

Goiânia 06 de dezembro de 2019 - Sexta Feira  
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Disciplina: Tópicos Especiais em Banco de Dados

////////////////////////////////////

Exemplo After para a tabela EMP

```
MYLENA:>create table log_salario(codigo number(4), salario_anterior number(7,2),  
salario_atual number(7,2), data_alteracao date,usuario varchar2(10));
```

Tabela criada.

MYLENA:>ed

Gravou file afiedt.buf

```
1 CREATE OR REPLACE TRIGGER trg_salario_aud  
2 AFTER UPDATE ON emp  
3 REFERENCING NEW AS NEW OLD AS OLD  
4 FOR EACH ROW  
5 BEGIN  
6 INSERT INTO log_salario  
7 (codigo, salario_anterior, salario_atual,  
8 data_alteracao, usuario )  
9 VALUES (:NEW.empno, :OLD.sal, :NEW.sal, SYSDATE, USER);  
10* END;  
MYLENA:>/
```

Gatilho criado.

MYLENA:>select \* from emp;

|        | EMPNO | ENAME | JOB       | MGR   | HIREDATE | SAL   | COMM  |
|--------|-------|-------|-----------|-------|----------|-------|-------|
| DEPTNO |       |       |           |       |          |       |       |
| -----  | ----- | ----- | -----     | ----- | -----    | ----- | ----- |
| 10     | 7839  | KING  | PRESIDENT |       | 17/11/81 | 5000  |       |
| 20     | 7566  | JONES | MANAGER   | 7839  | 02/04/81 | 2975  |       |
| 20     | 7788  | SCOTT | ANALYST   | 7566  | 19/04/87 | 2000  |       |
| 20     | 7876  | ADAMS | CLERK     | 7788  | 23/05/87 | 1100  |       |
| 20     | 7902  | FORD  | ANALYST   | 7566  | 03/12/81 | 3000  |       |
| 20     | 7369  | SMITH | CLERK     | 7902  | 17/12/80 | 800   |       |
| 30     | 7698  | BLAKE | MANAGER   | 7839  | 01/05/81 | 2850  |       |
| 30     | 7499  | ALLEN | SALESMAN  | 7698  | 20/02/81 | 1600  | 300   |
| 30     | 7521  | WARD  | SALESMAN  | 7698  | 22/02/81 | 1250  | 500   |

|    |      |        |          |               |      |      |
|----|------|--------|----------|---------------|------|------|
| 30 | 7654 | MARTIN | SALESMAN | 7698 28/09/81 | 1250 | 1400 |
| 30 | 7844 | TURNER | SALESMAN | 7698 08/09/81 | 1500 | 0    |
| 30 | 7900 | JAMES  | CLERK    | 7698 03/12/81 | 950  |      |
| 10 | 7782 | CLARK  | MANAGER  | 7839 09/06/81 | 2450 |      |
| 10 | 7934 | MILLER | CLERK    | 7782 23/01/82 | 1300 |      |
| 20 | 7935 | LIAM   | MANAGER  | 7782 29/11/19 | 2000 | 0    |

15 linhas selecionadas.

MYLENA:>update emp set sal= 5000 where empno=7935;

1 linha atualizada.

MYLENA:>select \* from log\_salario;

| CODIGO | SALARIO_ANTERIOR | SALARIO_ATUAL | DATA_ALT | USUARIO |
|--------|------------------|---------------|----------|---------|
| 7935   | 2000             | 5000          | 06/12/19 | SYSTEM  |

Exemplo after para a tabela FUNC

MYLENA:>create table log\_salario\_func(codigo number(4), salario\_anterior number(7,2), salario\_atual number(7,2), data\_alteracao date,usuario varchar2(30));

Tabela criada.

MYLENA:>ed

Gravou file afiedt.buf

```

1 CREATE OR REPLACE TRIGGER trg_salario_func
2 AFTER UPDATE ON func
3 REFERENCING NEW AS NEW OLD AS OLD
4 FOR EACH ROW
5 BEGIN
6     INSERT INTO log_salario_func
7     (codigo, salario_anterior, salario_atual, data_alteracao, usuario )
8     VALUES (:NEW.cd_mat, :OLD.vl_sal, :NEW.vl_sal, SYSDATE, USER);
9* END;
```

MYLENA:>/

Gatilho criado.

MYLENA:>select \* from func;

