**Queries**

1. Retrieve the first name and last name of each author in the author relation. Order does not matter. **(1 points)**

**SQL Statement:**

USE henry;

SELECT firstName, lastName FROM author;

**Output:**

# firstName lastName

Toni Morrison

Paul Solotaroff

Vernor Vintage

Dick Francis

Peter Straub

Stephen King

Philip Pratt

Truddi Chase

Bradley Collins

Joseph Heller

Gary Wills

Douglas R. Hofstadter

Harper Lee

Stephen E. Ambrose

J.K. Rowling

J.D. Salinger

Seamus Heaney

Albert Camus

Bradley Collins, Jr.

John Steinbeck

Riva Castelman

Barbara Owen

Randy O'Rourke

Tracy Kidder

Lon Schleining

1. Retrieve the title and book type in the book relation. Order does not matter. **(1 points)**

**SQL Statement:**

**USE henry;**

**SELECT title, type FROM book;**

**Output:**

# title type

A Deepness in the Sky SFI

Magic Terror HOR

The Stranger FIC

Venice ART

Second Wind MYS

The Edge MYS

Dreamcatcher: A Novel HOR

Treasure Chests ART

Beloved FIC

Harry Potter and the Prisoner of Azkaban SFI

Van Gogh and Gauguin ART

Of Mice and Men FIC

Electric Light POE

Group: Six People in Search of a Life PSY

Nine Stories FIC

The Soul of a New Machine SCI

Travels with Charley TRA

Catch-22 FIC

Jazz FIC

Band of Brothers HIS

A Guide to SQL CMP

Franny and Zooey FIC

East of Eden FIC

Harry Potter and the Goblet of Fire SFI

The Fall FIC

Godel, Escher, Bach PHI

When Rabbit Howls PSY

Black House HOR

Song of Solomon FIC

The Grapes of Wrath FIC

Slay Ride MYS

The Catcher in the Rye FIC

To Kill a Mockingbird FIC

1. Retrieve the publisherCode in the book relation. List each publisherCode only once in the result. Order does not matter. **(1 points)**

**SQL Statement:**

**USE henry;**

**SELECT DISTINCT (publisherCode) FROM book;**

**Output:**

**# publisherCode**

**BA**

**BP**

**BY**

**CT**

**FA**

**FS**

**HC**

**JP**

**LB**

**PE**

**PL**

**PU**

**RH**

**SC**

**SS**

**ST**

**TA**

**TB**

**TO**

**VB**

**WP**

1. Retrieve the title and price of each book in the book relation. Further add a calculated column named ‘discount’ that shows the price the book with 25% discount. Order does not matter. Show the first five rows of the result. **(2 points)**

**SQL Statement:**

**USE henry;**

**SELECT title, price, (price - (price\*0.25)) AS discount FROM book;**

**Output:**

**# title price discount**

**A Deepness in the Sky 7.19 5.3925**

**Magic Terror 7.99 5.9925**

**The Stranger 8.00 6.0000**

**Venice 24.50 18.3750**

**Second Wind 24.95 18.7125**

1. Retrieve the title and price for any book whose price is higher than $20.00 in the book relation. Show the full result. **(2 points)**

**SQL Statement:**

**USE henry;**

**SELECT title, price FROM book**

**WHERE price>20;**

**Output:**

**# title price**

**Venice 24.50**

**Second Wind 24.95**

**Treasure Chests 24.46**

**Van Gogh and Gauguin 21.00**

**A Guide to SQL 37.95**

1. Retrieve the publisherName of all publishers that are in New York only in the publisher relation. Order does not matter. **(2 points)**

**SQL Statement:**

**USE henry;**

**SELECT publisherName FROM publisher**

**WHERE city="New York";**

**Output:**

**# publisherName**

**Arcade Publishing**

**Back Bay books**

**Fawcett books**

**Farrar Straus and Giroux**

**HarperCollins publishers**

**Jove Publications**

**Lb books**

**Penguin USA**

**Plume**

**Putnam Publishing Group**

**Random House**

**Schoken books**

**Scribner**

**Simon and Schuster**

**SchoLASTic Trade**

**Tor books**

**Thames and Hudson**

**Vintage books**

**W.W. Norton**

1. Retrieve the publisherName of all publishers that are not in New York in the publisher relation. (use != for inequality). Order does not matter. Show the full result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT publisherName FROM publisher**

