

# Programação Avançada de Banco de Dados

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## LAB II – Tabela Temporária

### Enunciado do Problema

Criar uma tabela temporária no Oracle em nível de sessão para suportar o cálculo do reajuste salarial para a folha de pagamento da empresa.

Essa tabela será responsável por armazenar os cargos ocupados na empresa com a respectiva média salarial organizados por departamento.

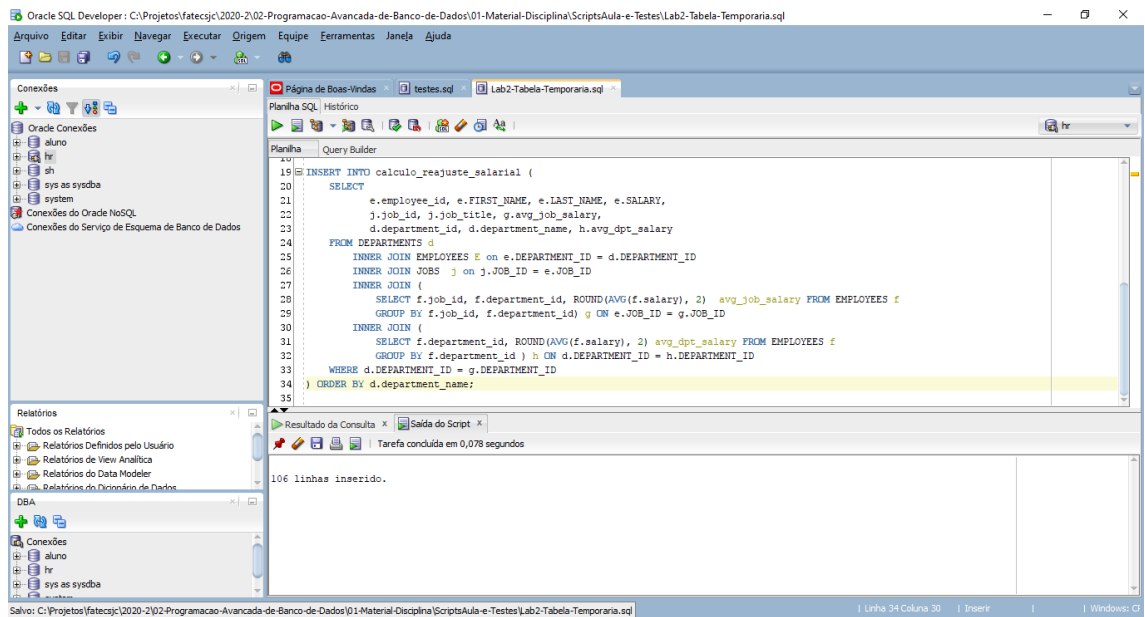
Imprimir no relatório um DESC dessa tabela;

The screenshot shows the Oracle SQL Developer interface. The main window displays the SQL script for creating a global temporary table and its description.