| CD_MAT | NM_FUNC      | NM_SOBRENOME               | CD_ | NR_RAMAL | DT_ADM   | NR_CARGO |
|--------|--------------|----------------------------|-----|----------|----------|----------|
| NR_GIT | I DT_NASC    | VL_SAL NM_FOTO             |     |          |          |          |
|        | 10 CRISTINA  | HENDERSON                  | A00 | 3978     | 01/01/95 | 66       |
| 18 F   | 14/08/53     | 5275 C:\FOTOS\CRIS.BMP     |     |          |          |          |
|        | 20 MIGUEL    | TEIXEIRA                   | B01 | 3478     | 10/10/93 | 61       |
| 18 M   | 02/02/68     | 4125 C:\FOTOS\MIGUEL.BMP   |     |          |          |          |
|        | 30 SANDRA    | KWAN                       | C01 | 4738     | 05/04/95 | 60       |
| 20 F   | 11/05/61     | 3825 C:\FOTOS\SANDRA.BMP   |     |          |          |          |
|        | 50 JOAO      | GOMES                      | E01 | 6789     | 17/08/89 | 58       |
| 16 M   | 15/09/55     | 4017 C:\FOTOS\JOAO.BMP     |     |          |          |          |
|        | 60 IRACY     | SOUZA                      | D11 | 6423     | 14/09/93 | 55       |
| 16 F   | 07/07/55     | 3225 C:\FOTOS\IRACY.BMP    |     |          |          |          |
|        | 70 EVA       | PEREIRA                    | D21 | 7831     | 30/09/90 | 56       |
| 16 F   | 26/05/63     | 3617 C:\FOTOS\EVA.BMP      |     |          |          |          |
|        | 90 ELIANE    | HONOFRE                    | E11 | 5498     | 15/08/95 | 55       |
| 16 F   | 15/05/71     | 2975 C:\FOTOS\ELIANE.BMP   |     |          |          |          |
|        | 100 TEODORO  | SIQUEIRA                   | E21 | 972      | 16/06/90 | 54       |
| 14 M   | 18/12/66     | 2615 C:\FOTOS\TEODORO.BMP  |     |          |          |          |
|        | 110 VICENTE  | LOURENCO                   | A00 | 3490     | 16/05/94 | 58       |
| 19 M   | 06/11/69     | 4650 C:\FOTOS\VICENTE.BMP  |     |          |          |          |
|        | 120 SILVIO   | OLIVA                      | A00 | 2167     | 05/12/93 | 58       |
| 14 M   | 18/01/62     | 2925 C:\FOTOS\SILVIO.BMP   |     |          |          |          |
|        | 130 DOLORES  | QUEIROZ                    | C01 | 4578     | 28/07/91 | 55       |
| 16 F   | 15/09/55     | 2380 C:\FOTOS\DOLORES.BMP  |     |          |          |          |
|        | 140 HELENA   | NOVAES                     | C01 | 1793     | 15/12/91 | 56       |
| 18 F   | 19/01/56     | 2842 C:\FOTOS\HELENA.BMP   |     |          |          |          |
|        | 150 BRUNO    | AZEVEDO                    | D11 | 4510     | 12/02/92 | 55       |
| 16 M   | 17/05/67     | 3844,77 C:\FOTOS\BRUNO.BMP |     |          |          |          |
|        | 160 ELIZABET | PINTO                      | D11 | 3782     | 11/01/93 | 54       |
| 17 F   | 12/04/65     | 2225 C:\FOTOS\BETH.BMP     |     |          |          |          |
|        | 170 GABRIEL  | YVES                       | D11 | 2890     | 15/09/89 | 54       |
| 16 M   | 05/01/71     | 2468 C:\FOTOS\GABRIEL.BMP  |     |          |          |          |
|        | 180 MARIA    | SANCHES                    | D11 | 1682     | 07/07/90 | 53       |
| 17 F   | 21/02/69     | 2134 C:\FOTOS\MARIA.BMP    |     |          |          |          |
|        | 190 JAIRO    | WILARES                    | D11 | 2986     | 26/07/95 | 53       |
| 26 M   | 25/06/72     | 2045 C:\FOTOS\JAIRO.BMP    |     |          |          |          |
|        | 200 DAVI     | BARBOSA                    | D11 | 4501     | 03/03/96 | 55       |
| 16 M   | 29/05/71     | 2774 C:\FOTOS\DAVI.BMP     |     |          |          |          |
|        | 210 WILIAM   | JONES                      | D11 | 942      | 11/04/94 | 52       |
| 17 M   | 23/02/63     | 1827 C:\FOTOS\WILIAN.BMP   |     |          |          |          |
|        | 220 JOANA    | LUZ                        | D11 | 672      | 29/08/95 | 55       |
| 18 F   | 19/03/68     | 2984 C:\FOTOS\JOANA.BMP    |     |          |          |          |
|        | 230 JOAQUIM  | JANUARIO                   | D21 | 2094     | 21/11/95 | 53       |
| 14 M   | 30/05/65     | 2218 C:\FOTOS\JOAQUIM.BMP  |     |          |          |          |
|        | 240 SALVADOR | MEDEIROS                   | D21 | 3780     | 05/12/93 | 55       |
| 17 M   | 31/03/74     | 2876 C:\FOTOS\SALVADOR.BMP |     |          |          |          |
|        | 250 DANIEL   | SANTANA                    | D21 | 961      | 30/10/99 | 52       |
| 15 M   | 12/11/69     | 1918 C:\FOTOS\DANIEL.BMP   |     |          |          |          |
|        | 260 SILVIA   | JUVENTO                    | D21 | 8953     | 11/09/95 | 52       |
| 16 F   | 05/10/66     | 1725 C:\FOTOS\SILVIA.BMP   |     |          |          |          |
|        | 2107 MARTA   | PARENTE                    | D21 | 9001     | 30/09/90 | 55       |
| 15 F   | 26/05/73     | 2738 C:\FOTOS\MARTA.BMP    |     |          |          |          |

|      |          |         |                      |     |      |          |    |
|------|----------|---------|----------------------|-----|------|----------|----|
|      | 280      | ELINE   | SEVERO               | E11 | 8997 | 24/03/91 | 54 |
| 17 F | 28/03/66 | 2625    | C:\FOTOS\ELIANE.BMP  |     |      |          |    |
|      | 290      | JOAO    | PONTES               | E11 | 4502 | 30/05/90 | 42 |
| 12 M | 09/07/66 | 1534    | C:\FOTOS\JOAO.BMP    |     |      |          |    |
|      | 300      | FELIPE  | SARAIVA              | E11 | 2095 | 19/06/92 | 48 |
| 14 M | 27/10/56 | 1775    | C:\FOTOS\FELIPE.BMP  |     |      |          |    |
|      | 310      | MARINA  | SALGADO              | E11 | 3332 | 12/09/91 | 43 |
| 12 F | 21/04/71 | 1590    | C:\FOTOS\MARINA.BMP  |     |      |          |    |
|      | 320      | ROBERTO | MARQUES              | E21 | 9990 | 07/07/90 | 52 |
| 16 M | 11/08/72 | 1995    | C:\FOTOS\ROBERTO.BMP |     |      |          |    |
|      | 330      | WILSON  | LOPES                | E21 | 2103 | 23/02/96 | 55 |
| 14 M | 18/07/71 | 2537    | C:\FOTOS\WILSON.BMP  |     |      |          |    |
|      | 340      | DILSON  | GONCALVES            | E21 | 5698 | 05/05/96 | 54 |
| 16 M | 17/05/66 | 4000    | C:\FOTOS\DILSON.BMP  |     |      |          |    |

32 linhas selecionadas.

MYLENA:>update func set vl\_sal=1000 where cd\_mat=340;

1 linha atualizada.

MYLENA:>select \* from log\_salario\_func;

| CODIGO | SALARIO_ANTERIOR | SALARIO_ATUAL | DATA_ALT | USUARIO |
|--------|------------------|---------------|----------|---------|
| 340    | 4000             | 1000          | 06/12/19 | SYSTEM  |

