



# Assignment

Assignment No. – 01

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Submitted to-

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## **Part 1**

### **Test your knowledge:**

1. Initiate an iSQL\*Plus session using the user ID and password that are provided by the instructor.
2. iSQL\*Plus commands access the database.

**Answer: False**

3. The following SELECT statement executes successfully:

```
SELECT last_name, job_id, salary AS Sal  
FROM employees;
```

**Answer:**

4. The following SELECT statement executes successfully:

```
SELECT *  
FROM job_grades;
```

**Answer:**

5. There are four coding errors in the following statement. Can you identify them?

```
SELECT      employee_id, last_name  
sal x 12    ANNUAL SALARY  
FROM        employees;
```

**Answer: Four errors are in the following-**

- 1.
- 2.
- 3.
- 4.

## Part 2

You have been hired as a SQL programmer for Acme Corporation. Your first task is to create some reports based on data from the Human Resources tables

6. Your first task is to determine the structure of the DEPARTMENTS table and its contents.

Name	Null?	Type
DEPARTMENT_ID	NOT NULL	NUMBER(4)
DEPARTMENT_NAME	NOT NULL	VARCHAR2(30)
MANAGER_ID		NUMBER(6)
LOCATION_ID		NUMBER(4)

Answer:

7. You need to determine the structure of the EMPLOYEES table.

Answer:

DESCRIBE employees

Results Explain Describe Saved SQL History										
Object Type TABLE Object EMPLOYEES										
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment	
EMPLOYEES	EMPLOYEE_ID	Number	-	6	0	1	-	-	Primary key of employees table.	
	FIRST_NAME	Varchar2	20	-	-	-	✓	-	First name of the employee. A not null column.	
	LAST_NAME	Varchar2	25	-	-	-	-	-	Last name of the employee. A not null column.	
	EMAIL	Varchar2	25	-	-	-	-	-	Email id of the employee	
	PHONE_NUMBER	Varchar2	20	-	-	-	✓	-	Phone number of the employee; includes country code and area code	
	HIRE_DATE	Date	7	-	-	-	-	-	Date when the employee started on this job. A not null column.	
	JOB_ID	Varchar2	10	-	-	-	-	-	Current job of the employee; foreign key to job_id column of the jobs table. A not null column.	
	SALARY	Number	-	8	2	-	✓	-	Monthly salary of the employee. Must be greater than zero (enforced by constraint emp_salary_min)	
	COMMISSION_PCT	Number	-	2	2	-	✓	-	Commission percentage of the employee; Only employees in sales department eligible for commission percentage	
	MANAGER_ID	Number	-	6	0	-	✓	-	Manager id of the employee; has same domain as manager_id in departments table. Foreign key to employee_id column of employees table. (useful for reflexive joins and CONNECT BY query)	
	DEPARTMENT_ID	Number	-	4	0	-	✓	-	Department id where employee works; foreign key to department_id column of the departments table	

User: HR

Home > SQL > SQL Commands

☒ Autocommit   Display 10 ▼

```
SELECT employee_id, last_name, job_id, hire_date StartDate
FROM employees;
```

**Results**   Explain   Describe   Saved SQL   History

EMPLOYEE_ID	LAST_NAME	JOB_ID	STARTDATE
100	King	AD_PRES	17-JUN-87
101	Kochhar	AD_VP	21-SEP-89
102	De Haan	AD_VP	13-JAN-93
103	Hunold	IT_PROG	03-JAN-90
104	Ernst	IT_PROG	21-MAY-91
105	Austin	IT_PROG	25-JUN-97
106	Pataballa	IT_PROG	05-FEB-98
107	Lorentz	IT_PROG	07-FEB-99
108	Greenberg	FI_MGR	17-AUG-94
109	Faviet	FI_ACCOUNT	16-AUG-94

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.00 seconds   [CSV Export](#)

8. Test your query in the file lab\_01\_07.sql to ensure that it runs correctly.

User: HR  
Home > SQL > SQL Commands

☒ Autocommit Display 10

```
SELECT employee_id, last_name, job_id, hire_date StartDate
FROM employees;
```

**Results** Explain Describe Saved SQL History

EMPLOYEE_ID	LAST_NAME	JOB_ID	STARTDATE
100	King	AD_PRES	17-JUN-87
101	Kochhar	AD_VP	21-SEP-89
102	De Haan	AD_VP	13-JAN-93
103	Hunold	IT_PROG	03-JAN-90
104	Ernst	IT_PROG	21-MAY-91
105	Austin	IT_PROG	25-JUN-97
106	Pataballa	IT_PROG	05-FEB-98
107	Lorentz	IT_PROG	07-FEB-99
108	Greenberg	FI_MGR	17-AUG-94
109	Faviet	FI_ACCOUNT	16-AUG-94

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.00 seconds [CSV Export](#)

9. The HR department needs a query to display all unique job codes from the EMPLOYEES table.

ORACLE® Database Express Edition

User: HR  
Home > SQL > SQL Commands

☒ Autocommit Display 10

```
SELECT DISTINCT job_id
FROM employees;
```

**Results** Explain Describe Saved SQL History

JOB_ID
AC_ACCOUNT
AC_MGR
AD_ASST
AD_PRES
AD_VP
FI_ACCOUNT
FI_MGR
HR_REP
IT_PROG
MK_MAN

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.00 seconds [CSV Export](#)

10. The HR department wants more descriptive column headings for its report on employees. Copy the statement from lab\_01\_07.sql to the iSQL\*Plus Edit window. Name the

column headings Emp #, Employee, Job, and Hire Date, respectively. Then run your query again.

