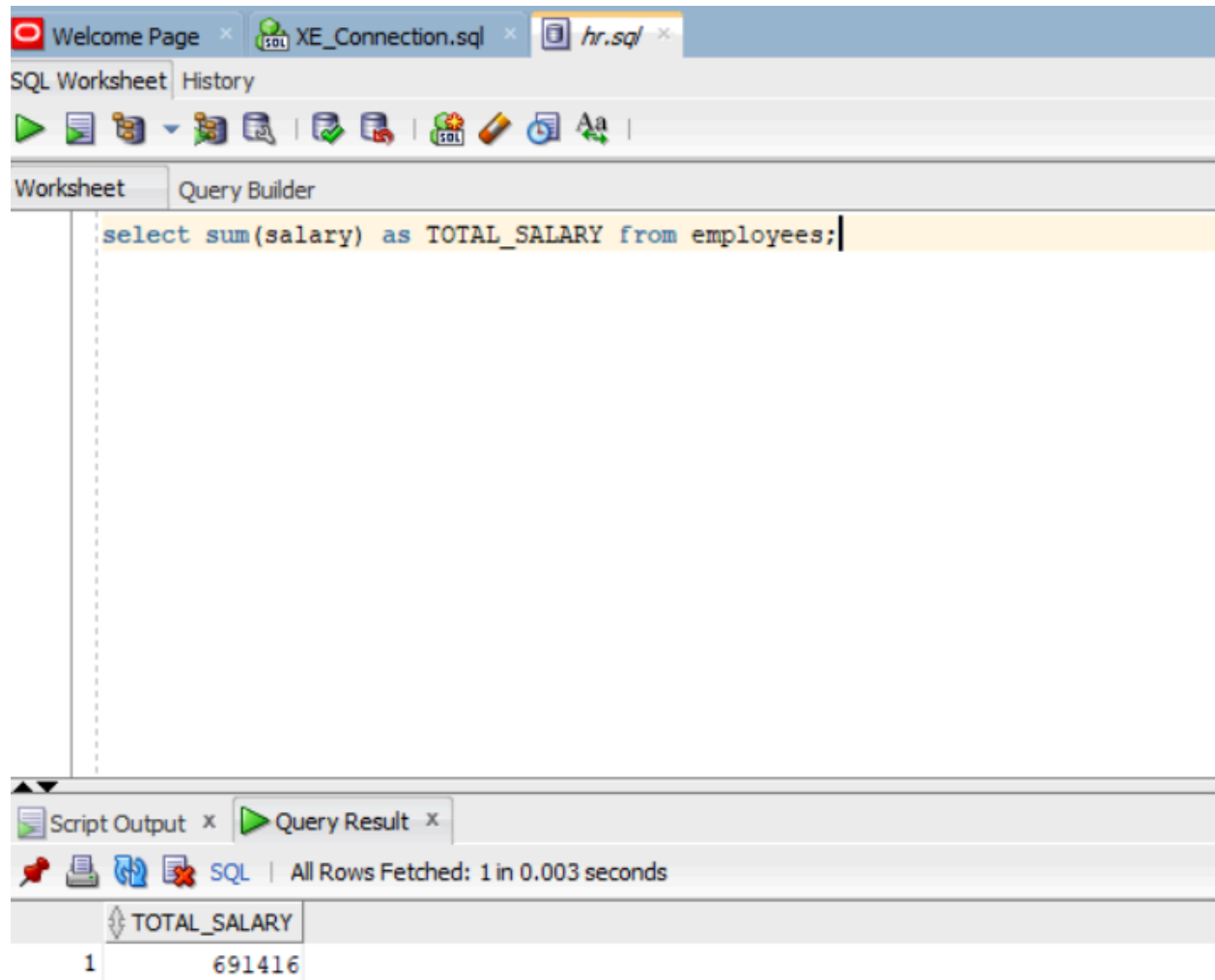


DB LAB 2
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23K-0057

Q1)



