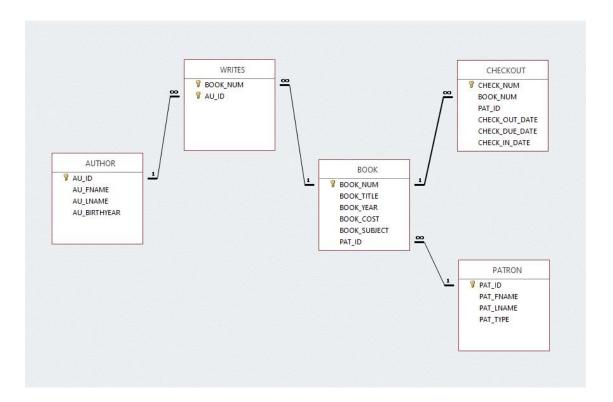
Team: GOD (Granter of Data)

Team Member: Sohal Patel, Gabriel Harper, Jose Andre, Carrie Doucette, Janelle Hall

I.



```
II.
```

56.

```
SELECT
         BOOK TITLE,
         BOOK_COST,
         BOOK_YEAR
FROM
         BOOK
ORDER BY
         BOOK_TITLE;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
        1 SELECT
                 BOOK_TITLE,
       3
                 BOOK_COST,
       4
                 BOOK_YEAR
       6
                 BOOK
            ORDER BY
       8
                 BOOK_TITLE;
       9
91 % 🔻 🖪
 BOOK_TITLE
                                                BOOK_COST
                                                             BOOK_YEAR
      Beginner's Guide to JAVA
                                                59.95
                                                69.95
                                                             2016
 2
       Beyond the Database Veil
 3
       C# in Middleware Deployment
                                                59.95
                                                             2015
       Capture the Cloud
                                                69.95
                                                             2016
 4
       Cloud-based Mobile Applications
                                                69.95
                                                             2015
       Coding Style for Maintenance
                                                49.95
                                                             2017
 6
       Conceptual Programming
                                                59.95
                                                             2015
       Database in the Cloud
                                                79.95
                                                             2014
 8
 9
       DATABASES in Theory
                                                129.95
                                                             2015
 10
       iOS Programming
                                                79.95
                                                             2015
 11
       J++ in Mobile Apps
                                                49.95
                                                             2015
 12
       JAVA First Steps
                                                49.95
                                                             2015
                                                89.95
                                                             2015
 13
       Mastering the database environment
 14
       Reengineering the Middle Tier
                                                89.95
                                                             2016
                                                109.95
                                                             2016
 15
       Shining Through the Cloud: Sun Programming
       Starlight Applications
                                                69.95
                                                             2016
 16
       The Golden Road to Platform independence
                                                119.95
                                                             2016
 17
 18
       Thoughts on Revitalizing Ruby
                                                59.95
                                                             2016
       Virtual Programming for Virtual Environments
                                                             2016
 19
                                                79 95
 20
       What You Always Wanted to Know About Dat...
                                                             2016
```

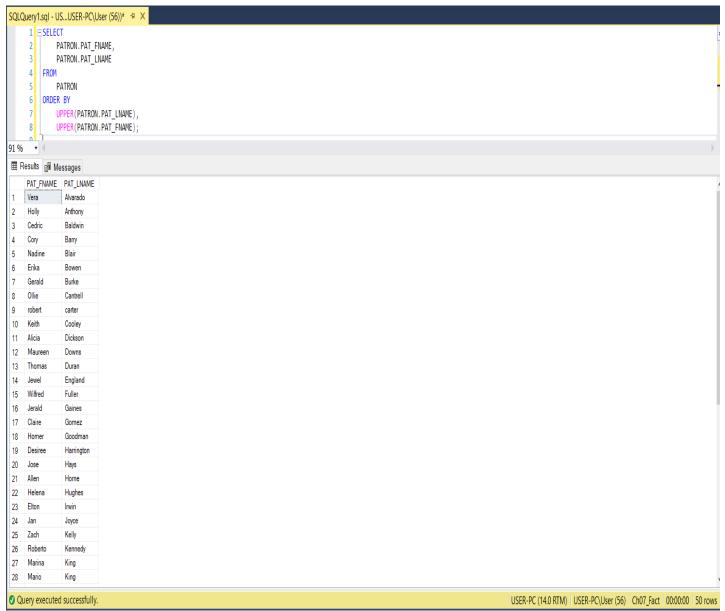
```
57.
```

```
PATRON.PAT_FNAME,
PATRON.PAT_LNAME

FROM
PATRON

ORDER BY

UPPER(PATRON.PAT_LNAME),
UPPER(PATRON.PAT_FNAME);
```



```
58.
```

25 91025

Query executed successfully.

2017-04-21 00:00:00.000 2017-04-28 00:00:00.000

CHECKOUT.CHECK_NUM,

```
CHECKOUT.CHECK_OUT_DATE,
               CHECKOUT.CHECK_DUE_DATE
FROM
               CHECKOUT
ORDER BY
               CHECKOUT.CHECK_NUM;
SQLQuery1.sql - US...USER-PC\User (56))* 4 X
       1 □SELECT
              CHECKOUT.CHECK_NUM,
               CHECKOUT.CHECK_OUT_DATE,
              CHECKOUT.CHECK_DUE_DATE
      5 FROM
              CHECKOUT
      7 ORDER BY
               CHECKOUT.CHECK NUM;
       8
       9
91 % • (
 ■ Results 🗐 Messages
      CHECK_NUM CHECK_OUT_DATE CHECK_DUE_DATE
                  2017-03-31 00:00:00.000 2017-04-14 00:00:00.000
 2 91002
                   2017-03-31 00:00:00.000 2017-04-07 00:00:00.000
 3
      91003
                   2017-03-31 00:00:00.000 2017-04-14 00:00:00.000
      91004
                   2017-03-31 00:00:00.000 2017-04-14 00:00:00.000
     91005
                   2017-03-31 00:00:00.000 2017-04-07 00:00:00.000
 5
 6
      91006
                   2017-04-05 00:00:00.000 2017-04-12 00:00:00.000
      91007
                   2017-04-05 00:00:00.000 2017-04-12 00:00:00.000
                   2017-04-05 00:00:00.000 2017-04-12 00:00:00.000
      91008
 8
 9
      91009
                   2017-04-05 00:00:00.000 2017-04-19 00:00:00.000
                   2017-04-05 00:00:00.000 2017-04-19 00:00:00.000
 10 91010
 11 91011
                   2017-04-05 00:00:00.000 2017-04-12 00:00:00.000
                   2017-04-08 00:00:00.000 2017-04-15 00:00:00.000
 12 91012
 13 91013
                   2017-04-10 00:00:00.000 2017-04-24 00:00:00.000
 14 91014
                   2017-04-11 00:00:00.000 2017-04-18 00:00:00.000
 15 91015
                   2017-04-11 00:00:00.000 2017-04-18 00:00:00.000
 16 91016
                   2017-04-13 00:00:00.000 2017-04-27 00:00:00.000
 17 91017
                   2017-04-14 00:00:00.000 2017-04-21 00:00:00.000
 18 91018
                   2017-04-14 00:00:00.000 2017-04-28 00:00:00.000
 19 91019
                   2017-04-14 00:00:00.000 2017-04-21 00:00:00.000
                   2017-04-16 00:00:00.000 2017-04-23 00:00:00.000
 20 91020
 21 91021
                   2017-04-16 00:00:00.000 2017-04-23 00:00:00.000
                   2017-04-16 00:00:00.000 2017-04-23 00:00:00.000
 22 91022
 23 91023
                   2017-04-16 00:00:00.000 2017-04-23 00:00:00.000
 24 91024
                   2017-04-21 00:00:00.000 2017-04-28 00:00:00.000
```

USER-PC (14.0 RTM) USER-PC\User (56) Ch07_Fact 00:00:00 68 rows

Query executed successfully.

```
BOOK.BOOK_NUM,
               BOOK.BOOK_TITLE AS TITLE,
               BOOK.BOOK_SUBJECT AS 'Subject of Book'
FROM
               BOOK
ORDER BY
               BOOK.BOOK_NUM;
 SQLQuery1.sql - US...USER-PC\User (56))* 4 X
       1 □SELECT
               BOOK.BOOK_NUM,
               BOOK.BOOK_TITLE AS TITLE,
               BOOK.BOOK_SUBJECT AS 'Subject of Book'
       5
          FROM
       6
               BOOK
       7
          ORDER BY
       8
               BOOK.BOOK_NUM;
       9
91% • (
 ■ Results 🛭 Messages
      BOOK_NUM TITLE
                                                          Subject of Book
                  Beginner's Guide to JAVA
                                                          Programming
      5236
                  Database in the Cloud
                                                          Cloud
 3
      5237
                  Mastering the database environment
                                                          Database
      5238
 4
                 Conceptual Programming
                                                          Programming
 5
      5239
                  J++ in Mobile Apps
                                                          Programming
      5240
                  iOS Programming
                                                          Programming
      5241
                  JAVA First Steps
                                                          Programming
      5242
                                                          Middleware
                  C# in Middleware Deployment
                  DATABASES in Theory
      5243
                                                          Database
 10
      5244
                  Cloud-based Mobile Applications
                                                          Cloud
  11
      5245
                  The Golden Road to Platform independence
                                                          Middleware
  12
      5246
                  Capture the Cloud
                                                          Cloud
  13
      5247
                  Shining Through the Cloud: Sun Programming
                                                          Programming
      5248
                  What You Always Wanted to Know About Database, B... Database
  14
  15
      5249
                  Starlight Applications
  16
      5250
                  Reengineering the Middle Tier
                                                          Middleware
 17
      5251
                  Thoughts on Revitalizing Ruby
                                                          Programming
  18
      5252
                  Beyond the Database Veil
                                                          Database
  19
      5253
                  Virtual Programming for Virtual Environments
                                                          Programming
                  Coding Style for Maintenance
 20 5254
                                                          Programming
```

USER-PC (14.0 RTM) USER-PC\User (56) Ch07_Fact 00:00:00 20 rows

```
60.
```

SELECT DISTINCT

```
BOOK.BOOK_YEAR
FROM
       BOOK
ORDER BY
      BOOK.BOOK_YEAR;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
     1 □SELECT DISTINCT
        BOOK.BOOK_YEAR
     3 FROM
         BOOK
     4
     5 ORDER BY
     6 BOOK.BOOK_YEAR;
91 % 🔻 🔻
 BOOK_YEAR
 1 2014
 2
    2015
 3
     2016
     2017
61.
SELECT
       BOOK_SUBJECT
FROM
      BOOK
GROUP BY
      BOOK_SUBJECT;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
     1 □SELECT
     2
        BOOK_SUBJECT
     3 FROM
         BOOK
     5 GROUP BY
     BOOK_SUBJECT;
91 % 🔻 🔻
BOOK_SUBJECT
   Cloud
 2
   Database
   Middleware
 3
   Programming
 4
```

Query executed successfully.

```
BOOK.BOOK_NUM,
              BOOK.BOOK_TITLE,
              BOOK.BOOK_COST AS 'Replacement Cost'
FROM
              BOOK
ORDER BY BOOK.BOOK_NUM;
SQLQuery1.sql - US...USER-PC\User (56))* # X
      1 □SELECT
              BOOK.BOOK_NUM,
              BOOK.BOOK_TITLE,
              BOOK.BOOK_COST AS 'Replacement Cost'
      5 FROM
              BOOK
      8 ORDER BY BOOK.BOOK_NUM;
91 % 🔻 🕻
 BOOK_NUM BOOK_TITLE
                                                        Replacement Cost
     5235
                 Beginner's Guide to JAVA
                                                         59.95
     5236
                 Database in the Cloud
                                                         79.95
 2
 3
      5237
                 Mastering the database environment
                                                        89.95
      5238
                                                        59.95
 4
                 Conceptual Programming
                                                        49.95
 5
      5239
                 J++ in Mobile Apps
                 iOS Programming
 6
      5240
                                                         79.95
                                                        49.95
      5241
                 JAVA First Steps
      5242
                 C# in Middleware Deployment
                                                        59.95
      5243
                 DATABASES in Theory
                                                         129.95
 9
      5244
                                                        69.95
 10
                 Cloud-based Mobile Applications
 11
      5245
                 The Golden Road to Platform independence
                                                        119.95
     5246
                 Capture the Cloud
 12
                                                        69.95
 13
     5247
                 Shining Through the Cloud: Sun Programming
                                                         109.95
 14
      5248
                 What You Always Wanted to Know About Database, B... 49.95
                 Starlight Applications
                                                        69.95
 15
      5249
 16
      5250
                 Reengineering the Middle Tier
                                                        89.95
                 Thoughts on Revitalizing Ruby
 17
      5251
                                                        59.95
     5252
                 Beyond the Database Veil
                                                        69.95
 18
 19
     5253
                 Virtual Programming for Virtual Environments
                                                        79.95
 20 5254
                 Coding Style for Maintenance
                                                        49.95
```

USER-PC (14.0 RTM) | USER-PC\User (56) | Ch07_Fact | 00:00:00 | 20 rows

Query executed successfully.

CHECKOUT.CHECK_NUM, CHECKOUT.BOOK NUM,

```
CHECKOUT.PAT ID,
               CHECKOUT.CHECK OUT DATE,
               CHECKOUT.CHECK_DUE_DATE
FROM
               CHECKOUT
ORDER BY
               CHECKOUT.CHECK_OUT_DATE DESC,
               CHECKOUT.CHECK_NUM;
SQLQuery1.sql - US...USER-PC\User (56))* 4 X
      1 □ SELECT
               CHECKOUT.CHECK_NUM,
               CHECKOUT.BOOK_NUM,
              CHECKOUT.PAT_ID,
      5
              CHECKOUT.CHECK_OUT_DATE,
      6
              CHECKOUT.CHECK_DUE_DATE
      7 FROM
      8
             CHECKOUT
      9
          ORDER BY
     10
           CHECKOUT.CHECK_OUT_DATE DESC,
     11
             CHECKOUT.CHECK_NUM;
     12
91 % 🔻 (
 Results 🖟 Messages
      CHECK_NUM BOOK_NUM PAT_ID CHECK_OUT_DATE CHECK_DUE_DATE
     91067
                 5252 1229 2017-05-24 00:00:00.000 2017-05-31 00:00:00.000
 2
                  5238 1229 2017-05-24 00:00:00.000 2017-05-31 00:00:00.000
 3
     91066
                  5242 1228 2017-05-19 00:00:00.000 2017-05-26 00:00:00.000
                  5236 1183 2017-05-17 00:00:00.000 2017-05-31 00:00:00.000
      91064
                         1210 2017-05-17 00:00:00.000 2017-05-24 00:00:00.000
      91065
                  5244
      91060
                  5235
                            1209 2017-05-15 00:00:00.000 2017-05-22 00:00:00.000
                 5246
      91061
                            1172 2017-05-15 00:00:00.000 2017-05-22 00:00:00.000
     91062
                  5254 1223 2017-05-15 00:00:00.000 2017-05-22 00:00:00.000
     91063
                  5243 1223 2017-05-15 00:00:00.000 2017-05-22 00:00:00.000
                  5254 \hspace{1.5cm} 1224 \hspace{1.5cm} 2017-05-10 \hspace{0.05cm} 00:\hspace{0.05cm} 00:\hspace{0.05cm} 00:\hspace{0.05cm} 00.\hspace{0.05cm} 000 \hspace{0.05cm} \hspace{0.05cm} 2017-05-17 \hspace{0.05cm} 00:\hspace{0.05cm} 00:\hspace{0.05cm} 00.\hspace{0.05cm} 000 \hspace{0.05cm}
     91056
     91057
                  5238 1224 2017-05-10 00:00:00.000 2017-05-17 00:00:00.000
 11
                  5252 1171 2017-05-10 00:00:00.000 2017-05-17 00:00:00.000
 12 91058
 13 91059
                          1207 2017-05-10 00:00:00.000 2017-05-17 00:00:00.000
                  5249
                         1212 2017-05-09 00:00:00.000 2017-05-16 00:00:00.000
 14
     91053
                  5240
 15 91054
                  5236
                            1221 2017-05-09 00:00:00.000 2017-05-16 00:00:00.000
                 5246
 16 91055
                            1221 2017-05-09 00:00:00.000 2017-05-16 00:00:00.000
     91050
                  5236 1220 2017-05-08 00:00:00.000 2017-05-15 00:00:00.000
 17
     91051
                  5237 1222 2017-05-08 00:00:00.000 2017-05-15 00:00:00.000
 18
     91052
                  5236 1213 2017-05-08 00:00:00.000 2017-05-15 00:00:00.000
 20
      91048
                  5249 1229 2017-05-04 00:00:00.000 2017-05-11 00:00:00.000
     91049
                  5240 1214 2017-05-04 00:00:00.000 2017-05-11 00:00:00.000
 21
     91044
                  5248
                          1219 2017-04-30 00:00:00.000 2017-05-07 00:00:00.000
 22
     91045
                  5242
                            1210 2017-04-30 00:00:00.000 2017-05-07 00:00:00.000
 23
 24
     91046
                  5235
                             1225 2017-04-30 00:00:00.000 2017-05-07 00:00:00.000
 25 91047
                  5236
                             1218 2017-04-30 00:00:00 000 2017-05-07 00:00:00
```

USER-PC (14.0 RTM) | USER-PC\User (56) | Ch07_Fact | 00:00:00 | 68 rows

```
BOOK.BOOK_TITLE,
              BOOK.BOOK_YEAR,
              BOOK.BOOK_SUBJECT
FROM
              BOOK
ORDER BY
              BOOK.BOOK_SUBJECT,
              BOOK.BOOK_YEAR DESC,
              BOOK.BOOK_TITLE;
SQLQuery1.sql - US...USER-PC\User (56))* 3 X
      1 □SELECT
              BOOK.BOOK_TITLE,
              BOOK.BOOK_YEAR,
              BOOK.BOOK_SUBJECT
      5 FROM
              BOOK
      7 ORDER BY
              BOOK.BOOK_SUBJECT,
              BOOK.BOOK_YEAR DESC,
     10
              BOOK.BOOK_TITLE;
     11
91 % • 4
 ■ Results 📲 Messages
     BOOK_TITLE
                                             BOOK_YEAR BOOK_SUBJECT
     Capture the Cloud
                                             2016
                                                        Cloud
     Starlight Applications
                                             2016
                                                        Cloud
                                             2015
 3 Cloud-based Mobile Applications
                                                        Cloud
 4 Database in the Cloud
                                             2014
 5 Beyond the Database Veil
                                             2016
                                                        Database
 6 What You Always Wanted to Know About Database, B... 2016
                                                        Database
     DATABASES in Theory
                                             2015
                                                        Database
     Mastering the database environment
                                             2015
                                                        Database
 9 Reengineering the Middle Tier
                                             2016
                                                        Middleware
                                             2016
 10 The Golden Road to Platform independence
                                                        Middleware
 11 C# in Middleware Deployment
                                             2015
                                                        Middleware
                                             2017
 12 Coding Style for Maintenance
                                                        Programming
 13 Shining Through the Cloud: Sun Programming
                                             2016
                                                        Programming
 14 Thoughts on Revitalizing Ruby
                                             2016
                                                        Programming
 15 Virtual Programming for Virtual Environments
                                             2016
                                                        Programming
 16 Conceptual Programming
                                             2015
                                                        Programming
 17 iOS Programming
                                             2015
                                                        Programming
 18 J++ in Mobile Apps
                                             2015
                                                        Programming
 19 JAVA First Steps
                                             2015
                                                        Programming
                                             2014
 20 Beginner's Guide to JAVA
                                                        Programming
Query executed successfully.
                                                                                                                                                    USER-PC (14.0 RTM) | USER-PC\User (56) | Ch07_Fact | 00:00:00 | 20 rows
```

```
65.
```

```
SELECT
        BOOK.BOOK_NUM,
        BOOK.BOOK_TITLE,
        BOOK.BOOK COST
FROM
        BOOK
WHERE
        BOOK.BOOK\_COST = 59.95
ORDER BY
        BOOK.BOOK NUM;
SQLQuery1.sql - US...USER-PC\User (56))* → ×
        1 SELECT
                 BOOK . BOOK_NUM,
                 BOOK.BOOK_TITLE,
BOOK.BOOK_COST
       4
            FROM
                 BOOK
            WHERE
                 BOOK.BOOK\_COST = 59.95
        8
            ORDER BY
       9
      10
                 BOOK . BOOK_NUM;
      11
91 % -
 BOOK_NUM BOOK_TITLE
5235 Beginner's Guide to JAVA
                                              BOOK_COST
      5235
                                              59.95
 2
       5238
                   Conceptual Programming
                                              59 95
 3
       5242
                   C# in Middleware Deployment
                                              59.95
                  Thoughts on Revitalizing Ruby
       5251
                                              59.95
66.
SELECT
        BOOK.BOOK_NUM,
        BOOK.BOOK_TITLE,
        BOOK.BOOK COST
FROM
        BOOK
WHERE
        BOOK.BOOK SUBJECT = 'Database'
ORDER BY
        BOOK.BOOK_NUM;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
      1 □ SELECT
            BOOK BOOK_NUM,
            BOOK BOOK TITLE,
            BOOK . BOOK_COST
        FROM
            BOOK
         WHERE
            BOOK.BOOK_SUBJECT = 'Database'
        ORDER BY
            BOOK BOOK NUM;
     10
    11
91 % •
 BOOK_NUM BOOK_TITLE
                                                BOOK COST
    5237
              Mastering the database environment
                                                 89.95
              DATABASES in Theory
     5243
                                                 129.95
 2
              What You Always Wanted to Know About Database, B...
 3
     5248
                                                49.95
 4
     5252
              Beyond the Database Veil
                                                 69.95
```

```
67.
```

```
SELECT
       CHECKOUT.CHECK_NUM,
       CHECKOUT.BOOK NUM,
       CHECKOUT.CHECK OUT DATE
FROM
       CHECKOUT
WHERE
       CHECKOUT.CHECK_OUT_DATE < '2017/04/05'
ORDER BY
       CHECKOUT.CHECK NUM;
 SQLQuery1.sql - US...USER-PC\User (56))* 😕 🔀
           ■ SELECT
                  CHECKOUT.CHECK_NUM,
                  CHECKOUT . BOOK_NUM,
                  CHECKOUT.CHECK_OUT_DATE
        5
        6
                  CHECKOUT
        8
                  CHECKOUT.CHECK_OUT_DATE < '2017/04/05'
        9
             ORDER BY
                  CHECKOUT.CHECK_NUM;
       10
       11
91 %
 ■ Results ■ Messages
       CHECK_NUM BOOK_NUM CHECK_OUT_DATE
91001 5235 2017-03-31 00:00:00
91002 5238 2017-03-31 00:00:00
       91001
                                    2017-03-31 00:00:00.000
                  5238
                                    2017-03-31 00:00:00.000
  2
       91002
  3
       91003
                      5240
                                    2017-03-31 00:00:00.000
       91004
                      5237
                                    2017-03-31 00:00:00.000
  4
                     5236
                                   2017-03-31 00:00:00.000
       91005
  5
68.
SELECT
       BOOK.BOOK_NUM,
       BOOK.BOOK TITLE,
       BOOK.BOOK YEAR
FROM
       BOOK
WHERE
       BOOK.BOOK_YEAR > 2015 AND BOOK.BOOK_SUBJECT = 'Programming'
ORDER BY
       BOOK.BOOK NUM;
SQLQuery1.sql - US...USER-PC\User (56))* □ ×
      1 SELECT
              BOOK . BOOK_NUM,
              BOOK.BOOK_TITLE,
      3
              BOOK . BOOK_YEAR
      4
          FROM
              воок
      6
              BOOK.BOOK_YEAR > 2015 AND BOOK.BOOK_SUBJECT = 'Programming'
     10
              BOOK.BOOK_NUM;
     11
91 % 🔻 🔻
 BOOK_NUM BOOK_TITLE
                                                 BOOK_YEAR
             Shining Through the Cloud: Sun Programming
 2
                Thoughts on Revitalizing Ruby
                                                 2016
      5251
 3
     5253
                Virtual Programming for Virtual Environments
     5254
                Coding Style for Maintenance
 4
```

```
69.
```

BOOK.BOOK_NUM, BOOK.BOOK_TITLE,

```
BOOK.BOOK SUBJECT,
      BOOK.BOOK COST
FROM
      BOOK
WHERE
      BOOK.BOOK_SUBJECT = 'Middleware'
      AND BOOK.BOOK_COST >= 70
      OR BOOK.BOOK_SUBJECT = 'Cloud'
      AND BOOK.BOOK COST >= 70
ORDER BY
      BOOK.BOOK_NUM;
 SQLQuery1.sql - US...USER-PC\User (56))* 😐 🗶
        1 □ SELECT
        2
                 BOOK.BOOK NUM,
        3
                 BOOK.BOOK_TITLE,
                 BOOK.BOOK SUBJECT,
        4
        5
                 BOOK.BOOK COST
        6
            FROM
        7
                 BOOK
        8
            WHERE
        9
                 BOOK.BOOK SUBJECT = 'Middleware'
                 AND BOOK.BOOK COST >= 70
       10
       11
                 OR BOOK.BOOK SUBJECT = 'Cloud'
                 AND BOOK.BOOK COST >= 70
       12
       13
            ORDER BY
       14
                 BOOK.BOOK NUM;
       15
91 %

    ⊞ Results

    Messages

                    BOOK_TITLE
                                                           BOOK_SUBJECT
       BOOK NUM
                                                                           BOOK_COST
       5236
                    Database in the Cloud
                                                           Cloud
                                                                            79.95
  1
       5245
                    The Golden Road to Platform independence
                                                           Middleware
                                                                            119.95
  2
  3
       5250
                    Reengineering the Middle Tier
                                                           Middleware
                                                                            89.95
```

```
70.
```

```
AUTHOR.AU_ID,
      AUTHOR.AU_FNAME,
      AUTHOR.AU LNAME,
      AUTHOR.AU BIRTHYEAR
FROM
      AUTHOR
WHERE
      AUTHOR.AU BIRTHYEAR BETWEEN 1980 AND 1989
ORDER BY AUTHOR.AU_ID;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
       1 □ SELECT
       2
                AUTHOR.AU_ID,
       3
                AUTHOR.AU_FNAME,
       4
                AUTHOR.AU LNAME,
       5
                AUTHOR.AU BIRTHYEAR
       6
           FROM
       7
                AUTHOR
       8
           WHERE
       9
                AUTHOR.AU_BIRTHYEAR BETWEEN 1980 AND 1989
      10
           ORDER BY AUTHOR.AU_ID;
      11
91 %
 AU_FNAME
                         AU_LNAME
      AU_ID
                                    AU_BIRTHYEAR
      218
              Rachel
                         Beatney
                                    1983
 1
              Neal
      383
                         Walsh
                                    1980
 2
 3
      394
              Robert
                         Lake
                                     1982
      438
              Perry
                         Pearson
 4
                                    1986
 5
      460
              Connie
                         Paulsen
                                    1983
 6
      581
              Manish
                         Aggerwal
                                    1984
 7
      603
              Julia
                         Palca
                                     1988
```

```
71.
```

BOOK.BOOK_NUM,

```
BOOK.BOOK_TITLE,
      BOOK.BOOK SUBJECT
FROM
      BOOK
WHERE
      BOOK.BOOK_TITLE LIKE '%Database%'
ORDER BY
      BOOK.BOOK NUM;
 SQLQuery1.sql - US...USER-PC\User (56))* = X
        1 □ SELECT
        2
                 BOOK.BOOK NUM,
                 BOOK.BOOK TITLE,
        3
        4
                 BOOK.BOOK SUBJECT
        5
            FROM
        6
                 BOOK
        7
            WHERE
        8
                 BOOK.BOOK_TITLE LIKE '%Database%'
        9
            ORDER BY
      10
                 BOOK.BOOK_NUM;
      11
 91 %
 BOOK_NUM
                    BOOK_TITLE
                                                                  BOOK_SUBJECT
                    Database in the Cloud
       5236
                                                                  Cloud
  1
       5237
                    Mastering the database environment
                                                                  Database
  2
       5243
                                                                  Database
  3
                    DATABASES in Theory
       5248
                    What You Always Wanted to Know About Database, B ...
                                                                  Database
  4
       5252
                    Beyond the Database Veil
                                                                  Database
  5
```

```
72.
```

```
SELECT
           PATRON.PAT_ID,
           PATRON.PAT_FNAME,
           PATRON.PAT_LNAME
FROM
           PATRON
WHERE
           PATRON.PAT_TYPE = 'Student'
ORDER BY
           PATRON.PAT_ID;
SQLQuery1.sql - US...USER-PC\User (56))* 🕒 🗶
    1 □SELECT
           PATRON.PAT_ID,
           PATRON.PAT_FNAME,
          PATRON.PAT_LNAME
    5 FROM
    6 PATRON
    7 WHERE
        PATRON.PAT_TYPE = 'Student'
    9 ORDER BY
    10
          PATRON.PAT_ID;
    11
91 % •
 PAT_ID PAT_FNAME PAT_LNAME
    1166 Vera
                   Alvarado
2 1171
          Peggy
                   Marsh
3 1172
                   Miles
          Tony
4 1174
          Betsy
                   Malone
 5 1180
                   Blair
 6 1181
          Allen
                   Home
 7 1182
          Jamal
                   Melendez
8 1184
          Jimmie
                  Love
          Sandra
 9 1185
 10 1200
          Lorenzo
                  Torres
 11 1201
          Shelby
                   Noble
 12 1202
 13 1203
          Tyler
                   Pope
 14 1204
          Thomas
                   Duran
 15 1205
          Claire
                   Gomez
 16 1207
                   Ramos
          lva
 17 1208
                   Cantrell
 18 1209
          Rena
                   Mathis
 19 1210
          Keith
                   Cooley
 20 1211
          Jerald
                   Gaines
 21 1212 Iva
                   McClain
Query executed successfully.
                                                                                                                    USER-PC (14.0 RTM) | USER-PC\User (56) | Ch07_Fact | 00:00:00 | 44 rows
```

```
73.
```

```
SELECT
     PATRON.PAT_ID,
     PATRON.PAT_FNAME,
     PATRON.PAT LNAME,
     PATRON.PAT_TYPE
FROM
     PATRON
WHERE
     PATRON.PAT_LNAME LIKE 'C%'
ORDER BY
     PATRON.PAT_ID;
SQLQuery1.sql - US...USER-PC\User (56))* □ ×
        1 □ SELECT
        2
                  PATRON.PAT ID,
        3
                  PATRON.PAT_FNAME,
                  PATRON.PAT LNAME,
        4
        5
                  PATRON.PAT_TYPE
        6
             FROM
        7
                  PATRON
        8
             WHERE
        9
                  PATRON.PAT_LNAME LIKE 'C%'
       10
             ORDER BY
                  PATRON.PAT_ID;
       11
       12
91 %

    ⊞ Results

    Messages

       PAT_ID
                PAT_FNAME
                              PAT_LNAME
                                            PAT_TYPE
       1160
                robert
                                            Faculty
                              carter
  1
       1208
                Ollie
                                            Student
  2
                              Cantrell
       1210
                Keith
                              Cooley
                                            STUdent
  3
```

```
74.
```

```
AUTHOR.AU_ID,
     AUTHOR.AU_FNAME,
     AUTHOR.AU LNAME
FROM
     AUTHOR
WHERE
     AUTHOR.AU_BIRTHYEAR IS NULL
ORDER BY
     AUTHOR.AU_ID;
SQLQuery1.sql - US...USER-PC\User (56))* + ×
        1 SELECT
        2
                 AUTHOR.AU_ID,
        3
                 AUTHOR.AU_FNAME,
        4
                 AUTHOR.AU LNAME
        5
            FROM
        6
                  AUTHOR
        7
            WHERE
        8
                 AUTHOR.AU BIRTHYEAR IS NULL
        9
            ORDER BY
                 AUTHOR.AU_ID;
       10
      11
91 %

    Messages

    ⊞ Results

       AU_ID
               AU_FNAME
                           AU_LNAME
       229
               Carmine
                            Salvadore
  1
               Xia
       262
                            Chiang
  2
  3
       559
               Rachel
                            McGill
```

```
75.
```

```
SELECT
       AUTHOR.AU_ID,
       AUTHOR.AU_FNAME,
       AUTHOR.AU_LNAME
FROM
       AUTHOR
WHERE
       AUTHOR.AU_BIRTHYEAR IS NOT NULL
ORDER BY
       AUTHOR.AU_ID;
 SQLQuery1.sql - US...USER-PC\User (56))* 🖈 🗶
        1 ■ SELECT
        2
                 AUTHOR.AU_ID,
        3
                 AUTHOR.AU_FNAME,
        4
                 AUTHOR.AU LNAME
        5
            FROM
        6
                 AUTHOR
        7
            WHERE
        8
                 AUTHOR.AU_BIRTHYEAR IS NOT NULL
        9
            ORDER BY
       10
                 AUTHOR.AU_ID;
       11
91 %
         ▼ 4

    ⊞ Results

    Messages

       AU_ID
              AU_FNAME
                          AU_LNAME
       185
               Benson
                           Reeves
  2
       218
               Rachel
                           Beatney
       251
  3
               Hugo
                           Bruer
       273
               Reba
                           Durante
  4
       284
               Trina
                           Tankersly
  5
       383
               Neal
                           Walsh
  6
  7
       394
               Robert
                           Lake
  8
       438
               Perry
                           Pearson
       460
               Connie
                           Paulsen
  9
       581
               Manish
                           Aggerwal
  10
       592
                           Sheel
               Lawrence
  11
       603
               Julia
                           Palca
  12
```

```
76.
```

91067

6

5252

1229

2017-05-24 00:00:00.000

2017-05-31 00:00:00.000

```
SELECT
      CHECKOUT.CHECK NUM,
      CHECKOUT.BOOK NUM,
      CHECKOUT.PAT ID,
      CHECKOUT.CHECK OUT DATE,
      CHECKOUT.CHECK_DUE_DATE
FROM
      CHECKOUT
WHERE
      CHECKOUT.CHECK_IN_DATE IS NULL
ORDER BY
      CHECKOUT.BOOK NUM;
SQLQuery1.sql - US...USER-PC\User (56))* 	₱ ×
        1 □ SELECT
        2
                 CHECKOUT.CHECK_NUM,
        3
                 CHECKOUT.BOOK_NUM,
        4
                 CHECKOUT.PAT ID,
        5
                 CHECKOUT.CHECK OUT DATE,
        6
                 CHECKOUT.CHECK_DUE_DATE
        7
            FROM
        8
                 CHECKOUT
        9
            WHERE
                 CHECKOUT.CHECK_IN_DATE IS NULL
      10
      11
            ORDER BY
      12
                 CHECKOUT.BOOK NUM;
      13
91 %
         ▼ 4

    ⊞ Results

    Messages

                                           CHECK_OUT_DATE
       CHECK_NUM
                     BOOK_NUM
                                  PAT_ID
                                                                   CHECK_DUE_DATE
                                   1229
                                           2017-05-24 00:00:00.000
 1
       91068
                     5238
                                                                   2017-05-31 00:00:00.000
       91053
                     5240
                                   1212
                                           2017-05-09 00:00:00.000
                                                                   2017-05-16 00:00:00.000
 2
       91066
                     5242
                                   1228
                                           2017-05-19 00:00:00.000
                                                                   2017-05-26 00:00:00.000
 3
       91061
                     5246
                                   1172
                                           2017-05-15 00:00:00.000
                                                                   2017-05-22 00:00:00.000
 4
 5
       91059
                     5249
                                   1207
                                           2017-05-10 00:00:00.000
                                                                   2017-05-17 00:00:00.000
```

```
SELECT
      AUTHOR.AU_ID,
      AUTHOR.AU_FNAME,
      AUTHOR.AU LNAME,
      AUTHOR.AU_BIRTHYEAR
FROM
      AUTHOR
ORDER BY
      AUTHOR.AU_BIRTHYEAR DESC,
      AUTHOR.AU_LNAME;
SQLQuery1.sql - US...USER-PC\User (56))* + ×
      1 □ SELECT
      2
              AUTHOR.AU_ID,
      3
              AUTHOR.AU_FNAME,
      4
              AUTHOR.AU_LNAME,
      5
              AUTHOR.AU_BIRTHYEAR
      6
          FROM
      7
              AUTHOR
      8
          ORDER BY
      9
              AUTHOR.AU_BIRTHYEAR DESC,
     10
              AUTHOR.AU LNAME;
     11
91 % - 4
```

	AU_ID	AU_FNAME	AU_LNAME	AU_BIRTHYEAR
1	185	Benson	Reeves	1990
2	603	Julia	Palca	1988
3	438	Perry	Pearson	1986
4	581	Manish	Aggerwal	1984
5	218	Rachel	Beatney	1983
6	460	Connie	Paulsen	1983
7	394	Robert	Lake	1982
8	383	Neal	Walsh	1980
9	592	Lawrence	Sheel	1976
10	251	Hugo	Bruer	1972
11	273	Reba	Durante	1969
12	284	Trina	Tankersly	1961
13	262	Xia	Chiang	NULL
14	559	Rachel	McGill	NULL
15	229	Carmine	Salvadore	NULL

```
78.
SELECT
      Count( BOOK_NUM ) AS 'Number of Books'
FROM
      BOOK;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
      1 □ SELECT
           Count( BOOK_NUM ) AS 'Number of Books'
      3 FROM
      4 BOOK;
91 % 🔻 🔻
 Number of Books
    20
79.
SELECT
      Count( bdetails.bs ) AS 'Number of Subjects'
FROM
      ( SELECT BOOK SUBJECT AS bs FROM BOOK GROUP BY BOOK SUBJECT ) bdetails;
SQLQuery1.sql - US...USER-PC\User (56))* 😐 🗙
     1 SELECT
         Count( bdetails.bs ) AS 'Number of Subjects'
           ( SELECT BOOK_SUBJECT AS bs FROM BOOK GROUP BY BOOK_SUBJECT ) bdetails;
91 % 🔻 🔻
```

Number of Subjects

```
80.
SELECT
      Count( BOOK_NUM ) AS 'Available Books'
FROM
      BOOK
WHERE
      BOOK.PAT_ID IS NULL;
SQLQuery1.sql - US...USER-PC\User (56))* + X
     1 ■ SELECT
             Count( BOOK_NUM ) AS 'Available Books'
     2
     3
        FROM
     4
            BOOK
     5
        WHERE
             BOOK.PAT_ID IS NULL;
     6
     7
91 % • 4
Available Books
    14
81.
SELECT
      Max( BOOK_COST ) AS 'Most Expensive'
FROM
      BOOK;
SQLQuery1.sql - US...USER-PC\User (56))* + ×
      1 □ SELECT
             Max( BOOK_COST ) AS 'Most Expensive'
      2
      3
        FROM
      4
             BOOK;
      5
91 % 🔻 🔻
 Most Expensive
     129.95
```

```
82.
```

```
SELECT
      Min( BOOK_COST ) AS 'Least Expensive'
FROM
      BOOK;
SQLQuery1.sql - US...USER-PC\User (56))* # X
      1 □ SELECT
             Min( BOOK_COST ) AS 'Least Expensive'
      2
      3
         FROM
      4
             BOOK;
      5
91 %
 Least Expensive
     49.95
83.
SELECT
      Count( pidSet.pid ) AS 'DIFFERENT PATRONS'
FROM
      ( SELECT DISTINCT PAT_ID AS pid FROM CHECKOUT GROUP BY PAT_ID ) AS pidSet;
SQLQuery1.sql - US...USER-PC\User (56))* # X
      1 □ SELECT
      2
             Count( pidSet.pid ) AS 'DIFFERENT PATRONS'
      3
         FROM
             ( SELECT DISTINCT PAT_ID AS pid FROM CHECKOUT GROUP BY PAT_ID ) AS pidSet;
91 %
 DIFFERENT PATRONS
     33
```

```
84.
```

BOOK.BOOK_SUBJECT,

Count(BOOK.BOOK_NUM) AS 'Books in Subject'

```
FROM
     BOOK
GROUP BY
     BOOK.BOOK_SUBJECT,
     BOOK.BOOK_SUBJECT
ORDER BY
     Count( BOOK.BOOK NUM ) DESC,
     BOOK.BOOK_SUBJECT;
 SQLQuery1.sql - US...USER-PC\User (56))* □ ×

□ SELECT

        2
                  BOOK.BOOK SUBJECT,
                  Count( BOOK.BOOK_NUM ) AS 'Books in Subject'
        4
             FROM
                  BOOK
             GROUP BY
                  BOOK.BOOK_SUBJECT,
        7
                  BOOK.BOOK_SUBJECT
        8
             ORDER BY
        9
       10
                  Count( BOOK.BOOK_NUM ) DESC,
       11
                  BOOK.BOOK_SUBJECT;
       12
91 %

    ⊞ Results

    Messages

       BOOK SUBJECT
                        Books in Subject
       Programming
                        9
  1
       Cloud
                         4
       Database
  3
                         4
       Middleware
                         3
  4
```

```
SELECT
      WRITES.AU_ID,
      Count( WRITES.BOOK_NUM ) AS 'Books Written'
FROM
      WRITES
GROUP BY
      WRITES.AU_ID
ORDER BY
      Count( WRITES.BOOK_NUM ) DESC,
      WRITES.AU_ID;
SQLQuery1.sql - US...USER-PC\User (56))* * ×
       1 □ SELECT
       2
               WRITES.AU_ID,
       3
               Count( WRITES.BOOK_NUM ) AS 'Books Written'
       4
           FROM
       5
               WRITES
           GROUP BY
       6
       7
               WRITES.AU_ID
       8
           ORDER BY
               Count( WRITES.BOOK_NUM ) DESC,
       9
      10
               WRITES.AU_ID;
      11
91 % - 4
 AU ID
             Books Written
      262
             3
 2
      460
             3
             2
      185
 3
      229
             2
 4
 5
      251
             2
 6
      383
             2
 7
      394
             2
      559
             2
 8
      218
 9
             1
      273
             1
 10
 11
      284
             1
      438
             1
 12
      581
             1
 13
             1
      592
 14
 15
      603
             1
```

```
86.
SELECT
    Sum( BOOK_COST ) AS 'Library Value'
FROM
    BOOK;
SQLQuery1.sql - US...USER-PC\User (56))* + ×
       1 □ SELECT
               Sum( BOOK_COST ) AS 'Library Value'
           FROM
       4
               BOOK;
       5
91 %
```

Library Value

1499.00

```
SELECT
          CHECKOUT.PAT_ID AS PATRON,
          CHECKOUT.BOOK_NUM AS BOOK,
          DATEDIFF(day, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE ) AS 'Days Kept'
FROM
          CHECKOUT
ORDER BY
         DATEDIFF(day, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE) DESC, PAT_ID,
BOOK_NUM;
SQLQuery1.sql - US...USER-PC\User (56))* 🕸 🗶
    1 □SELECT
          CHECKOUT.PAT_ID AS PATRON,
          CHECKOUT.BOOK_NUM AS BOOK,
         DATEDIFF(day, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE ) AS 'Days Kept'
    5 FROM
    6 CHECKOUT
    7 ORDER BY
         DATEDIFF(day, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE ) DESC, PAT_ID, BOOK_NUM;
91 % 🔻 🕻
 PATRON BOOK Days Kept
   1160
         5240 9
         5240 9
         5235 9
    1165
         5236 8
    1183
    1184
          5240 8
         5240 8
    1185
         5236 8
    1202
    1203
         5235 8
    1204
         5236 8
 10 1207
         5242 8
 11
    1209
          5235 8
         5248 8
 12 1219
 13 1222
         5240 8
 14 1226
         5244 8
 15 1165
         5252 7
 16 1185
         5254 7
 17 1218
          5236 7
 18 1222
         5237 7
 19 1228
         5237 7
 20 1172
         5246 6
 21 1181
         5236 6
 22 1220
         5235 6
 23 1161
          5243 5
         5254 5
 24 1161

    Query executed successfully.

                                                                                                         USER-PC (14.0 RTM) USER-PC\User (56) Ch07_Fact 00:00:00 68 rows
```

```
88.
```

```
PATRON.PAT_ID,
            CONCAT( PATRON.pat_fname,' ', PATRON.pat_lname ) AS 'Patron Name',
            PATRON.PAT_TYPE
FROM
            PATRON
ORDER BY PATRON.PAT_ID;
SQLQuery1.sql - US...USER-PC\User (56))* 4 X
     1 SELECT
            PATRON.PAT ID,
            CONCAT( PATRON.pat_fname,' ', PATRON.pat_lname ) AS 'Patron Name',
            PATRON.PAT_TYPE
     5 FROM
            PATRON
     7 ORDER BY PATRON.PAT_ID;
91 % • 4
 PAT_ID Patron Name
                       PAT_TYPE
     1160
           robert carter
                       Faculty
                       Faculty
     1161
           Kelsey Koch
     1165
           Cedric Baldwin
 3
                       Faculty
 4
     1166
           Vera Alvarado
                       Student
 5
     1167
           Alan Martin
                       FACULTY
     1170
           Cory Barry
                        faculty
     1171
                       STUDENT
           Peggy Marsh
     1172
           Tony Miles
                       STUDENT
           Betsy Malone
     1174
                       STUDENT
 10 1180
           Nadine Blair
 11 1181
           Allen Horne
                       Student
 12 1182
           Jamal Melendez STUDENT
 13 1183
           Helena Hughes Faculty
 14 1184
           Jimmie Love
                       StudenT
 15 1185
           Sandra Yang
 16 1200
           Lorenzo Torres
                       Student
 17 1201
           Shelby Noble
 18 1202
           Holly Anthony
                       Student
 19 1203
           Tyler Pope
                        STUDENT
 20 1204
           Thomas Duran
                       Student
 21 1205
           Claire Gomez
                       student
 22 1207
           Iva Ramos
                        Student
 23 1208
           Ollie Cantrell
                       Student
 24 1209 Rena Mathis
Query executed successfully.
                                                                                                                                    USER-PC (14.0 RTM) | USER-PC\User (56) | Ch07_Fact | 00:00:00 | 50 rows
```

```
BOOK BOOK NUM,
        CONCAT( BOOK.BOOK_TITLE, ' (', BOOK.BOOK_YEAR, ')' ) AS BOOK,
        BOOK.BOOK SUBJECT
FROM
        BOOK
ORDER BY BOOK.BOOK_NUM;
 SQLQuery1.sql - US...USER-PC\User (56))* □ ×

□ SELECT

        2
                  BOOK.BOOK_NUM,
        3
                  CONCAT( BOOK.BOOK_TITLE, '(', BOOK.BOOK_YEAR, ')' ) AS BOOK,
        4
                  BOOK.BOOK_SUBJECT
        5
             FROM
        6
                  BOOK
        7
             ORDER BY BOOK.BOOK_NUM;
        8
 91 %
          ▼ 4
  BOOK NUM
                     BOOK
                                                                      BOOK_SUBJECT
        5235
                     Beginner's Guide to JAVA (2014)
                                                                      Programming
        5236
                     Database in the Cloud (2014)
                                                                      Cloud
        5237
  3
                     Mastering the database environment (2015)
                                                                      Database
        5238
                     Conceptual Programming (2015)
  4
                                                                      Programming
  5
        5239
                     J++ in Mobile Apps (2015)
                                                                      Programming
        5240
                     iOS Programming (2015)
  6
                                                                      Programming
        5241
                     JAVA First Steps (2015)
                                                                      Programming
        5242
                     C# in Middleware Deployment (2015)
                                                                      Middleware
  8
        5243
                     DATABASES in Theory (2015)
                                                                      Database
  10
        5244
                     Cloud-based Mobile Applications (2015)
                                                                      Cloud
  11
        5245
                     The Golden Road to Platform independence (2016)
                                                                      Middleware
  12
        5246
                     Capture the Cloud (2016)
                                                                      Cloud
  13
        5247
                     Shining Through the Cloud: Sun Programming (2016)
                                                                      Programming
        5248
                     What You Always Wanted to Know About Database, B...
                                                                      Database
  14
  15
        5249
                     Starlight Applications (2016)
                                                                      Cloud
  16
        5250
                     Reengineering the Middle Tier (2016)
                                                                      Middleware
  17
        5251
                     Thoughts on Revitalizing Ruby (2016)
                                                                      Programming
        5252
                     Beyond the Database Veil (2016)
  18
                                                                      Database
  19
        5253
                     Virtual Programming for Virtual Environments (2016)
                                                                      Programming
        5254
                     Coding Style for Maintenance (2017)
                                                                      Programming
  20
```

```
90.
```

```
SELECT
       AUTHOR.AU_LNAME,
       AUTHOR.AU_FNAME,
       WRITES.BOOK NUM
FROM
       AUTHOR
       JOIN WRITES ON AUTHOR.AU_ID = WRITES.AU_ID
ORDER BY
       AU LNAME,
       AU FNAME,
       BOOK_NUM;
SQLQuery1.sql - US...USER-PC\User (56))* □ ×
       1 □ SELECT
       2
                 AUTHOR.AU_LNAME,
       3
                AUTHOR.AU_FNAME,
       4
                WRITES.BOOK_NUM
       5
            FROM
       6
                 AUTHOR
       7
                 JOIN WRITES ON AUTHOR.AU_ID = WRITES.AU_ID
       8
            ORDER BY
       9
                AU_LNAME,
      10
                AU_FNAME,
      11
                 BOOK_NUM;
91 %
 AU_LNAME
                  AU_FNAME
                              BOOK_NUM
       Aggerwal
                  Manish
                              5242
 2
       Beatney
                   Rachel
                              5240
                              5243
 3
       Bruer
                  Hugo
 4
       Bruer
                  Hugo
                              5246
                              5244
 5
       Chiang
                  Xia
       Chiang
                  Xia
                              5249
 6
 7
                  Xia
                              5252
       Chiang
                              5235
 8
       Durante
                  Reba
 9
       Lake
                  Robert
                              5245
       Lake
                  Robert
                              5247
 10
 11
       McGill
                  Rachel
                              5241
       McGill
 12
                  Rachel
                              5254
 13
       Palca
                  Julia
                              5238
 14
       Paulsen
                  Connie
                              5239
                              5241
       Paulsen
                  Connie
 15
 16
       Paulsen
                  Connie
                              5251
                              5250
 17
       Pearson
                  Perry
 18
       Reeves
                  Benson
                              5237
 19
       Reeves
                              5253
                  Benson
                              5239
 20
       Salvadore
                  Carmine
       Salvadore
                              5248
 21
                  Carmine
       Sheel
                              5239
 22
                  Lawrence
 23
       Tankersly
                  Trina
                              5244
       Walsh
                              5236
 24
                  Neal
 25
       Walsh
                  Neal
                              5250
```

```
SELECT
        WRITES.AU_ID,
        BOOK.BOOK NUM,
        BOOK.BOOK TITLE,
        BOOK.BOOK SUBJECT
FROM
        BOOK
        INNER JOIN WRITES ON BOOK.BOOK_NUM = WRITES.BOOK_NUM
ORDER BY
        BOOK.BOOK NUM,
        WRITES.AU ID;
 SQLQuery1.sql - US...USER-PC\User (56))* + ×
        1 □ SELECT
                  WRITES.AU_ID,
        2
        3
                  BOOK.BOOK_NUM,
        4
                  BOOK.BOOK TITLE,
        5
                  BOOK.BOOK SUBJECT
        6
             FROM
        7
                  BOOK
        8
                  INNER JOIN WRITES ON BOOK.BOOK_NUM = WRITES.BOOK_NUM
        9
             ORDER BY
       10
                  BOOK.BOOK_NUM,
       11
                  WRITES.AU ID;
91 %

    ⊞ Results

    Messages

       AU_ID
               BOOK_NUM
                             BOOK_TITLE
                                                                               BOOK SUBJECT
        273
                5235
                             Beginner's Guide to JAVA
                                                                               Programming
  2
                5236
                              Database in the Cloud
                                                                               Cloud
                5237
  3
        185
                              Mastering the database environment
                                                                               Database
  4
        603
                5238
                             Conceptual Programming
                                                                               Programming
  5
        229
                5239
                             J++ in Mobile Apps
                                                                               Programming
  6
        460
                5239
                             J++ in Mobile Apps
                                                                               Programming
  7
        592
                5239
                             J++ in Mobile Apps
                                                                               Programming
  8
        218
                5240
                             iOS Programming
                                                                               Programming
  9
        460
                5241
                             JAVA First Steps
                                                                               Programming
        559
                5241
                             JAVA First Steps
  10
                                                                               Programming
                5242
  11
        581
                             C# in Middleware Deployment
                                                                               Middleware
        251
                5243
                              DATABASES in Theory
                                                                               Database
  12
        262
                5244
                                                                               Cloud
  13
                             Cloud-based Mobile Applications
                             Cloud-based Mobile Applications
        284
                5244
                                                                               Cloud
  14
        394
                5245
                              The Golden Road to Platform independence
                                                                               Middleware
  15
                5246
  16
        251
                             Capture the Cloud
                                                                               Cloud
  17
        394
                5247
                              Shining Through the Cloud: Sun Programming
                                                                               Programming
        229
                5248
                             What You Always Wanted to Know About Database, B...
                                                                               Database
  18
  19
        262
                5249
                              Starlight Applications
                                                                               Cloud
  20
        383
                5250
                              Reengineering the Middle Tier
                                                                               Middleware
        438
                5250
  21
                              Reengineering the Middle Tier
                                                                               Middleware
                5251
  22
        460
                              Thoughts on Revitalizing Ruby
                                                                               Programming
  23
        262
                5252
                              Beyond the Database Veil
                                                                               Database
        185
                5253
  24
                             Virtual Programming for Virtual Environments
                                                                               Programming
        559
  25
                5254
                             Coding Style for Maintenance
                                                                               Programming
```

```
SELECT
        AUTHOR.AU LNAME,
        AUTHOR . AU FNAME,
        BOOK.BOOK TITLE,
        BOOK BOOK COST
FROM
        BOOK
        JOIN WRITES ON BOOK.BOOK_NUM = WRITES.BOOK_NUM
        JOIN AUTHOR ON AUTHOR.AU_ID = WRITES.AU_ID
ORDER BY
        WRITES.BOOK_NUM,
       WRITES.AU ID;
SQLQuery1.sql - US...USER-PC\User (56))* 	⇒ ×
        1 SELECT
        2
                  AUTHOR.AU LNAME,
        3
                  AUTHOR.AU FNAME,
        4
                  BOOK.BOOK TITLE,
        5
                  BOOK . BOOK _ COST
        6
             FROM
        7
                  BOOK
        8
                  JOIN WRITES ON BOOK.BOOK_NUM = WRITES.BOOK_NUM
        9
                  JOIN AUTHOR ON AUTHOR.AU_ID = WRITES.AU_ID
             ORDER BY
       10
                  WRITES.BOOK_NUM,
       11
       12
                  WRITES.AU ID;
91 %
 AU_LNAME
                    AU FNAME
                                 BOOK_TITLE
                                                                                  BOOK COST
       Durante
                    Reba
                                 Beginner's Guide to JAVA
                                                                                  59.95
  1
 2
       Walsh
                    Neal
                                 Database in the Cloud
                                                                                  79.95
                                                                                  89.95
 3
       Reeves
                    Benson
                                 Mastering the database environment
       Palca
                    Julia
                                 Conceptual Programming
                                                                                  59.95
 4
 5
       Salvadore
                    Carmine
                                 J++ in Mobile Apps
                                                                                  49.95
 6
       Paulsen
                    Connie
                                 J++ in Mobile Apps
                                                                                  49.95
 7
       Sheel
                                 J++ in Mobile Apps
                                                                                  49.95
                    Lawrence
 8
       Beatney
                    Rachel
                                 iOS Programming
                                                                                  79.95
 9
       Paulsen
                    Connie
                                 JAVA First Steps
                                                                                  49.95
       McGill
                    Rachel
                                 JAVA First Steps
                                                                                  49.95
  10
  11
       Aggerwal
                    Manish
                                 C# in Middleware Deployment
                                                                                  59.95
       Bruer
                    Hugo
                                 DATABASES in Theory
                                                                                  129.95
  12
                                 Cloud-based Mobile Applications
                                                                                  69.95
  13
       Chiang
                    Xia
       Tankersly
                    Trina
                                 Cloud-based Mobile Applications
                                                                                  69.95
  14
       Lake
                    Robert
                                 The Golden Road to Platform independence
                                                                                  119.95
  15
                                                                                  69.95
                                 Capture the Cloud
  16
       Bruer
                    Hugo
                    Robert
                                 Shining Through the Cloud: Sun Programming
                                                                                   109.95
  17
                                                                                  49.95
       Salvadore
                    Carmine
                                 What You Always Wanted to Know About Database, B...
  18
  19
       Chiang
                    Xia
                                 Starlight Applications
                                                                                  69.95
       Walsh
                                                                                  89.95
 20
                    Neal
                                 Reengineering the Middle Tier
       Pearson
                    Perry
                                 Reengineering the Middle Tier
                                                                                  89 95
 21
 22
       Paulsen
                    Connie
                                 Thoughts on Revitalizing Ruby
                                                                                  59.95
 23
       Chiang
                    Xia
                                 Beyond the Database Veil
                                                                                  69.95
 24
       Reeves
                    Benson
                                 Virtual Programming for Virtual Environments
                                                                                  79 95
 25
       McGill
                    Rachel
                                 Coding Style for Maintenance
                                                                                  49.95
```

```
93.
```

