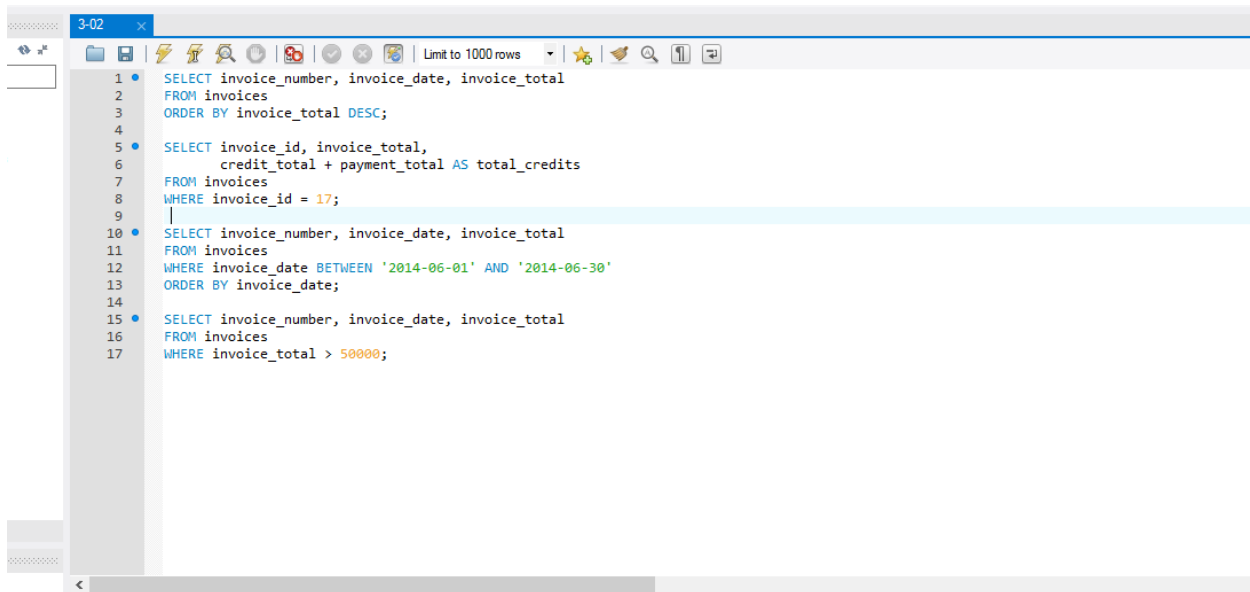
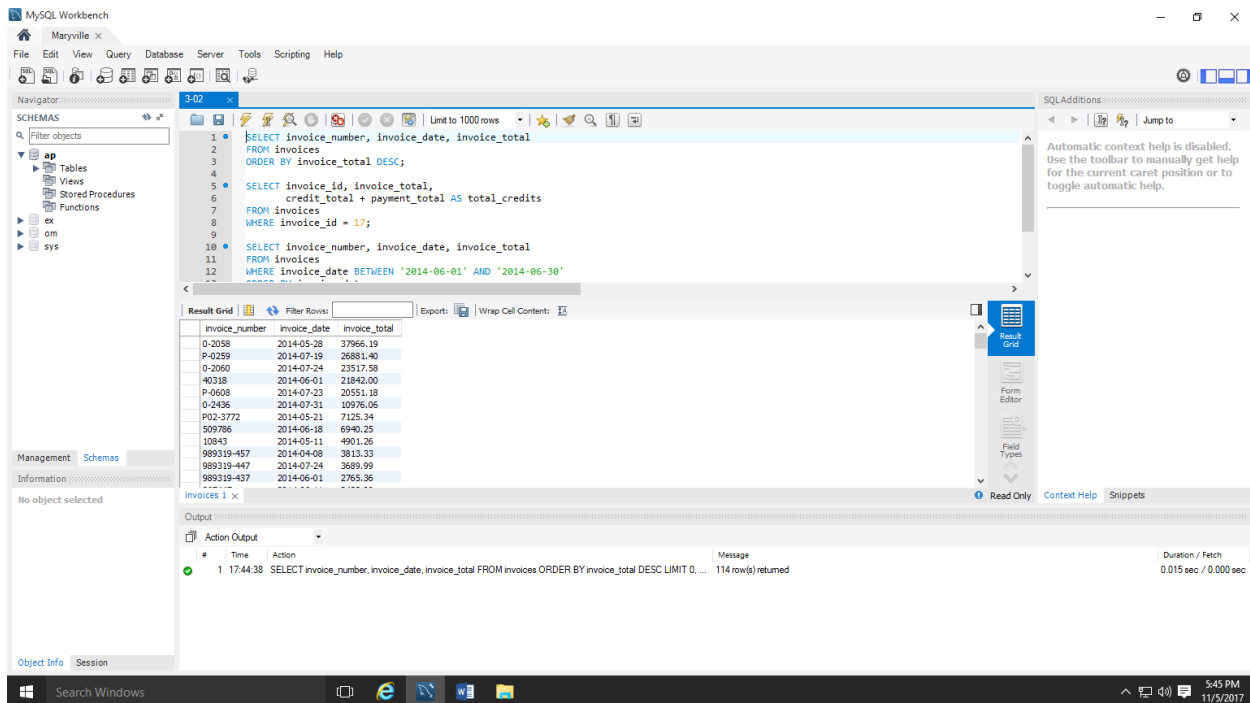