The screenshot shows the Oracle Database Express Edition interface. The user is 'HR'. The breadcrumb navigation is 'Home > SQL > SQL Commands'. The 'Autocommit' checkbox is checked, and the 'Display' dropdown is set to 10. The SQL query entered is:

```
SELECT employee_id "Emp #", last_name "Employee", job_id "Job", hire_date "Hire Date"
FROM employees;
```

Below the query, there are tabs for 'Results', 'Explain', 'Describe', 'Saved SQL', and 'History'. The 'Results' tab is active, showing a table with 10 rows of employee data:

Emp #	Employee	Job	Hire Date
100	King	AD_PRES	17-JUN-87
101	Kochhar	AD_VP	21-SEP-89
102	De Haan	AD_VP	13-JAN-93
103	Hunold	IT_PROG	03-JAN-90
104	Ernst	IT_PROG	21-MAY-91
105	Austin	IT_PROG	25-JUN-97
106	Pataballa	IT_PROG	05-FEB-98
107	Lorentz	IT_PROG	07-FEB-99
108	Greenberg	FI_MGR	17-AUG-94
109	Faviet	FI_ACCOUNT	16-AUG-94

Below the table, it says 'More than 10 rows available. Increase rows selector to view more rows.' At the bottom, it indicates '10 rows returned in 0.02 seconds' and provides a 'CSV Export' link.

11. The HR department has requested a report of all employees and their job IDs. Display the last name concatenated with the job ID (separated by a comma and space) and name the column Employee and Title.

The screenshot shows the Oracle Database Express Edition interface. At the top, it says "ORACLE Database Express Edition". Below that, it indicates "User: HR". The breadcrumb navigation is "Home > SQL > SQL Commands". There is a checkbox for "Autocommit" which is checked, and a "Display" dropdown set to "10". The SQL command entered is:
 

```
SELECT last_name||', '||job_id AS "Employee and Title"
FROM employees;
```

 Below the command, there are tabs for "Results", "Explain", "Describe", "Saved SQL", and "History". The "Results" tab is active, showing a table titled "Employee And Title". The table contains 10 rows of data, each with a concatenated string of the employee's last name and job ID. At the bottom of the results, it says "More than 10 rows available. Increase rows selector to view more rows." and "10 rows returned in 0.00 seconds". There is also a link for "CSV Export".

ORACLE Database Express Edition

User: HR

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
SELECT last_name||', '||job_id AS "Employee and Title"
FROM employees;
```

Results Explain Describe Saved SQL History

Employee And Title
King, AD_PRES
Kochhar, AD_VP
De Haan, AD_VP
Hunold, IT_PROG
Ernst, IT_PROG
Austin, IT_PROG
Pataballa, IT_PROG
Lorentz, IT_PROG
Greenberg, FI_MGR
Faviet, FI_ACCOUNT

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.00 seconds [CSV Export](#)

12. To familiarize yourself with the data in the EMPLOYEES table, create a query to display all the data from the EMPLOYEES table. Separate each column output by a comma. Name the column title THE\_OUTPUT.

The screenshot shows the Oracle Database Express Edition interface. The user is 'HR'. The SQL Command window contains the following query:

```
SELECT employee_id || ',' || first_name || ',' || last_name || ',' || email || ',' || phone_number || ',' || job_id
|| ',' || manager_id || ',' || hire_date || ',' || salary || ',' || commission_pct || ',' || department_id
AS THE_OUTPUT
FROM employees;
```

The query results are displayed in a table with the following data:

THE_OUTPUT									
100	Steven	King	SKING	515.123.4567	AD_PRES	17-JUN-87	24000	90	
101	Neena	Kochhar	NKOCHHAR	515.123.4568	AD_VP	100,21-SEP-89	17000	90	
102	Lex	De Haan	LDEHAAN	515.123.4569	AD_VP	100,13-JAN-93	17000	90	
103	Alexander	Hunold	AHUNOLD	590.423.4567	IT_PROG	102,03-JAN-90	9000	60	
104	Bruce	Ernst	BERNST	590.423.4568	IT_PROG	103,21-MAY-91	6000	60	
105	David	Austin	DAUSTIN	590.423.4569	IT_PROG	103,25-JUN-97	4800	60	
106	Valli	Pataballa	VPATABAL	590.423.4560	IT_PROG	103,05-FEB-98	4800	60	
107	Diana	Lorentz	DLORENTZ	590.423.5567	IT_PROG	103,07-FEB-99	4200	60	
108	Nancy	Greenberg	NGREENBE	515.124.4569	FI_MGR	101,17-AUG-94	12000	100	
109	Daniel	Faviet	DFAVIET	515.124.4169	FI_ACCOUNT	108,16-AUG-94	9000	100	

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.00 seconds [CSV Export](#)

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