The screenshot shows an SQL IDE interface. At the top, there are tabs for 'Welcome Page', 'XE_Connection.sql', and 'hr.sql'. Below the tabs is a toolbar with various icons. The main area is divided into 'Worksheet' and 'Query Builder' tabs. The 'Worksheet' tab is active, displaying the SQL query: `select sum(salary) as TOTAL_SALARY from employees;`. Below the query editor, there is a 'Script Output' and 'Query Result' section. The 'Query Result' section shows the execution status: 'All Rows Fetched: 1 in 0.003 seconds'. Below this, a table displays the result of the query:

| | TOTAL_SALARY |
|---|--------------|
| 1 | 691416 |

Q2)

The screenshot shows a SQL query editor window with a toolbar at the top containing icons for execution, saving, and other functions. Below the toolbar, there are two tabs: 'Worksheet' and 'Query Builder'. The 'Query Builder' tab is active, displaying the following SQL query:

```
select avg(salary) as AVG_SALARY from employees;
```

Below the query editor, there is a 'Script Output' and 'Query Result' section. The 'Query Result' tab is active, showing the results of the query. The results are displayed in a table with one column, 'AVG_SALARY', and one row containing the value 6461.831775700934579439252336448598130841.

| | AVG_SALARY |
|---|---|
| 1 | 6461.831775700934579439252336448598130841 |

Q3)

The screenshot shows an SQL Worksheet interface. The top bar includes a 'History' tab and a toolbar with icons for running queries, saving, and other functions. The main area is divided into 'Worksheet' and 'Query Builder' tabs. The 'Worksheet' tab is active, displaying the following SQL query:

```
select count(*) as total_employees from employees;  
select count(*) as total_employees,manager_id from employees group by(manager_id);
```

Below the query, the 'Script Output' tab is active, showing the results of the query. The output is a table with two columns: 'TOTAL_EMPLOYEES' and 'MANAGER_ID'. The first row shows a total of 14 employees for manager_id 100. The subsequent rows show totals for other managers: 8 for 123, 8 for 120, 8 for 121, 6 for 147, 5 for 108, 6 for 148, 6 for 149, 1 for 205, and 1 for 102.

| TOTAL_EMPLOYEES | MANAGER_ID |
|-----------------|------------|
| 14 | 100 |
| 8 | 123 |
| 8 | 120 |
| 8 | 121 |
| 6 | 147 |
| 5 | 108 |
| 6 | 148 |
| 6 | 149 |
| 1 | 205 |
| 1 | 102 |

Q4)

The screenshot shows the SQL Developer application window. The top toolbar includes icons for running, saving, and other database operations. The main text area contains the following SQL query:

```
select * from employees where salary = (select min(salary) from employees);
```

Below the query editor, the 'Query Result' tab is active, displaying the results of the executed query. The status bar indicates 'All Rows Fetched: 1 in 0.002 seconds'. The results are presented in a table with the following columns and data:

| EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL | PHONE_NUMBER | HIRE_DATE | JOB_ID | SALARY | COMMISSION_PCT | MANAGER_ID |
|-------------|------------|-----------|---------|--------------|-----------|----------|--------|----------------|------------|
| 1 | 132 TJ | Olson | TJOLSON | 650.124.8234 | 10-APR-07 | ST_CLERK | 2100 | (null) | |

Q5)

The screenshot displays an SQL IDE interface with the following components:

- Top Tab Bar:** Contains 'Welcome Page', 'XE_Connection.sql', and 'hr.sql'.
- Worksheet Tab:** Active tab showing the SQL query: `select sysdate from dual;`
- Query Builder Tab:** Inactive tab.
- Script Output / Query Result Tab:** Active tab showing the execution result. It includes a status bar indicating 'All Rows Fetched: 1 in 0 seconds'.
- Query Result Table:**

| | SYSDATE |
|---|-----------|
| 1 | 02-SEP-25 |

Q6)

The screenshot shows an SQL IDE interface. At the top, there are tabs for 'Welcome Page', 'SQL Connection', and 'SQL'. Below the tabs is a toolbar with various icons for execution, saving, and editing. The main workspace is divided into two panes: 'Worksheet' and 'Query Builder'. The 'Worksheet' pane contains the following SQL query:

```
select to_char(sysdate, 'DAY MONTH YYYY') from dual;
```

