

PRAKTIKUM 9 PEMROGRAMAN BASIS DATA “SP FUNCTION”

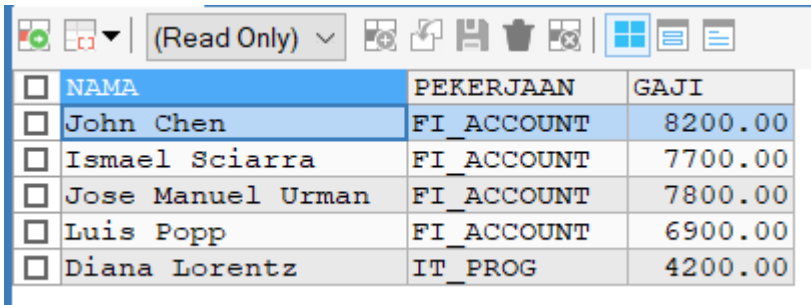
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NIM : 152011513029

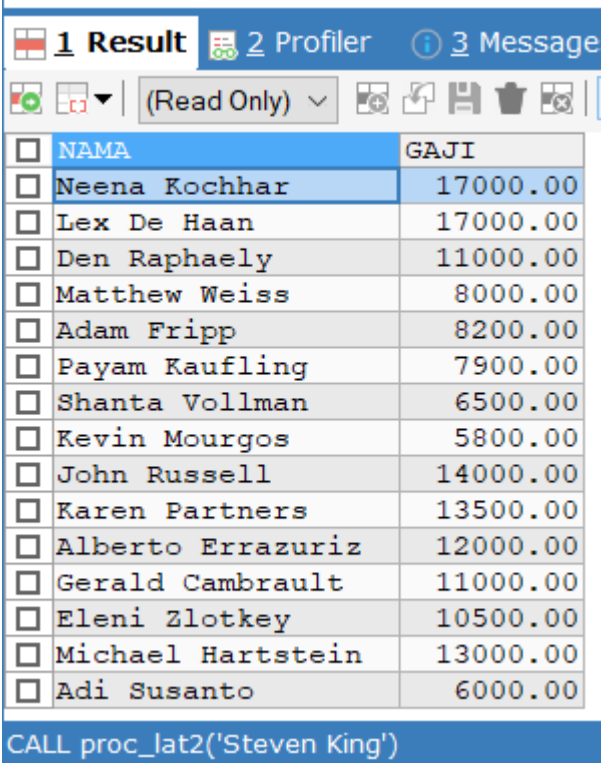
SOAL PRAKTIKUM

Buatlah procedure yang mampu menampilkan informasi dibawah ini! Kemudian tuliskan cara Anda untuk menampilkan procedure. Screenshot syntax procedure, syntaks untuk menampilkan procedure dan hasil dari procedure.

1. Tampilkan informasi mengenai nama, pekerjaan, dan gaji dari semua pegawai yang memiliki pekerjaan ‘IT_PROG’ atau ‘FI_ACCOUNT’ dan gajinya tidak sama dengan \$4800, \$6000 atau \$9000. (Beri nama procedure proc_lat1)

