

## E) Datatypes

### 11. Main tables with data types, lengths and data type examples, screen shots, default values and check constraints

#### Main tables with data types:

##### Employees

Column Name	Details	Domain Value Examples
SSN	Char. Fixed length string 13. It is a combination of numbers and a letter which identifies uniquely each employee and it's crucial to each of the employees in order to register in the Social Security. It is the primary key.	070006503592B, 00794582026T, 330878370678B, 149357614005X...
DNI	Char. String of maximum length 9 (8 numbers + 1 letter). It must have a valid value. There cannot be duplicate values in this column.	74814966K, 12697627G,77910028P, 56870341P...
Name	Varchar. Variable size string of maximum length 20. It must have a valid value.	'Fulano', 'Mengano', 'Pedro', 'Luis', 'Pepe', 'Maria Luisa', 'Clementina', 'Maximiliano Hermeregildo'...
Surname	Varchar. Variable size string of maximum length 20. It must have a valid value.	'López', 'Pérez', 'González', 'García', 'arietaleanizbeazcoechea', 'bereziartua'...
City	Varchar. Variable size string of maximum length 50. It must have a valid value.	'Soria', 'Ponferrada', 'Zaragoza', 'Jaca', 'Huesca', 'Peñalba de Santiago', 'Ronda', 'Oviedo'...
Zip	Numeric. Number of maximum 5 digits with no decimals. It must have a valid value.	'33209', '24007', '29001', '34004'...

Street	Varchar. Variable size string of maximum length 50. It must have a valid value.	'Calle Alfonso X El Sabio', 'Avenida del LLano', 'Calle Héroe de Sostoa', 'Avenida de José Ortega y Gasset' ...
Type	Varchar whose value must be either 'Accountmanagers', 'Deliverymans', 'Softwareengineers', 'Securitymans', 'Supportmans' or 'Salesmans'. It can't be null	'Accountmanagers', 'Deliverymans', 'Softwareengineers', 'Securitymans', 'Supportmans', 'Salesmans'.
Allergies	Varchar. Variable String of maximum 20 characters. Can be null, could have no allergies. Multivalued	'Pollen', 'Pet', 'Seafood', 'Milk'...
Diseases	Varchar. Variable String of maximum 2 characters. Can be null, could have no diseases. Multivalued	'Diabetes', 'Sclerosis', 'Crohn', 'Asthma'...
E-mail	Varchar. Variable String of maximum 320 characters (max standard length of a mail address). It can't be null, at least one email has to be stored fir each employee (corporative).  There can be 2 equal emails for instance if a couple share an email and they both work in the store. Multivalued	'PericoFdZ@game.com', 'PericoFdZ@gmail.com', 'luciaGzlez@terra.com', 'AndresGarcia@game.com'...
Phone Number	Numeric. Number of máximo size 9. It can't be null, at least one pone has to be stored. There can be 2 equal phones from different employees, for instance if they live in the same house and the house phone is stored for both. Multivalued	'664892310', '679852139', '985647300', '987634211'...

# Products

Column Name	Details	Domain Value Examples
UPC	999999999999, 222556658744,  346378575346,  478544488677	int
Origing_Country	United_States, Afghanistan, Spain,  Finland,	varchar(15)
Discount	100, 20, 15, 10...	char(3)
Warranty	5, 2, 3, 1....	int
GuideLanguage	Spanish, english, French...	int
Price_PhysicalStore	9999, 2500, 23, 50	int
Price_Online	9999, 2500, 23, 50	int
Day	31, 4, 27, 19	date
Month	12, 10, 4, 6	date
Year	9999, 2018, 2016, 2000	date
Type	peripherals, console, games, films	varchar(8)
SendingTime	getdate(), 26/10/2017, 03/4/2005,  17/03/2018...	date

