

Assignment#1: Lab#2

Database Systems Lab

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LAB TASKS

1. The following SELECT statement executes successfully:

SELECT last_name, job_id, salary AS Sal FROM employees;

Ans:

The screenshot shows the Oracle Database Express Edition web interface. The browser address bar displays the URL: 127.0.0.1:8080/apex/f?p=4500:1003:3925719445441047::NO:: The page title is "ORACLE Database Express Edition". The user is logged in as "HR". The navigation menu includes "Home", "Logout", and "Help". The main content area shows the "SQL Commands" tab. The "Autocommit" checkbox is checked, and the "Display" dropdown is set to "10". The SQL command entered is: `SELECT last_name, job_id, salary AS Sal FROM employees;` The "Save" and "Run" buttons are visible. Below the command editor, the "Results" tab is selected, showing a table with 10 rows of data. The table has columns: LAST_NAME, JOB_ID, and SAL. The data is as follows:

LAST_NAME	JOB_ID	SAL
King	AD_PRES	24000
Kochhar	AD_VP	17000
De Haan	AD_VP	17000
Hunold	IT_PROG	9000
Ernst	IT_PROG	6000
Austin	IT_PROG	4800
Pataballa	IT_PROG	4800
Lorentz	IT_PROG	4200
Greenberg	FI_MGR	12000
Faviet	FI_ACCOUNT	9000

Below the table, it states: "More than 10 rows available. Increase rows selector to view more rows." At the bottom, it says: "10 rows returned in 0.01 seconds" and provides a "CSV Export" link.

2. The following SELECT statement executes

successfully: SELECT * FROM job_grades;

Ans:

There is no attribute for job_grades in employee table

The screenshot shows the Oracle Database Express Edition web interface. At the top, it says "ORACLE Database Express Edition". Below that, it indicates the user is "HR". The breadcrumb navigation shows "Home > SQL > SQL Commands". The main area has a text input field containing the SQL statement: `SELECT *
FROM job_grades;`. Above the input field, there are checkboxes for "Autocommit" and "Display" set to "10". To the right of the input field are "Save" and "Run" buttons. Below the input field, there are tabs for "Results", "Explain", "Describe", "Saved SQL", and "History". A red error message is displayed: "ORA-00942: table or view does not exist". At the bottom of the page, it says "Language: en-us" and "Application Express 2.1.0.00.39 Copyright © 1999, 2006, Oracle. All rights reserved."

3. 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;

Ans: 1. There is no , (coma) after last_name entity.

2. For multiplication we use * (asterisk sign) but here the error is sal x 12. We use arithmetic operator (*) for multiplication instead of x.

3. The entity salary is written as sal before multiplication error.

4. The ANNUAL SALARY must be written in inverted comas as the error is sal x 12
ANNUAL SALARY FROM employees;

The screenshot shows the Oracle Database Express Edition interface. At the top, it says "ORACLE Database Express Edition" and "User: HR". Below this, there's a navigation bar with "Home", "SQL", and "SQL Commands". The main area has a text input field with the SQL command: "SELECT employee_id, last_name, salary * 12 'ANNUAL SALARY' FROM employees;". There are buttons for "Autocommit", "Display", "Save", and "Run". Below the input field, there's a "Results" tab selected, showing a table with 10 rows of data. The table has columns: EMPLOYEE_ID, LAST_NAME, and ANNUAL SALARY. The data is as follows:

EMPLOYEE_ID	LAST_NAME	ANNUAL SALARY
100	King	288000
101	Kochhar	204000
102	De Haan	204000
103	Hunold	108000
104	Ernst	72000
105	Austin	57600
106	Pataballa	57600
107	Lorentz	50400
108	Greenberg	144000
109	Faviet	108000

Below the table, it says "More than 10 rows available. Increase rows selector to view more rows." and "10 rows returned in 0.03 seconds". There is also a "CSV Export" link.

4. Write a query that return all columns and all records of department table.

Ans: SELECT * FROM departments;

The screenshot shows the Oracle Database Express Edition web interface. At the top, the user is logged in as 'HR'. The breadcrumb navigation shows 'Home > SQL > SQL Commands'. The main area contains a text editor with the SQL query 'SELECT * FROM departments;'. Above the editor are controls for 'Autocommit' (checked) and 'Display' (set to 10). To the right of the editor are 'Save' and 'Run' buttons. Below the editor, the 'Results' tab is selected, displaying a table with 10 rows of department data. At the bottom, a message states '10 rows returned in 0.12 seconds' with a 'CSV Export' link.

ORACLE Database Express Edition

User: HR

Home > SQL > SQL Commands

☒ Autocommit Display 10

Save Run

```
SELECT *
FROM departments;
```

Results Explain Describe Saved SQL History

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	LOCATION_ID
10	Administration	200	1700
20	Marketing	201	1800
30	Purchasing	114	1700
40	Human Resources	203	2400
50	Shipping	121	1500
60	IT	103	1400
70	Public Relations	204	2700
80	Sales	145	2500
90	Executive	100	1700
100	Finance	108	1700

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

10 rows returned in 0.12 seconds [CSV Export](#)

5. Write a query that return only department_name and location_id.

Ans: SELECT department_name, location_id
FROM departments;

The screenshot shows the Oracle Database Express Edition web interface. The browser address bar displays the URL: 127.0.0.1:8080/apex/f?p=4500:1003:3925719445441047::NO::... The page title is "ORACLE Database Express Edition". The user is logged in as "User: HR". The navigation bar shows "Home > SQL > SQL Commands". The main area contains a SQL editor with the query: `SELECT department_name, location_id FROM departments;`. The editor has "Autocommit" checked and "Display" set to 10. Below the editor, the "Results" tab is selected, showing a table with two columns: "DEPARTMENT_NAME" and "LOCATION_ID". The table contains 10 rows of data. At the bottom, it states "10 rows returned in 0.02 seconds" and provides a "CSV Export" link.