Code	<pre>DELIMITER \$\$ CREATE PROCEDURE proc_lat1() BEGIN SELECT CONCAT(first_name,' ',last_name) AS NAMA, job_id AS PEKERJAAN, salary AS GAJI FROM employees WHERE (job_id = "it_prog" OR job_id = "fi_account") AND salary NOT IN (4800,6000,9000); END \$\$ DELIMITER ; DROP PROCEDURE proc_lat1; CALL proc_lat1();</pre>																		
Hasil	 <table><tr><th><input type="checkbox"/> NAMA</th><th>PEKERJAAN</th><th>GAJI</th></tr><tr><td><input type="checkbox"/> John Chen</td><td>FI_ACCOUNT</td><td>8200.00</td></tr><tr><td><input type="checkbox"/> Ismael Sciarra</td><td>FI_ACCOUNT</td><td>7700.00</td></tr><tr><td><input type="checkbox"/> Jose Manuel Urman</td><td>FI_ACCOUNT</td><td>7800.00</td></tr><tr><td><input type="checkbox"/> Luis Popp</td><td>FI_ACCOUNT</td><td>6900.00</td></tr><tr><td><input type="checkbox"/> Diana Lorentz</td><td>IT_PROG</td><td>4200.00</td></tr></table>	<input type="checkbox"/> NAMA	PEKERJAAN	GAJI	<input type="checkbox"/> John Chen	FI_ACCOUNT	8200.00	<input type="checkbox"/> Ismael Sciarra	FI_ACCOUNT	7700.00	<input type="checkbox"/> Jose Manuel Urman	FI_ACCOUNT	7800.00	<input type="checkbox"/> Luis Popp	FI_ACCOUNT	6900.00	<input type="checkbox"/> Diana Lorentz	IT_PROG	4200.00
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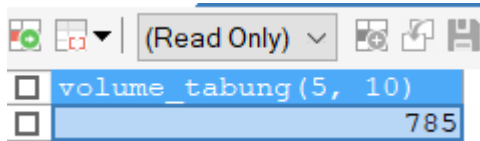
2. Tampilkan informasi mengenai nama dan gaji dari semua pegawai yang merupakan bawahan dari nama pegawai tertentu (parameter yang dimasukkan user). (Beri nama procedure proc_lat2)

Code	<pre>DELIMITER \$\$ CREATE OR REPLACE PROCEDURE proc_lat2(a VARCHAR(50)) BEGIN SELECT CONCAT(first_name,' ',last_name) AS NAMA, salary AS GAJI FROM employees WHERE manager_id = (SELECT employee_id FROM employees WHERE CONCAT(first_name,' ',last_name) = a); END \$\$ DELIMITER ; CALL proc_lat2('Steven King');</pre>
Hasil	

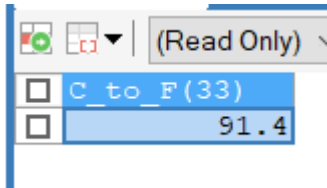
3. Tampilkan informasi mengenai nama pegawai, nama department, gaji setahun, dan komisim yang diperoleh selama setahun pada nama department tertentu sesuai dengan isian user(parameter yang dimasukkan user). Jika pegawai tidak mendapatkan komisi maka akan diisi dengan nilai 0. (Beri nama procedure proc_lat3)

