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S2(R)MCA, ROLL NO:15

1.create table countries(country_id char(2),country_name varchar(20),region_id int(10));

insert into countries values('CA','Canada',2);

insert into countries values('DE','Germany',1);

insert into countries values('UK','United Kingdom',1);

insert into countries values('US','United States',2);

select * from countries

The screenshot displays the SQL Developer environment. The Navigator on the left shows the 'countries' schema. The SQL Editor contains the following code:

```
2 create table countries(country_id char(2),country_name varchar(20),region_id int(10));
3
4 insert into countries values('CA','Canada',2);
5 insert into countries values('DE','Germany',1);
6 insert into countries values('UK','United Kingdom',1);
7 insert into countries values('US','United States',2);
8 select * from countries
```

The Result Grid shows the output of the select statement:

country_id	country_name	region_id
CA	Canada	2
DE	Germany	1
UK	United Kingdom	1
US	United States	2

The Action Output window at the bottom shows the execution log:

#	Time	Action	Message
5	11:56:52	create table countries(country_id char(2),country_name varchar(20),region_id int(10))	Error Code: 1050. Table 'countries' already exists
6	11:57:02	select * from countries LIMIT 0, 1000	0 row(s) returned
7	11:59:33	insert into countries values('CA','Canada',2)	1 row(s) affected
8	11:59:39	select * from countries LIMIT 0, 1000	1 row(s) returned
9	12:02:28	insert into countries values('DE','Germany',1)	1 row(s) affected
10	12:02:28	insert into countries values('UK','United Kingdom',1)	1 row(s) affected
11	12:02:28	insert into countries values('US','United States of America',2)	Error Code: 1406. Data too long for column 'country_name' at row 1
12	12:02:59	insert into countries values('US','United States',2)	1 row(s) affected
13	12:03:12	select * from countries LIMIT 0, 1000	4 row(s) returned

2.

create table departments(department_id numeric(4)NOT NULL,department_name varchar(30)NOT NULL,manager_id numeric(6),location_id numeric(4));

insert into departments values(10,'Administration',200,1700);

insert into departments values(20,'marketing',201,1800);

insert into departments values(50,'shipping',124,1500);

```

insert into departments values(60,'IT',103,1400);

insert into departments values(80,'sales',149,2500);

insert into departments values(90,'Executive',100,1700);

insert into departments values(110,'Accounting',205,1700);

insert into departments values('190','Contracting',0,1700);

select * from departments

```

The screenshot shows the SQL Developer interface. The left pane displays the 'SCHEMAS' tree with 'dprmts' selected. The main editor shows a SQL script with 11 lines, including insert statements for departments and a select statement. The 'Result Grid' shows the output of the select statement, displaying columns: department_id, department_name, manager_id, and location_id. The 'Output' pane shows the execution log with 7 rows, each indicating a successful insert operation for a specific department.

department_id	department_name	manager_id	location_id
50	shipping	124	1500
10	Administration	200	1700
20	marketing	201	1800
50	shipping	124	1500
60	IT	103	1400
80	sales	149	2500
90	Executive	100	1700
110	Accounting	205	1700
190	Contracting	0	1700

#	Time	Action	Message
27	12:27:43	insert into departments values(10,'Administration',200,1700)	1 row(s) affected
28	12:27:43	insert into departments values(20,'marketing',201,1800)	1 row(s) affected
29	12:27:43	insert into departments values(50,'shipping',124,1500)	1 row(s) affected
30	12:27:43	insert into departments values(60,'IT',103,1400)	1 row(s) affected
31	12:27:43	insert into departments values(80,'sales',149,2500)	1 row(s) affected
32	12:27:43	insert into departments values(90,'Executive',100,1700)	1 row(s) affected
33	12:27:43	insert into departments values(110,'Accounting',205,1700)	1 row(s) affected

3.

```

create table employees(employee_id numeric(6)NOT NULL,first_name varchar(20),last_name
varchar(25),email varchar(25),phone_numer varchar(25),hire_date date,job_id varchar(10),salary
numeric(8,2),commission_pct numeric(2,2),manager decimal(6),department_id decimal(4));