## 3.1 AND 3.2



```
1 SELECT invoice_number, invoice_date, invoice_total
2 FROM invoices
3 ORDER BY invoice_total DESC;
4
5 SELECT invoice_id, invoice_total,
6        credit_total + payment_total AS total_credits
7 FROM invoices
8 WHERE invoice_id = 17;
9
10 SELECT invoice_number, invoice_date, invoice_total
11 FROM invoices
12 WHERE invoice_date BETWEEN '2014-06-01' AND '2014-06-30'
13 ORDER BY invoice_date;
14
15 SELECT invoice_number, invoice_date, invoice_total
16 FROM invoices
17 WHERE invoice_total > 50000;
```

## 3.3



MySQL Workbench interface showing the execution of the first SQL query. The query is: `SELECT invoice_number, invoice_date, invoice_total FROM invoices ORDER BY invoice_total DESC;`

The results are displayed in a grid with columns: invoice\_number, invoice\_date, and invoice\_total. The data is sorted by invoice\_total in descending order.

invoice_number	invoice_date	invoice_total
0-2058	2014-05-28	37966.19
P-0259	2014-07-19	26881.40
0-2060	2014-07-24	23517.58
40318	2014-06-01	21842.00
P-0608	2014-07-23	20551.18
0-2436	2014-07-31	10976.06
P02-3772	2014-05-21	7125.34
509786	2014-06-18	6940.25
10843	2014-05-11	4901.26
989319-457	2014-04-08	3815.33
989319-447	2014-07-24	3689.99
989319-437	2014-06-01	2765.36

The Output pane shows the execution message: `SELECT invoice_number, invoice_date, invoice_total FROM invoices ORDER BY invoice_total DESC LIMIT 0...` with 114 rows returned. The duration is 0.015 sec / 0.000 sec.

## 3.4

The screenshot shows a SQL IDE window with a query editor and a result grid. The query editor contains the following SQL code:

```
1 SELECT invoice_number, invoice_date, invoice_total
2 FROM invoices
3 ORDER BY invoice_total DESC;
4
5 SELECT invoice_id, invoice_total,
6 credit_total + payment_total AS total_credits
7 FROM invoices
8 WHERE invoice_id = 17;
9
10 SELECT invoice_number, invoice_date, invoice_total
11 FROM invoices
12 WHERE invoice_date BETWEEN '2014-06-01' AND '2014-06-30'
```