Exemplo Usando :old e :new pag-10 tabela emp

MYLENA:>ed

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```

1 CREATE OR REPLACE TRIGGER trg_salario_aud2
2 AFTER UPDATE ON emp
3 REFERENCING NEW AS NEW OLD AS OLD
4 FOR EACH ROW
5 BEGIN
6     IF :NEW.SAL < 800 THEN
7         raise_application_error(-20003, 'O valor so salario nao deve ser
inferior a R$ 800,00');
8     END IF;
9* END;
MYLENA:>/
```

Gatilho criado.

MYLENA:>select \* from emp;

| EMPNO | ENAME | JOB       | MGR | HIREDATE | SAL  | COMM |
|-------|-------|-----------|-----|----------|------|------|
| 7839  | KING  | PRESIDENT |     | 17/11/81 | 5000 |      |

|    |      |        |          |      |          |      |      |
|----|------|--------|----------|------|----------|------|------|
| 10 | 7566 | JONES  | MANAGER  | 7839 | 02/04/81 | 2975 |      |
| 20 | 7788 | SCOTT  | ANALYST  | 7566 | 19/04/87 | 2000 |      |
| 20 | 7876 | ADAMS  | CLERK    | 7788 | 23/05/87 | 1100 |      |
| 20 | 7902 | FORD   | ANALYST  | 7566 | 03/12/81 | 3000 |      |
| 20 | 7369 | SMITH  | CLERK    | 7902 | 17/12/80 | 800  |      |
| 20 | 7698 | BLAKE  | MANAGER  | 7839 | 01/05/81 | 2850 |      |
| 30 | 7499 | ALLEN  | SALESMAN | 7698 | 20/02/81 | 1600 | 300  |
| 30 | 7521 | WARD   | SALESMAN | 7698 | 22/02/81 | 1250 | 500  |
| 30 | 7654 | MARTIN | SALESMAN | 7698 | 28/09/81 | 1250 | 1400 |
| 30 | 7844 | TURNER | SALESMAN | 7698 | 08/09/81 | 1500 | 0    |
| 30 | 7900 | JAMES  | CLERK    | 7698 | 03/12/81 | 950  |      |
| 30 | 7782 | CLARK  | MANAGER  | 7839 | 09/06/81 | 2450 |      |
| 10 | 7934 | MILLER | CLERK    | 7782 | 23/01/82 | 1300 |      |
| 10 | 7935 | LIAM   | MANAGER  | 7782 | 29/11/19 | 5000 | 0    |
| 20 |      |        |          |      |          |      |      |

15 linhas selecionadas.

MYLENA:>update emp set sal=600 where empno=7935;

update emp set sal=600 where empno=7935

\*

ERRO na linha 1:

ORA-20003: O valor so salario nao deve ser inferior a R\$ 800,00

ORA-06512: em "SYSTEM.TRG\_SALARIO\_AUD2", line 3

ORA-04088: erro durante a execucao do gatilho 'SYSTEM.TRG\_SALARIO\_AUD2'

////////////////////////////////////  
Exemplo Usando :old e :new pag-10 tabela func

MYLENA:>ed

Gravou file afiedt.buf

```

1 CREATE OR REPLACE TRIGGER trg_salario_func2
2 AFTER UPDATE ON func
3 REFERENCING NEW AS NEW OLD AS OLD
4 FOR EACH ROW
5 BEGIN
6     IF :NEW.v1_sal < 800 THEN
7         raise_application_error(-20003, 'O valor so salario nao deve

```

```

ser inferior a R$ 800,00');
      8      END IF;
      9* END;
MYLENA:>/

```

Gatilho criado.

```

MYLENA:>update func set vl_sal=600 where cd_mat=340;
update func set vl_sal=600 where cd_mat=340
      *

```

ERRO na linha 1:

ORA-20003: O valor so salario nao deve ser inferior a R\$ 800,00

ORA-06512: em "SYSTEM.TRG\_SALARIO\_FUNC2", line 3

ORA-04088: erro durante a execução do gatilho 'SYSTEM.TRG\_SALARIO\_FUNC2'

```

MYLENA:>update func set vl_sal=2000 where cd_mat=340;

```

1 linha atualizada.

(como o novo salário é maior que 800, a trigger não foi chamada)

////////////////////////////////////  
Exemplo usando instead of pag-12

```

MYLENA:>create view view_emp as select * from emp;

```

View criada.

```

MYLENA:>ed

```

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```

      1  CREATE OR REPLACE TRIGGER TRG_NOVO_FUNC
      2  INSTEAD OF INSERT ON view_EMP
      3  FOR EACH ROW
      4  BEGIN
      5  INSERT INTO emp (empno, ename, sal)
      6  VALUES (:NEW.empno, :NEW.ename, :NEW.sal);
      7* END;
MYLENA:>/

```

Gatilho criado.

```

MYLENA:>insert into view_emp values(7936, 'Emily', 'CLERK', 7935, SYSDATE, 2000,
0, 10);

```

1 linha criada.

```

MYLENA:>SELECT * FROM view_emp;

```

| EMPNO | ENAME | JOB       | MGR | HIREDATE | SAL  | COMM |
|-------|-------|-----------|-----|----------|------|------|
| 7839  | KING  | PRESIDENT |     | 17/11/81 | 5000 |      |

10

|    |      |        |          |      |          |      |      |
|----|------|--------|----------|------|----------|------|------|
| 20 | 7566 | JONES  | MANAGER  | 7839 | 02/04/81 | 2975 |      |
| 20 | 7788 | SCOTT  | ANALYST  | 7566 | 19/04/87 | 2000 |      |
| 20 | 7876 | ADAMS  | CLERK    | 7788 | 23/05/87 | 1100 |      |
| 20 | 7902 | FORD   | ANALYST  | 7566 | 03/12/81 | 3000 |      |
| 20 | 7369 | SMITH  | CLERK    | 7902 | 17/12/80 | 800  |      |
| 30 | 7698 | BLAKE  | MANAGER  | 7839 | 01/05/81 | 2850 |      |
| 30 | 7499 | ALLEN  | SALESMAN | 7698 | 20/02/81 | 1600 | 300  |
| 30 | 7521 | WARD   | SALESMAN | 7698 | 22/02/81 | 1250 | 500  |
| 30 | 7654 | MARTIN | SALESMAN | 7698 | 28/09/81 | 1250 | 1400 |
| 30 | 7844 | TURNER | SALESMAN | 7698 | 08/09/81 | 1500 | 0    |
| 30 | 7900 | JAMES  | CLERK    | 7698 | 03/12/81 | 950  |      |
| 10 | 7782 | CLARK  | MANAGER  | 7839 | 09/06/81 | 2450 |      |
| 10 | 7934 | MILLER | CLERK    | 7782 | 23/01/82 | 1300 |      |
| 20 | 7935 | LIAM   | MANAGER  | 7782 | 29/11/19 | 5000 | 0    |
|    | 7936 | Emily  |          |      |          | 2000 |      |

16 linhas selecionadas.

