



Universidad Autónoma de Chihuahua

Facultad de Ingeniería

Asignatura: Fundamentos de bases de datos

Clave: CI675

Grupo: 6CC2

Semestre: Ago-Dic 2024

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Act. 3 SQL Groups

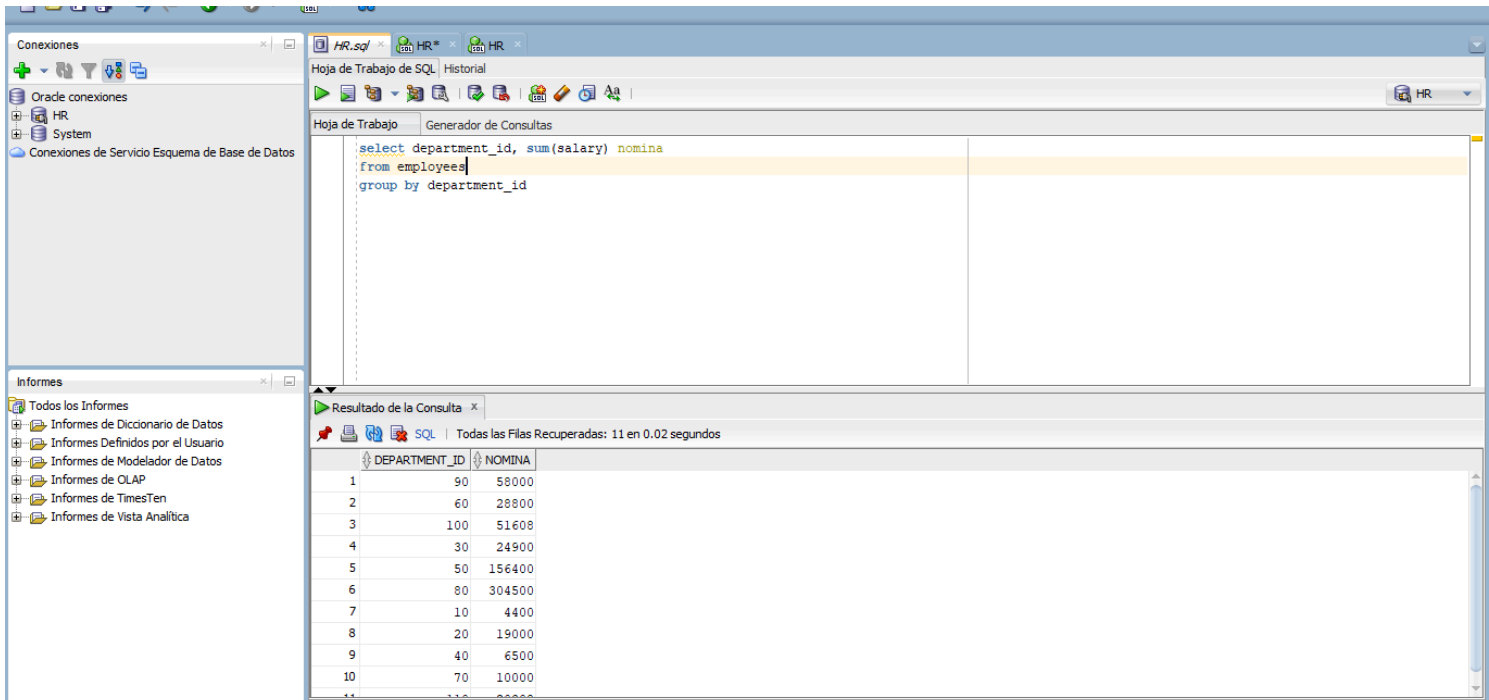
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Fecha de entrega: domingo 8 de septiembre de 2024

Realizar un documento formal en formato PDF con la respuesta a los requerimientos (Se deberá incluir la redacción del problema, la consulta de SQL y el resultado para cada consulta de la actividad)

1. Obtener la nómina (suma de los salarios de los empleados del departamento) que paga cada uno de los departamentos (department_id y nómina)