The result grid displays the following data:

invoice_id	invoice_total	total_credits
17	10.00	10.00

3.5

The screenshot shows a SQL IDE window with a query editor and a result grid. The query editor contains the following SQL code:

```
6 credit_total + payment_total AS total_credits
7 FROM invoices
8 WHERE invoice_id = 17;
9
10 SELECT invoice_number, invoice_date, invoice_total
11 FROM invoices
12 WHERE invoice_date BETWEEN '2014-06-01' AND '2014-06-30'
13 ORDER BY invoice_date;
14
15 SELECT invoice_number, invoice_date, invoice_total
16 FROM invoices
17 WHERE invoice_total > 50000;
```

The result grid displays the following data:

invoice_number	invoice_date	invoice_total
40318	2014-06-01	21842.00
111-92R-10094	2014-06-01	19.67
989319-437	2014-06-01	2765.36
547481328	2014-06-03	224.00
31359783	2014-06-03	1575.00
1-202-2978	2014-06-03	33.00
111-92R-10097	2014-06-04	16.33
547479217	2014-06-07	116.00
989319-477	2014-06-08	2184.11
0545443	2014-06-09	1083.58
111-92R-10092	2014-06-09	46.21
97/5538	2014-06-10	313.55

3.6

Query 1 x

Limit to 1000 rows

```

1 SELECT vendor_name, vendor_contact_last_name, vendor_contact_first_name
2 FROM vendors
3

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

vendor_name	vendor_contact_last_name	vendor_contact_first_name
US Postal Service	Alberto	Francesco
National Information Data Ctr	Irvin	Ania
Register of Copyrights	Liana	Lukas
Jobtrak	Quinn	Kenzie
Newbriar Book Clubs	Marks	Michelle
California Chamber Of Commerce	Mauro	Anton
Towne Advertiser's Mailing Svcs	Maeoen	Ted
BFI Industries	Kaleiah	Erick
Pacific Gas & Electric	Anthony	Kaitlyn
Robbins Mobile Lock And Key	Leiah	Bill
Bill Marvin Electric Inc	Hostler	Kaitlin

vendors 1 x

Read Only

Query 1 x

Limit to 1000 rows

```

1 SELECT vendor_name, vendor_contact_last_name, vendor_contact_first_name
2 FROM vendors
3 ORDER BY vendor_contact_last_name, vendor_contact_first_name
4

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

vendor_name	vendor_contact_last_name	vendor_contact_first_name
Dristas Groom & McCormick	Aaronsen	Thom
Internal Revenue Service	Aileen	Joan
US Postal Service	Alberto	Francesco
Yale Industrial Trucks-Fresno	Alexis	Alexandro
Leslie Company	Alondra	Zev
American Booksellers Assoc	Annelica	Nashalie
Courier Companies, Inc	Antavius	Trov
Pacific Gas & Electric	Anthony	Kaitlyn
Lou Gentile's Flower Basket	Anum	Trisha
Pollstar	Aranovitch	Robert
Compuserve	Armando	Jan

vendors 2 x

Query 1

```

1 SELECT vendor_name, vendor_contact_last_name, vendor_contact_first_name
2 FROM vendors
3 ORDER BY vendor_contact_last_name, vendor_contact_first_name;
4
5 SELECT CONCAT(vendor_contact_last_name, ', ', vendor_contact_first_name) AS full_name
6 FROM vendors
7 WHERE vendor_contact_last_name < 'D' OR vendor_contact_last_name LIKE 'E%'
8 ORDER BY vendor_contact_last_name, vendor_contact_first_name;
9

```

Automatic code editor for the current query

Result Grid

full_name
Aaronsen, Thom
Aileen, Joan
Alberto, Francesco
Alexis, Alexandro
Alondra, Zev
Anaelica, Nashalie
Antavious, Troy
Anthoni, Kaitlyn
Anum, Trisha
Aranovitch, Robert
Armando, Jan

Result 3

Output

3.8

SQL File 2

```

1 SELECT invoice_due_date AS "Due Date",
2        invoice_total AS "Invoice Total",
3        invoice_total / 10 AS "10%",
4        invoice_total * 1.1 AS "Plus 10%"
5 FROM invoices
6 WHERE invoice_total >= 500 AND invoice_total <= 1000
7 ORDER BY invoice_due_date DESC;
8