```

```

insert into employees values (100,'steven','king','sking','515.123.4567','1987-06-
17','ad_pres',24000,NULL,NULL,90);

```

```

insert into employees values (101,'neena','kochhar','kochhar','515.123.4568','1989-09-
21','ad_vp',24000,NULL,100,90);

```

```

insert into employees values (102,'lex','de haan','Idehaan','515.123.4569','1993-01-
13','ad_vp',17000,NULL,100,90);

```

```
insert into employees values (103,'alexander','hunold','ahunold','590.423.4567','1990-01-03','it_prog',9000,NULL,102,60);

insert into employees values (104,'bruce','ernst','bernst','590.423.4568','1991-05-21','it_prog',6000,NULL,103,60);

insert into employees values (107,'diana','lorentz','dlorentz','590.423.5567','1999-02-07','it_prog',4200,NULL,103,60);

insert into employees values (124,'kevin','mourgos','kmourgos','650.123.5234','1999-11-16','st_man',5800,NULL,100,50);

insert into employees values (141,'trenaa','rajs','trajs','650.121.8009','1995-10-17','st_clerk',3500,NULL,124,50);

insert into employees values (142,'curtis','davies','cdavies','650.121.2994','1997-01-29','st_clerk',3100,NULL,124,50);

insert into employees values (143,'randall','matos','rmatos','605.121.2874','1998-03-15','st_clerk',2600,NULL,124,50);

insert into employees values (144,'peter','vargas','pvargas','605.121.2004','1998-07-09','st_clerk',2500,NULL,124,50);

insert into employees values (149,'eleni','zlotkay','ezlotkay','011.44.1344.429018','2000-01-29','sa_man',10500,.2,100,80);

insert into employees values (174,'ellen','abel','eabel','011.44.1644.429267','1996-05-11','sa_rep',11000,.3,149,80);

insert into employees values (176,'jonathon','tylor','jtylor','011.44.1644.429265','1998-03-24','sa_rep',8600,.2,149,80);

insert into employees values (178,'kimberely','grant','kgrant','011.44.1644.429263','1999-05-24','sa_rep',7000,.15,149,NULL);

insert into employees values (200,'jennifer','whalen','jwhalen','515.123.4444','1987-09-17','ad_asst',4400,NULL,101,10);

insert into employees values (201,'michael','hartstein','mhartstein','515.123.5555','1996-02-17','mk-man',13000,NULL,100,20);

insert into employees values (202,'pat','fay','pfay','603.123.6666','1997-08-17','mk_rep',6000,NULL,201,20);

insert into employees values (205,'shelley','higgins','shiggins','515.123.8080','1994-06-07','ac_mgr',12000,NULL,101,110);

insert into employees values (206,'william','gietz','wgietz','515.123.8181','1994-06-07','ac_account',8300,NULL,205,110);

select * from employees;
```