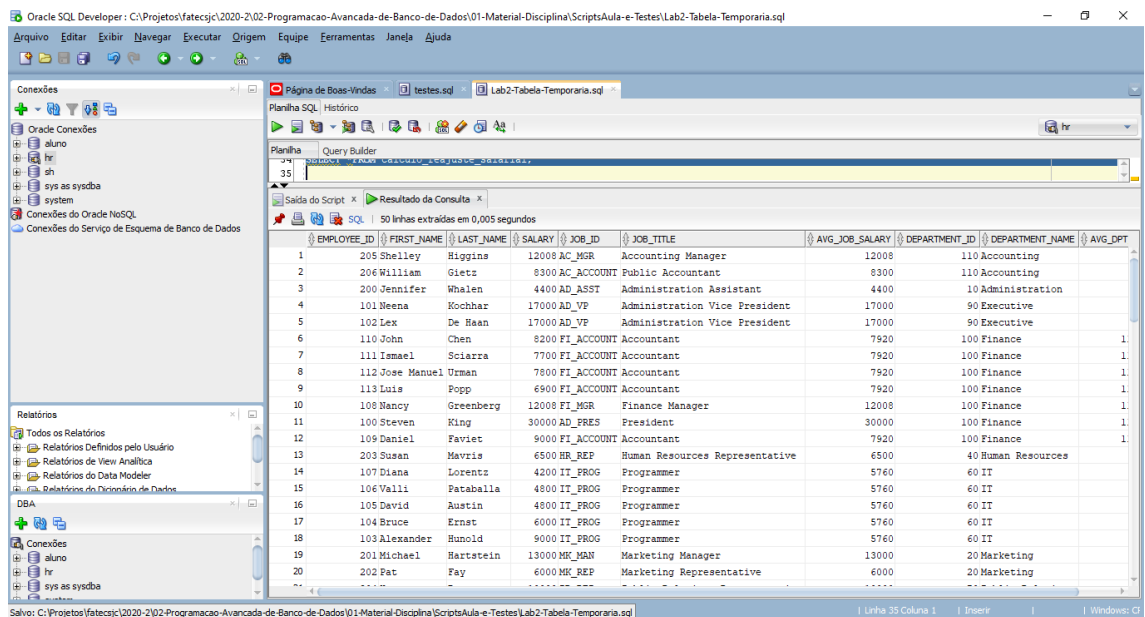
```
1 CREATE GLOBAL TEMPORARY TABLE calculo_reajuste_salarial (  
2     employee_id NUMBER(6) PRIMARY KEY,  
3     first_name VARCHAR2(20),  
4     last_name VARCHAR2(25) NOT NULL,  
5     salary NUMBER(8, 2),  
6     job_id VARCHAR2(10) NOT NULL,  
7     job_title VARCHAR2(35) NOT NULL,  
8     avg_job_salary NUMBER(8, 2),  
9     department_id NUMBER(4) NOT NULL,  
10    department_name VARCHAR2(30) NOT NULL,  
11    avg_dpt_salary NUMBER(8, 2)  
12 )  
13 ON COMMIT PRESERVE ROWS;  
14  
15 DESC calculo_reajuste_salarial
```

The bottom pane shows the result of the DESCRIBE command, displaying the table structure:

Nome	Nulo?	Tipo
EMPLOYEE_ID	NOT NULL	NUMBER(6)
FIRST_NAME		VARCHAR2(20)
LAST_NAME	NOT NULL	VARCHAR2(25)
SALARY		NUMBER(8,2)
JOB_ID	NOT NULL	VARCHAR2(10)
JOB_TITLE	NOT NULL	VARCHAR2(35)
AVG_JOB_SALARY		NUMBER(8,2)
DEPARTMENT_ID	NOT NULL	NUMBER(4)
DEPARTMENT_NAME	NOT NULL	VARCHAR2(30)
AVG_DPT_SALARY		NUMBER(8,2)



Após **armazenar essa lista de cargos e salários** deve-se utilizar os registros para atender aos seguintes requisitos:



- Listar os cargos ocupados, a média salarial por departamento e o total de funcionários existentes;

The screenshot shows the Oracle SQL Developer interface. The 'Planilha SQL' window contains the following query:

```

36 SELECT c.job_id, c.job_title, c.department_id, c.department_name, c.avg_dpt_salary, COUNT(c.employee_id)
37 FROM calculo_reajuste_salarial c GROUP BY c.job_id, c.job_title, c.department_id, c.department_name, c.avg_dpt_salary
38 ORDER BY COUNT(c.employee_id) DESC;
39

```

The 'Resultado da Consulta' window displays the following data:

JOB_ID	JOB_TITLE	DEPARTMENT_ID	DEPARTMENT_NAME	AVG_DPT_SALARY	COUNT(C.EMPLOYEE_ID)
SA_REP	Sales Representative	80	Sales	9555,88	29
ST_CLERK	Stock Clerk	50	Shipping	3475,56	20
SH_CLERK	Shipping Clerk	50	Shipping	3475,56	20
SA_MAN	Sales Manager	80	Sales	9555,88	5
PU_CLERK	Purchasing Clerk	30	Purchasing	4150	5
IT_PROG	Programmer	60	IT	5760	5
FI_ACCOUNT	Accountant	100	Finance	11658,29	5
ST_MAN	Stock Manager	90	Shipping	3475,56	5
AD_VP	Administration Vice President	90	Executive	17000	2
HR_REP	Human Resources Representative	40	Human Resources	6500	1
AD_PRES	President	100	Finance	11658,29	1
FI_MGR	Finance Manager	100	Finance	11658,29	1
AD_ASST	Administration Assistant	10	Administration	4400	1
PR_REP	Public Relations Representative	70	Public Relations	10000	1
MK_REP	Marketing Representative	20	Marketing	9500	1
MK_MAN	Marketing Manager	20	Marketing	9500	1
AC_ACCOUNT	Public Accountant	110	Accounting	10154	1
AC_MGR	Accounting Manager	110	Accounting	10154	1
PU_MAN	Purchasing Manager	30	Purchasing	4150	1