```

Result Grid

Due Date	Invoice Total	10%	Plus 10%
2014-08-23	503.20	50.320000	553.520
2014-08-10	579.42	57.942000	637.362
2014-08-08	600.00	60.000000	660.000
2014-08-06	739.20	73.920000	813.120
2014-07-25	904.14	90.414000	994.554
2014-07-11	936.93	93.693000	1030.623
2014-06-29	639.77	63.977000	703.747
2014-06-24	565.15	56.515000	621.665
2014-06-20	953.10	95.310000	1048.410
2014-06-02	856.92	85.692000	942.612

Result 1

Output

3.9

The screenshot shows a SQL query in a file named "SQL File 2\*". The query is as follows:

```
ORDER BY invoice_due_date DESC;  
  
SELECT invoice_number,  
       invoice_total,  
       payment_total + credit_total AS payment_credit_total,  
       invoice_total - payment_total - credit_total AS balance_due  
FROM invoices  
WHERE invoice_total - payment_total - credit_total > 50  
ORDER BY balance_due DESC  
LIMIT 5;
```

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

invoice_number	invoice_total	payment_credit_total	balance_due
P-0608	20551.18	1200.00	19351.18
0-2436	10976.06	0.00	10976.06
31361833	579.42	0.00	579.42
9982771	503.20	0.00	503.20
547480102	224.00	0.00	224.00

3.10

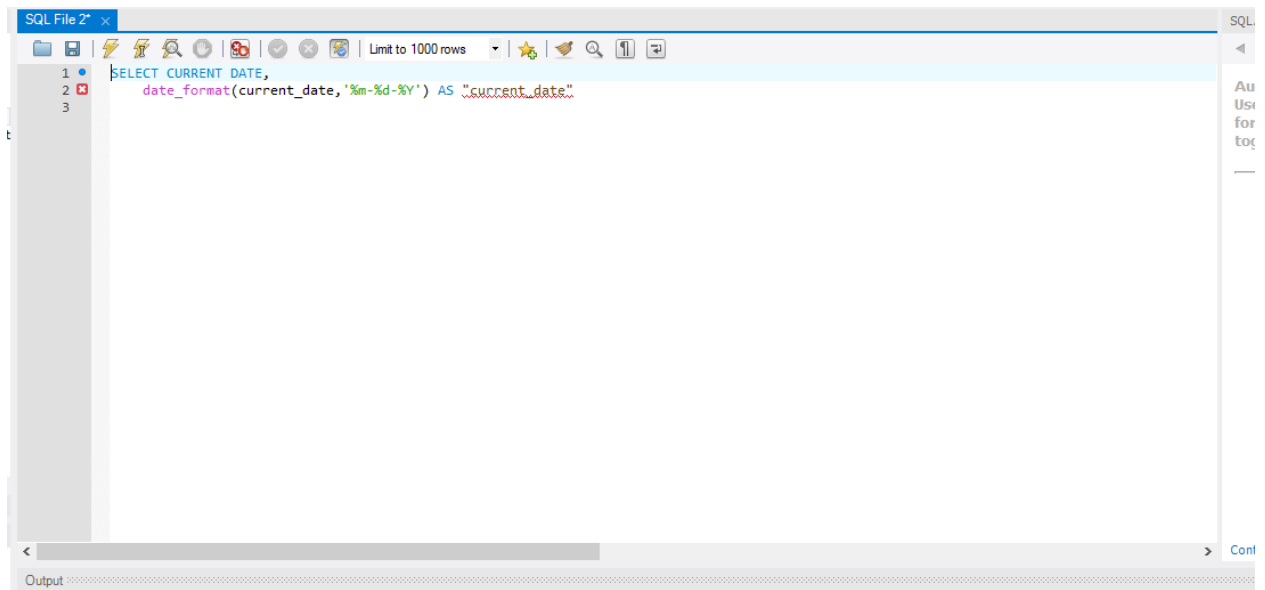
The screenshot shows a SQL query in a file named "SQL File 2\*". The query is as follows:

```
ORDER BY balance_due DESC  
LIMIT 5;  
  
SELECT invoice_number,  
       invoice_date,  
       invoice_total - payment_total - credit_total AS balance_due,  
       payment_date  
FROM invoices  
WHERE payment_date IS NULL
```

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

invoice_number	invoice_date	balance_due	payment_date
39104	2014-07-10	85.31	NULL
963253264	2014-07-18	52.25	NULL
31361833	2014-07-21	579.42	NULL
263253268	2014-07-21	59.97	NULL
263253270	2014-07-22	67.92	NULL
263253273	2014-07-22	30.75	NULL
P-0608	2014-07-23	19351.18	NULL
9982771	2014-07-24	503.20	NULL
134116	2014-07-28	90.36	NULL
0-2436	2014-07-31	10976.06	NULL
547480102	2014-08-01	224.00	NULL

3.11



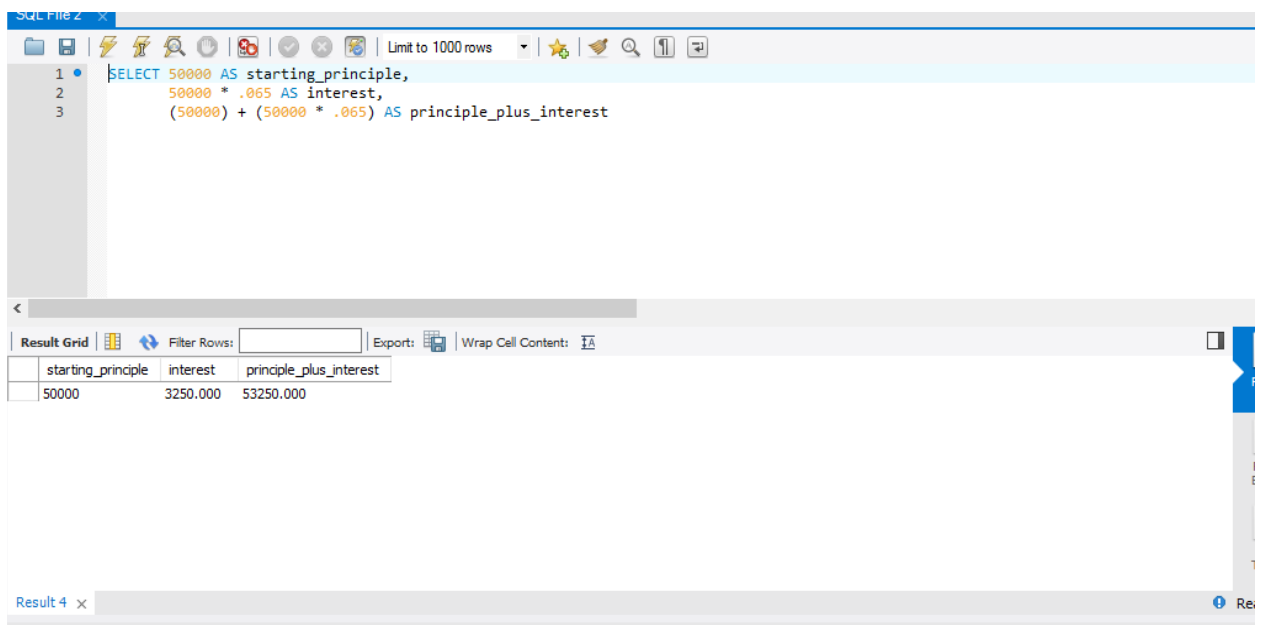
SQL File 2

```
1 SELECT CURRENT DATE,  
2 date_format(current_date, '%m-%d-%Y') AS "current_date"  
3
```

Limit to 1000 rows

Output

3.12



SQL File 2

```
1 SELECT 50000 AS starting_principle,  
2 50000 * .065 AS interest,  
3 (50000) + (50000 * .065) AS principle_plus_interest
```

Limit to 1000 rows

Result Grid

	starting_principle	interest	principle_plus_interest
	50000	3250.000	53250.000

Filter Rows: Export: Wrap Cell Content: Result 4

4.1

SQL File 2\* SQL File 5\*

```

1 select *
2 from vendors inner join invoices
3   on vendors.vendor_id = invoices.vendor_id

```

Result Grid | Filter Rows: | Export: | Wrap Cell Contents: |

vendor_id	vendor_name	vendor_address1	vendor_address2	vendor_city	vendor_state	vendor_zip_code	vendor_phone	vendor_contact_last_name
122	United Parcel Service	P.O. Box 505820	NULL	Reno	NV	88905	(800) 555-0855	Beauregard
123	Federal Express Corporation	P.O. Box 1140	Deot A	Memphis	TN	38101	(800) 555-4091	Bucket
123	Federal Express Corporation	P.O. Box 1140	Deot A	Memphis	TN	38101	(800) 555-4091	Bucket
123	Federal Express Corporation	P.O. Box 1140	Deot A	Memphis	TN	38101	(800) 555-4091	Bucket
123	Federal Express Corporation	P.O. Box 1140	Deot A	Memphis	TN	38101	(800) 555-4091	Bucket
123	Federal Express Corporation	P.O. Box 1140	Deot A	Memphis	TN	38101	(800) 555-4091	Bucket
123	Federal Express Corporation	P.O. Box 1140	Deot A	Memphis	TN	38101	(800) 555-4091	Bucket
89	Evans Executone Inc	4918 Tavior Ct	NULL	Turlock	CA	95380	NULL	Rovce
121	Zvika Design	3467 W Shaw Ave #103	NULL	Fresno	CA	93711	(559) 555-8625	Ronaldsen
123	Federal Express Corporation	P.O. Box 1140	Deot A	Memphis	TN	38101	(800) 555-4091	Bucket

Result 1 x | Read Only

## 4.2

```

1 select *
2 from vendors inner join invoices
3   on vendors.vendor_id = invoices.vendor_id;
4
5 select vendor_name, invoice_number, invoice_date,
6        invoice_total - payment_total - credit_total AS balance_due
7 from vendors v join invoices i
8   on v.vendor_id = i.vendor_id
9 where invoice_total - payment_total - credit_total <> 0
10 order by vendor_name;
11
12

```

Autom: Use the for the toggle

Result Grid | Filter Rows: | Export: | Wrap Cell Contents: |

vendor_name	invoice_number	invoice_date	balance_due
Blue Cross	547480102	2014-08-01	224.00
Cardinal Business Media, Inc.	134116	2014-07-28	90.36
Data Reproductions Corp	39104	2014-07-10	85.31
Federal Express Corporation	263253270	2014-07-22	67.92
Federal Express Corporation	263253273	2014-07-22	30.75
Federal Express Corporation	963253264	2014-07-18	52.25
Federal Express Corporation	263253268	2014-07-21	59.97
Ford Motor Credit Company	9982771	2014-07-24	503.20
Inoram	31361833	2014-07-21	579.42
Mallory Lithographing Inc	0-2436	2014-07-31	10976.06
Mallory Lithographing Inc	P-0608	2014-07-23	19351.18

Result 2 x | Read Only | Context H

## 4.3

SQL File 2 SQL File 5

Limit to 1000 rows

```

8      on v.vendor_id = i.vendor_id
9  where invoice_total - payment_total - credit_total <> 0
10     order by vendor_name;
11
12 • select vendor_name, default_account_number AS default_account,
13         account_description AS description
14 from vendors v join general_ledger_accounts gl
15     on v.default_account_number = gl.account_number
16     order by account_description, vendor_name;
17
18
19

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

vendor_name	default_account	description
Oristas Groom & McCormick	591	Accounting
DMV Renewal	568	Auto License Fee
Newbriar Book Clubs	394	Book Club Royalties
Bertelsmann Industr Svcs. Inc	400	Book Printing Costs
Courier Companies. Inc	400	Book Printing Costs
Crown Printing	400	Book Printing Costs
Data Reproductions Corp	400	Book Printing Costs
Diversified Printing & Pub	400	Book Printing Costs
Mallov Lithoaraahing Inc	400	Book Printing Costs
Fresno Photoenaravina Companv	403	Book Production Costs
Register of Coovrihts	403	Book Production Costs

Result 3 x

Output

## 4.4

SQL File 2 SQL File 5

Limit to 1000 rows

```

17
18 • select vendor_name, invoice_date, invoice_number,
19         invoice_sequence AS li_sequence,
20         line_item_amount AS li_amount
21 from vendors v join invoices i
22     on v.vendor_id = i.vendor_id
23     join invoice_line_items li
24     on i.invoice_id = li.invoice_id
25     order by vendor_name, invoice_date, invoice_number, invoice_sequence;
26
27
28

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

vendor_name	invoice_date	invoice_number	li_sequence	li_amount
Abbev Office Furnishinas	2014-07-05	203339-13	1	17.50
Bertelsmann Industr Svcs. Inc	2014-06-18	509786	1	6940.25
Blue Cross	2014-06-03	547481328	1	224.00
Blue Cross	2014-06-07	547479217	1	116.00
Blue Cross	2014-08-01	547480102	1	224.00
Cahners Publishinga Companv	2014-06-30	587056	1	2184.50
Cardinal Business Media. Inc.	2014-06-22	133560	1	175.00
Cardinal Business Media. Inc.	2014-07-28	134116	1	90.36
Coffee Break Service	2014-06-24	109596	1	41.80
Comuserve	2014-05-03	21-4748363	1	9.95
Comuserve	2014-05-13	21-4923721	1	9.95

Result 5 x

Output

## 4.5



```
25 order by vendor_name, invoice_date, invoice_number, invoice_sequence;
26
27 • select v1.vendor_id,
28       v1.vendor_name,
29       concat(v1.vendor_contact_first_name, ' ', v1.vendor_contact_last_name) AS contact_name
30 from vendors v1 join vendors v2
31 on v1.vendor_id <> v2.vendor_id and
32 v1.vendor_contact_last_name = v2.vendor_contact_last_name
33 order by v1.vendor_contact_last_name;
34
35
36
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

vendor_id	vendor_name	contact_name
115	Roadway Package System, Inc	Sam Smith
51	Blue Shield of California	Kylie Smith

Result Grid | Form Editor | Field Types

result 6 x | Read Only

Output

4.6'

```
35
36 • select gl.account_number, account_description, invoice_id
37 from general_ledger_accounts gl left join invoice_line_items li
38 on gl.account_number = li.account_number
39 where li.invoice_id is null
40 order by gl.account_number;
41
42
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

account_number	account_description	invoice_id
100	Cash	NULL
110	Accounts Receivable	NULL
120	Book Inventory	NULL
162	Capitalized Lease	NULL
167	Software	NULL
181	Book Development	NULL
200	Accounts Payable	NULL
205	Royalties Payable	NULL
221	401K Employee Contributions	NULL
230	Sales Taxes Payable	NULL
234	Medicare Taxes Payable	NULL

Result Grid | Form Editor | Field Types

Result 7 x | Read On

Output

4.7

The screenshot shows the SQL Developer interface with a SQL query in the main editor and its results in the Result Grid.

**SQL Query:**

```
order by gl.account_number;  
40  
41  
42 | select vendor_name, vendor_state  
43 | from vendors  
44 | where vendor_state = 'CA'  
45 | union  
46 | select vendor_name, 'Outside CA'  
47 | from vendors  
48 | where vendor_state <> 'CA'  
49 | order by vendor_name;  
50  
51
```

**Result Grid:**

account_number	account_description	invoice_id
100	Cash	NULL
110	Accounts Receivable	NULL
120	Book Inventorv	NULL
162	Capitalized Lease	NULL
167	Software	NULL
181	Book Development	NULL
200	Accounts Payable	NULL
205	Royalties Payable	NULL
221	401K Employee Contributions	NULL
230	Sales Taxes Payable	NULL
234	Medicare Taxes Payable	NULL

**SQLAdditions:**

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

**Result Grid:**

Read Only Context Help Snippets