

## Bases de Datos 1

### Laboratorio 05 Triggers

- Fabián Bustos
- Ian Murillo

## Evidencia Laboratorio 5 Triggers

### Ejercicio 1:

#### Person

ejercicio1.sql x ejercicio2.sql x PERSON x					
Columns   Data   Model   Constraints   Grants   Statistics   Triggers   Flashback   Dependencies   Details   Partitions   Indexes   SQL					
Actions...					
COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1 ID_PERSON	NUMBER(6,0)	No	(null)	1	Primary Key for person table
2 FIRST_NAME	VARCHAR2(20 BYTE)	No	(null)	2	Persons first name
3 SECOND_NAME	VARCHAR2(20 BYTE)	Yes	(null)	3	Persons second name
4 FIRST_LASTNAME	VARCHAR2(20 BYTE)	No	(null)	4	Persons first lastname
5 SECOND_LASTNAME	VARCHAR2(20 BYTE)	Yes	(null)	5	Persons second lastname
6 EMAIL	VARCHAR2(30 BYTE)	No	(null)	6	Persons personal email
7 BIRTH_DATE	DATE	Yes	SYSDATE	7	Persons birth date. Can calculate age from it
8 SALARY	NUMBER(10,0)	No	(null)	8	(null)
9 CREATION_DATE	DATE	Yes	(null)	9	Creation audit space
10 USER_CREATED_BY	VARCHAR2(10 BYTE)	Yes	(null)	10	Creator user audit space
11 LAST_MODIFY_DATE	DATE	Yes	(null)	11	Update date audit space
12 USER_MODIFIED_BY	VARCHAR2(10 BYTE)	Yes	(null)	12	Update user audit space

#### Phone

ejercicio1.sql x ejercicio2.sql x PHONE x					
Columns   Data   Model   Constraints   Grants   Statistics   Triggers   Flashback   Dependencies   Details   Partitions   Indexes   SQL					
Actions...					
COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1 ID_PHONE	NUMBER(6,0)	No	(null)	1	Primary Key for Phone table
2 PHONE_NUMBER	NUMBER(10,0)	No	(null)	2	Phone number
3 PHONE_TYPE	VARCHAR2(30 BYTE)	Yes	(null)	3	Phone type
4 AREA_CODE	NUMBER(5,0)	Yes	(null)	4	phones area code
5 ID_PERSON	NUMBER(6,0)	Yes	(null)	5	Foreign key references Person
6 CREATION_DATE	DATE	Yes	(null)	6	Creation audit space
7 USER_CREATED_BY	VARCHAR2(10 BYTE)	Yes	(null)	7	Creator user audit space
8 LAST_MODIFY_DATE	DATE	Yes	(null)	8	Update date audit space
9 USER_MODIFIED_BY	VARCHAR2(10 BYTE)	Yes	(null)	9	Update user audit space

## Ejercicio 2:

### Trigger de Creación

ID_PERSON	FIRST_NAME	FIRST_LASTNAME	CREATION_	USER_CREAT
22	Kenneth	Baldi	02-OCT-23	GE

1 row inserted.

ID_PHONE	PHONE_NUMBER	PHONE_TYPE	USER_CREAT	CREATION_
13	70113045	Celular	GE	02-OCT-23

### Trigger de Update

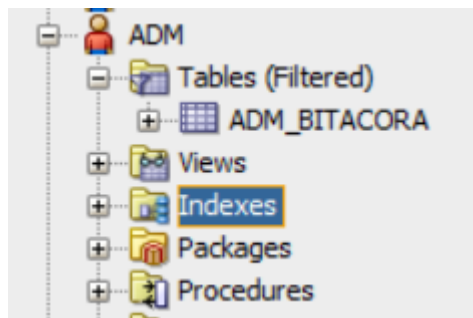
1 row updated.

ID_PERSON	FIRST_NAME	FIRST_LASTNAME	LAST_MODI	USER_MODIF
3	Pietro	Buendia	02-OCT-23	GE

1 row updated.

ID_PHONE	PHONE_NUMBER	PHONE_TYPE	USER_MODIF	LAST_MODI
12	70003445	Casa	GE	02-OCT-23

### Ejercicio 3:



### Ejercicio 4:

The screenshot shows the 'Columns' tab in the Oracle Enterprise Manager interface for the 'ADM\_BITACORA' table. The table structure is displayed in a table with 7 columns: COLUMN\_NAME, DATA\_TYPE, NULLABLE, DATA\_DEFAULT, COLUMN\_ID, and COMMENTS. The table contains 10 rows of data, each representing a column in the table.