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SQL File 3*

Limit to 1000 rows

SCHEMAS

Filter objects

countries

dprmts

emp

Tables

Views

Stored Procedures

Functions

sakila

sys

```
1 • create database emp;
2 • create table employees(employee_id numeric(6)NOT NULL,first_name varchar(20),last_name varchar(25),email varchar(25),phone_number varchar(20),hire_date date,job_id varchar(10),salary numeric(8,2),commission_pct numeric(3,1),manager numeric(6),department_id numeric(4));
3 • select * from employees;
4 • insert into employees values (100,'steven','king','sking','515.123.4567','1987-06-17','ad_pres',24000,NULL,NULL,90);
5 • insert into employees values (101,'neena','kochhar','kocchar','515.123.4568','1989-09-21','ad_vp',24000,NULL,100,90);
6 • insert into employees values (102,'lex','de haan','ldehaan','515.123.4569','1993-01-13','ad_vp',17000,NULL,100,90);
7 • insert into employees values (103,'alexander','hunold','ahunold','590.423.4567','1990-01-03','it_prog',9000,NULL,102,60);
8 • insert into employees values (104,'bruce','ernst','bernst','590.423.4568','1991-05-21','it_prog',6000,NULL,103,60);
```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager	department_id
100	steven	king	sking	515.123.4567	1987-06-17	ad_pres	24000.00			90
101	neena	kochhar	kocchar	515.123.4568	1989-09-21	ad_vp	24000.00		100	90
102	lex	de haan	ldehaan	515.123.4569	1993-01-13	ad_vp	17000.00		100	90
103	alexander	hunold	ahunold	590.423.4567	1990-01-03	it_prog	9000.00		102	60
104	bruce	ernst	bernst	590.423.4568	1991-05-21	it_prog	6000.00		103	60
107	diana	lorentz	dlorentz	590.423.5567	1999-02-07	it_prog	4200.00		103	60
124	kevin	mourgos	kmourgos	650.123.5234	1999-11-16	st_man	5800.00		100	50
141	trenaa	rajs	trajs	650.121.8009	1995-10-17	st_clerk	3500.00		124	50
142	curtis	davies	cdavies	650.121.2994	1997-01-29	st_clerk	3100.00		124	50
143	randall	matos	rmatos	605.121.2874	1998-03-15	st_clerk	2600.00		124	50
144	peter	vargas	pvargas	605.121.2004	1998-07-09	st_clerk	2500.00		124	50
149	eleni	zlotkay	ezlotkay	011.44.1344...	2000-01-29	sa_man	10500.00	0.20	100	80
174	ellen	abel	eabel	011.44.1644...	1996-05-11	sa_rep	11000.00	0.30	149	80
176	jonathon	tylor	jtylor	011.44.1644...	1998-03-24	sa_rep	8600.00	0.20	149	80
178	kimberely	grant	kgrant	011.44.1644...	1999-05-24	sa_rep	7000.00	0.15	149	
200	jennifer	whalen	jwhalen	515.123.4444	1987-09-17	ad_asst	4400.00		101	10
201	michael	hartstein	mhartstein	515.123.5555	1996-02-17	mk-man	13000.00		100	20
202	pat	fay	pfay	603.123.6666	1997-08-17	mk_rep	6000.00		201	20
205	shelley	higgins	shiggins	515.123.8080	1994-06-07	ac_mgr	12000.00		101	110
206	william	gietz	wgietz	515.123.8181	1994-06-07	ac_acc...	8300.00		205	110

employees 8 x

Read Only

Output

4. CREATE TABLE jobs (JOB_ID varchar(10) NOT NULL, JOB_TITLE varchar(35) NOT NULL, MIN_SALARY decimal(6), MAX_SALARY decimal(6), PRIMARY KEY (JOB_ID));

INSERT INTO jobs VALUES ('AD_PRES','President',20000,40000),('AD_VP','Administration Vice President',15000,30000),('AD_ASST','Administration Assistant',3000,6000),('AC_MGR','Accounting Manager',8200,16000),('AC_ACCOUNT','Public Accountant',4200,9000),('SA_MAN','Sales Manager',10000,20000),('SA_REP','Sales Representatives',6000,12000),('ST_MAN','Stock Manager',5500,8500),('ST_CLERK','Stock Clerk',2000,5000),('IT_PROG','Programmer',4000,10000),('MK_MAN','Marketing Manager',9000,15000),('MK_REP','Marketing Representative',4000,9000);

Select * from jobs

The screenshot displays the SQL Developer environment. The left sidebar shows the 'SCHEMAS' tree with the 'job' schema selected. The main window shows the SQL Editor with the following code:

```

1
2 CREATE TABLE jobs (JOB_ID varchar(10) NOT NULL, JOB_TITLE varchar(35) NOT NULL, MIN_SALARY decimal(6), MAX_SALARY decimal(6), PRIMARY KEY
3
4 INSERT INTO jobs VALUES ('AD_PRES','President',20000,40000),('AD_VP','Administration Vice President',15000,30000),('AD_ASST','Administrat
5