MYLENA:>SELECT \* FROM emp;

| DEPTNO | EMPNO | ENAME | JOB       | MGR  | HIREDATE | SAL  | COMM |
|--------|-------|-------|-----------|------|----------|------|------|
| 10     | 7839  | KING  | PRESIDENT |      | 17/11/81 | 5000 |      |
| 20     | 7566  | JONES | MANAGER   | 7839 | 02/04/81 | 2975 |      |
| 20     | 7788  | SCOTT | ANALYST   | 7566 | 19/04/87 | 2000 |      |
| 20     | 7876  | ADAMS | CLERK     | 7788 | 23/05/87 | 1100 |      |
| 20     | 7902  | FORD  | ANALYST   | 7566 | 03/12/81 | 3000 |      |
| 20     | 7369  | SMITH | CLERK     | 7902 | 17/12/80 | 800  |      |
| 30     | 7698  | BLAKE | MANAGER   | 7839 | 01/05/81 | 2850 |      |
| 30     | 7499  | ALLEN | SALESMAN  | 7698 | 20/02/81 | 1600 | 300  |

|    |      |        |          |      |          |      |      |
|----|------|--------|----------|------|----------|------|------|
| 30 | 7521 | WARD   | SALESMAN | 7698 | 22/02/81 | 1250 | 500  |
| 30 | 7654 | MARTIN | SALESMAN | 7698 | 28/09/81 | 1250 | 1400 |
| 30 | 7844 | TURNER | SALESMAN | 7698 | 08/09/81 | 1500 | 0    |
| 30 | 7900 | JAMES  | CLERK    | 7698 | 03/12/81 | 950  |      |
| 10 | 7782 | CLARK  | MANAGER  | 7839 | 09/06/81 | 2450 |      |
| 10 | 7934 | MILLER | CLERK    | 7782 | 23/01/82 | 1300 |      |
| 20 | 7935 | LIAM   | MANAGER  | 7782 | 29/11/19 | 5000 | 0    |
|    | 7936 | Emily  |          |      |          | 2000 |      |

16 linhas selecionadas.

MYLENA:>ed

Gravou file afiedt.buf

```

1 CREATE OR REPLACE TRIGGER TRG_NOVO_FUNC
2 INSTEAD OF INSERT ON view_EMP
3 FOR EACH ROW
4 BEGIN
5     INSERT INTO emp (empno, ename, job, mgr, hiredate, sal, comm, deptno)
6     VALUES (:NEW.empno, :NEW.ename, :NEW.job, :NEW.mgr, :NEW.hiredate,
:NEW.sal, :NEW.comm, :NEW.deptno);
7* END;
MYLENA:>/

```

Gatilho criado.

MYLENA:>insert into view\_emp values(7937, 'Mariana', 'Manager', 7935, SYSDATE, 3000, 0, 10);

1 linha criada.

MYLENA:>select \* from emp;

|        | EMPNO | ENAME | JOB       | MGR  | HIREDATE | SAL  | COMM |
|--------|-------|-------|-----------|------|----------|------|------|
| DEPTNO |       |       |           |      |          |      |      |
| 10     | 7839  | KING  | PRESIDENT |      | 17/11/81 | 5000 |      |
| 20     | 7566  | JONES | MANAGER   | 7839 | 02/04/81 | 2975 |      |
| 20     | 7788  | SCOTT | ANALYST   | 7566 | 19/04/87 | 2000 |      |
| 20     | 7876  | ADAMS | CLERK     | 7788 | 23/05/87 | 1100 |      |
| 20     | 7902  | FORD  | ANALYST   | 7566 | 03/12/81 | 3000 |      |



|    |              |          |               |      |      |
|----|--------------|----------|---------------|------|------|
| 20 | 7369 SMITH   | CLERK    | 7902 17/12/80 | 800  |      |
| 30 | 7698 BLAKE   | MANAGER  | 7839 01/05/81 | 2850 |      |
| 30 | 7499 ALLEN   | SALESMAN | 7698 20/02/81 | 1600 | 300  |
| 30 | 7521 WARD    | SALESMAN | 7698 22/02/81 | 1250 | 500  |
| 30 | 7654 MARTIN  | SALESMAN | 7698 28/09/81 | 1250 | 1400 |
| 30 | 7844 TURNER  | SALESMAN | 7698 08/09/81 | 1500 | 0    |
| 30 | 7900 JAMES   | CLERK    | 7698 03/12/81 | 950  |      |
| 10 | 7782 CLARK   | MANAGER  | 7839 09/06/81 | 2450 |      |
| 10 | 7934 MILLER  | CLERK    | 7782 23/01/82 | 1300 |      |
| 20 | 7935 LIAM    | MANAGER  | 7782 29/11/19 | 5000 | 0    |
|    | 7936 Emily   |          |               | 2000 |      |
| 10 | 7937 Mariana | Manager  | 7935 06/12/19 | 3000 | 0    |

17 linhas selecionadas.

MYLENA:>SELECT \* FROM view\_emp;

| DEPTNO | EMPNO | ENAME  | JOB       | MGR   | HIREDATE | SAL   | COMM  |
|--------|-------|--------|-----------|-------|----------|-------|-------|
| -----  | ----- | -----  | -----     | ----- | -----    | ----- | ----- |
| 10     | 7839  | KING   | PRESIDENT |       | 17/11/81 | 5000  |       |
| 20     | 7566  | JONES  | MANAGER   | 7839  | 02/04/81 | 2975  |       |
| 20     | 7788  | SCOTT  | ANALYST   | 7566  | 19/04/87 | 2000  |       |
| 20     | 7876  | ADAMS  | CLERK     | 7788  | 23/05/87 | 1100  |       |
| 20     | 7902  | FORD   | ANALYST   | 7566  | 03/12/81 | 3000  |       |
| 20     | 7369  | SMITH  | CLERK     | 7902  | 17/12/80 | 800   |       |
| 30     | 7698  | BLAKE  | MANAGER   | 7839  | 01/05/81 | 2850  |       |
| 30     | 7499  | ALLEN  | SALESMAN  | 7698  | 20/02/81 | 1600  | 300   |
| 30     | 7521  | WARD   | SALESMAN  | 7698  | 22/02/81 | 1250  | 500   |
| 30     | 7654  | MARTIN | SALESMAN  | 7698  | 28/09/81 | 1250  | 1400  |
| 30     | 7844  | TURNER | SALESMAN  | 7698  | 08/09/81 | 1500  | 0     |

|    |              |         |               |      |   |
|----|--------------|---------|---------------|------|---|
| 30 | 7900 JAMES   | CLERK   | 7698 03/12/81 | 950  |   |
| 10 | 7782 CLARK   | MANAGER | 7839 09/06/81 | 2450 |   |
| 10 | 7934 MILLER  | CLERK   | 7782 23/01/82 | 1300 |   |
| 20 | 7935 LIAM    | MANAGER | 7782 29/11/19 | 5000 | 0 |
| 10 | 7936 Emily   |         |               | 2000 |   |
|    | 7937 Mariana | Manager | 7935 06/12/19 | 3000 | 0 |

17 linhas selecionadas.

```

////////////////////////////////////
@L03_246

```

MYLENA:>set serveroutput on

Gravou file afiedt.buf

```

1 CREATE OR REPLACE TRIGGER EVENTO
2 BEFORE DELETE OR INSERT OR UPDATE OF VL_SAL ON FUNC
3 FOR EACH ROW
4 BEGIN
5     DBMS_OUTPUT.PUT_LINE('MAT = '||:OLD.CD_MAT);
6     DBMS_OUTPUT.PUT_LINE('SAL OLD = '||:OLD.VL_SAL||' SAL NEW =
' ||:NEW.VL_SAL);
7* END;
MYLENA:>/

```

Gatilho criado.