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	SCHEMA_NAME	VARCHAR2(10 BYTE)	Yes	(null)	1	(null)
2	TABLE_NAME	VARCHAR2(30 BYTE)	Yes	(null)	2	(null)
3	COLUMN_NAME	VARCHAR2(30 BYTE)	Yes	(null)	3	(null)
4	LAST_VALUE	VARCHAR2(100 BYTE)	Yes	(null)	4	(null)
5	CURRENT_VALUE	VARCHAR2(100 BYTE)	Yes	(null)	5	(null)
6	ID_ADM_BITACORA	NUMBER(6,0)	No	(null)	6	(null)
7	CREATED_BY	VARCHAR2(10 BYTE)	Yes	(null)	7	(null)
8	CREATION_DATE	DATE	Yes	(null)	8	(null)
9	UPDATED_BY	VARCHAR2(10 BYTE)	Yes	(null)	9	(null)
10	UPDATE_DATE	DATE	Yes	(null)	10	(null)

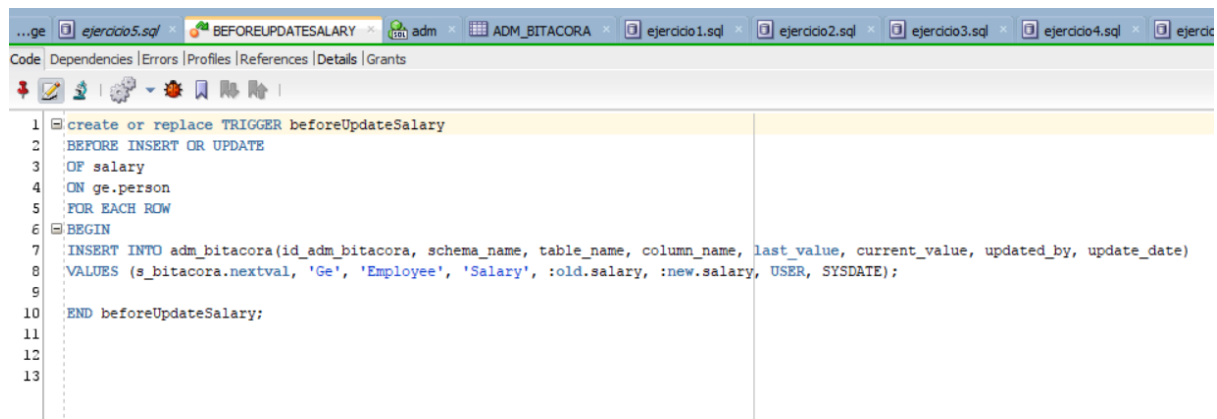
### Ejercicio 5:

La tabla fue creada con los campos de auditoría ya incluidos

The screenshot shows the 'Columns' tab in the Oracle Enterprise Manager interface for the 'ADM\_BITACORA' table. The table structure is displayed in a table with 7 columns: COLUMN\_NAME, DATA\_TYPE, NULLABLE, DATA\_DEFAULT, COLUMN\_ID, and COMMENTS. The table contains 10 rows of data, each representing a column in the table.

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	SCHEMA_NAME	VARCHAR2(10 BYTE)	Yes	(null)	1	(null)
2	TABLE_NAME	VARCHAR2(30 BYTE)	Yes	(null)	2	(null)
3	COLUMN_NAME	VARCHAR2(30 BYTE)	Yes	(null)	3	(null)
4	LAST_VALUE	VARCHAR2(100 BYTE)	Yes	(null)	4	(null)
5	CURRENT_VALUE	VARCHAR2(100 BYTE)	Yes	(null)	5	(null)
6	ID_ADM_BITACORA	NUMBER(6,0)	No	(null)	6	(null)
7	CREATED_BY	VARCHAR2(10 BYTE)	Yes	(null)	7	(null)
8	CREATION_DATE	DATE	Yes	(null)	8	(null)
9	UPDATED_BY	VARCHAR2(10 BYTE)	Yes	(null)	9	(null)
10	UPDATE_DATE	DATE	Yes	(null)	10	(null)

## Trigger:



```
1 create or replace TRIGGER beforeUpdateSalary
2 BEFORE INSERT OR UPDATE
3 OF salary
4 ON ge.person
5 FOR EACH ROW
6 BEGIN
7 INSERT INTO adm_bitacora(id_adm_bitacora, schema_name, table_name, column_name, last_value, current_value, updated_by, update_date)
8 VALUES (s_bitacora.nextval, 'Ge', 'Employee', 'Salary', :old.salary, :new.salary, USER, SYSDATE);
9
10 END beforeUpdateSalary;
11
12
13
```

## Ejercicio 6:

El select está dividido en dos partes debido a que al ser los campos de last\_val y current\_value de VARCHAR2 tamaño 100, el Developer muestra los campos con todo el tamaño que tienen, no el tamaño que tiene ocupado. Las funciones de trim o rtrim no sirvieron

SCHEMA_NAME	TABLE_NAME	COLUMN_NAME	LAST_VAL
Ge	Employee	Salary	2300
Ge	Employee	Salary	4500
Ge	Employee	Salary	4500

CURRENT_VALUE	UPDATED_BY
4500	GE
4500	GE
4500	GE