Below the workspace, there is a 'Script Output' and 'Query Result' section. The 'Query Result' section shows the output of the query:

| | TO_CHAR(SYSDATE,'DAYMONTHYYYY') |
|---|---------------------------------|
| 1 | TUESDAY SEPTEMBER 2025 |

Q7)

SQL Worksheet | History

Query Builder

```
select * from employees where to_char(hire_date, 'Day') = 'Wednesday';
```

Script Output x | Query Result x

SQL | All Rows Fetched: 15 in 0.006 seconds

| | EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL | PHONE_NUMBER | HIRE_DATE | JOB_ID | SALARY | COMMISSION_F |
|----|-------------|------------|------------|----------|--------------------|-----------|------------|--------|--------------|
| 1 | 101 | Neena | Kochhar | NKOCHHAR | 515.123.4568 | 21-SEP-05 | AD_VP | 17000 | (nu |
| 2 | 107 | Diana | Lorentz | DLORENTZ | 590.423.5567 | 07-FEB-07 | IT_PROG | 4200 | (nu |
| 3 | 110 | John | Chen | JCHEN | 515.124.4269 | 28-SEP-05 | FI_ACCOUNT | 8200 | (nu |
| 4 | 118 | Guy | Himuro | GHIMURO | 515.127.4565 | 15-NOV-06 | PU_CLERK | 2600 | (nu |
| 5 | 131 | James | Marlow | JAMLOW | 650.124.7234 | 16-FEB-05 | ST_CLERK | 2500 | (nu |
| 6 | 135 | Ki | Gee | KGEE | 650.127.1734 | 12-DEC-07 | ST_CLERK | 2400 | (nu |
| 7 | 136 | Hazel | Philtanker | HPHILTAN | 650.127.1634 | 06-FEB-08 | ST_CLERK | 2200 | (nu |
| 8 | 138 | Stephen | Stiles | SSTILES | 650.121.2034 | 26-OCT-05 | ST_CLERK | 3200 | (nu |
| 9 | 143 | Randall | Matos | RMATOS | 650.121.2874 | 15-MAR-06 | ST_CLERK | 2600 | (nu |
| 10 | 146 | Karen | Partners | KPARTNER | 011.44.1344.467268 | 05-JAN-05 | SA_MAN | 13500 | |
| 11 | 187 | Anthony | Cabrio | ACABRIO | 650.509.4876 | 07-FEB-07 | SH_CLERK | 3000 | (nu |
| 12 | 191 | Randall | Perkins | RPERKINS | 650.505.4876 | 19-DEC-07 | SH CLERK | 2500 | (nu |

Q8)

The screenshot shows an SQL IDE interface. The top toolbar includes icons for running queries, saving, and editing. The main workspace is divided into two tabs: 'Worksheet' and 'Query Builder'. The 'Worksheet' tab is active, displaying the following SQL query:

```
select months_between('01-JAN-2025' , '01-OCT-2024') from dual;
```

Below the query editor, there is a 'Script Output' tab and a 'Query Result' tab. The 'Query Result' tab is active, showing the execution status: 'All Rows Fetched: 1 in 0 seconds'. The result is displayed in a table with one row and one column:

| MONTHS_BETWEEN('01-JAN-2025','01-OCT-2024') |
|---|
| 3 |

Q9)

The screenshot shows a SQL Worksheet interface with a 'Query Builder' tab. The query entered is: `employee_id,first_name,hire_date, TRUNC(months_between(sysdate,hire_date)) as months_worked from employees;`