MYLENA:>select \* from func;

|      | CD_MAT   | NM_FUNC  | NM_SOBRENOME        | CD_ | NR_RAMAL | DT_ADM   | NR_CARGO | NR_GIT |
|------|----------|----------|---------------------|-----|----------|----------|----------|--------|
| I    | DT_NASC  | VL_SAL   | NM_FOTO             |     |          |          |          |        |
|      | 10       | CRISTINA | HENDERSON           | A00 | 3978     | 01/01/95 | 66       |        |
| 18 F | 14/08/53 | 5275     | C:\FOTOS\CRIS.BMP   |     |          |          |          |        |
|      | 20       | MIGUEL   | TEIXEIRA            | B01 | 3478     | 10/10/93 | 61       |        |
| 18 M | 02/02/68 | 4125     | C:\FOTOS\MIGUEL.BMP |     |          |          |          |        |
|      | 30       | SANDRA   | KWAN                | C01 | 4738     | 05/04/95 | 60       |        |
| 20 F | 11/05/61 | 3825     | C:\FOTOS\SANDRA.BMP |     |          |          |          |        |
|      | 50       | JOAO     | GOMES               | E01 | 6789     | 17/08/89 | 58       |        |
| 16 M | 15/09/55 | 4017     | C:\FOTOS\JOAO.BMP   |     |          |          |          |        |
|      | 60       | IRACY    | SOUZA               | D11 | 6423     | 14/09/93 | 55       |        |
| 16 F | 07/07/55 | 3225     | C:\FOTOS\IRACY.BMP  |     |          |          |          |        |
|      | 70       | EVA      | PEREIRA             | D21 | 7831     | 30/09/90 | 56       |        |
| 16 F | 26/05/63 | 3617     | C:\FOTOS\EVA.BMP    |     |          |          |          |        |
|      | 90       | ELIANE   | HONOFRE             | E11 | 5498     | 15/08/95 | 55       |        |
| 16 F | 15/05/71 | 2975     | C:\FOTOS\ELIANE.BMP |     |          |          |          |        |
|      | 100      | TEODORO  | SIQUEIRA            | E21 | 972      | 16/06/90 | 54       |        |

|    |   |              |           |                       |               |    |
|----|---|--------------|-----------|-----------------------|---------------|----|
| 14 | M | 18/12/66     | 2615      | C:\FOTOS\TEODORO.BMP  |               |    |
|    |   | 110 VICENTE  | LOURENCO  | A00                   | 3490 16/05/94 | 58 |
| 19 | M | 06/11/69     | 4650      | C:\FOTOS\VICENTE.BMP  |               |    |
|    |   | 120 SILVIO   | OLIVA     | A00                   | 2167 05/12/93 | 58 |
| 14 | M | 18/01/62     | 2925      | C:\FOTOS\SILVIO.BMP   |               |    |
|    |   | 130 DOLORES  | QUEIROZ   | C01                   | 4578 28/07/91 | 55 |
| 16 | F | 15/09/55     | 2380      | C:\FOTOS\DOLORES.BMP  |               |    |
|    |   | 140 HELENA   | NOVAES    | C01                   | 1793 15/12/91 | 56 |
| 18 | F | 19/01/56     | 2842      | C:\FOTOS\HELENA.BMP   |               |    |
|    |   | 150 BRUNO    | AZEVEDO   | D11                   | 4510 12/02/92 | 55 |
| 16 | M | 17/05/67     | 3844,77   | C:\FOTOS\BRUNO.BMP    |               |    |
|    |   | 160 ELIZABET | PINTO     | D11                   | 3782 11/01/93 | 54 |
| 17 | F | 12/04/65     | 2225      | C:\FOTOS\BETH.BMP     |               |    |
|    |   | 170 GABRIEL  | YVES      | D11                   | 2890 15/09/89 | 54 |
| 16 | M | 05/01/71     | 2468      | C:\FOTOS\GABRIEL.BMP  |               |    |
|    |   | 180 MARIA    | SANCHES   | D11                   | 1682 07/07/90 | 53 |
| 17 | F | 21/02/69     | 2134      | C:\FOTOS\MARIA.BMP    |               |    |
|    |   | 190 JAIRO    | WILARES   | D11                   | 2986 26/07/95 | 53 |
| 26 | M | 25/06/72     | 2045      | C:\FOTOS\JAIRO.BMP    |               |    |
|    |   | 200 DAVI     | BARBOSA   | D11                   | 4501 03/03/96 | 55 |
| 16 | M | 29/05/71     | 2774      | C:\FOTOS\DAVI.BMP     |               |    |
|    |   | 210 WILIAM   | JONES     | D11                   | 942 11/04/94  | 52 |
| 17 | M | 23/02/63     | 1827      | C:\FOTOS\WILIAN.BMP   |               |    |
|    |   | 220 JOANA    | LUZ       | D11                   | 672 29/08/95  | 55 |
| 18 | F | 19/03/68     | 2984      | C:\FOTOS\JOANA.BMP    |               |    |
|    |   | 230 JOAQUIM  | JANUARIO  | D21                   | 2094 21/11/95 | 53 |
| 14 | M | 30/05/65     | 2218      | C:\FOTOS\JOAQUIM.BMP  |               |    |
|    |   | 240 SALVADOR | MEDEIROS  | D21                   | 3780 05/12/93 | 55 |
| 17 | M | 31/03/74     | 2876      | C:\FOTOS\SALVADOR.BMP |               |    |
|    |   | 250 DANIEL   | SANTANA   | D21                   | 961 30/10/99  | 52 |
| 15 | M | 12/11/69     | 1918      | C:\FOTOS\DANIEL.BMP   |               |    |
|    |   | 260 SILVIA   | JUVENTO   | D21                   | 8953 11/09/95 | 52 |
| 16 | F | 05/10/66     | 1725      | C:\FOTOS\SILVIA.BMP   |               |    |
|    |   | 2107 MARTA   | PARENTE   | D21                   | 9001 30/09/90 | 55 |
| 15 | F | 26/05/73     | 2738      | C:\FOTOS\MARTA.BMP    |               |    |
|    |   | 280 ELINE    | SEVERO    | E11                   | 8997 24/03/91 | 54 |
| 17 | F | 28/03/66     | 2625      | C:\FOTOS\ELIANE.BMP   |               |    |
|    |   | 290 JOAO     | PONTES    | E11                   | 4502 30/05/90 | 42 |
| 12 | M | 09/07/66     | 1534      | C:\FOTOS\JOAO.BMP     |               |    |
|    |   | 300 FELIPE   | SARAIVA   | E11                   | 2095 19/06/92 | 48 |
| 14 | M | 27/10/56     | 1775      | C:\FOTOS\FELIPE.BMP   |               |    |
|    |   | 310 MARINA   | SALGADO   | E11                   | 3332 12/09/91 | 43 |
| 12 | F | 21/04/71     | 1590      | C:\FOTOS\MARINA.BMP   |               |    |
|    |   | 320 ROBERTO  | MARQUES   | E21                   | 9990 07/07/90 | 52 |
| 16 | M | 11/08/72     | 1995      | C:\FOTOS\ROBERTO.BMP  |               |    |
|    |   | 330 WILSON   | LOPES     | E21                   | 2103 23/02/96 | 55 |
| 14 | M | 18/07/71     | 2537      | C:\FOTOS\WILSON.BMP   |               |    |
|    |   | 340 DILSON   | GONCALVES | E21                   | 5698 05/05/96 | 54 |
| 16 | M | 17/05/66     | 2000      | C:\FOTOS\DILSON.BMP   |               |    |

