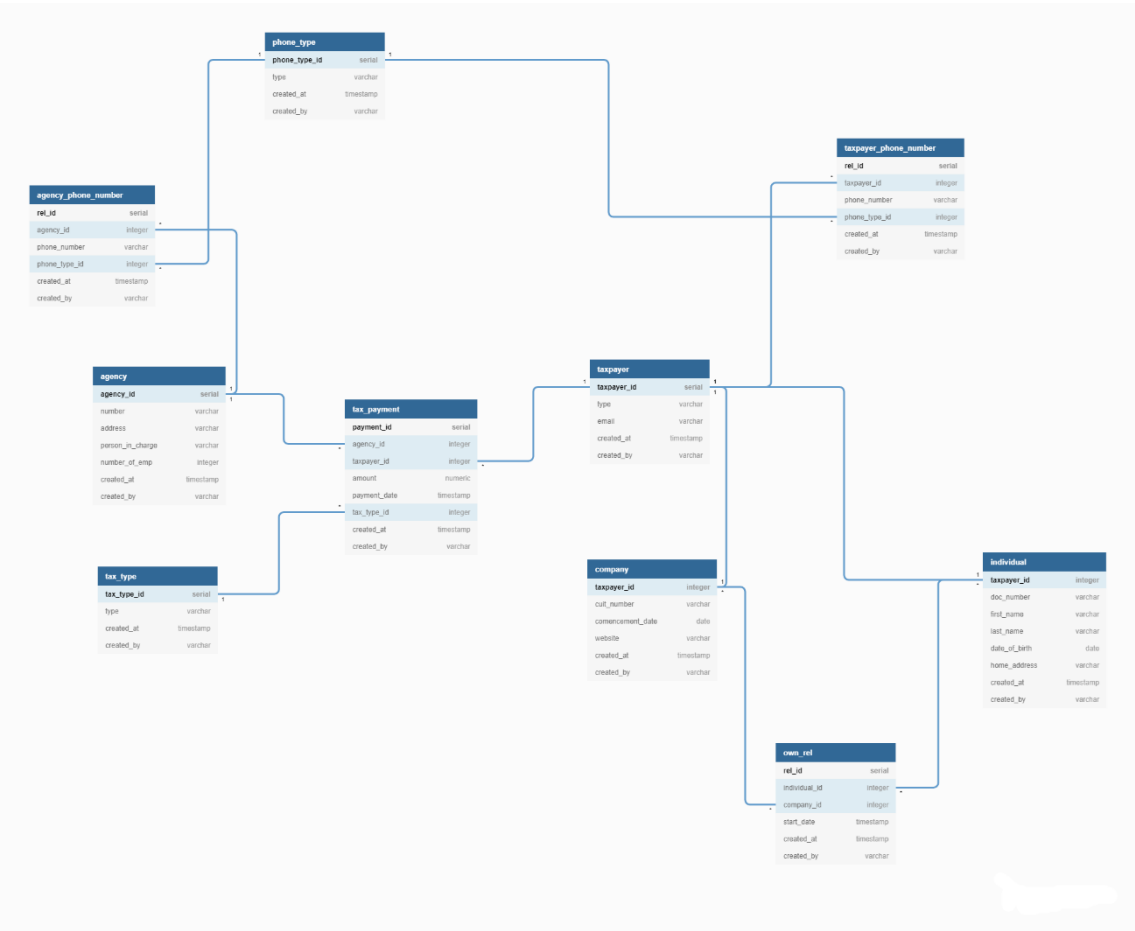| Entity	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Taxpayer_Phone_Number	rel_id	Relationship's unique ID	Serial	Yes	Yes	No	taxpayer_phone_number_pkey	No
Taxpayer_Phone_Number	taxpayer_id	Taxpayer's unique ID	Integer	Yes	No	Taxpayer	taxpayer_phone_number_taxpayer_id_fkey	No
Taxpayer_Phone_Number	phone_number	Phone number	Varchar	Yes	No	No	No	No
Taxpayer_Phone_Number	phone_type_id	Phone type unique id	Integer	Yes	No	Phone_Type	taxpayer_phone_number_phone_type_id_fkey	No
Taxpayer_Phone_Number	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Taxpayer_Phone_Number	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

Agency_Phone_Number

Agency's phone numbers. The relationship agency_id/pone_number must be unique
(implemented by the unique index **agency_phone_number_u_1**)

Entity	Atributes	Description	Type	Required?	Primary Key?	Foreign Key?	Constraint	Default
Agency_Phone_Number	rel_id	Relationship's unique ID	Serial	Yes	Yes	No	agency_phone_number_pkey	No
Agency_Phone_Number	agency_id	Agency's unique ID	Integer	Yes	No	Agency	agency_phone_number_agency_id_fkey	No
Agency_Phone_Number	phone_number	Phone number	Varchar	Yes	No	No	No	No
Agency_Phone_Number	phone_type_id	Phone type unique id	Integer	Yes	No	Phone_Type	agency_phone_number_phone_type_id_fkey	No
Agency_Phone_Number	created_at	Date of record creation	Date Time	Yes	No	No	Must not be after current date time (CHK_Created_At)	Current Datetime
Agency_Phone_Number	created_by	User login that created the record	Varchar	Yes	No	No	No	Current User

TaxesCollection DB – General Description

Entity Relationship Diagram (ERD)

The figure below shows the ERD for the DataCollection Database

For additional information, please see the link indicated below.

TaxesCollection DB Data Dictionary

Database Interactions

Functions have been created in TaxesCollection DB that can be used to obtain following information

How much tax did certain taxpayer pay per month.

The function ***totaltaxpermonth*** has been created in order to return the information.

Input Parameters

- **Taxpayer Id**: The id of the taxpayer whose total amount per month has to be calculated.

Function Output

A table that includes following columns:

- **Tax Amount**: Total amount payed by a taxpayer whose id has been received as input parameter. This amount is totalized by year and month.
- **Year**: The year for which the total amount has been calculated.
- **Month**: The month of the year, for which the total amount has been calculated.

Total tax paid for all companies person is owner or co-owner of.

The function ***ownedcompaniestaxpayed*** has been created in order to return the information.

Input Parameters

- **Individual Id**: The id of the individual that owns the companies whose total amount payed has to be calculated.

Function Output

A table that includes following columns:

- **Amount**: Total amount payed by all the companies owned by the individual whose id has been received as input parameter.