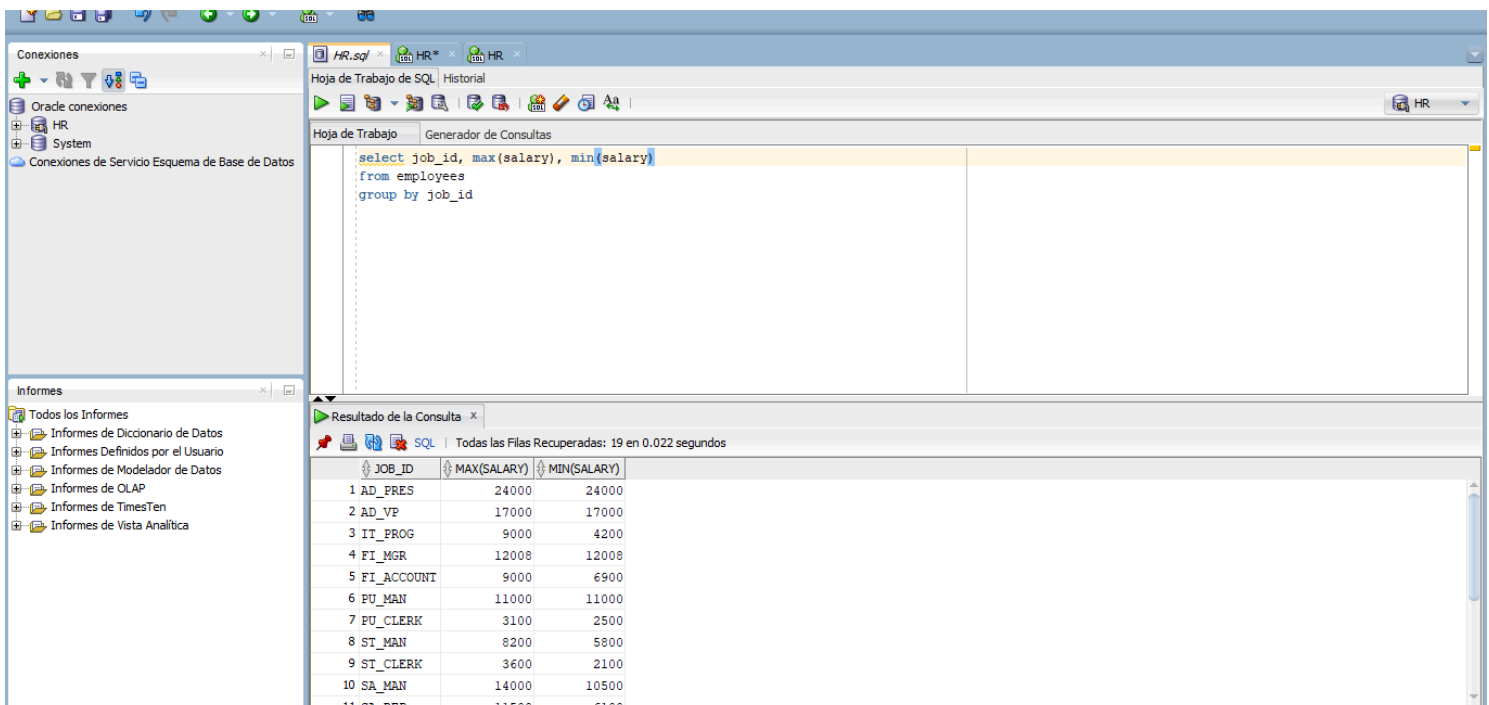
The screenshot shows the Oracle SQL Developer interface. The 'Conexiones' pane on the left lists 'HR' and 'System'. The 'Informes' pane shows various report options. The main window displays a SQL query in the 'Hoja de Trabajo' tab:

```
select department_id, sum(salary) nomina
from employees
group by department_id
```

The 'Resultado de la Consulta' pane shows the results of the query, with 11 rows recovered in 0.02 seconds. The data is as follows:

DEPARTMENT_ID	NOMINA
1	90
2	60
3	100
4	30
5	50
6	80
7	10
8	20
9	40
10	70

2. Obtener el salario menor y mayor que se está pagando por puesto (job_id, salario menor y salario mayor)



The screenshot shows the Oracle SQL Developer interface. The 'Conexiones' pane on the left lists 'HR' and 'System'. The 'Informes' pane shows various report options. The main window displays a SQL query in the 'Hoja de Trabajo' tab:

```
select job_id, max(salary), min(salary)
from employees
group by job_id
```

The 'Resultado de la Consulta' pane shows the results of the query, with 19 rows recovered in 0.022 seconds. The data is as follows:

JOB_ID	MAX(SALARY)	MIN(SALARY)
1 AD_PRES	24000	24000
2 AD_VP	17000	17000
3 IT_PROG	9000	4200
4 FI_MGR	12008	12008
5 FI_ACCOUNT	9000	6900
6 PU_MAN	11000	11000
7 PU_CLERK	3100	2500
8 ST_MAN	8200	5800
9 ST_CLERK	3600	2100
10 SA_MAN	14000	10500

3. Obtener los departamentos que tienen asignados más de 30 empleados (department_id, no. empleados).

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Conexiones' (Connections) pane shows 'HR' and 'System' connections. The 'Informes' (Reports) pane is also visible. The main window displays a SQL query in the 'Hoja de Trabajo' (Worksheet) tab:

```
select department_id, count(*)  
from employees  
where department_id is not null  
group by department_id  
having count(*) > 30
```

The 'Resultado de la Consulta' (Query Result) pane shows the results of the query:

DEPARTMENT_ID	COUNT(*)
1	45
2	34

4. Obtener el salario promedio que se paga por puesto (job_id, salario promedio)

The screenshot shows the Oracle SQL Developer interface. The 'Conexiones' (Connections) pane shows 'HR' and 'System' connections. The 'Informes' (Reports) pane is also visible. The main window displays a SQL query in the 'Hoja de Trabajo' (Worksheet) tab:

```
select job_id, avg(salary) salarioPromedio  
from EMPLOYEES  
group by job_id
```