32 linhas selecionadas.

```
MYLENA:>update func set vl_sal=1.2*vl_sal where cd_mat=340;
MAT = 340
```

SAL OLD = 2000 SAL NEW = 2400

1 linha atualizada.

```
////////////////////////////////////  
////////
```

@L03\_248 e @L03\_249

MYLENA:>ed

Gravou file afiedt.buf

```
1 CREATE OR REPLACE VIEW VFUNC  
2 AS SELECT * FROM FUNC  
3* WHERE CD_DEPTO = 'D11'
```

MYLENA:>/

View criada.

MYLENA:>ed

Gravou file afiedt.buf

```
1 CREATE OR REPLACE TRIGGER EVENTO1  
2 INSTEAD OF UPDATE ON VFUNC  
3 FOR EACH ROW  
4 BEGIN  
5 IF :OLD.VL_SAL <> :NEW.VL_SAL THEN  
6 DBMS_OUTPUT.PUT_LINE('MAT = '||:OLD.CD_MAT);  
7 DBMS_OUTPUT.PUT_LINE('SAL OLD = '||:OLD.VL_SAL);  
8 DBMS_OUTPUT.PUT_LINE('SAL NEW = '||:NEW.VL_SAL);  
9 UPDATE FUNC SET VL_SAL = :NEW.VL_SAL  
10 WHERE CD_MAT = :NEW.CD_MAT;  
11 END IF;  
12 IF :OLD.CD_DEPTO <> :NEW.CD_DEPTO THEN  
13 DBMS_OUTPUT.PUT_LINE('MAT = '||:OLD.CD_MAT);  
14 DBMS_OUTPUT.PUT_LINE('DEPTO OLD = '||:OLD.CD_DEPTO);  
15 DBMS_OUTPUT.PUT_LINE('DEPTO NEW = '||:NEW.CD_DEPTO);  
16 UPDATE FUNC SET CD_DEPTO = :NEW.CD_DEPTO  
17 WHERE CD_MAT = :NEW.CD_MAT;  
18 END IF;  
19* END;
```

MYLENA:>/

Gatilho criado.

MYLENA:>select \* from func;

|      | CD_MAT    | NM_FUNC     | NM_SOBRENOME        | CD_  | NR_RAMAL | DT_ADM   | NR_CARGO | NR_GIT |
|------|-----------|-------------|---------------------|------|----------|----------|----------|--------|
| I    | DT_NASC   | VL_SAL      | NM_FOTO             |      |          |          |          |        |
|      |           | 10 CRISTINA | HENDERSON           | A00  | 3978     | 01/01/95 | 66       |        |
| 18 F | 14/08/53  | 5275        | C:\FOTOS\CRIS.BMP   |      |          |          |          |        |
|      | 20 MIGUEL | TEIXEIRA    | B01                 | 3478 | 10/10/93 | 61       |          |        |
| 18 M | 02/02/68  | 4125        | C:\FOTOS\MIGUEL.BMP |      |          |          |          |        |