# Clients

Column Name	Details	Domain Value Examples
ClientID	int: Number with and identity increased in 1	999999999999, 46566443443, 3643634545, 354330008
BirthdayDate	Date	31/12/9999, 23/11/3452,12/12/2019,01/01/2000
DNI	Varchar(9)	58347385F, 23435323A, 32342435G, 34524344S
Gender	Varchar(1)	M, F , O (otro)
Age	int	It can save big values, but this are ages of people: 98, 100, 45, 19
Type	Varchar(11)	PARTNERS, NONPARTNERS
Birthday_Month	date	12, 03, 06, 10.....
Birthday_year	date	1996, 2000, 2015, 2018, 1999....
Birthday_day	date	23, 26, 05, 08, 07, 12.....
Day_Of_Visit	date	23/11/3452,12/12/2019,04/03/2017...
Satisfied	int	Del 1 al 10, nivel de satisfacción
Adult	int	Si es referente a adultos o por defecto a niños

## Screen Shots:

EMPLOYEES *						
	Column Name	Condensed Type	Nullable	Identity	Default Value	Description
🔑	SSN	char(13)	No	<input type="checkbox"/>		Social Security Number
	DNI	char(9)	No	<input type="checkbox"/>		Identification number
	Name	varchar(20)	No	<input type="checkbox"/>		First Name
	Surname	varchar(20)	No	<input type="checkbox"/>		The two Surnames together
	City	varchar(50)	No	<input type="checkbox"/>		Census (birth) city
	Zip	numeric(5, 0)	No	<input type="checkbox"/>		Census (birth) Zip code
	Street	varchar(50)	No	<input type="checkbox"/>		Census (birth) Street
	Type	varchar(17)	No	<input type="checkbox"/>		Category of the employee
	Allergy1	varchar(20)	Yes	<input type="checkbox"/>		If the employee has any
	Allergy2	varchar(20)	Yes	<input type="checkbox"/>		
	Disease1	varchar(20)	Yes	<input type="checkbox"/>		If the employee has any
	Disease2	varchar(20)	Yes	<input type="checkbox"/>		
	CorporativeEmail	varchar(320)	No	<input type="checkbox"/>		Provided by the company
	PersonalEmail	varchar(320)	Yes	<input type="checkbox"/>		Owned by each employee
	PersonalPhoneNumber	numeric(9, 0)	Yes	<input type="checkbox"/>		Owned by each employee
	CompanyPhoneNumber	numeric(9, 0)	No	<input type="checkbox"/>		Provided by the company
				<input type="checkbox"/>		

PRODUCTS						
	Column Name	Condensed Type	Nullable	Identity	Default Value	Description
🔑	UPC	int	No	<input type="checkbox"/>		
	Origing_Cou...	varchar(15)	Yes	<input type="checkbox"/>		
	Discount	char(3)	Yes	<input type="checkbox"/>		
	Warranty	int	Yes	<input type="checkbox"/>	((40))	
	GuideLangua...	int	No	<input type="checkbox"/>		
	Price_Physica...	int	Yes	<input type="checkbox"/>		
	Price_Online	int	Yes	<input type="checkbox"/>		
	Day	date	Yes	<input type="checkbox"/>		
	Month	date	Yes	<input type="checkbox"/>		
	Year	date	Yes	<input type="checkbox"/>		
	Type	varchar(8)	No	<input type="checkbox"/>		
	APID	int	Yes	<input type="checkbox"/>		
	SendingTime	date	Yes	<input type="checkbox"/>	(getdate())	
	ThieveID	int	Yes	<input type="checkbox"/>		
				<input type="checkbox"/>		

CLIENTS *						
	Column Name	Condensed Type	Nullable	Identity	Default Value	Description
💡	Client_ID	int	No	<input type="checkbox"/>		
	Birthday_Date	date	Yes	<input type="checkbox"/>		
	DNI	varchar(9)	No	<input type="checkbox"/>		
	Gender	varchar(1)	Yes	<input type="checkbox"/>	('O')	
	AGE	int	Yes	<input type="checkbox"/>		
	Type	varchar(8)	No	<input type="checkbox"/>		
	Birthday_day	date	No	<input type="checkbox"/>		
	Birthday_month	date	No	<input type="checkbox"/>		
	Birthday_year	date	No	<input type="checkbox"/>		
	Day_Of_Visit	date	Yes	<input type="checkbox"/>		
	Satisfied	int	Yes	<input type="checkbox"/>		
	Adult	int	No	<input type="checkbox"/>		
				<input type="checkbox"/>		

