

Domas Budrys A7 -CSCI 5020 Screenshots

Ch8Ex4:

The screenshot shows the SQL Developer interface. The Query Builder window contains the following SQL query:

```
1 SELECT invoice_number, invoice_date, invoice_date + 30,  
2     payment_date, payment_date - invoice_date "days_to_pay",  
3     EXTRACT(month FROM invoice_date) "invoice_date month",  
4     EXTRACT(YEAR FROM invoice_date) "invoice_date year",  
5     LAST_DAY(invoice_date) "last day"  
6 FROM invoices  
7 WHERE TO_CHAR(invoice_date, 'FMMonth') = 'May'
```

The Query Result window shows the results of the query. It indicates that all rows were fetched in 0.042 seconds. The results are displayed in a table with the following columns: INVOICE_NUMBER, INVOICE_DATE, INVOICE_DATE+30, PAYMENT_DATE, days_to_pay, invo..., invoic..., and last day.

| INVOICE_NUMBER | INVOICE_DATE | INVOICE_DATE+30 | PAYMENT_DATE | days_to_pay | invo... | invoic... | last day |
|----------------|--------------|-----------------|--------------|-------------|---------|----------------|----------|
| 1 97/465 | 01-MAY-08 | 31-MAY-08 | 05-MAY-08 | 4 | 5 | 2008 31-MAY-08 | |
| 2 97/222 | 01-MAY-08 | 31-MAY-08 | 25-MAY-08 | 24 | 5 | 2008 31-MAY-08 | |
| 3 4-342-8069 | 01-MAY-08 | 31-MAY-08 | 27-MAY-08 | 26 | 5 | 2008 31-MAY-08 | |
| 4 4-327-7357 | 01-MAY-08 | 31-MAY-08 | 21-MAY-08 | 20 | 5 | 2008 31-MAY-08 | |
| 5 4-321-2596 | 01-MAY-08 | 31-MAY-08 | 11-MAY-08 | 10 | 5 | 2008 31-MAY-08 | |
| 6 7548906-20 | 01-MAY-08 | 31-MAY-08 | 26-MAY-08 | 25 | 5 | 2008 31-MAY-08 | |
| 7 4-314-3057 | 02-MAY-08 | 01-JUN-08 | 07-MAY-08 | 5 | 5 | 2008 31-MAY-08 | |
| 8 203339-13 | 02-MAY-08 | 01-JUN-08 | (null) | (null) | 5 | 2008 31-MAY-08 | |
| 9 2-000-2993 | 03-MAY-08 | 02-JUN-08 | 04-MAY-08 | 1 | 5 | 2008 31-MAY-08 | |

Ch8Ex5:

The screenshot shows the SQL Developer interface. The Query Builder window contains the following SQL query:

```
1 SELECT invoice_number,  
2     TO_CHAR(invoice_total - payment_total - credit_total, '999,999.99') "balance due",  
3     RANK() OVER (ORDER BY TO_CHAR(invoice_total  
4         - payment_total - credit_total, '999,999.99') DESC) "Balance Rank"  
5  
6 FROM invoices
```

The Query Result window shows the results of the query. It indicates that 50 rows were fetched in 0.018 seconds. The results are displayed in a table with the following columns: INVOICE_NUMBER, balance due, and Balance Rank.

| INVOICE_NUMBER | balance due | Balance Rank |
|----------------|-------------|--------------|
| 1 40318 | 21,842.00 | 1 |
| 2 P-0608 | 19,351.18 | 2 |
| 3 0-2436 | 10,976.06 | 3 |
| 4 367447 | 2,433.00 | 4 |
| 5 989319-497 | 2,312.20 | 5 |
| 6 989319-487 | 1,927.54 | 6 |
| 7 97/522 | 1,762.13 | 7 |
| 8 31359783 | 1,575.00 | 8 |
| 9 97/553 | 904.14 | 9 |

Ch10Ex1:

The screenshot shows a SQL IDE with a tab labeled 'ap~2'. The 'Query Builder' tab is active, displaying the following SQL code:

```
1 ALTER TABLE invoices
2 ADD CONSTRAINT check_payment_date
3     CHECK((payment_date IS NULL AND payment_total = 0)
4         OR (payment_date IS NOT NULL AND payment_total > 0));
5
6 ALTER TABLE invoices
7 ADD CONSTRAINT check_invoice_total
8     CHECK ((payment_total + credit_total) <= invoice_total);
9
10
```

Below the query editor, the 'Script Output' tab shows the message: 'Task completed in 0.081 seconds'.