Below the query editor, the 'Query Result' tab is active, displaying a table with 12 rows of data. The table has four columns: **EMPLOYEE_ID**, **FIRST_NAME**, **HIRE_DATE**, and **MONTHS_WORKED**. The data is as follows:

| | EMPLOYEE_ID | FIRST_NAME | HIRE_DATE | MONTHS_WORKED |
|----|-------------|------------|-----------|---------------|
| 1 | 100 | Steven | 17-JUN-03 | 266 |
| 2 | 101 | Neena | 21-SEP-05 | 239 |
| 3 | 102 | Lex | 13-JAN-01 | 295 |
| 4 | 103 | Alexander | 03-JAN-06 | 235 |
| 5 | 104 | Bruce | 21-MAY-07 | 219 |
| 6 | 105 | David | 25-JUN-05 | 242 |
| 7 | 106 | Valli | 05-FEB-06 | 234 |
| 8 | 107 | Diana | 07-FEB-07 | 222 |
| 9 | 108 | Nancy | 17-AUG-02 | 276 |
| 10 | 109 | Daniel | 16-AUG-02 | 276 |
| 11 | 110 | John | 28-SEP-05 | 239 |
| 12 | 111 | Ismael | 30-SEP-05 | 239 |

Q10)

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

- Top Bar:** Includes tabs for 'Welcome Page', 'XE_Connection.sql', and 'hr.sql'. Below the tabs is a toolbar with various icons for file operations, execution, and formatting.
- Worksheet Tab:** Contains the SQL query: `select employee_id,first_name,last_name, substr(last_name,1,5) as five_char from employees;`
- Query Result Tab:** Displays the results of the query. It shows a table with 5 columns: EMPLOYEE_ID, FIRST_NAME, LAST_NAME, and FIVE_CHAR. The table contains 12 rows of data.
- Status Bar:** At the bottom, it shows the file path 'C:\Users\rjia\hr.sql' and the current cursor position 'Line 1 Column 92'.

| | EMPLOYEE_ID | FIRST_NAME | LAST_NAME | FIVE_CHAR |
|----|-------------|------------|-----------|-----------|
| 1 | 100 | Steven | King | King |
| 2 | 101 | Neena | Kochhar | Kochh |
| 3 | 102 | Lex | De Haan | De Ha |
| 4 | 103 | Alexander | Hunold | Hunol |
| 5 | 104 | Bruce | Ernst | Ernst |
| 6 | 105 | David | Austin | Austi |
| 7 | 106 | Valli | Pataballa | Patab |
| 8 | 107 | Diana | Lorentz | Loren |
| 9 | 108 | Nancy | Greenberg | Green |
| 10 | 109 | Daniel | Faviet | Favie |
| 11 | 110 | John | Chen | Chen |
| 12 | 111 | Ismael | Sciarra | Sciar |

Q11)

The screenshot shows an SQL IDE interface. At the top, there are tabs for 'Welcome Page', 'XE_Connection.sql', and 'hr.sql'. Below the tabs is a toolbar with various icons for running queries, saving, and editing. The main area is divided into 'Worksheet' and 'Query Builder' tabs. The 'Worksheet' tab is active, showing the following SQL query:

```
select lpad(first_name,15,'') from employees;
```

Below the query editor, there is a 'Query Result' tab. It shows the results of the query, indicating that 50 rows were fetched in 0.002 seconds. The results are displayed in a table with a single column titled 'LPAD(FIRST_NAME,15,*)'. The first 12 rows are visible:

| | LPAD(FIRST_NAME,15,*) |
|----|-----------------------|
| 1 | *****Ellen |
| 2 | *****Sundar |
| 3 | *****Mozhe |
| 4 | *****David |
| 5 | *****Hermann |
| 6 | *****Shelli |
| 7 | *****Amit |
| 8 | *****Elizabeth |
| 9 | *****Sarah |
| 10 | *****David |
| 11 | *****Laura |
| 12 | *****Harrison |

Q12)

The screenshot shows the Oracle SQL Developer interface. At the top, there are three tabs: 'Welcome Page', 'XE_Connection.sql', and 'hr.sql'. Below the tabs is a toolbar with various icons for running queries, saving, and editing. The main workspace is divided into two panes: 'Worksheet' and 'Query Builder'. The 'Worksheet' pane contains the following SQL query:

```
select ltrim(' ORACLE') from dual;
```

Below the query editor is the 'Query Result' pane. It shows the execution status: 'All Rows Fetched: 1 in 0.002 seconds'. The result is displayed in a table with one column, 'LTRIM('ORACLE')', and one row containing the value 'ORACLE'.

| LTRIM('ORACLE') |
|-----------------|
| ORACLE |

Q13)

The screenshot shows an SQL IDE interface with the following components:

- Top Bar:** Contains tabs for 'Welcome Page', 'XE_Connection.sql', and 'hr.sql'. Below the tabs is a toolbar with various icons for file operations and execution.
- Worksheet Tab:** Displays the SQL query: `select INITCAP(first_name||' '||last_name) from employees;`
- Query Builder Tab:** A blank area for building queries visually.
- Query Result Tab:** Shows the execution results. It indicates 'Fetched 50 rows in 0.012 seconds'. The results are displayed in a table with one column: `INITCAP(FIRST_NAME||' '||LAST_NAME)`.

| | INITCAP(FIRST_NAME ' ' LAST_NAME) |
|----|-------------------------------------|
| 1 | Ellen Abel |
| 2 | Sundar Ande |
| 3 | Mozhe Atkinson |
| 4 | David Austin |
| 5 | Hermann Baer |
| 6 | Shelli Baida |
| 7 | Amit Banda |
| 8 | Elizabeth Bates |
| 9 | Sarah Bell |
| 10 | David Bernstein |
| 11 | Laura Bissot |
| 12 | Harrison Bloom |

At the bottom of the window, a status bar shows: 'Line: 2 Column: 1 | Insert | Modified | Windows: CL'.

Q14)

The screenshot shows the SQL Developer application window. The top pane, titled 'SQL Worksheet', contains the following SQL query:













```
select next_day('20-aug-2022','monday') from dual;
```

The bottom pane, titled 'Query Result', displays the output of the query. It shows a single row with the value '22-AUG-22'.

| | NEXT_DAY('20-AUG-2022','MONDAY') |
|---|----------------------------------|
| 1 | 22-AUG-22 |

Q15)





SQL Worksheet | History

            |

Worksheet | Query Builder

```
SELECT TO_CHAR(TO_DATE('25-DEC-2023', 'DD-MON-YYYY'), 'MM-YYYY') FROM dual;
```

Query Result x

    | All Rows Fetched: 1 in 0.003 seconds

| | TO_CHAR(TO_DATE('25-DEC-2023','DD-MON-YYYY'),'MM-YYYY') |
|---|---|
| 1 | 12-2023 |

Q16)

The screenshot shows an SQL IDE interface. At the top, there are tabs for 'Welcome Page', 'XE_Connection.sql', and 'hr.sql'. Below the tabs is a toolbar with various icons for file operations and execution. The main area is divided into two panes: 'Worksheet' and 'Query Builder'. The 'Worksheet' pane contains the following SQL query:

```
select employee_id,first_name,salary from employees order by(salary) asc;
```

Below the query editor is the 'Query Result' pane, which displays the results of the query. It shows a table with three columns: 'EMPLOYEE_ID', 'FIRST_NAME', and 'SALARY'. The table contains 12 rows of data, sorted by salary in ascending order.

| | EMPLOYEE_ID | FIRST_NAME | SALARY |
|----|-------------|------------|--------|
| 1 | 132 | TJ | 2100 |
| 2 | 128 | Steven | 2200 |
| 3 | 136 | Hazel | 2200 |
| 4 | 127 | James | 2400 |
| 5 | 135 | Ki | 2400 |
| 6 | 119 | Karen | 2500 |
| 7 | 131 | James | 2500 |
| 8 | 140 | Joshua | 2500 |
| 9 | 144 | Peter | 2500 |
| 10 | 182 | Martha | 2500 |
| 11 | 191 | Randall | 2500 |
| 12 | 118 | Guy | 2600 |

At the bottom of the IDE, there is a status bar showing the file path 'C:\Users\rja\hr.sql' and the current cursor position 'Line 1 Column 31'.

Q17)

The screenshot shows an SQL IDE interface. At the top, there's a 'Welcome Page' and a tab for 'SQL Worksheet'. Below the toolbar, the 'Query Builder' tab is active, displaying the following SQL query:

```
select employee_id,first_name,salary from employees where(salary = TRUNC(salary));
```

Below the query editor, the 'Query Result' tab is active, showing the results of the query. The results are displayed in a table with 12 rows and 3 columns: EMPLOYEE_ID, FIRST_NAME, and SALARY. The table indicates that 50 rows were fetched in 0.005 seconds.

| | EMPLOYEE_ID | FIRST_NAME | SALARY |
|----|-------------|------------|--------|
| 1 | 100 | Steven | 24000 |
| 2 | 101 | Neena | 17000 |
| 3 | 102 | Lex | 17000 |
| 4 | 103 | Alexander | 9000 |
| 5 | 104 | Bruce | 6000 |
| 6 | 105 | David | 4800 |
| 7 | 106 | Valli | 4800 |
| 8 | 107 | Diana | 4200 |
| 9 | 108 | Nancy | 12008 |
| 10 | 109 | Daniel | 9000 |
| 11 | 110 | John | 8200 |
| 12 | 111 | Ismael | 7700 |

Q18)

The screenshot shows a database query builder interface. The top toolbar includes icons for running queries, saving, and editing. The 'Query Builder' tab is active, displaying the following SQL query:

```
select department_id, count(*) as total_emp from employees group by (department_id);
```

Below the query editor, the 'Query Result' tab shows the results of the query. The status bar indicates 'All Rows Fetched: 12 in 0.005 seconds'. The results are displayed in a table with two columns: DEPARTMENT_ID and TOTAL_EMP.

| | DEPARTMENT_ID | TOTAL_EMP |
|----|---------------|-----------|
| 1 | 100 | 6 |
| 2 | 30 | 6 |
| 3 | (null) | 1 |
| 4 | 90 | 3 |
| 5 | 20 | 2 |
| 6 | 70 | 1 |
| 7 | 110 | 2 |
| 8 | 50 | 45 |
| 9 | 80 | 34 |
| 10 | 40 | 1 |
| 11 | 60 | 5 |
| 12 | 10 | 1 |

Q19)

SQL Worksheet History

Worksheet Query Builder

```
select department_id, sum(salary) as total from employees group by (department_id);
```

Query Result x

SQL | All Rows Fetched: 12 in 0.002 seconds

| | DEPARTMENT_ID | TOTAL |
|----|---------------|--------|
| 1 | 100 | 51608 |
| 2 | 30 | 24900 |
| 3 | (null) | 7000 |
| 4 | 90 | 58000 |
| 5 | 20 | 19000 |
| 6 | 70 | 10000 |
| 7 | 110 | 20308 |
| 8 | 50 | 156400 |
| 9 | 80 | 304500 |
| 10 | 40 | 6500 |
| 11 | 60 | 28800 |
| 12 | 10 | 4400 |

Q20)

The screenshot shows a database query tool interface. At the top, there is a toolbar with various icons for execution, saving, and editing. Below the toolbar, the 'Query Builder' tab is active, displaying the following SQL query:

```
select department_id, count(*) as total_emp from employees group by (department_id);
```

Below the query editor, the 'Query Result' tab is active, showing the results of the query. The status bar indicates 'All Rows Fetched: 12 in 0.005 seconds'. The results are displayed in a table with two columns: 'DEPARTMENT_ID' and 'TOTAL_EMP'.

| | DEPARTMENT_ID | TOTAL_EMP |
|----|---------------|-----------|
| 1 | 100 | 6 |
| 2 | 30 | 6 |
| 3 | (null) | 1 |
| 4 | 90 | 3 |
| 5 | 20 | 2 |
| 6 | 70 | 1 |
| 7 | 110 | 2 |
| 8 | 50 | 45 |
| 9 | 80 | 34 |
| 10 | 40 | 1 |
| 11 | 60 | 5 |
| 12 | 10 | 1 |