Default values and check constraints:

## Defaults

TABLE NAME	COLUMN NAME	PROPOSED DEFAULT
WORKOFFPERIODS	Reason	default 'No workoffPeriod Registered for this Employee'
WORKOFFPERIODS	TotalDays	default 0
HOLIDAYS	TotalDays	default 0
HOLIDAYS	Season	default 'The Employee Has not booked holidays yet'
ALLERGIES	AllergyType	default 'The Employee has no allergies'
EMPDISEASES	DiseaseName	default 'The Employee has no diseases'
EMPEMAIL	EmailAdress	default 'No registered Emails'
EMPHONE#	PhoneNumber	default 'No registered Phone Numbers'

SUPPORTMANS	LanguageLevel	default 'Not specified'
SECURITYMANS	Weapon	default 'No weapon'
SOFTWAREENGINEERS	NumProgrammingLanguages	default 0
SOFTWAREENGINEERS	UniversityTittle	default ''
ACCOUNTMANAGERS	UniversityTittle	default ''
VEHICLES	FuelType	default 'diesel'
PRODUCTS	Warranty	default 2
PRODUCTS	SendingTime	default getdate()
PACKAGINGS	Colour	default 'BLACK'
PACKAGINGS	Material	default 'PLASTIC'
PACKAGINGS	Type	default 'NORMAL'
CLIENTS	Gender	default 'O'
SUGGESTIONS	Rate	default 5
EVENTS	Price	default 0.0
PARTNERS	Points#	default 0
OFFERS	Percentage	default '00%'
WEBPAGE	Language	default 'ESPAÑOL'
EXPENSES	Description	default 'No description'

## Checks:

TABLE NAME	COLUMN NAME	CHECK CONSTRAINT
SOFTWAREENGINEERS	NumProgrammingLanguages	CHECK(NumProgrammingLanguages > 0 or NumProgrammingLanguages = 0)
EMPLOYEES	Type	CHECK(Type IN('Aa][Cc][Cc][Oo][Uu][Nn][Tt][Mm][Aa][Nn][Aa][Gg][Ee][Rr][Ss]', 'Dd][Ee][Ll][Ii][Vv][Ee][Rr][Yy][Mm][Aa][Nn][Ss]', 'Ss][Oo][Ff][Tt][Ww][Aa][Rr][Ee][Ee][Nn][Gg][Ii][Nn][Ee][Ee][Rr][Ss]', 'Ss][Ee][Cc][Uu][Rr][Ii][Tt][Yy][Mm][Aa][Nn][Ss]', 'S][U][P][P][O][R][T][M][A][N][S]', 'S][A][L][E][S][M][A][N][S]'))

HOLIDAYS	Season	CHECK(Season IN('Ww][li][Nn][Tt][Ee][Rr]', '[Aa][Uu][Tt] [Uu][Mm][Nn]', '[Ss][Pp][Rr][li][Nn][Gg]', '[ Ss][Uu][Mm][Mm][Ee][Rr]'))
ARRIVALPOINTS	Shopping_Centre	Yes or No
PRODUCTS	Month	Check(Month<'13')
PRODUCTS	PriceCheckPhysical	Price_PhysicalStore> 0
PRODUCTS	PriceCheckOnline	Price_Online> 0
PRODUCTS	Year	Check(Year>'2000')
CLIENTS	Gender	CHECK(Gender in ('M', 'F', 'O'))
SUGGESTIONS	Rate	CHECK (Rate > 0 and Rate < 6)
EXPENSES	Paid	CHECK (Paid in (0, 1))