Table INVOICES altered.

Table INVOICES altered.

Ch10Ex2:

The screenshot shows a SQL IDE with a tab labeled 'ap~2'. The 'Query Builder' tab is active, displaying the following SQL code:

```
1 CREATE INDEX zip_code_index ON vendors(VENDOR_ZIP_CODE);
```

Below the query editor, the 'Script Output' tab shows the message: 'Task completed in 0.209 seconds'.

Index ZIP_CODE_INDEX created.

Ch10Ex3:

Worksheet Query Builder

```
13
14 CREATE TABLE groups
15 (
16     group_id NUMERIC(25),
17     group_name VARCHAR(255),
18
19     CONSTRAINT groupsPK PRIMARY KEY (group_id)
20 );
21
22 CREATE TABLE members_groups
23 (
24     member_id NUMERIC(25),
25     group_id NUMERIC(25),
26
27     CONSTRAINT membersFK FOREIGN KEY (member_id)
```

Script Output x

Task completed in 0.058 seconds

Table MEMBERS created.

Table GROUPS created.

Table MEMBERS_GROUPS created.

Ch10Ex4:

Worksheet Query Builder

```
16 VALUES (2, 1);
17 INSERT INTO members_groups
18 VALUES (2, 2);
19
20
21 SELECT g.group_name, m.last_name, m.first_name
22 FROM members m
23 JOIN members_groups mg
24     ON m.member_id = mg.member_id
25 JOIN groups g
26     ON mg.group_id = g.group_id;
```

Script Output x Query Result x

SQL | All Rows Fetched: 3 in 0.029 seconds

| | GROUP_NAME | LAST_NAME | FIRST_NAME |
|---|------------|-----------|------------|
| 1 | AC/DC | Doe | John |
| 2 | Coldplay | Smith | Jane |
| 3 | AC/DC | Smith | Jane |

Ch10Ex7:

```
1 ALTER TABLE members
2 ADD (annual_dues NUMBER(5,2) DEFAULT 52.50,
3     payment_date DATE );
```

Script Output x



| Task completed in 0.113 seconds

Table MEMBERS altered.

Ch11Ex1:

```
Worksheet | Query Builder
1 CREATE VIEW open_items
2 AS
3
4 SELECT v.vendor_name, i.invoice_number, i.invoice_total,
5        (i.invoice_total - i.payment_total - i.credit_total) "balance_due"
6 FROM invoices i
7 JOIN vendors v
8     ON i.vendor_id = v.vendor_id
9
10 WHERE (i.invoice_total - i.payment_total - i.credit_total) > 0
11 ORDER BY v.vendor_name;
```

Query Result x | Script Output x

Task completed in 0.093 seconds

View OPEN_ITEMS created.

Connections | ...sql | ch10ex2.sql | ch10ex3.sql | ch10ex4.sql | ch10ex7.sql | ch11ex1.sql | OPEN_ITEMS

Columns | Data | Grants | Dependencies | Details | Triggers | SQL | Errors

Actions...

| | COLUMN_NAME | DATA_TYPE | NULLABLE | DATA_DEFAULT | COLUMN_ID | COMMENTS | INSERTABLE | UPDATABLE | DELETABLE |
|---|----------------|--------------|----------|--------------|-----------|----------|------------|-----------|-----------|
| 1 | VENDOR_NAME | VARCHAR2(50) | No | (null) | 1 (null) | | NO | NO | NO |
| 2 | INVOICE_NUMBER | VARCHAR2(50) | No | (null) | 2 (null) | | YES | YES | YES |
| 3 | INVOICE_TOTAL | NUMBER(9,2) | No | (null) | 3 (null) | | YES | YES | YES |
| 4 | balance_due | NUMBER | Yes | (null) | 4 (null) | | NO | NO | NO |

Views

- OPEN_ITEMS
 - VENDOR_NAME
 - INVOICE_NUMBER
 - INVOICE_TOTAL
 - balance_due

Ch11Ex2:

Worksheet

Query Builder

1

2

3




4

SELECT *

FROM open_items

WHERE "balance_due" >= 1000

▶ Query Result x

   SQL | All Rows Fetched: 8 in 0.007 seconds

| | VENDOR_NAME | INVOICE_NUMBER | INVOICE_TOTAL | balance_due |
|---|--------------------------|----------------|---------------|-------------|
| 1 | Computerworld | 367447 | 2433 | 2433 |
| 2 | Data Reproductions Corp | 40318 | 21842 | 21842 |
| 3 | Ingram | 31359783 | 1575 | 1575 |
| 4 | Malloy Lithographing Inc | P-0608 | 20551.18 | 19351.18 |
| 5 | Malloy Lithographing Inc | 0-2436 | 10976.06 | 10976.06 |
| 6 | United Parcel Service | 989319-497 | 2312.2 | 2312.2 |
| 7 | United Parcel Service | 989319-487 | 1927.54 | 1927.54 |
| 8 | Zylka Design | 97/522 | 1962.13 | 1762.13 |

Ch12Ex1:

Worksheet

Query Builder

1

CREATE ROLE payment_entry;

2

3

GRANT select, update ON ap.vendors TO payment_entry;

4

5

GRANT select, update ON ap.invoices TO payment_entry;

6

7






GRANT select, update, insert ON ap.invoice_line_items TO payment_entry;

8

9

GRANT create session TO payment_entry;

Script Output x

 Task completed in 0.164 seconds

Grant succeeded.

Grant succeeded.

Grant succeeded.

Ch12Ex2:

The screenshot shows the SQL Developer interface with the 'Query Builder' tab active. The SQL script in the editor is as follows:

```
1  
2  
3 CREATE USER Tom IDENTIFIED BY temp DEFAULT TABLESPACE users;  
4  
5 GRANT payment_entry TO Tom;  
6  
7 -- SELECT vendor_id from ap.vendors;  
8  
9
```

Below the editor, the 'Script Output' window shows the results of the script execution:

Task completed in 0.063 seconds

User TOM created.

Grant succeeded.

The screenshot shows the SQL Developer interface with the 'Query Builder' tab active. The SQL script in the editor is:

```
1 SELECT vendor_id from ap.vendors;
```

Below the editor, the 'Query Result' window shows the results of the query execution:

SQL | Fetched 50 rows in 0.063 seconds

| VENDOR_ID |
|-----------|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |
| 8 |

Ch12Ex2:

Worksheet Query Builder

```
1 SELECT *
2 FROM ap.Vendors;
3
4 DELETE FROM ap.Vendors
5 WHERE vendor_id = 74;
```

Script Output x Query Result x

SQL | Fetched 50 rows in 0.094 seconds

| | VENDOR_ID | VENDOR_NAME | VENDOR_ADDRESS1 | VENDOR_ADDRESS2 |
|---|-----------|-----------------------------|------------------------------|-----------------|
| 1 | 72 | Data Reproductions Corp | 4545 Glenmeade Lane | NULL |
| 2 | 73 | Executive Office Products | 353 E Shaw Ave | NULL |
| 3 | 74 | Leslie Company | PO Box 610 | NULL |
| 4 | 75 | Retirement Plan Consultants | 6435 North Palm Ave, Ste 101 | NULL |
| 5 | 76 | Simon Direct Inc | 4 Cornwall Dr Ste 102 | NULL |
| 6 | 77 | State Board Of Equalization | PO Box 942808 | NULL |
| 7 | 78 | The Presort Center | 1627 "E" Street | NULL |
| 8 | 79 | Valprint | PO Box 12332 | NULL |

om
system
tom
Oracle NoSQL Connections
Database Schema Service Connections

```
3
4 DELETE FROM ap.Vendors
5 WHERE vendor_id = 74;
```

Query Result x Script Output x

Task completed in 0.14 seconds

DELETE FROM ap.Vendors
WHERE vendor_id = 74
Error at Command Line : 4 Column : 16
Error report -
SQL Error: ORA-01031: insufficient privileges
01031. 00000 - "insufficient privileges"
*Cause: An attempt was made to perform a database operation without
 the necessary privileges.
*Action: Ask your database administrator or designated security
 administrator to grant you the necessary privileges

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports