

1.

```

1 • select distinct vendor_name from vendors where
2   vendor_id in(select vendor_id from invoices)
3   order by vendor_name;

```

Result Grid | Filter Rows: | Export: | Wrap

vendor_name
Abbey Office Furnishings
Bertelsmann Industry Svcs. Inc
Blue Cross
Cahners Publishing Company
Cardinal Business Media, Inc.
Coffee Break Service
Compuserve
Computerworld
Data Reproductions Corp
Dean Witter Reynolds
Digital Dreamworks
Dristas Groom & McCormick
Edward Data Services
Evans Executone Inc
Federal Express Corporation
Ford Motor Credit Company
Franchise Tax Board
Fresno County Tax Collector
Gostanian General Building
IBM
Ingram
Ingram
Malloy Lithographing Inc
Pacific Bell
Pollstar
Postmaster
Reiter's Scientific & Pro Books
Roadway Package System, Inc
Suburban Propane
United Parcel Service
Wakefield Co
Wang Laboratories, Inc.
Wells Fargo Bank
Yesmed, Inc
Zylka Design

2.

```

1 • select invoice_number,invoice_total from invoices where payment_total >
2   (select avg(payment_total) from invoices where payment_total > 0)
3   order by invoice_total desc ;
4
5

```

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

invoice_number	invoice_total
0-2058	37966.19
P-0259	26881.40
0-2060	23517.58
40318	21842.00
P02-3772	7125.34
509786	6940.25
10843	4901.26
989319-457	3813.33
989319-447	3689.99
989319-437	2765.36
367447	2433.00
989319-467	2318.03
989319-497	2312.20
587056	2184.50
989319-477	2184.11
989319-427	2115.81
989319-417	2051.59
97/522	1962.13
989319-487	1927.54
77290	1750.00

Activat

3.

The screenshot shows the SQL Developer interface with a query window titled 'SQL File 9*'. The query is as follows:

```

1 • select a.account_number, a.account_description from general_ledger_accounts a
2 where not exists (select 1 from invoice_line_items b
3 where a.account_number=b.account_number)order by a.account_number;
4
5

```

The 'Result Grid' shows the following data:

account_number	account_description
100	Cash
110	Accounts Receivable
120	Book Inventory
162	Capitalized Lease
167	Software
181	Book Development
200	Accounts Payable
205	Royalties Payable
771	401K Employee Contributions

The 'Output' window shows the 'Action Output' with the following log:

#	Time	Action	Message
199	19:24:24	select * from invoices where payme...	20 row(s) returned
200	19:25:57	select invoice_number,invoice_total...	20 row(s) returned
201	19:31:14	select a.account_number, a.account...	54 row(s) returned
202	19:32:15	EXPLAIN select a.account_number,...	OK
203	19:32:15	EXPLAIN FORMAT=JSON select a....	OK
204	19:32:53	select a.account_number, a.account...	54 row(s) returned

4.

The screenshot shows the SQL Developer interface with a query window titled 'SQL File 9*'. The query is as follows:

```

1 • select v.vendor_name,ii.invoice_id,ii.invoice_sequence,ii.line_item_amount
2 from vendors v
3 inner join invoices i on v.vendor_id=i.invoice_id
4 inner join invoice_line_items ii on i.invoice_id=ii.invoice_id
5 where i.invoice_id in
6 (select invoice_id from invoice_line_items where invoice_sequence > 1)
7 order by v.vendor_name, ii.invoice_id, ii.invoice_sequence;

```

The 'Result Grid' shows the following data:

vendor_name	invoice_id	invoice_sequence	line_item_amount
City Of Fresno	12	1	50.00
City Of Fresno	12	2	75.60
City Of Fresno	12	3	58.40
City Of Fresno	12	4	478.00
The Presort Center	78	1	1197.00
The Presort Center	78	2	765.13

5.

The screenshot shows a SQL IDE with multiple tabs. The active tab contains the following SQL query:

```
1 • select invoices.vendor_id, max(invoices.invoice_total-invoices.payment_total)
2   as largest_unpaid_invoice
3   from invoices where invoices.invoice_total-invoices.payment_total > 0
4   group by invoices.vendor_id;
```

Below the query editor, the 'Result Grid' is displayed with the following data:

vendor_id	largest_unpaid_invoice
37	224.00
72	85.31
80	90.36
83	579.42
106	503.20
110	20551.18
121	200.00
123	67.92

5-A)

The screenshot shows a SQL IDE with multiple tabs. The active tab contains the following SQL query:

```
1 • select sum(largest_unpaid_invoice) as total_largest_unpaid_invoice from
2   (select invoices.vendor_id, max(invoices.invoice_total-invoices.payment_total)
3    as largest_unpaid_invoice
4    from invoices where invoices.invoice_total-invoices.payment_total > 0
5    group by invoices.vendor_id) as q1;
```

Below the query editor, the 'Result Grid' is displayed with the following data:

total_largest_unpaid_invoice
22301.39

CONTINUE TO NEXT PAGE

6.

