DataBase ultimate project

Database model documentation

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1. Model details

Model name:

DataBase ultimate project

Version:

2.3

Database engine:

mysql

Description:

The goal of this project is to model all services consumption that an enterprise or a house could do all over the year. It is going to be useful for service providers, to realize how much their users are spending and to have all that data under control.

2. Tables

2.1. Table Bill

Description:

Table that contains all services registers.

2.1.1. Columns

Column name	Type	Properties	Description
id_payment	varchar(30)		Identification to recognize what the Organization has to pay and how much.
bill_total_cost	double(10,10)		Total cost of all services.
consumption_days	int		Days that services have been borrowed since the last bill and have to be paid by the Organization.
month	int		1- 12 Current bill's month.
Organization_contract	varchar(10)		Organization where services are being borrowed.
Enterprise_id_enterprise	varchar(20)		Enterprise that lends services.
Telephony_id_telephony	varchar(30)	null	Telephony service that was borrowed.
Television_id_tv	varchar(30)	null	TV service that was borrowed.
Internet_id_internet	varchar(30)	null	Internet service that was borrowed.
Energy_id_energy	varchar(30)	null	Energy service that was borrowed.
Aqueduct_id_aqueduct	varchar(30)	null	Aqueduct service that was borrowed.
Sewerage_id_sewerage	varchar(30)	null	Sewerage service that was borrowed.
Gas_id_gas	varchar(30)	null	Gas service that was borrowed.

2.2. Table Enterprise

Description:

Enterprise that borrows services.

2.2.1. Columns

Column name	Type	Properties	Description
id_enterprise	varchar(20)		Identification of the Enterprise.
name	varchar(30)	null	An enterprise that borrows services could have or not a name. Anyhow, it can be identified by its id.
colldate	date		Collection date is when the service provider enterprise gathers the money that Organizations have to pay for all the services they have lent.

2.3. Table Organization

Description:

Organization or House that lends services.

2.3.1. Columns

Column name	Type	Properties	Description
contract	varchar(10)		Contract which that organization has with the service provider enterprise. Enterprise and Organization are related by the bill.
address	varchar(30)		Address is the Organization localization, where services are being borrowed.
activity	varchar(30)	null	What the Organization does. It means that an Organization can be an enterprise or a house. That's why it can be null.

2.4. Table Energy

2.4.1. Columns

Column name	Type	Properties	Description
id_energy	varchar(30)		Energy service that was borrowed.
cost_month	varchar(30)		Cost of the energy that specifically month.
benefit	double(10,10)		Discount that the enterprise applies to the cost of the month.
consumption_KWH	int		Quantity of KWH the Organization spent in that month.
unitary_cost	double(10,10)		Cost per KWH in the current month.
Const_energy_id_const_energy	varchar(30)		Identifier from cost_energy where the Organization can realize fixed charge.

2.5. Table Const_energy

2.5.1. Columns

Column name	Type	Properties	Description
id_const_energy	varchar(30)		Constant cost of the energy service that was borrowed.
fixed_charge	double(10,10)		Fixed cost of the energy.

2.6. Table Const_aqueduct

2.6.1. Columns

Column name	Type	Properties	Description
id_const_aqueduct	varchar(30)		Constant cost of the aqueduct service that was borrowed.
fixed_charge	double(10,10)		Fixed cost of the aqueduct.

2.7. Table Const_sewerage

2.7.1. Columns

Column name	Type	Properties	Description
id_const_sewerage	varchar(30)		Constant cost of the sewerage service that was borrowed.
fixed_charge	double(10,10)		Fixed cost of the sewerage.

2.8. Table Const_gas

2.8.1. Columns

Column name	Type	Properties	Description
id_const_gas	varchar(30)		Constant cost of the gas service that was borrowed.
fixed_charge	double(10,10)		Fixed cost of the gas.
cosumption_factor	double(10,10)		Constant factor of the gas consumption.