The 'Resultado de la Consulta' (Query Result) pane shows the results of the query:

JOB_ID	SALARIO PROMEDIO
1 AD_PRES	24000
2 AD_VP	17000
3 IT_PROG	5760
4 FI_MGR	12008
5 FI_ACCOUNT	7920
6 PU_MAN	11000
7 PU_CLERK	2780
8 ST_MAN	7280
9 ST_CLERK	2785
10 SA_MAN	12200

5. Obtener los departamentos con más de un movimiento de puesto de su personal (department_id, no. movimientos)

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Conexiones' pane shows the 'HR' schema. The 'Hoja de Trabajo' pane contains the following SQL query:

```
select department_id, COUNT(*) AS num_movimientos
from job_history
where department_id is not null
group by department_id
having COUNT(*) > 1
```

The 'Resultado de la Consulta' pane shows the results of the query:

DEPARTMENT_ID	NUM_MOVIMIENTOS
1	50
2	80
3	90
4	110

6. Obtener la nómina que se paga por puesto, no incluir el puesto SA_REP, para aquellos puestos que tienen una nómina mayor a \$50000 (job_id, nómina)

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Conexiones' pane shows the 'HR' schema. The 'Hoja de Trabajo' pane contains the following SQL query:

```
select job_id, sum(salary) nomina
from employees
where job_id NOT IN ('SA_REP')
having sum(salary) > 50000
group by job_id
```

The 'Resultado de la Consulta' pane shows the results of the query:

JOB_ID	NOMINA
1 ST_CLERK	55700
2 SA_MAN	61000
3 SH_CLERK	64300

7. Obtener el número de empleados por departamento, para los empleados que tienen un salario en el rango de 2000 a 10000 (department_id, no. empleados)

The screenshot shows the Oracle SQL Developer interface. The 'Conexiones' pane on the left lists 'HR' and 'System' connections. The 'Buscar Objeto de Base de Datos' pane is open, showing search criteria. The main editor displays the following SQL query:

```
select department_id, count(*) as no_empleados
from employees
where salary between 2000 and 10000
group by department_id
```

The 'Resultado de la Consulta' pane shows the results of the query:

DEPARTMENT_ID	NO_EMPLEADOS
1	60
2	100
3	30
4	50
5	80
6	(null)
7	10
8	20
9	40
10	70

8. Obtener el número de empleados que tienen comisión, por puesto (job_id, no. empleados)

The screenshot shows the Oracle SQL Developer interface. The 'Conexiones' pane on the left lists 'HR' and 'System' connections. The 'Buscar Objeto de Base de Datos' pane is open, showing search criteria. The main editor displays the following SQL query:

```
select job_id, COUNT(commission_pct)
from employees
where commission_pct is not null
group by job_id
```

The 'Resultado de la Consulta' pane shows the results of the query:

JOB_ID	COUNT(COMMISSION_PCT)
1 SA_MAN	5
2 SA_REP	30

9. Obtener el no. mayor de empleados a cargo de un administrador

The screenshot shows the SQL Developer interface. The 'Conexiones' pane on the left lists 'Oracle conexiones' with 'HR' and 'System' selected. The 'Buscar Objeto de Base de Datos' pane shows a tree view with 'Todos los Esquemas' selected. The main editor displays the following SQL query:

```
SELECT MAX(num_empleados) AS max_empleados_a_cargo
FROM (
  SELECT manager_id, COUNT(*) AS num_empleados
  FROM employees
  WHERE manager_id IS NOT NULL
  GROUP BY manager_id
)
```

The 'Resultado de la Consulta' pane shows the results of the query:

MAX_EMPLEADOS_A_CARGO
14

10. Obtener la primera y última fecha de ingreso o contratación para cada departamento

The screenshot shows the SQL Developer interface. The 'Objeto de Base de Datos' pane on the left shows a tree view with 'DEPARTMENT_ID' selected. The main editor displays the following SQL query:

```
SELECT department_id, MIN(hire_date) AS primera_fecha_contratacion, MAX(hire_date) AS ultima_fecha_contratacion
FROM employees
WHERE department_id IS NOT NULL
GROUP BY department_id;
```

The 'Resultado de la Consulta' pane shows the results of the query:

DEPARTMENT_ID	PRIMERA_FECHA_CONTRATACION	ULTIMA_FECHA_CONTRATACION
1	90 13/01/01	21/09/05
2	60 25/06/05	21/05/07
3	100 16/08/02	07/12/07
4	30 07/12/02	10/08/07
5	50 01/05/03	08/03/08
6	80 30/01/04	21/04/08
7	10 17/09/03	17/09/03
8	20 17/02/04	17/08/05
9	40 07/06/02	07/06/02
10	70 07/06/02	07/06/02