DEPARTMENT_NAME	LOCATION_ID
Administration	1700
Marketing	1800
Purchasing	1700
Human Resources	2400
Shipping	1500
IT	1400
Public Relations	2700
Sales	2500
Executive	1700
Finance	1700

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

10 rows returned in 0.02 seconds [CSV Export](#)

6. Get all employees with their name and hire date, change the column heading of hire date column.

Ans: SELECT first_name, last_name, hire_date AS "new col hire_date"
FROM employees;

The screenshot shows the Oracle Database Express Edition web interface. The browser address bar displays the URL: 127.0.0.1:8080/apex/f?p=4500:1003:3925719445441047::NO::: The page header includes the Oracle logo and "Database Express Edition". The user is logged in as "HR". The main content area shows the "SQL Commands" tab with the following query entered:

```
SELECT first_name, last_name, hire_date AS "new col hire_date"
FROM employees;
```

 The query is executed, and the results are displayed in a table. The table has three columns: FIRST_NAME, LAST_NAME, and New Col Hire_date. The results show 10 rows of employee data. Below the table, a message states: "More than 10 rows available. Increase rows selector to view more rows." The footer indicates "10 rows returned in 0.01 seconds" and provides a "CSV Export" link.

Oracle Database Express Edition

User: HR

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

```
SELECT first_name, last_name, hire_date AS "new col hire_date"
FROM employees;
```

Results Explain Describe Saved SQL History

FIRST_NAME	LAST_NAME	New Col Hire_date
Steven	King	17-JUN-87
Neena	Kochhar	21-SEP-89
Lex	De Haan	13-JAN-93
Alexander	Hunold	03-JAN-90
Bruce	Ernst	21-MAY-91
David	Austin	25-JUN-97
Valli	Pataballa	05-FEB-98
Diana	Lorentz	07-FEB-99
Nancy	Greenberg	17-AUG-94
Daniel	Faviet	16-AUG-94

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

10 rows returned in 0.01 seconds [CSV Export](#)

7. Write a query that display all unique job codes from Employee table.

Ans: SELECT DISTINCT job_id

FROM employees;

The screenshot shows the Oracle Database Express Edition web interface. The browser address bar displays the URL: 127.0.0.1:8080/apex/f?p=4500:1003:3925719445441047::NO::: The page header includes the Oracle logo and the text "Database Express Edition". The user is logged in as "HR". The main content area is titled "SQL Commands" and contains a text input field with the following SQL query:

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

 The query is executed, and the results are displayed in a table with the column header "JOB_ID". The table contains 10 rows of job codes. Below the table, a message states "More than 10 rows available. Increase rows selector to view more rows." The footer of the interface shows "10 rows returned in 0.06 seconds" and a "CSV Export" link.

Oracle Database Express Edition

User: HR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

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

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 0.06 seconds [CSV Export](#)

8. Write a query that print all employees and their job IDs, Display the last name concatenated with the job ID (separated by a comma and space) and name of the column Employee and Title.

Employee and Title
King, AD_PRES
Kochhar, AD_VP
De Haan, AD_VP
Hunold, IT_PROG
Ernst, IT_PROG
Lorentz, IT_PROG

Ans: SELECT last_name||','||job_id AS "Employee and Title"

FROM employees;

The screenshot shows the Oracle Database Express Edition web interface. The browser address bar displays the URL: 127.0.0.1:8080/apex/f?p=4500:1003:3925719445441047::NO::.

The page header includes the Oracle logo and "Database Express Edition". The user is logged in as "HR".

The main content area shows the "SQL Commands" tab. The query entered is:

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

The query is executed, and the results are displayed in a table titled "Employee And Title". The results show the last name concatenated with the job ID for the first six employees:

Employee And Title
King,AD_PRES
Kochhar,AD_VP
De Haan,AD_VP
Hunold,IT_PROG
Ernst,IT_PROG
Lorentz,IT_PROG

Below the table, it states: "More than 10 rows available. Increase rows selector to view more rows." At the bottom, it indicates "10 rows returned in 0.00 seconds" and provides a "CSV Export" link.

9. To familiarize yourself with the data in the EMPLOYEES table, create a query to display all the data from that table. Separate each column output by a comma. Name the column title THE_OUTPUT.

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		

Ans: SELECT

```
employee_id||','||first_name||','||last_name||','||email||','||phone_number||','||job_id||','||hire_date||','||salary||','||commission_pct||','||manager_id||','||department_id AS
"THE_OUTPUT"
```

FROM employees;

ORACLE Database Express Edition

User: HR

Home Logout Help

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

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

Results Explain Describe Saved SQL History

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		21-MAY-91	6000		103	60	
105	David	Austin	DAUSTIN	590.423.4569	IT_PROG		25-JUN-97	4800		103	60	
106	Valli	Pataballa	VPATABAL	590.423.4560	IT_PROG		05-FEB-98	4800		103	60	
107	Diana	Lorentz	DLORENTZ	590.423.5567	IT_PROG		07-FEB-99	4200		103	60	
108	Nancy	Greenberg	NGREENBE	515.124.4569	FI_MGR		17-AUG-94	12000		101	100	
109	Daniel	Faviet	DFAVIET	515.124.4169	FI_ACCOUNT		16-AUG-94	9000		108	100	

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

40 rows returned in 0.03 seconds