Code	<pre>DELIMITER \$\$ CREATE OR REPLACE PROCEDURE proc_lat3(departmen VARCHAR(50)) BEGIN SELECT CONCAT(E.first_name, ' ', E.last_name) AS NAMA, D.department_name, (E.salary*12) AS "GAJI SETAHUN", IFNULL(e.COMMISSION_PCT*12,0) AS "KOMISI SETAHUN" FROM EMPLOYEES E JOIN DEPARTMENTS D ON E.DEPARTMENT_ID = D.DEPARTMENT_ID WHERE E.DEPARTMENT_ID = (SELECT DEPARTMENT_ID FROM DEPARTMENTS WHERE DEPARTMENT_NAME = departmen); END \$\$ DELIMITER ; CALL proc_lat3('Sales');</pre>																																																																																
Hasil	<div><div>1 Result2 Profiler3 Messages4 Table Data5 Info</div><div>(Read Only)</div><table><thead><tr><th></th><th>NAMA</th><th>department_name</th><th>GAJI SETAHUN</th><th>KOMISI SETAHUN</th></tr></thead><tbody><tr><td><input type="checkbox"/></td><td>Karen Partners</td><td>Sales</td><td>162000.00</td><td>3.60</td></tr><tr><td><input type="checkbox"/></td><td>Alberto Errazuriz</td><td>Sales</td><td>144000.00</td><td>3.60</td></tr><tr><td><input type="checkbox"/></td><td>Gerald Cambrault</td><td>Sales</td><td>132000.00</td><td>3.60</td></tr><tr><td><input type="checkbox"/></td><td>Eleni Zlotkey</td><td>Sales</td><td>126000.00</td><td>2.40</td></tr><tr><td><input type="checkbox"/></td><td>Peter Tucker</td><td>Sales</td><td>120000.00</td><td>3.60</td></tr><tr><td><input type="checkbox"/></td><td>David Bernstein</td><td>Sales</td><td>114000.00</td><td>3.00</td></tr><tr><td><input type="checkbox"/></td><td>Peter Hall</td><td>Sales</td><td>108000.00</td><td>3.00</td></tr><tr><td><input type="checkbox"/></td><td>Christopher Olsen</td><td>Sales</td><td>96000.00</td><td>2.40</td></tr><tr><td><input type="checkbox"/></td><td>Nanette Cambrault</td><td>Sales</td><td>90000.00</td><td>2.40</td></tr><tr><td><input type="checkbox"/></td><td>Oliver Tuvault</td><td>Sales</td><td>84000.00</td><td>1.80</td></tr><tr><td><input type="checkbox"/></td><td>Janette King</td><td>Sales</td><td>120000.00</td><td>4.20</td></tr><tr><td><input type="checkbox"/></td><td>Patrick Sully</td><td>Sales</td><td>114000.00</td><td>4.20</td></tr><tr><td><input type="checkbox"/></td><td>Allan McEwen</td><td>Sales</td><td>108000.00</td><td>4.20</td></tr><tr><td><input type="checkbox"/></td><td>Lindsey Smith</td><td>Sales</td><td>96000.00</td><td>3.60</td></tr><tr><td><input type="checkbox"/></td><td>Louise Doran</td><td>Sales</td><td>90000.00</td><td>3.60</td></tr></tbody></table><div>CALL proc_lat3('Sales')</div></div>		NAMA	department_name	GAJI SETAHUN	KOMISI SETAHUN	<input type="checkbox"/>	Karen Partners	Sales	162000.00	3.60	<input type="checkbox"/>	Alberto Errazuriz	Sales	144000.00	3.60	<input type="checkbox"/>	Gerald Cambrault	Sales	132000.00	3.60	<input type="checkbox"/>	Eleni Zlotkey	Sales	126000.00	2.40	<input type="checkbox"/>	Peter Tucker	Sales	120000.00	3.60	<input type="checkbox"/>	David Bernstein	Sales	114000.00	3.00	<input type="checkbox"/>	Peter Hall	Sales	108000.00	3.00	<input type="checkbox"/>	Christopher Olsen	Sales	96000.00	2.40	<input type="checkbox"/>	Nanette Cambrault	Sales	90000.00	2.40	<input type="checkbox"/>	Oliver Tuvault	Sales	84000.00	1.80	<input type="checkbox"/>	Janette King	Sales	120000.00	4.20	<input type="checkbox"/>	Patrick Sully	Sales	114000.00	4.20	<input type="checkbox"/>	Allan McEwen	Sales	108000.00	4.20	<input type="checkbox"/>	Lindsey Smith	Sales	96000.00	3.60	<input type="checkbox"/>	Louise Doran	Sales	90000.00	3.60
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4. Buatlah function yang bisa menghitung volume tabung. (Rumus volume tabung : $\pi r^2 t$)

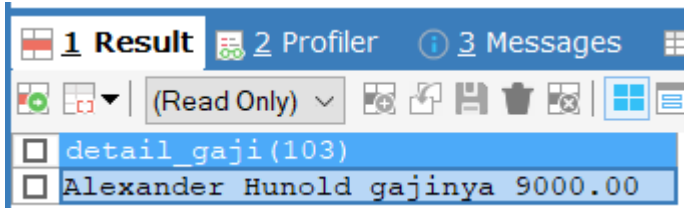
Code	<pre> DELIMITER \$\$ CREATE FUNCTION volume_tabung(r INT, t INT) RETURNS INT BEGIN DECLARE v INT; SET v = t * r * r * 3.14; RETURN v; END\$\$ DELIMITER ; SELECT volume_tabung(5, 10); </pre>
Hasil	

5. Buatlah function yang bisa mengkonversi suhu Celsius ke Fahrenheit (Rumus Konversi $^{\circ}\text{F} = ^{\circ}\text{C} \times \text{perbandingan suhu} + 32$)