```

Below the editor, the 'Result Grid' shows the data inserted into the 'jobs' table:

job_id	job_title	min_salary	max_max_salary
AD_VP	Administration Vice President	15000	30000
AD_ASST	Administration Assistant	3000	6000
AC_MGR	Accounting Manager	8200	16000
AC_ACCOUNT	Public Accountant	4200	9000
SA_MAN	Sales Manager	10000	20000
SA_REP	Sales Representatives	6000	12000
ST_MAN	Stock Manager	5500	8500
ST_CLERK	Stock Clerk	2000	5000
IT_PROG	Programmer	4000	10000
MK_MAN	Marketing Manager	9000	15000
MK_REP	Marketing Representative	4000	9000

The 'Output' window at the bottom shows the execution log:

#	Time	Action	Message
75	13:20:18	SELECT * FROM JOBS WHERE MIN_SALARY > 10000 LIMIT 0, 1000	Error Code: 1146. Table 'emp.jobs' doesn't exist
76	13:21:41	SELECT first_name, last_name, salary, department_id FROM employees WHERE salary IN (SE...	9 row(s) returned
77	17:01:17	select * from departments LIMIT 0, 1000	Error Code: 1146. Table 'emp.departments' doesn't exist
78	17:01:32	select * from departments LIMIT 0, 1000	9 row(s) returned
79	17:03:05	create database job	1 row(s) affected
80	17:07:19	create table jobs(job_id varchar(20),job_title varchar(35),min_salary numeric(6),max_max_salary(6))	Error Code: 1064. You have an error in your SQL syntax; check the manual that come
81	17:07:57	create table jobs(job_id varchar(20),job_title varchar(35),min_salary numeric(6),max_max_salary numeric(6))	0 row(s) affected
82	17:10:18	insert into jobs values('AD_PRES','President',20000,40000),('AD_VP','Administration Vice President',15000,300...	12 row(s) affected Records: 12 Duplicates: 0 Warnings: 0
83	17:11:00	select * from jobs LIMIT 0, 1000	12 row(s) returned

5.CREATE TABLE job_grades (gradelevel varchar(3),lowest_sal decimal,highest_sal decimal(8,2));

INSERT INTO job_grades VALUES

('A',1000,2999),('B',3000,5999),('C',6000,9999),('D',10000,14999),('E',15000,24999),('F',25000,40000
);

select * from job_grades;

The screenshot shows the MySQL Workbench interface. The SQL Editor contains the following queries:

```
1 • create database jobdr;
2 • CREATE TABLE job_grades (gradelevel varchar(3),lowest_sal decimal,highest_sal decimal(8,2));
3 • INSERT INTO job_grades VALUES ('A',1000,2999),('B',3000,5999),('C',6000,9999),('D',10000,14999),('E',15000,24999),('F',25000,40000);
4 • select * from job_grades;
```

The Result Grid shows the output of the last query:

gradelevel	lowest_sal	highest_sal
A	1000	2999.00
B	3000	5999.00
C	6000	9999.00
D	10000	14999.00
E	15000	24999.00
F	25000	40000.00

The Output tab shows the execution log:

#	Time	Action	Message
79	17:03:05	create database job	1 row(s) affected
80	17:07:19	create table jobs(job_id varchar(20),job_title varchar(35),min_salary numeric(6),max_max_salary(6))	Error Code: 1064. You have an error in your SQL syntax; check the manual that corr
81	17:07:57	create table jobs(job_id varchar(20),job_title varchar(35),min_salary numeric(6),max_max_salary numeric(6))	0 row(s) affected
82	17:10:18	insert into jobs values(AD_PRES,'President',20000,40000),(AD_VP,'Administration Vice President',15000,300...	12 row(s) affected Records: 12 Duplicates: 0 Warnings: 0
83	17:11:00	select * from jobs LIMIT 0, 1000	12 row(s) returned
84	17:16:39	create database jobdr	1 row(s) affected
85	17:17:09	CREATE TABLE job_grades (gradelevel varchar(3),lowest_sal decimal,highest_sal decimal(8,2))	0 row(s) affected
86	17:17:49	INSERT INTO job_grades VALUES ('A',1000,2999),('B',3000,5999),('C',6000,9999),('D',10000,14999),('E',1500...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0
87	17:18:15	select * from job_grades LIMIT 0, 1000	6 row(s) returned