PATRON.PAT_ID, BOOK.BOOK_NUM, PATRON.PAT FNAME,

```
PATRON.PAT LNAME,
      BOOK.BOOK TITLE
FROM
      PATRON
      INNER JOIN BOOK ON PATRON.PAT ID = BOOK.PAT ID
ORDER BY
      PATRON.PAT_LNAME,
      BOOK.BOOK TITLE;
 SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
        1 □ SELECT
        2
                  PATRON.PAT ID,
        3
                  BOOK.BOOK NUM,
        4
                  PATRON.PAT_FNAME,
        5
                  PATRON.PAT_LNAME,
        6
                  BOOK.BOOK TITLE
        7
             FROM
                  PATRON
        8
        9
                  INNER JOIN BOOK ON PATRON.PAT ID = BOOK.PAT ID
       10
            ORDER BY
                  PATRON.PAT LNAME,
       11
       12
                  BOOK.BOOK TITLE;
       13
91 %

    ⊞ Results

    Messages

       PAT_ID
                BOOK_NUM
                             PAT_FNAME
                                          PAT_LNAME
                                                        BOOK_TITLE
       1229
                5252
                             Gerald
                                           Burke
                                                        Beyond the Database Veil
  1
       1229
                5238
                             Gerald
                                           Burke
  2
                                                        Conceptual Programming
       1228
                5242
                             Homer
                                           Goodman
                                                        C# in Middleware Deployment
  3
  4
       1212
                5240
                             lva
                                           McClain
                                                        iOS Programming
       1172
                5246
                             Tony
                                           Miles
                                                        Capture the Cloud
  5
       1207
                5249
                                           Ramos
                                                        Starlight Applications
  6
                             lva
```

```
94.
```

```
SELECT
            PATRON.PAT_ID,
            CONCAT( PATRON.PAT_FNAME, ' ', PATRON.PAT_LNAME ) AS NAME,
            PATRON.PAT_TYPE
FROM
            PATRON
ORDER BY
            PATRON.PAT_TYPE,
            PATRON.PAT_LNAME,
            PATRON.PAT_FNAME;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
     1 □SELECT
            PATRON.PAT_ID,
            CONCAT( PATRON.PAT_FNAME, ' ', PATRON.PAT_LNAME ) AS NAME,
            PATRON.PAT_TYPE
     5 FROM
            PATRON
     7
        ORDER BY
            PATRON.PAT TYPE,
           PATRON.PAT_LNAME,
    10
           PATRON.PAT_FNAME;
    11
91 % 🔻 (
 Results Messages
     PAT_ID NAME
                        PAT_TYPE
    1165 Cedric Baldwin
                        Faculty
 2 1170
           Cory Barry
                        faculty
 3 1160
           robert carter
                        Faculty
    1183
           Helena Hughes
                        Faculty
    1161
           Kelsey Koch
                        Faculty
    1167
                        FACULTY
           Alan Martin
     1166
           Vera Alvarado
                        Student
     1202
           Holly Anthony
                        Student
    1180
           Nadine Blair
                        STUDENT
 10 1238
           Erika Bowen
                        Student
 11 1229
           Gerald Burke
                        Student
 12 1208
           Ollie Cantrell
                        Student
 13 1210
           Keith Cooley
                        STUdent
 14 1227
           Alicia Dickson
                        Student
 15 1215
           Maureen Downs
                        Student
 16 1204 Thomas Duran
                        Student
 17 1224 Jewel England
                        Student
 18 1225 Wilfred Fuller
                        Student
 19 1211 Jerald Gaines
                        Student
 20 1205
           Claire Gomez
                        student
 21 1228
           Homer Goodman Student
 22 1219 Desiree Harrington Student
 23 1223 .lose Havs

    Query executed successfully.

                                                                                                                                USER-PC (14.0 RTM) USER-PC\User (56) Ch07_Fact 00:00:00 50 rows
```

```
95.
```

```
SELECT
      CHECKOUT.BOOK_NUM,
      COUNT( CHECKOUT.CHECK_NUM ) AS 'Times Checked Out'
FROM
      CHECKOUT
GROUP BY
      CHECKOUT.BOOK_NUM
ORDER BY
      COUNT( CHECKOUT.CHECK_NUM ) DESC;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
      1 □ SELECT
      2
              CHECKOUT.BOOK_NUM,
      3
              COUNT( CHECKOUT.CHECK_NUM ) AS 'Times Checked Out'
          FROM
      4
      5
              CHECKOUT
      6
          GROUP BY
      7
              CHECKOUT.BOOK_NUM
          ORDER BY
      8
              COUNT( CHECKOUT.CHECK_NUM ) DESC;
      9
     10
91 % 🔻 🖪
 BOOK_NUM
                Times Checked Out
      5236
                 12
 1
 2
      5235
                 9
 3
      5240
                 7
 4
      5238
                 6
      5237
                 5
 5
      5242
 6
                 4
 7
      5244
                 4
 8
      5246
                 4
      5249
                 4
     5252
                 4
 10
      5254
 11
                 4
 12
      5248
                 3
 13
      5243
                 2
```

```
96.
```

```
AUTHOR.AU ID,
        AUTHOR . AU FNAME,
        AUTHOR.AU LNAME,
        WRITES.BOOK NUM,
        BOOK.BOOK_TITLE
FROM
        AUTHOR
        INNER JOIN ( BOOK INNER JOIN WRITES ON BOOK BOOK NUM = WRITES BOOK NUM ) ON
AUTHOR.AU ID = WRITES.AU ID
WHERE
        BOOK.BOOK SUBJECT = 'Cloud'
ORDER BY
        BOOK.BOOK_TITLE,
        AUTHOR . AU_LNAME;
SQLQuery1.sql - US...USER-PC\User (56))* = X
      1 ■ SELECT
      2
              AUTHOR.AU ID,
      3
              AUTHOR.AU FNAME,
              AUTHOR.AU LNAME,
      4
      5
              WRITES.BOOK_NUM,
      6
              BOOK.BOOK_TITLE
      7
          FROM
              AUTHOR
      8
      9
              INNER JOIN ( BOOK INNER JOIN WRITES ON BOOK.BOOK NUM = WRITES.BOOK NUM ) ON AUTHOR.AU ID = WRITES.AU ID
     10
          WHERE
              BOOK.BOOK SUBJECT = 'Cloud'
     11
     12
          ORDER BY
     13
              BOOK.BOOK TITLE,
     14
              AUTHOR.AU_LNAME;
     15
91 %
 AU_FNAME
     AU_ID
                      AU_LNAME
                                BOOK_NUM
                                          BOOK_TITLE
     251
                                5246
                                          Capture the Cloud
            Hugo
                      Bruer
 2
                                5244
      262
            Xia
                      Chiang
                                          Cloud-based Mobile Applications
 3
      284
            Trina
                      Tankersly
                                5244
                                          Cloud-based Mobile Applications
      383
                                5236
            Neal
                      Walsh
                                          Database in the Cloud
 5
      262
            Xia
                                5249
                                          Starlight Applications
                      Chiang
```

```
97.
```