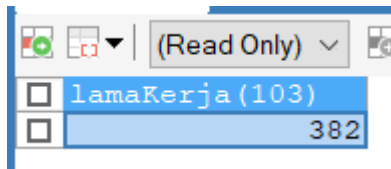
Code	<pre> DELIMITER \$\$ CREATE FUNCTION C_to_F (celcius DOUBLE) RETURNS DOUBLE BEGIN DECLARE fahrenheit DOUBLE; SELECT ((celcius * 9/5) + 32) INTO fahrenheit; RETURN fahrenheit; END\$\$ DELIMITER ; SELECT C_to_F(33); </pre>
Hasil	

6. Buatlah function yang mampu melakukan penggabungan first_name, last_name dan salary dengan parameter masukan adalah employee_id. Hasilnya yang diinginkan bisa menampilkan

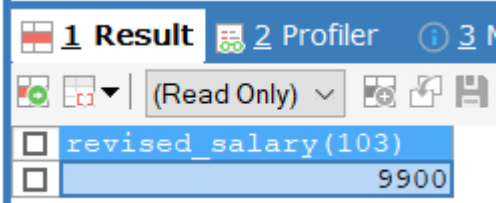
	Detail_Gaji
<input type="checkbox"/>	Steven King gajinya 24000.00

Code	<pre>DELIMITER \$\$ CREATE FUNCTION detail_gaji (id INT) RETURNS VARCHAR(100) BEGIN DECLARE detail VARCHAR(100); SELECT CONCAT(first_name, ' ', last_name, ' gajinya ', salary) INTO detail FROM employees WHERE employee_id = id; RETURN detail; END\$\$ DELIMITER ; SELECT detail_gaji(103);</pre>
Hasil	

7. Buatlah function yang bisa menghitung lama kerja employee dalam satuan bulan dengan parameter masukan adalah employee_id.

Code	<pre>DELIMITER \$\$ CREATE OR REPLACE FUNCTION lamaKerja(emp_id INT) RETURNS INT BEGIN DECLARE hitung INT; SELECT TIMESTAMPTDIFF(MONTH, HIRE_DATE , NOW()) INTO hitung FROM employees WHERE employee_id = emp_id; RETURN hitung; END \$\$ DELIMITER ; SELECT lamaKerja(103);</pre>		
Hasil	 <p>The screenshot shows a database query result window. At the top, there are icons for running, saving, and other actions, along with a "(Read Only)" dropdown. Below this, there is a table with two rows. The first row shows the function call "lamaKerja(103)" and the second row shows the result "382".</p> <table><tr><td>lamaKerja(103)</td></tr><tr><td>382</td></tr></table>	lamaKerja(103)	382
lamaKerja(103)			
382			

8. Buatlah function yang bisa menghitung revised_salary dengan ketentuan sebagai berikut:
- Jika JOB_ID adalah terdapat string VIP maka salary dinaikkan 35%
 - Jika JOB_ID adalah terdapat string MAN maka salary dinaikkan 30%
 - JOB_ID adalah terdapat string ACCOUNT maka salary dinaikkan 20%
 - Selain itu salary dinaikkan 10%
9. Parameter inputan yang dimasukkan adalah employee_id

Code	<pre> DELIMITER \$\$ CREATE OR REPLACE FUNCTION revised_salary (emp_id INT) RETURNS FLOAT BEGIN DECLARE gaji DOUBLE; DECLARE job VARCHAR(100); SELECT job_id INTO job FROM employees WHERE employee_id = emp_id; SELECT salary INTO gaji FROM employees WHERE employee_id = emp_id; IF (job LIKE '%VIP%') THEN RETURN gaji + (gaji*0.35); ELSEIF (job LIKE '%MAN%') THEN RETURN gaji + (gaji*0.3); ELSEIF (job LIKE '%ACCOUNT%') THEN RETURN gaji + (gaji*0.2); ELSE RETURN gaji + (gaji*0.1); END IF ; END\$\$ DELIMITER ; SELECT revised_salary(103); </pre>
Hasil	 <p>The screenshot shows the SQL Developer interface with the 'Result' tab selected. It displays the execution of the query <code>revised_salary(103)</code>, which returned a single value, 9900.</p>