6. CREATE TABLE job_history (EMPLOYEE_ID decimal(6,0) NOT NULL PRIMARY KEY, START_DATE date NOT NULL, END_DATE date NOT NULL, JOB_ID varchar(10) NOT NULL, DEPARTMENT_ID decimal(4,0));

INSERT INTO job_history VALUES (102,'1993-01-13','1998-07-24','IT_PROG',60),(101,'1989-09-21','1993-10-27','AC_ACCOUNT',110);

select * from job_history

The screenshot shows the MySQL Workbench interface for a local instance of MySQL 8.0. The SQL Editor contains the following queries:

```
1 • CREATE TABLE job_history ( EMPLOYEE_ID decimal(6,0) NOT NULL PRIMARY KEY, START_DATE date NOT NULL, END_DATE date NOT NULL, JOB_ID v
2 • INSERT INTO job_history VALUES (102,'1993-01-13','1998-07-24','IT_PROG',60),(101,'1989-09-21','1993-10-27','AC_ACCOUNT',110);
3 • select * from job_history
4
5
```

The Result Grid shows the data inserted into the job_history table:

EMPLOYEE_ID	START_DATE	END_DATE	JOB_ID	DEPARTMENT_ID
101	1989-09-21	1993-10-27	AC_ACCOUNT	110
102	1993-01-13	1998-07-24	IT_PROG	60

The Output tab shows the execution results of the queries:

#	Time	Action	Message
87	17:18:15	select * from job_grades LIMIT 0, 1000	6 row(s) returned
88	17:21:19	create database jobhis	1 row(s) affected
89	17:21:43	CREATE TABLE job_history (EMPLOYEE_ID decimal(6,0) NOT NULL PRIMARY KEY, START_DATE date N...	Error Code: 1824. Failed to open the referenced table 'jobs'
90	17:22:12	CREATE TABLE job_history (EMPLOYEE_ID decimal(6,0) NOT NULL PRIMARY KEY, START_DATE date N...	Error Code: 1824. Failed to open the referenced table 'jobs'
91	17:22:47	CREATE TABLE job_history (EMPLOYEE_ID decimal(6,0) NOT NULL PRIMARY KEY, START_DATE date N...	Error Code: 1064. You have an error in your SQL syntax; check the manu...
92	17:23:12	CREATE TABLE job_history (EMPLOYEE_ID decimal(6,0) NOT NULL PRIMARY KEY, START_DATE date N...	Error Code: 1064. You have an error in your SQL syntax; check the manu...
93	17:25:18	CREATE TABLE job_history (EMPLOYEE_ID decimal(6,0) NOT NULL PRIMARY KEY, START_DATE date N...	0 row(s) affected
94	17:28:08	INSERT INTO job_history VALUES (102,'1993-01-13','1998-07-24','IT_PROG',60),(101,'1989-09-21','1993-10-...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0
95	17:28:32	select * from job_history LIMIT 0, 1000	2 row(s) returned

7.CREATE TABLE locations (LOCATION_ID decimal(4) NOT NULL, STREET_ADDRESS varchar(40),
POSTAL_CODE varchar(12), CITY varchar(30), STATE_PROVINCE varchar(25) NOT NULL, COUNTRY_ID
char(2), PRIMARY KEY (LOCATION_ID));

INSERT into locations values(1500,'2011inteririosRd',99236,'south san
franscisco','california','US'),(1400,'2014 jacabberwocky Rd',26192,'sothlake','texas','US'),(1700,'2004
Charade Rd',98199,'seattle','washington','US');

select * from locations

The screenshot shows the SQL Developer interface with the following components:

- Navigator:** Displays the schema structure under 'emp', including tables like 'countries', 'departments', 'employees', 'job_grades', 'job_history', 'jobs', 'regions', 'Views', 'Stored Procedures', and 'Functions'.
- SQL File Editor:** Contains the following SQL script:

```
1 CREATE TABLE locations (LOCATION_ID decimal(4) NOT NULL, STREET_ADDRESS varchar(40), POSTAL_CODE varchar(12), CITY varchar(30), STATE_PROVINCE varchar(25) NOT NULL, COUNTRY_ID char(2), PRIMARY KEY (LOCATION_ID));
2 INSERT into locations values(1500,'2011inteririosRd',99236,'south san francisco','california','US'),(1400,'2014 jacabberwocky Rd',26192,'sothlake','texas','US'),(1700,'2004 Charade Rd',98199,'seattle','washington','US');
3 select * from locations
```
- Result Grid:** Displays the output of the 'select * from locations' query. The grid shows three rows of data with columns: LOCATION_ID, STREET_ADDRESS, POSTAL_CODE, CITY, STATE_PROVINCE, and COUNTRY_ID.
- Bottom Panel:** Shows the 'locations' table selected, with a status bar indicating 'No object selected'.

LOCATION_ID	STREET_ADDRESS	POSTAL_CODE	CITY	STATE_PROVINCE	COUNTRY_ID
1400	2014 jacabberwocky Rd	26192	sothlake	texas	US
1500	2011inteririosRd	99236	south san francisco	california	US
1700	2004 Charade Rd	98199	seattle	washington	US

8.CREATE TABLE regions (region_id DECIMAL,region_name VARCHAR(25));

INSERT INTO regions VALUES (1,'EUROPE'),(2,'AMERICA'),(3,'ASIA'),(4,'MIDDLE EAST AND AFRICA');

select * from regions

The screenshot shows a SQL IDE interface with a menu bar (File, Edit, View, Query, Database, Server, Tools, Scripting, Help) and a toolbar. The left sidebar displays a 'SCHEMAS' tree with a search filter and a list of databases (emp, regi, sakila, sys). The 'emp' database is expanded, showing tables like countries, departments, employees, job_grades, job_history, jobs, locations, Views, Stored Procedures, and Functions. The main editor window, titled 'SQL File 3*', contains the following SQL script:

```
1 CREATE TABLE regions (region_id DECIMAL,region_name VARCHAR(25));
2
3 INSERT INTO regions VALUES (1,'EUROPE'),(2,'AMERICA'),(3,'ASIA'),(4,'MIDDLE EAST AND AFRICA');
4 select * from regions
5
6
7
```

Below the editor, the 'Result Grid' shows the output of the query:

region_id	region_name
1	EUROPE
2	AMERICA
3	ASIA
4	MIDDLE EAST AND AFRICA

The bottom section of the IDE displays the 'Output' window, showing the execution log for the 'regions' table:

#	Time	Action	Message
188	19:23:27	DROP TABLE 'emp'.regions'	0 row(s) affected
189	19:23:32	CREATE TABLE regions (region_id DECIMAL,region_name VARCHAR(25))	0 row(s) affected
190	19:23:36	INSERT INTO regions VALUES (1,EUROPE),(2,AMERICA),(3,ASIA),(4,MIDDLE EAST AND AFRICA)	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0
191	19:23:39	select * from regions LIMIT 0, 1000	4 row(s) returned

```
1.SELECT *  
  
FROM employees  
  
WHERE job_id = 'ST_CLERK'  
  
AND hire_date > '1997-12-31';
```

The screenshot shows the SQL Developer interface with a query executed in the 'SQL File 3*' window. The query is:

```
1 SELECT *  
2 FROM employees  
3 WHERE job_id='ST_CLERK'  
4 AND hire_date > '1997-12-31';  
5
```

The 'Result Grid' displays the following data:

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager	department_id
143	randall	matos	rmatos	605.121.2874	1998-03-15	st_clerk	2600.00	NULL	124	50
144	peter	vargas	pvargas	605.121.2004	1998-07-09	st_clerk	2500.00	NULL	124	50

The 'Output' pane shows the following messages:

#	Time	Action	Message
98	17:31:37	INSERT into locations values(1500,'2011interiorsRd',99236,'south san francisco','california','US'),(1400,'2014 ...	3 row(s) affected Records: 3 Duplicates: 0 Warni
99	17:31:56	select * from locations LIMIT 0, 1000	3 row(s) returned