|      |              |                            |     |               |    |
|------|--------------|----------------------------|-----|---------------|----|
|      | 30 SANDRA    | KWAN                       | C01 | 4738 05/04/95 | 60 |
| 20 F | 11/05/61     | 3825 C:\FOTOS\SANDRA.BMP   |     |               |    |
|      | 50 JOAO      | GOMES                      | E01 | 6789 17/08/89 | 58 |
| 16 M | 15/09/55     | 4017 C:\FOTOS\JOAO.BMP     |     |               |    |
|      | 60 IRACY     | SOUZA                      | D11 | 6423 14/09/93 | 55 |
| 16 F | 07/07/55     | 3225 C:\FOTOS\IRACY.BMP    |     |               |    |
|      | 70 EVA       | PEREIRA                    | D21 | 7831 30/09/90 | 56 |
| 16 F | 26/05/63     | 3617 C:\FOTOS\EVA.BMP      |     |               |    |
|      | 90 ELIANE    | HONOFRE                    | E11 | 5498 15/08/95 | 55 |
| 16 F | 15/05/71     | 2975 C:\FOTOS\ELIANE.BMP   |     |               |    |
|      | 100 TEODORO  | SIQUEIRA                   | E21 | 972 16/06/90  | 54 |
| 14 M | 18/12/66     | 2615 C:\FOTOS\TEODORO.BMP  |     |               |    |
|      | 110 VICENTE  | LOURENCO                   | A00 | 3490 16/05/94 | 58 |
| 19 M | 06/11/69     | 4650 C:\FOTOS\VICENTE.BMP  |     |               |    |
|      | 120 SILVIO   | OLIVA                      | A00 | 2167 05/12/93 | 58 |
| 14 M | 18/01/62     | 2925 C:\FOTOS\SILVIO.BMP   |     |               |    |
|      | 130 DOLORES  | QUEIROZ                    | C01 | 4578 28/07/91 | 55 |
| 16 F | 15/09/55     | 2380 C:\FOTOS\DOLORES.BMP  |     |               |    |
|      | 140 HELENA   | NOVAES                     | C01 | 1793 15/12/91 | 56 |
| 18 F | 19/01/56     | 2842 C:\FOTOS\HELENA.BMP   |     |               |    |
|      | 150 BRUNO    | AZEVEDO                    | D11 | 4510 12/02/92 | 55 |
| 16 M | 17/05/67     | 3844,77 C:\FOTOS\BRUNO.BMP |     |               |    |
|      | 160 ELIZABET | PINTO                      | D11 | 3782 11/01/93 | 54 |
| 17 F | 12/04/65     | 2225 C:\FOTOS\BETH.BMP     |     |               |    |
|      | 170 GABRIEL  | YVES                       | D11 | 2890 15/09/89 | 54 |
| 16 M | 05/01/71     | 2468 C:\FOTOS\GABRIEL.BMP  |     |               |    |
|      | 180 MARIA    | SANCHES                    | D11 | 1682 07/07/90 | 53 |
| 17 F | 21/02/69     | 2134 C:\FOTOS\MARIA.BMP    |     |               |    |
|      | 190 JAIR     | WILARES                    | D11 | 2986 26/07/95 | 53 |
| 26 M | 25/06/72     | 2045 C:\FOTOS\JAIR.BMP     |     |               |    |
|      | 200 DAVI     | BARBOSA                    | D11 | 4501 03/03/96 | 55 |
| 16 M | 29/05/71     | 2774 C:\FOTOS\DAVI.BMP     |     |               |    |
|      | 210 WILIAM   | JONES                      | D11 | 942 11/04/94  | 52 |
| 17 M | 23/02/63     | 1827 C:\FOTOS\WILIAM.BMP   |     |               |    |
|      | 220 JOANA    | LUZ                        | D11 | 672 29/08/95  | 55 |
| 18 F | 19/03/68     | 2984 C:\FOTOS\JOANA.BMP    |     |               |    |
|      | 230 JOAQUIM  | JANUARIO                   | D21 | 2094 21/11/95 | 53 |
| 14 M | 30/05/65     | 2218 C:\FOTOS\JOAQUIM.BMP  |     |               |    |
|      | 240 SALVADOR | MEDEIROS                   | D21 | 3780 05/12/93 | 55 |
| 17 M | 31/03/74     | 2876 C:\FOTOS\SALVADOR.BMP |     |               |    |
|      | 250 DANIEL   | SANTANA                    | D21 | 961 30/10/99  | 52 |
| 15 M | 12/11/69     | 1918 C:\FOTOS\DANIEL.BMP   |     |               |    |
|      | 260 SILVIA   | JUVENTO                    | D21 | 8953 11/09/95 | 52 |
| 16 F | 05/10/66     | 1725 C:\FOTOS\SILVIA.BMP   |     |               |    |
|      | 2107 MARTA   | PARENTE                    | D21 | 9001 30/09/90 | 55 |
| 15 F | 26/05/73     | 2738 C:\FOTOS\MARTA.BMP    |     |               |    |
|      | 280 ELINE    | SEVERO                     | E11 | 8997 24/03/91 | 54 |
| 17 F | 28/03/66     | 2625 C:\FOTOS\ELIANE.BMP   |     |               |    |
|      | 290 JOAO     | PONTES                     | E11 | 4502 30/05/90 | 42 |
| 12 M | 09/07/66     | 1534 C:\FOTOS\JOAO.BMP     |     |               |    |
|      | 300 FELIPE   | SARAIVA                    | E11 | 2095 19/06/92 | 48 |
| 14 M | 27/10/56     | 1775 C:\FOTOS\FELIPE.BMP   |     |               |    |
|      | 310 MARINA   | SALGADO                    | E11 | 3332 12/09/91 | 43 |
| 12 F | 21/04/71     | 1590 C:\FOTOS\MARINA.BMP   |     |               |    |

|    |   |          |             |                      |     |      |          |    |
|----|---|----------|-------------|----------------------|-----|------|----------|----|
| 16 | M | 11/08/72 | 320 ROBERTO | MARQUES              | E21 | 9990 | 07/07/90 | 52 |
|    |   |          | 1995        | C:\FOTOS\ROBERTO.BMP |     |      |          |    |
| 14 | M | 18/07/71 | 330 WILSON  | LOPES                | E21 | 2103 | 23/02/96 | 55 |
|    |   |          | 2537        | C:\FOTOS\WILSON.BMP  |     |      |          |    |
| 16 | M | 17/05/66 | 340 DILSON  | GONCALVES            | E21 | 5698 | 05/05/96 | 54 |
|    |   |          | 2000        | C:\FOTOS\DILSON.BMP  |     |      |          |    |

32 linhas selecionadas.

MYLENA:>ed

Gravou file afiedt.buf

```

1  UPDATE VFUNC
2      SET VL_SAL = VL_SAL * 1.1,
3          CD_DEPTO = 'D21'
4*  WHERE CD_MAT = 60

```

MYLENA:>/

MAT = 60

SAL OLD = 3225

SAL NEW = 3547,5

MAT = 60

SAL OLD = 3225 SAL NEW = 3547,5

MAT = 60

DEPTO OLD = D11

DEPTO NEW = D21

1 linha atualizada.

MYLENA:>select \* from func where cd\_mat = 60;

| CD_MAT     | NM_FUNC | NM_SOBRENOME       | CD_ | NR_RAMAL | DT_ADM   | NR_CARGO | NR_GIT |
|------------|---------|--------------------|-----|----------|----------|----------|--------|
| I DT_NASC  | VL_SAL  | NM_FOTO            |     |          |          |          |        |
| 60         | IRACY   | SOUZA              | D21 | 6423     | 14/09/93 | 55       | 16     |
| F 07/07/55 | 3547,5  | C:\FOTOS\IRACY.BMP |     |          |          |          |        |

////////////////////////////////////  
 @L03\_248 e @L03\_249 (com outro funcionário)