2.9. Table Aqueduct

2.9.1. Columns

Column name	Type	Properties	Description
id_aqueduct	varchar(30)		Aqueduct service that was borrowed.
cost_month	varchar(30)		Cost of the aqueduct that specifically month.
benefit	double(10,10)		Discount that the enterprise applies to the cost of the month.
consumption_M3	int		Quantity of m3 the Organization spent in that month.
unitary_cost	double(10,10)		Cost per m3 in the current month.
Const_aqueduct_id_const_aqueduct	varchar(30)		Identifier from cost_aqueduct where the Organization can realize fixed charge.

2.10. Table Sewerage

2.10.1. Columns

Column name	Type	Properties	Description
id_sewerage	varchar(30)		Sewerage service that was borrowed.
cost_month	varchar(30)		Cost of the sewerage that specifically month.
benefit	double(10,10)		Discount that the enterprise applies to the cost of the month.
consumption_M3	int		Quantity of m3 the Organization spent in that month.
unitary_cost	double(10,10)		Cost per m3 in the current month.
Const_sewerage_id_const_sewerage	varchar(30)		Identifier from cost_sewerage where the Organization can realize fixed charge.

2.11. Table Gas

2.11.1. Columns

Column name	Type	Properties	Description
id_gas	varchar(30)		Gas service that was borrowed.
cost_month	varchar(30)		Cost of the gas that specifically month.
benefit	double(10,10)		Discount that the enterprise applies to the cost of the month.
equivalence_KWH	int		Equivalence of spent gas in m3 to KWH.
consumption_M3	double(10,10)		Quantity of m3 the Organization spent in that month.
diference_M3	int		Difference of spent gas between actual and last month.
unitary_cost	double(10,10)		Cost per m3 in the current month.

Const_gas_id_const_gas	varchar(30)		Identifier from cost_gas where the Organization can realize fixed charge.

2.12. Table Telephony

2.12.1. Columns

Column name	Type	Properties	Description
id_telephony	varchar(30)		Telephony service that was borrowed.
minutes	int		Spent minutes in the month.
cost_month	int		Cost of the telephony that specifically month.

2.13. Table Television

2.13.1. Columns

Column name	Type	Properties	Description
id_tv	varchar(30)		TV service that was borrowed.
chanels	int		Required channels by the Organization.
cost_month	int		Cost of the TV that specifically month.

2.14. Table Internet

2.14.1. Columns

Column name	Type	Properties	Description
id_internet	varchar(30)		Internet service that was borrowed.
speed_MBS	int		Speed of the internet in MB per second.
cost_month	int		Cost of the internet that specifically month.

3. References

3.1. Reference Bill_Organization

Organization	1..*	Bill
contract	<->	Organization_contract

3.2. Reference Bill_Enterprise

Enterprise	1..*	Bill
id_enterprise	<->	Enterprise_id_enterprise

3.3. Reference Energy_Const_energy

Const_energy	1..*	Energy
id_const_energy	<->	Const_energy_id_const_energy

3.4. Reference Aqueduct_Const_aqueduct

Const_aqueduct	1..*	Aqueduct
id_const_aqueduct	<->	Const_aqueduct_id_const_aqueduct

3.5. Reference Sewerage_Const_sewerage

Const_sewerage	1..*	Sewerage
id_const_sewerage	<->	Const_sewerage_id_const_sewerage

3.6. Reference Gas_Const_gas

Const_gas	1..*	Gas
id_const_gas	<->	Const_gas_id_const_gas

3.7. Reference Bill_Telephony

Telephony	1..1	Bill
id_telephony	<->	Telephony_id_telephony

3.8. Reference Bill_Television

Television	1..1	Bill
id_tv	<->	Television_id_tv

3.9. Reference Bill_Internet

Internet	1..1	Bill
id_internet	<->	Internet_id_internet

3.10. Reference Bill_Energy

Energy	1..1	Bill
id_energy	<->	Energy_id_energy

3.11. Reference Bill_Aqueduct

Aqueduct	1..1	Bill
id_aqueduct	<->	Aqueduct_id_aqueduct

3.12. Reference Bill_Sewerage

Sewerage	1..1	Bill
id_sewerage	<->	Sewerage_id_sewerage

3.13. Reference Bill_Gas

Gas	1..1	Bill
id_gas	<->	Gas_id_gas