SELECT

```
BOOK.BOOK_NUM,
          BOOK.BOOK_TITLE,
          AUTHOR.AU LNAME,
          AUTHOR.AU FNAME,
          BOOK.PAT ID,
          PATRON.PAT_LNAME,
          PATRON.PAT_TYPE
FROM
          AUTHOR
          INNER JOIN ( ( PATRON INNER JOIN BOOK ON PATRON.PAT_ID = BOOK.PAT_ID ) INNER JOIN
WRITES ON BOOK.BOOK_NUM = WRITES.BOOK_NUM ) ON AUTHOR.AU_ID = WRITES.AU_ID
ORDER BY
          BOOK.BOOK_TITLE;
SQLQuery1.sql - US...USER-PC\User (56))* 4 X
     1 SELECT
     2
           BOOK.BOOK_NUM,
     3
           BOOK.BOOK_TITLE,
     4
           AUTHOR.AU LNAME,
     5
           AUTHOR.AU_FNAME,
     6
           BOOK.PAT ID,
     7
           PATRON.PAT_LNAME,
           PATRON.PAT_TYPE
     8
     9
       FROM
    10
           INNER JOIN ( ( PATRON INNER JOIN BOOK ON PATRON.PAT ID = BOOK.PAT ID ) INNER JOIN WRITES ON BOOK.BOOK NUM = WRITES.BOOK NUM ) ON AUTHOR.AU ID = WRITES.AU ID
    11
    12
        ORDER BY
    13
           BOOK.BOOK_TITLE;
    14
91% 🔻 (
 BOOK_NUM BOOK_TITLE
                                AU_LNAME AU_FNAME PAT_ID PAT_LNAME PAT_TYPE
    5252
             Beyond the Database Veil
                                        Xia
                                                1229
                                                      Burke
                                                               Student
                                Chiang
             C# in Middleware Deployment | Aggerwal
    5242
                                        Manish
                                                1228
                                                      Goodman
                                                               Student
    5246
              Capture the Cloud
                                        Hugo
                                                1172
                                                      Miles
                                                               STUDENT
    5238
             Conceptual Programming
                                Palca
                                        Julia
                                                1229
                                                      Burke
                                                               Student
    5240
              iOS Programming
                                        Rachel
                                               1212
                                                      McClain
                                                               Student
                                Beatney
                                                1207
    5249
                                Chiang
              Starlight Applications
                                        Xia
                                                      Ramos
                                                               Student
```

```
98.
```

```
SELECT
       BOOK BOOK NUM,
       BOOK BOOK TITLE,
       Count( CHECKOUT.CHECK NUM ) AS 'Times Checked Out'
FROM
       BOOK
       LEFT JOIN CHECKOUT ON BOOK.BOOK_NUM = CHECKOUT.BOOK_NUM
GROUP BY
       BOOK BOOK NUM,
       BOOK.BOOK_TITLE,
       BOOK.BOOK TITLE
ORDER BY
       Count( CHECKOUT.CHECK_NUM ) DESC,
       BOOK.BOOK_TITLE;
SQLQuery1.sql - US...USER-PC\User (56))* + ×
        1 SELECT
        2
                 BOOK_BOOK_NUM,
        3
                 BOOK.BOOK_TITLE,
                 Count( CHECKOUT.CHECK_NUM ) AS 'Times Checked Out'
        4
            FROM
        5
        6
                 BOOK
                 LEFT JOIN CHECKOUT ON BOOK.BOOK_NUM = CHECKOUT.BOOK_NUM
        7
            GROUP BY
        8
                 BOOK.BOOK_NUM,
        9
       10
                 BOOK.BOOK_TITLE,
       11
                 BOOK.BOOK_TITLE
       12
            ORDER BY
       13
                 Count( CHECKOUT.CHECK_NUM ) DESC,
       14
                 BOOK.BOOK_TITLE;
       15
91 %
         ▼ | 4
 BOOK_NUM
                    BOOK_TITLE
                                                                   Times Checked Out
      5236
                    Database in the Cloud
                                                                    12
       5235
                    Beginner's Guide to JAVA
                                                                   9
  2
                                                                    7
       5240
  3
                    iOS Programming
       5238
                                                                   6
  4
                    Conceptual Programming
  5
       5237
                    Mastering the database environment
                                                                   5
  6
       5252
                    Beyond the Database Veil
                                                                    4
       5242
  7
                    C# in Middleware Deployment
       5246
                                                                    4
  8
                    Capture the Cloud
       5244
                                                                    4
  9
                    Cloud-based Mobile Applications
       5254
                                                                    4
  10
                    Coding Style for Maintenance
       5249
                    Starlight Applications
                                                                    4
  11
  12
       5248
                    What You Always Wanted to Know About Database, B...
  13
       5243
                    DATABASES in Theory
                                                                    2
       5239
                                                                   0
                    J++ in Mobile Apps
  14
       5241
                                                                   0
  15
                    JAVA First Steps
       5250
                                                                   0
  16
                    Reengineering the Middle Tier
  17
       5247
                    Shining Through the Cloud: Sun Programming
                                                                   0
       5245
                    The Golden Road to Platform independence
                                                                   0
  18
       5251
                                                                   0
  19
                    Thoughts on Revitalizing Ruby
  20
       5253
                                                                   0
                    Virtual Programming for Virtual Environments
```

```
99.
```

```
SELECT
      BOOK BOOK NUM,
      BOOK.BOOK_TITLE,
      Count( CHECKOUT.CHECK NUM ) AS 'Times Checked Out'
FROM
      BOOK
      INNER JOIN CHECKOUT ON BOOK.BOOK_NUM = CHECKOUT.BOOK_NUM
GROUP BY
      BOOK BOOK NUM,
      BOOK.BOOK_TITLE,
      BOOK.BOOK_TITLE
HAVING
      Count( CHECKOUT.CHECK_NUM ) > 5
ORDER BY
      Count( CHECKOUT.CHECK_NUM ) DESC,
      BOOK.BOOK_TITLE;
SQLQuery1.sql - US...USER-PC\User (56))* \Rightarrow X
       1 □ SELECT
        2
                 BOOK.BOOK_NUM,
        3
                 BOOK.BOOK TITLE,
                 Count( CHECKOUT.CHECK_NUM ) AS 'Times Checked Out'
       4
       5
            FROM
       6
                 BOOK
       7
                 INNER JOIN CHECKOUT ON BOOK.BOOK NUM = CHECKOUT.BOOK NUM
            GROUP BY
       8
                 BOOK.BOOK NUM,
       9
                 BOOK.BOOK TITLE,
      10
                 BOOK.BOOK TITLE
      11
            HAVING
      12
      13
                 Count( CHECKOUT.CHECK_NUM ) > 5
      14
            ORDER BY
      15
                 Count( CHECKOUT.CHECK_NUM ) DESC,
      16
                 BOOK.BOOK TITLE;
      17
91 %

    ⊞ Results

    Messages

       BOOK_NUM
                   BOOK_TITLE
                                           Times Checked Out
       5236
                    Database in the Cloud
                                           12
 1
       5235
                    Beginner's Guide to JAVA
                                           9
 2
       5240
                    iOS Programming
                                           7
 3
       5238
                    Conceptual Programming
                                           6
 4
```

```
100.
```

```
SELECT
       AUTHOR.AU_ID,
       AUTHOR.AU_LNAME,
       BOOK.BOOK TITLE,
       CHECKOUT.CHECK OUT DATE,
       PATRON.PAT_LNAME
FROM
       AUTHOR
       INNER JOIN (
              PATRON
              INNER JOIN (
                     ( BOOK INNER JOIN CHECKOUT ON BOOK.BOOK_NUM = CHECKOUT.BOOK_NUM )
                     INNER JOIN WRITES ON BOOK.BOOK_NUM = WRITES.BOOK_NUM
              ) ON ( PATRON.PAT_ID = CHECKOUT.PAT_ID )
              AND ( PATRON.PAT_ID = BOOK.PAT_ID )
       ) ON AUTHOR.AU_ID = WRITES.AU_ID
WHERE
       ( ( ( AUTHOR.AU_LNAME ) = 'Bruer' ) AND ( ( PATRON.PAT_LNAME ) = 'Miles' ) )
ORDER BY
       CHECKOUT.CHECK_OUT_DATE;
 SQLQuery1.sql - US...USER-PC\User (56))* 	⇒ ×
       1 SELECT
               AUTHOR.AU_ID,
       2
       3
               AUTHOR.AU_LNAME,
               BOOK.BOOK TITLE,
       4
       5
               CHECKOUT.CHECK_OUT_DATE,
       6
               PATRON.PAT_LNAME
       7
           FROM
       8
               AUTHOR
               INNER JOIN (
       9
                   PATRON
      10
                    INNER JOIN (
      11
                        ( BOOK INNER JOIN CHECKOUT ON BOOK.BOOK_NUM = CHECKOUT.BOOK_NUM )
      12
                        INNER JOIN WRITES ON BOOK.BOOK NUM = WRITES.BOOK NUM
      13
                    ) ON ( PATRON.PAT_ID = CHECKOUT.PAT_ID )
      14
                   AND ( PATRON.PAT_ID = BOOK.PAT_ID )
      15
               ) ON AUTHOR.AU_ID = WRITES.AU_ID
      16
           WHERE
      17
               ( ( ( AUTHOR.AU_LNAME ) = 'Bruer' ) AND ( ( PATRON.PAT_LNAME ) = 'Miles' ) )
      18
           ORDER BY
      19
               CHECKOUT.CHECK_OUT_DATE;
      20
      21
91 %

    Messages

    ⊞ Results

      AU_ID
             AU_LNAME
                       BOOK_TITLE
                                       CHECK_OUT_DATE
                                                           PAT_LNAME
      251
             Bruer
                        Capture the Cloud | 2017-04-21 00:00:00.000
                                                           Miles
                        Capture the Cloud 2017-05-15 00:00:00.000
 2
       251
             Bruer
                                                           Miles
```

```
101.
```

```
SELECT
        PATRON.PAT_ID,
        PATRON.PAT_FNAME,
        PATRON.PAT LNAME
FROM
        PATRON
        LEFT JOIN CHECKOUT ON PATRON.PAT_ID = CHECKOUT.PAT_ID
WHERE
        CHECKOUT.CHECK_NUM IS NULL
ORDER BY
        PATRON.PAT_LNAME,
        PATRON.PAT_FNAME;
SQLQuery1.sql - US...USER-PC\User (56))* + ×
       1 □ SELECT
       2
               PATRON.PAT_ID,
       3
               PATRON.PAT FNAME,
               PATRON.PAT_LNAME
       4
           FROM
       5
       6
               PATRON
               LEFT JOIN CHECKOUT ON PATRON.PAT_ID = CHECKOUT.PAT_ID
       7
       8
       9
               CHECKOUT.CHECK_NUM IS NULL
           ORDER BY
      10
      11
               PATRON.PAT_LNAME,
      12
               PATRON.PAT FNAME;
      13
91 %
        ▼ 4
 PAT_FNAME
      PAT_ID
                         PAT_LNAME
      1166
              Vera
                         Alvarado
      1180
                          Blair
 2
              Nadine
      1238
 3
              Erika
                          Bowen
      1208
 4
              Ollie
                         Cantrell
 5
      1227
              Alicia
                         Dickson
              Claire
                         Gomez
      1205
 6
 7
      1239
              Elton
                         Irwin
 8
      1240
              Jan
                         Joyce
 9
      1243
              Roberto
                         Kennedy
      1242
 10
              Mario
                          King
      1237
 11
              Brandi
                         Larson
      1167
                          Martin
 12
              Alan
 13
      1182
              Jamal
                          Melendez
 14
      1201
              Shelby
                          Noble
 15
      1244
                         Richmond
              Leon
 16
      1200
              Lorenzo
                         Torres
 17
      1241
                          West
              Irene
```

```
102.
```

```
SELECT
          PATRON.PAT_ID,
          PATRON.PAT_LNAME,
          COUNT( CHECK NUM ) AS 'NUM CHECKOUTS',
          S1.ndb AS 'NUM DIFFERENT BOOKS'
FROM
          SELECT
                    PAT_ID,
                    COUNT( BOOK_NUM ) AS ndb
          FROM
                    ( SELECT DISTINCT PAT_ID, BOOK_NUM FROM CHECKOUT ) AS sub2
          GROUP BY
                    PAT_ID
          ) AS S1
          INNER JOIN ( PATRON INNER JOIN CHECKOUT ON PATRON.PAT_ID = CHECKOUT.PAT_ID ) ON
S1.PAT_ID = PATRON.PAT_ID
GROUP BY
          PATRON.PAT_ID,
          PATRON.PAT_LNAME,
          S1.ndb
HAVING
          COUNT( CHECK_NUM ) >= 3
ORDER BY
          'NUM DIFFERENT BOOKS' DESC,
          "NUM CHECKOUTS" DESC,
          PATRON.PAT_ID ASC;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
          PATRON.PAT ID.
          PATRON. PAT LNAME.
           DUNT( CHECK_NUM ) AS 'NUM CHECKOUTS',
          S1.ndb AS 'NUM DIFFERENT BOOKS'
          SELECT
            PAT_ID,
             COUNT( BOOK_NUM ) AS ndb
         FROM ( SELECT DISTINCT PAT_ID, BOOK_NUM FROM CHECKOUT ) AS sub2
   12
          GROUP BY
            PAT_ID
          ) AS S1
          INNER JOIN ( PATRON INNER JOIN CHECKOUT ON PATRON.PAT_ID = CHECKOUT.PAT_ID ) ON S1.PAT_ID = PATRON.PAT_ID
      GROUP BY
PATRON.PAT_ID,
          PATRON.PAT_LNAME,
          S1.ndb
   21
22
       HAVING
          COUNT( CHECK_NUM ) >= 3
      ORDER BY
'NUM DIFFERENT BOOKS' DESC,
   25
          "NUM CHECKOUTS" DESC,
          PATRON.PAT_ID ASC;
   27
91 %
PAT_ID PAT_LNAME NUM CHECKOUTS NUM DIFFERENT BOOKS
   1161 Koch
   1181
   1185
         Yang
   1210
         Cooley
         Burke
    1160
   1171
         Marsh
    1172
         Miles
   1207
         Ramos
10
                                                                                                         USER-PC (14.0 RTM) | USER-PC\User (56) | Ch07_Fact | 00:00:00 | 12 rows
Query executed successfully.
```

```
103.
```

```
SELECT
       ROUND( AVG( DATEDIFF(d, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE ) ), 2 )
AS 'Average Days Kept'
FROM
       CHECKOUT;
SQLQuery1.sql - US...USER-PC\User (56))* 😕 🗶
           ROUND( AVG( DATEDIFF(d, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE ) ), 2 ) AS 'Average Days Kept'
        FROM
           CHECKOUT;
     4
     5
     ▼ 4
91 %
Average Days Kept
    4
104.
SELECT
       CHECKOUT.PAT ID,
       AVG( DATEDIFF(d, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE )) AS 'Average
Days Kept'
FROM
       CHECKOUT
GROUP BY
       CHECKOUT.PAT_ID
HAVING
       Count( CHECKOUT.CHECK_NUM ) >= 3
ORDER BY
       AVG( DATEDIFF(d, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE )) DESC;
SQLQuery1.sql - US...USER-PC\User (56))* □ ×
      1 SELECT
             CHECKOUT.PAT_ID,
      2
              AVG( DATEDIFF(d, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE )) AS 'Average Days Kept'
      3
      4
          FROM
             CHECKOUT
          GROUP BY
             CHECKOUT.PAT_ID
          HAVING
              Count( CHECKOUT.CHECK_NUM ) >= 3
         ORDER BY
     10
             AVG( DATEDIFF(d, CHECKOUT.CHECK OUT DATE, CHECKOUT.CHECK IN DATE )) DESC;
     11
     12
91 %
 PAT ID
           Average Days Kept
     1160
 2
      1185
 3
      1207
      1209
            5
 5
      1165
 6
      1172
            4
      1183
 8
     1181
            3
 9
      1171
            3
      1161
 10
      1210
            2
 11
 12
      1229
```

```
SELECT
      BOOK.BOOK_NUM,
      BOOK.BOOK_TITLE,
      BOOK BOOK COST
FROM
      BOOK
WHERE
      BOOK.BOOK_COST = ( SELECT MIN( book_cost ) FROM book )
ORDER BY
      BOOK.BOOK_NUM;
SQLQuery1.sql - US...USER-PC\User (56))* # X
        1 SELECT
                 BOOK.BOOK NUM,
        2
        3
                 BOOK.BOOK TITLE,
                 BOOK.BOOK COST
        4
            FROM
        5
        6
                 BOOK
        7
            WHERE
                 BOOK.BOOK_COST = ( SELECT MIN( book_cost ) FROM book )
        8
       9
            ORDER BY
      10
                 BOOK.BOOK NUM;
      11
91 %

    ⊞ Results

    Messages

       BOOK_NUM
                    BOOK_TITLE
                                                                  BOOK_COST
       5239
                    J++ in Mobile Apps
                                                                   49.95
       5241
                    JAVA First Steps
                                                                   49.95
  2
                    What You Always Wanted to Know About Database, B...
  3
       5248
                                                                   49.95
                    Coding Style for Maintenance
       5254
                                                                   49.95
 4
```