MYLENA:>select \* from vfunc;

| CD_MAT           | NM_FUNC  | NM_SOBRENOME         | CD_ | NR_RAMAL | DT_ADM   | NR_CARGO |
|------------------|----------|----------------------|-----|----------|----------|----------|
| NR_GIT I DT_NASC | VL_SAL   | NM_FOTO              |     |          |          |          |
| 150              | BRUNO    | AZEVEDO              | D11 | 4510     | 12/02/92 | 55       |
| 16 M 17/05/67    | 3844,77  | C:\FOTOS\BRUNO.BMP   |     |          |          |          |
| 160              | ELIZABET | PINTO                | D11 | 3782     | 11/01/93 | 54       |
| 17 F 12/04/65    | 2225     | C:\FOTOS\BETH.BMP    |     |          |          |          |
| 170              | GABRIEL  | YVES                 | D11 | 2890     | 15/09/89 | 54       |
| 16 M 05/01/71    | 2468     | C:\FOTOS\GABRIEL.BMP |     |          |          |          |
| 180              | MARIA    | SANCHES              | D11 | 1682     | 07/07/90 | 53       |
| 17 F 21/02/69    | 2134     | C:\FOTOS\MARIA.BMP   |     |          |          |          |

|      |          |        |                     |     |      |          |    |
|------|----------|--------|---------------------|-----|------|----------|----|
|      | 190      | JAIRO  | WILARES             | D11 | 2986 | 26/07/95 | 53 |
| 26 M | 25/06/72 | 2045   | C:\FOTOS\JAIRO.BMP  |     |      |          |    |
|      | 200      | DAVI   | BARBOSA             | D11 | 4501 | 03/03/96 | 55 |
| 16 M | 29/05/71 | 2774   | C:\FOTOS\DAVI.BMP   |     |      |          |    |
|      | 210      | WILIAM | JONES               | D11 | 942  | 11/04/94 | 52 |
| 17 M | 23/02/63 | 1827   | C:\FOTOS\WILIAN.BMP |     |      |          |    |
|      | 220      | JOANA  | LUZ                 | D11 | 672  | 29/08/95 | 55 |
| 18 F | 19/03/68 | 2984   | C:\FOTOS\JOANA.BMP  |     |      |          |    |

8 linhas selecionadas.

MYLENA:>ed

Gravou file afiedt.buf

```

1  UPDATE VFUNC
2      SET VL_SAL = VL_SAL * 1.1,
3          CD_DEPTO = 'D21'
4*  WHERE CD_MAT = 150

```

MYLENA:>/

MAT = 150

SAL OLD = 3844,77

SAL NEW = 4229,25

MAT = 150

SAL OLD = 3844,77 SAL NEW = 4229,25

MAT = 150

DEPTO OLD = D11

DEPTO NEW = D21

1 linha atualizada.

MYLENA:>select \* from vfunc;

|      | CD_MAT   | NM_FUNC   | NM_SOBRENOME         | CD_ | NR_RAMAL | DT_ADM   | NR_CARGO |
|------|----------|-----------|----------------------|-----|----------|----------|----------|
|      | NR_GIT   | I DT_NASC | VL_SAL NM_FOTO       |     |          |          |          |
|      | 160      | ELIZABET  | PINTO                | D11 | 3782     | 11/01/93 | 54       |
| 17 F | 12/04/65 | 2225      | C:\FOTOS\BETH.BMP    |     |          |          |          |
|      | 170      | GABRIEL   | YVES                 | D11 | 2890     | 15/09/89 | 54       |
| 16 M | 05/01/71 | 2468      | C:\FOTOS\GABRIEL.BMP |     |          |          |          |
|      | 180      | MARIA     | SANCHES              | D11 | 1682     | 07/07/90 | 53       |
| 17 F | 21/02/69 | 2134      | C:\FOTOS\MARIA.BMP   |     |          |          |          |
|      | 190      | JAIRO     | WILARES              | D11 | 2986     | 26/07/95 | 53       |
| 26 M | 25/06/72 | 2045      | C:\FOTOS\JAIRO.BMP   |     |          |          |          |
|      | 200      | DAVI      | BARBOSA              | D11 | 4501     | 03/03/96 | 55       |
| 16 M | 29/05/71 | 2774      | C:\FOTOS\DAVI.BMP    |     |          |          |          |
|      | 210      | WILIAM    | JONES                | D11 | 942      | 11/04/94 | 52       |
| 17 M | 23/02/63 | 1827      | C:\FOTOS\WILIAN.BMP  |     |          |          |          |
|      | 220      | JOANA     | LUZ                  | D11 | 672      | 29/08/95 | 55       |
| 18 F | 19/03/68 | 2984      | C:\FOTOS\JOANA.BMP   |     |          |          |          |

7 linhas selecionadas.

MYLENA:>select \* from func where cd\_mat = 150;

| CD_MAT | NM_FUNC   | NM_SOBRENOME | CD_                | NR_RAMAL | DT_ADM   | NR_CARGO |
|--------|-----------|--------------|--------------------|----------|----------|----------|
| NR_GIT | I DT_NASC | VL_SAL       | NM_FOTO            |          |          |          |
| 150    | BRUNO     | AZEVEDO      | D21                | 4510     | 12/02/92 | 55       |
| 16 M   | 17/05/67  | 4229,25      | C:\FOTOS\BRUNO.BMP |          |          |          |

////////////////////////////////////  
 @L03\_255 e L03\_256

MYLENA:>ed  
 Gravou file afiedt.buf

```

1 CREATE OR REPLACE TRIGGER TIPO_ROW
2 BEFORE DELETE OR INSERT OR UPDATE OF VL_SAL ON FUNC
3 REFERENCING OLD AS V
4 NEW AS N
5 FOR EACH ROW
6 WHEN (V.CD_DEPTO = 'D11' OR N.CD_DEPTO = 'D11')
7 BEGIN
8 IF UPDATING THEN
9 DBMS_OUTPUT.PUT_LINE('MAT = '||:V.CD_MAT);
10 DBMS_OUTPUT.PUT_LINE('SAL OLD = '||:V.VL_SAL||' SAL NEW =
' ||:N.VL_SAL);
11 ELSIF INSERTING THEN
12 DBMS_OUTPUT.PUT_LINE('MAT = '||:N.CD_MAT);
13 DBMS_OUTPUT.PUT_LINE('SAL NEW = '||:N.VL_SAL);
14 ELSE
15 DBMS_OUTPUT.PUT_LINE('MAT = '||:V.CD_MAT);
16 DBMS_OUTPUT.PUT_LINE('SAL OLD = '||:V.VL_SAL);
17 END IF;
18* END;
```

MYLENA:>/

Gatilho criado.

MYLENA:>INSERT INTO FUNC (CD\_MAT, VL\_SAL, CD\_DEPTO)  
 2 VALUES (2, 1000, 'D11');  
 MAT = 2  
 SAL NEW = 1000  
 MAT =  
 SAL OLD = SAL NEW = 1000

1 linha criada.

MYLENA:>UPDATE FUNC SET VL\_SAL = 2000  
 2 WHERE CD\_MAT = 2;  
 MAT = 2  
 SAL OLD = 1000 SAL NEW = 2000  
 MAT = 2  
 SAL OLD = 1000 SAL NEW = 2000



1 linha atualizada.

```
MYLENA:>DELETE FROM FUNC  
      2 WHERE CD_MAT = 2;  
MAT = 2  
SAL OLD = 2000  
MAT = 2  
SAL OLD = 2000 SAL NEW =
```

1 linha excluída.