2. SELECT last_name,job_id,salary,commission_pct

FROM employees

WHERE commission_pct IS NOT NULL

ORDER BY salary DESC;

The screenshot shows the SQL Developer interface with a query executed in the 'SQL File 3*' window. The query is:

```

1 SELECT last_name,job_id,salary,commission_pct
2 FROM employees
3 WHERE commission_pct IS NOT NULL
4 ORDER BY salary DESC;

```

The 'Result Grid' displays the following data:

last_name	job_id	salary	commission_pct
abel	sa_rep	11000.00	0.30
zlotkay	sa_man	10500.00	0.20
tylor	sa_rep	8600.00	0.20
grant	sa_rep	7000.00	0.15

The 'Action Output' window shows the execution log:

#	Time	Action	Message
99	17:31:56	select * from locations LIMIT 0, 1000	3 row(s) returned
100	17:34:08	create database regi	1 row(s) affected
101	17:34:23	CREATE TABLE regions (region_id DECIMAL,region_name VARCHAR(25))	0 row(s) affected
102	17:34:29	INSERT INTO regions VALUES (1,'EUROPE'),(2,'AMERICA'),(3,'ASIA'),(4,'MIDDLE EAST AND AFRICA')	4 row(s) affected Records: 4 Duplicates: 0 W
103	17:34:51	select * from regions LIMIT 0, 1000	4 row(s) returned
104	17:48:21	SELECT * FROM employees WHERE job_id='ST_CLERK' AND hire_date > '31-dec-1997' LIMIT 0, 1000	Error Code: 1146. Table 'loc employees' does
105	17:48:35	SELECT * FROM employees WHERE job_id='ST_CLERK' AND hire_date > '31-dec-1997' LIMIT 0, 1000	Error Code: 1525. Incorrect DATE value: '31-d
106	17:49:07	SELECT * FROM employees WHERE job_id='ST_CLERK' AND hire_date > '1997-12-31' LIMIT 0, 1000	2 row(s) returned
107	17:55:22	SELECT last_name,job_id,salary,commission_pct FROM employees WHERE commission_pct IS NOT NULL O...	4 row(s) returned

```
3. SELECT 'The salary of ' || last_name || ' after a 10% raise is '
|| ROUND(salary*1.10) "New salary"
FROM employees
WHERE commission_pct IS NULL;
```

```
4. SELECT last_name,
TRUNC(MONTHS_BETWEEN(SYSDATE, hire_date) / 12) YEARS,
TRUNC(MOD(MONTHS_BETWEEN(SYSDATE, hire_date), 12))
MONTHS
FROM employees
ORDER BY years DESC, MONTHS desc;
```

5. SELECT last_name FROM employees WHERE SUBSTR(last_name, 1,1) IN ('J', 'K', 'L', 'M');

The screenshot displays the SQL Developer interface with the following components:

- Navigator:** Shows the database schema structure. The 'emp' schema is expanded, showing tables, views, stored procedures, and functions. The 'employees' table is selected.
- SQL File:** Contains the query: `SELECT last_name FROM employees WHERE SUBSTR(last_name, 1,1) IN ('J', 'K', 'L', 'M');`
- Result Grid:** Displays the query results in a table format. The table has one column, 'last_name', and five rows of data: 'king', 'kochhar', 'lorentz', 'mourgos', and 'matos'.
- Output:** Shows the execution log with the following entries:

#	Time	Action	Message
110	18:02:52	select * from employees LIMIT 0, 1000	20 row(s) returned
111	18:03:43	SELECT 'The salary of ' last_name ' after a 10% raise is ' ROUND(salary + salary*0.10) "New salary" FROM ...	16 row(s) returned
112	18:04:03	SELECT last_name, ROUND(salary+(salary*.10),2) "New salary" FROM employees WHERE commission_pct=...	0 row(s) returned
113	18:06:17	select * from employees LIMIT 0, 1000	20 row(s) returned
114	18:07:25	SELECT 'The salary of ' last_name ' after a 10% raise is ' ROUND(salary*1.10) "New salary" FROM employee...	16 row(s) returned
115	18:07:42	SELECT 'The salary of ' last_name ' after a 10% raise is ' ROUND(salary*1.10) "New salary" FROM employee...	4 row(s) returned
116	18:08:14	SELECT 'The salary of ' last_name ' after a 10% raise is ' ROUND(salary*1.10) "New salary" FROM employee...	16 row(s) returned
117	18:10:46	SELECT last_name, TRUNC(MONTHS_BETWEEN(SYSDATE, hire_date) / 12) YEARS, TRUNC(MOD(MON...	Error Code: 1305. FUNCTION emp.TRUNC doe
118	18:14:12	SELECT last_name FROM employees WHERE SUBSTR(last_name, 1,1) IN ('J', 'K', 'L', 'M') LIMIT 0, 1000	5 row(s) returned


```

6. SELECT d.department_name, d.location_id, e.last_name,
e.job_id, e.salary
FROM employees e, departments d
WHERE e.department_id = d.department_id
AND d.location_id = location_id;

```

The screenshot shows the SQL Developer interface with a query window and a results grid.

Query:

```

1 • SELECT d.department_name, d.location_id, e.last_name,
2   e.job_id, e.salary
3 FROM employees e, departments d
4 WHERE e.department_id = d.department_id
5 AND d.location_id = location_id;

```

Result Grid:

	department_name	location_id	last_name	job_id	salary
▶	Executive	1700	king	ad_pres	24000.00
	Executive	1700	kochhar	ad_vp	24000.00
	Executive	1700	de haan	ad_vp	17000.00
	IT	1400	hunold	it_prog	9000.00
	IT	1400	ernst	it_prog	6000.00
	IT	1400	lorentz	it_prog	4200.00
	shipping	1500	mourgos	st_man	5800.00
	shipping	1500	rajs	st_clerk	3500.00
	shipping	1500	davies	st_clerk	3100.00
	shipping	1500	matos	st_clerk	2600.00
	shipping	1500	vargas	st_clerk	2500.00
	sales	2500	slott	sa_rep	10500.00

Output:

#	Time	Action	Message
155	18:28:48	CREATE TABLE locations (LOCATION_ID decimal(4) NOT NULL, STREET_ADDRESS varchar(40), POSTAL...	0 row(s) affected
156	18:28:52	INSERT into locations values(1500,'2011interinosRd',99236,'south san francisco','california','US'),(1400,'2014 ...	Error Code: 1064. You hav
157	18:28:58	INSERT into locations values(1500,'2011interinosRd',99236,'south san francisco','california','US'),(1400,'2014 ...	3 row(s) affected Records
158	18:29:01	INSERT into locations values(1500,'2011interinosRd',99236,'south san francisco','california','US'),(1400,'2014 ...	Error Code: 1062. Duplicat
159	18:29:06	select * from locations LIMIT 0, 1000	2 row(s) returned

7. SELECT count(*)

FROM employees

WHERE last_name LIKE '%n';

The screenshot shows the SQL Developer interface with a query window titled 'SQL File 3*' containing the following SQL statement:

```
1
2 SELECT count(*)
3 FROM employees
4 WHERE last_name LIKE '%n';
5
6
7
8
```

The 'Result Grid' shows the query results:

count(*)
3

The 'Administration' tab is selected, showing the 'Schema: emp' information.

The 'Output' tab shows the 'Action Output' window with the following log:

#	Time	Action	Message
✓ 169	18:39:02	SELECT last_name FROM employees WHERE last_name LIKE '%n' LIMIT 0, 1000	3 row(s) returned
✓ 170	18:39:27	SELECT last_name FROM employees WHERE last_name not LIKE '%n' LIMIT 0, 1000	17 row(s) returned
✗ 171	18:39:57	SELECT count FROM employees WHERE last_name LIKE '%n' LIMIT 0, 1000	Error Code: 1054. Unknown column 'count'
✓ 172	18:40:30	SELECT count(*) FROM employees WHERE last_name LIKE '%n' LIMIT 0, 1000	1 row(s) returned