105.

```
106.
SELECT
        AUTHOR.AU_ID,
        AUTHOR.AU_FNAME,
        AUTHOR . AU LNAME
FROM
        AUTHOR
WHERE
        AUTHOR.AU_ID NOT IN ( SELECT au_id FROM writes INNER JOIN book ON writes.book_num
= book.book_num WHERE book_subject = 'Programming' )
ORDER BY
        AUTHOR.AU_LNAME;
SQLQuery1.sql - US...USER-PC\User (56))* ♯ X
     1 = SELECT
            AUTHOR.AU_ID,
            AUTHOR.AU FNAME,
            AUTHOR.AU_LNAME
        FROM
            AUTHOR
         WHERE
            AUTHOR.AU ID NOT IN ( SELECT au id FROM writes INNER JOIN book ON writes.book num = book.book num WHERE book subject = 'Programming')
        ORDER BY
     9
    10
            AUTHOR.AU LNAME;
    11
91 %
AU_ID AU_FNAME AU_LNAME
     581
          Manish
                   Aggerwal
     251
          Hugo
                   Bruer
     262
          Xia
                   Chiang
     438
          Perry
                   Pearson
 5
     284
          Trina
                   Tankersly
```

383

Neal

Walsh

```
107.
```

```
SELECT
           BOOK.BOOK_NUM,
           BOOK.BOOK_TITLE,
           BOOK.BOOK SUBJECT,
           ROUND((AVGCOST),2) AS AVGCOST,
           ROUND((BOOK.BOOK_COST - AVGCOST),2) AS DIFFERENCE
FROM
           BOOK
           INNER JOIN ( SELECT book_subject, round( avg( book_cost ), 2 ) AS avgcost FROM
book GROUP BY book_subject ) AS s1 ON BOOK.BOOK_SUBJECT = s1.book_subject
           ORDER BY
                       BOOK TITLE;
SQLQuery1.sql - US...USER-PC\User (56))* 4 X
      1 □SELECT
      2
              BOOK.BOOK_NUM,
      3
              BOOK.BOOK TITLE,
              BOOK.BOOK_SUBJECT,
      4
      5
              ROUND((AVGCOST),2) AS AVGCOST,
      6
              ROUND((BOOK.BOOK_COST - AVGCOST),2) AS DIFFERENCE
      7
          FROM
      8
              INNER JOIN ( SELECT book subject, round( avg( book cost ), 2 ) AS avgcost FROM book GROUP BY book subject ) AS s1 ON BOOK.BOOK SUBJECT = s1.book subject
      9
     10
              ORDER BY
     11
                   BOOK TITLE;
     12
91 % 🔻 🖪
 BOOK_NUM BOOK_TITLE
                                                        BOOK_SUBJECT AVGCOST DIFFERENCE
     5235
                 Beginner's Guide to JAVA
                                                                      66.620000 -6.670000
                                                        Programming
      5252
                 Beyond the Database Veil
                                                        Database
                                                                      84.950000 -15.000000
      5242
                 C# in Middleware Deployment
                                                        Middleware
                                                                      89.950000 -30.000000
 3
      5246
                 Capture the Cloud
                                                        Cloud
                                                                      72.450000 -2.500000
      5244
                 Cloud-based Mobile Applications
                                                                      72.450000 -2.500000
                                                        Cloud
 6
      5254
                 Coding Style for Maintenance
                                                                      66.620000 -16.670000
                                                        Programming
      5238
                                                                      66.620000 -6.670000
                 Conceptual Programming
                                                        Programming
      5236
                                                                      72.450000 7.500000
                 Database in the Cloud
                                                        Cloud
      5243
                 DATABASES in Theory
                                                                      84.950000 45.000000
 9
                                                        Database
      5240
                                                                      66.620000 13.330000
 10
                 iOS Programming
                                                        Programming
      5239
 11
                 J++ in Mobile Apps
                                                        Programming
                                                                      66.620000
                                                                               -16.670000
                 JAVA First Steps
 12
      5241
                                                                      66.620000 -16.670000
                                                        Programming
 13
      5237
                 Mastering the database environment
                                                        Database
                                                                      84.950000 5.000000
      5250
                                                                      89.950000 0.000000
 14
                 Reengineering the Middle Tier
                                                        Middleware
      5247
                                                                      66.620000 43.330000
 15
                 Shining Through the Cloud: Sun Programming
                                                        Programming
 16
      5249
                 Starlight Applications
                                                        Cloud
                                                                      72.450000 -2.500000
      5245
 17
                 The Golden Road to Platform independence
                                                        Middleware
                                                                      89.950000 30.000000
      5251
                                                                      66.620000 -6.670000
 18
                 Thoughts on Revitalizing Ruby
                                                        Programming
      5253
                                                                      66.620000 13.330000
 19
                 Virtual Programming for Virtual Environments
                                                        Programming
 20
      5248
                 What You Always Wanted to Know About Database, B...
                                                        Database
                                                                      84.950000 -35.000000
```

```
108.
```

```
SELECT
         BOOK.BOOK_NUM,
         BOOK.BOOK_TITLE,
         BOOK.BOOK SUBJECT,
         AUTHOR.AU LNAME,
         s1.numbooks AS 'Num Books by Author'
FROM
                  INNER JOIN ( SELECT au id, count( book num ) AS numbooks FROM writes GROUP
BY au_id ) AS s1 ON AUTHOR.AU_ID = s1.au_id
         INNER JOIN ( BOOK INNER JOIN WRITES ON BOOK, BOOK_NUM = WRITES, BOOK_NUM ) ON
AUTHOR.AU_ID = WRITES.AU_ID
WHERE
         BOOK.BOOK_SUBJECT = 'Cloud'
ORDER BY
         BOOK.BOOK_TITLE,
         AUTHOR . AU_LNAME ;
SQLQuery1.sql - US...USER-PC\User (56))* = X
      1 □ SELECT
      2
             BOOK.BOOK_NUM,
      3
             BOOK.BOOK TITLE,
      4
             BOOK.BOOK_SUBJECT,
      5
             AUTHOR.AU_LNAME,
      6
             s1.numbooks AS 'Num Books by Author'
      7
         FROM
      8
      9
                 AUTHOR
     10
                 INNER JOIN ( SELECT au id, count( book num ) AS numbooks FROM writes GROUP BY au id ) AS s1 ON AUTHOR.AU ID = s1.au id
     11
             INNER JOIN ( BOOK INNER JOIN WRITES ON BOOK.BOOK NUM = WRITES.BOOK NUM ) ON AUTHOR.AU ID = WRITES.AU ID
     12
     13
         WHERE
             BOOK.BOOK_SUBJECT = 'Cloud'
     14
         ORDER BY
     15
     16
             BOOK.BOOK TITLE,
     17
             AUTHOR.AU_LNAME;
     18
91 %
 AU_LNAME Num Books by Author
     BOOK_NUM
               BOOK_TITLE
                                     BOOK_SUBJECT
     5246
               Capture the Cloud
                                     Cloud
                                                  Bruer
                                                           2
                                                           3
     5244
               Cloud-based Mobile Applications | Cloud
                                                  Chiang
 3
     5244
               Cloud-based Mobile Applications Cloud
                                                  Tankersly
                                                           1
 4
     5236
               Database in the Cloud
                                     Cloud
                                                  Walsh
                                                           2
                                                           3
 5
     5249
               Starlight Applications
                                     Cloud
                                                  Chiang
```

66.620000

89.950000

```
109.
SELECT
       MIN( AVG.AVGCOST ) AS 'Lowest Avg Cost',
       MAX( AVG.AVGCOST ) AS 'Highest Avg Cost'
FROM
       ( SELECT book_subject, round( avg( book_cost ), 2 ) AS avgcost FROM BOOK GROUP BY
book_subject ) AS AVG;
SQLQuery1.sql - US...USER-PC\User (56))* # X
     1 □SELECT
            MIN( AVG.AVGCOST ) AS 'Lowest Avg Cost',
     2
            MAX( AVG.AVGCOST ) AS 'Highest Avg Cost'
     3
        FROM
     4
            ( SELECT book_subject, round( avg( book_cost ), 2 ) AS avgcost FROM BOOK GROUP BY book_subject ) AS AVG;
     5
     6
91 %
 Lowest Avg Cost Highest Avg Cost
```