SQL File 9* x SQL File 8* SQL File 7* SQL File 15* SQL File 16* SQL File 6* SQL File 6* JLD8

```

1 • select v.vendor_name, i.invoice_date, i.invoice_number, invoice_total from vendors v
2   inner join invoices i on v.vendor_id=i.vendor_id
3   where i.invoice_date =
4   (select min(invoice_date) from invoices where vendor_id=v.vendor_id)
5   order by v.vendor_name;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	vendor_name	invoice_date	invoice_number	invoice_total
▶	Abbey Office Furnishings	2018-07-05	203339-13	17.50
	Bertelsmann Industry Svcs. Inc	2018-06-18	509786	6940.25
	Blue Cross	2018-06-03	547481328	224.00
	Cahners Publishing Company	2018-06-30	587056	2184.50
	Cardinal Business Media, Inc.	2018-06-22	133560	175.00
	Coffee Break Service	2018-06-24	109596	41.80
	Compuserve	2018-05-03	21-4748363	9.95
	Computerworld	2018-06-11	367447	2433.00

Result 20 x

Output

Action Output

#	Time	Action	Message	D
✓	212 20:09:15	select * from invoices	114 row(s) returned	0.000
✓	213 20:13:01	select invoices.vendor_id, max(invoi...	8 row(s) returned	0.000
✗	214 20:14:39	select invoices.vendor_id, max(invoi...	Error Code: 1111. Invalid use of group function	0.000
✓	215 20:15:42	select sum(largest_unpaid_invoice) ...	1 row(s) returned	0.000
✓	216 20:21:14	select v.vendor_name,i.invoice_tot...	34 row(s) returned	0.000
✓	217 20:21:40	select v.vendor_name,i.invoice_da...	34 row(s) returned	0.000

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7.

SQL File 9* x SQL File 8* SQL File 7* SQL File 15* SQL File 16* SQL File 6* SQL File 6* JLD8

```

1 • select v.vendor_name, i.invoice_date, i.invoice_number, invoice_total from vendors v
2   inner join invoices i on v.vendor_id=i.vendor_id
3   inner join (select vendor_id, min(invoice_date) as min_invoice_date
4     from invoices group by vendor_id) as subquery on i.vendor_id=subquery.vendor_id and
5     i.invoice_date = subquery.min_invoice_date order by v.vendor_name;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	vendor_name	invoice_date	invoice_number	invoice_total
▶	Abbey Office Furnishings	2018-07-05	203339-13	17.50
	Bertelsmann Industry Svcs. Inc	2018-06-18	509786	6940.25
	Blue Cross	2018-06-03	547481328	224.00
	Cahners Publishing Company	2018-06-30	587056	2184.50
	Cardinal Business Media, Inc.	2018-06-22	133560	175.00
	Coffee Break Service	2018-06-24	109596	41.80
	Compuserve	2018-05-03	21-4748363	9.95
	Computerworld	2018-06-11	367447	2433.00

Result 21 x

Output

Action Output

#	Time	Action	Message	Duration
✗	218 20:26:59	select v.vendor_name,i.invoice_da...	Error Code: 1052. Column 'vendor_id' in where clause is ambiguous	0.000
✗	219 20:27:43	select v.vendor_name,i.invoice_da...	Error Code: 1052. Column 'vendor_id' in where clause is ambiguous	0.000
✗	220 20:28:22	select v.vendor_name,i.invoice_da...	Error Code: 1054. Unknown column 'invoices.vendor_id' in 'where clau...	0.016
✗	221 20:28:44	select v.vendor_name,i.invoice_da...	Error Code: 1054. Unknown column 'q1.invoice_date' in 'where clause'	0.000
✗	222 20:29:04	select v.vendor_name,i.invoice_da...	Error Code: 1054. Unknown column 'q1.invoice_date' in 'on clause'	0.000
✓	223 20:30:00	select v.vendor_name,i.invoice_da...	34 row(s) returned	0.000

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