- Listar os funcionários de um departamento e indicar se o salário dele é menor, igual ou maior que a médio do departamento dele na empresa;

The screenshot shows the Oracle SQL Developer interface. The 'Planilha SQL' window contains the following query:

```

30 SELECT f.department_id, f.first_name || ' ' || last_name AS full_name, f.salary, f.avg_dpt_salary
31 FROM calculo_reajuste_salarial f JOIN calculo_reajuste_salarial g ON f.department_id = g.department_id
32 WHERE d.department_id = g.department_id
33 ORDER BY d.department_name;
34
35 SELECT * FROM calculo_reajuste_salarial;
36
37 SELECT c.job_id, c.job_title, c.department_id, c.department_name, c.avg_dpt_salary, COUNT(c.employee_id)
38 FROM calculo_reajuste_salarial c GROUP BY c.job_id, c.job_title, c.department_id, c.department_name, c.avg_dpt_salary
39 ORDER BY COUNT(c.employee_id) DESC;
40
41 SELECT department_id, department_name, first_name || ' ' || last_name AS full_name, salary, avg_dpt_salary,
42 CASE
43 WHEN SALARY < avg_dpt_salary THEN 'Salário menor que a média salarial do departamento'
44 WHEN SALARY > avg_dpt_salary THEN 'Salário maior que a média salarial do departamento'
45 END AS "Departamento x Salário"
46 FROM calculo_reajuste_salarial WHERE department_name = 'IT';

```

The 'Resultado da Consulta' window displays the following data:

DEPARTMENT_ID	DEPARTMENT_NAME	FULL_NAME	SALARY	AVG_DPT_SALARY	Departamento x Salário
60	IT	Diana Lorentz	4200	5760	Salário menor que a média salarial do departamento
60	IT	Valli Pataballa	4800	5760	Salário menor que a média salarial do departamento
60	IT	David Austin	4800	5760	Salário menor que a média salarial do departamento
60	IT	Bruce Ernst	6000	5760	Salário maior que a média salarial do departamento
60	IT	Alexander Runold	9000	5760	Salário maior que a média salarial do departamento

- Para todos os funcionários aplicar um reajuste de salário que é de 10% sobre a diferença entre o salário e a média salarial do cargo dele no departamento.

Oracle SQL Developer: C:\Projetos\fatescj\2020-2\02-Programacao-Avancada-de-Banco-de-Dados\01-Material-Disciplina\ScriptsAula-e-Testes\Lab2-Tabela-Temporaria.sql

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Conexões

Planilha SQL Histórico

Planilha Query Builder

```

33
34 SELECT *FROM calculo_reajuste_salarial;
35
36 SELECT c.job_id, c.job_title, c.department_id, c.department_name, c.avg_dpt_salary, COUNT(c.employee_id)

```

Saída do Script x Resultado da Consulta x

50 linhas extraídas em 0,004 segundos

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	SALARY	JOB_ID	JOB_TITLE	AVG_JOB_SALARY	DEPARTMENT_ID	DEPARTMENT_NAME	AVG_DPT_SALARY
1	205	Shelley	Higgins	12008	AC_MGR	Accounting Manager	12008	110	Accounting	10154
2	206	William	Gietz	8300	AC_ACCOUNT	Public Accountant	8300	110	Accounting	10154
3	200	Jennifer	Whalen	4400	AD_ASST	Administration Assistant	4400	10	Administration	4400
4	101	Neena	Kochhar	17000	AD_VP	Administration Vice President	17000	90	Executive	17000
5	102	Lex	De Haan	17000	AD_VP	Administration Vice President	17000	90	Executive	17000
6	110	John	Chen	8200	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
7	111	Imael	Sciarra	7700	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
8	112	Jose Manuel	Urman	7800	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
9	113	Luis	Popp	6900	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
10	108	Nancy	Greenberg	12008	FI_MGR	Finance Manager	12008	100	Finance	11658,29
11	100	Steven	King	30000	AD_PRES	President	30000	100	Finance	11658,29
12	109	Daniel	Faviet	9000	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
13	203	Susan	Mavris	6500	HR_REP	Human Resources Representative	6500	40	Human Resources	6500
14	107	Diana	Lorentz	4200	IT_FROG	Programmer	5760	60	IT	5760
15	106	Valli	Pataballa	4800	IT_FROG	Programmer	5760	60	IT	5760
16	105	David	Austin	4800	IT_FROG	Programmer	5760	60	IT	5760
17	104	Bruce	Ernst	6000	IT_FROG	Programmer	5760	60	IT	5760
18	103	Alexander	Burnold	9000	IT_FROG	Programmer	5760	60	IT	5760
19	201	Michael	Hartstein	13000	MK_MGR	Marketing Manager	13000	20	Marketing	9500

Clique em um identificador com a tecla Control pressionada para executar a operação "Ir para Declaração"

Salários dos funcionários antes do ajuste salarial.

Oracle SQL Developer: C:\Projetos\fatescj\2020-2\02-Programacao-Avancada-de-Banco-de-Dados\01-Material-Disciplina\ScriptsAula-e-Testes\Lab2-Tabela-Temporaria.sql

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Conexões

Planilha SQL Histórico

Planilha Query Builder

```

40 WHEN SALARY < avg_dpt_salary THEN 'Salário menor que a média salarial do departamento'
41 WHEN SALARY > avg_dpt_salary THEN 'Salário maior que a média salarial do departamento'
42 END AS "Departamento e Salário"
43 FROM calculo_reajuste_salarial WHERE department_name = 'IT';
44
45 UPDATE calculo_reajuste_salarial
46 SET salary = salary + (ABS(avg_dpt_salary - salary) * 0.1);
47
48 SELECT *FROM calculo_reajuste_salarial;
49

```

Saída do Script x Resultado da Consulta x

50 linhas extraídas em 0,003 segundos

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	SALARY	JOB_ID	JOB_TITLE	AVG_JOB_SALARY	DEPARTMENT_ID	DEPARTMENT_NAME	AVG_DPT_SALARY
1	205	Shelley	Higgins	12193,4	AC_MGR	Accounting Manager	12008	110	Accounting	10154
2	206	William	Gietz	8485,4	AC_ACCOUNT	Public Accountant	8300	110	Accounting	10154
3	200	Jennifer	Whalen	4400	AD_ASST	Administration Assistant	4400	10	Administration	4400
4	101	Neena	Kochhar	17000	AD_VP	Administration Vice President	17000	90	Executive	17000
5	102	Lex	De Haan	17000	AD_VP	Administration Vice President	17000	90	Executive	17000
6	110	John	Chen	8545,83	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
7	111	Imael	Sciarra	8095,83	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
8	112	Jose Manuel	Urman	8185,83	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
9	113	Luis	Popp	7375,83	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
10	108	Nancy	Greenberg	12042,97	FI_MGR	Finance Manager	12008	100	Finance	11658,29
11	100	Steven	King	31834,17	AD_PRES	President	30000	100	Finance	11658,29
12	109	Daniel	Faviet	9265,83	FI_ACCOUNT	Accountant	7920	100	Finance	11658,29
13	203	Susan	Mavris	6500	HR_REP	Human Resources Representative	6500	40	Human Resources	6500
14	107	Diana	Lorentz	4356	IT_FROG	Programmer	5760	60	IT	5760

Salvar: C:\Projetos\fatescj\2020-2\02-Programacao-Avancada-de-Banco-de-Dados\01-Material-Disciplina\ScriptsAula-e-Testes\Lab2-Tabela-Temporaria.sql

Salários dos funcionários após o ajuste salarial.

Orientações:

- Obrigatório o uso de tabela temporária.
- Opcionalmente, pode-se criar blocos pl/sql para produzir os resultados esperados