**WHERE city!="New York";**

**Output:**

**# publisherName**

**Arkham House**

**Basic books**

**Berkley Publishing**

**Course Technology**

**Jeremy P. Tarcher**

**McPherson and Co.**

**Taunton Press**

**Touchstone books**

**Westview Press**

1. Retrieve the bookCode and onHand for each book for which a branch has between 2 and 4 copies in the inventory relation. **Use the BETWEEN keyword in this query.** Order does not matter. Show the full result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT bookCode, onHand FROM inventory**

**WHERE onHand BETWEEN 2 and 4;**

**Output:**

**# bookCode onHand**

**0180 2**

**0189 2**

**0200 3**

**0378 2**

**079X 2**

**079X 3**

**1351 4**

**1351 2**

**138X 3**

**2226 3**

**2226 2**

**2281 3**

**2766 2**

**2908 3**

**3350 2**

**3906 2**

**5790 2**

**6128 4**

**6128 3**

**6328 2**

**6908 2**

**7405 2**

**7559 2**

**8720 3**

**9611 2**

**9627 2**

**9701 2**

**9701 3**

**9701 2**

**9882 3**

**9883 3**

**9883 2**

**9931 2**

1. Retrieve the title and type for each book in the book relation in which the type is SFI, HOR, ART or PSY. **Use the IN operator for this query.** Order the result by type ascending. Show the first five rows of the result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT title, type FROM book**

**WHERE type IN ("SFI", "HOR", "ART", "PSY");**

**Output:**

**# title type**

**A Deepness in the Sky SFI**

**Magic Terror HOR**

**Venice ART**

**Dreamcatcher: A Novel HOR**

**Treasure Chests ART**

**Harry Potter and the Prisoner of Azkaban SFI**

**Van Gogh and Gauguin ART**

**Group: Six People in Search of a Life PSY**

**Harry Potter and the Goblet of Fire SFI**

**When Rabbit Howls PSY**

**Black House HOR**

1. Retrieve the title for each book in the book relation that begins with the word “The”. Order the result by title ascending. Show the full result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT title FROM book**

**WHERE title LIKE ("The%")**

**ORDER BY title;**

**Output:**

**# title**

**The Catcher in the Rye**

**The Edge**

**The Fall**

**The Grapes of Wrath**

**The Soul of a New Machine**

**The Stranger**

1. Retrieve the title for each book in the book relation that doesn’t have a type. Order the result by title ascending. Show the full result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT title FROM book**

**WHERE type=null**

**ORDER BY title;**

**Output:**

title

1. Retrieve all of the columns from the author relation. Order the results by the authors lastName descending. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT \* FROM author**

**ORDER BY lastName DESC;**

**Output:**

**# authorNum lastName firstName**

**11 Wills Gary**

**3 Vintage Vernor**

**5 Straub Peter**

**20 Steinbeck John**

**2 Solotaroff Paul**

**25 Schleining Lon**

**16 Salinger J.D.**

**15 Rowling J.K.**

**7 Pratt Philip**

**22 Owen Barbara**

**23 O'Rourke Randy**

**1 Morrison Toni**

**13 Lee Harper**

**6 King Stephen**

**24 Kidder Tracy**

**12 Hofstadter Douglas R.**

**10 Heller Joseph**

**17 Heaney Seamus**

**4 Francis Dick**

**19 Collins, Jr. Bradley**

**9 Collins Bradley**

**8 Chase Truddi**

**21 Castelman Riva**

**18 Camus Albert**

**14 Ambrose Stephen E.**

1. Retrieve the title and type from the book relation. Order the results first by type and then by title. Both sort keys should be ascending order. Show the first five rows of the result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT title, type FROM book**

**ORDER BY type, title;**

**Output:**

**# title type**

**Treasure Chests ART**

**Van Gogh and Gauguin ART**

**Venice ART**

**A Guide to SQL CMP**

**Beloved FIC**

1. Retrieve a count of the number of books published by Penguin USA. Name the column ‘Penguin Books’. Order does not matter. Show your full result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT COUNT(publisherName) AS "Penguin Books" FROM publisher**

**WHERE publisherName="Penguin USA";**

**Output:**

**# Penguin Books**

**1**

1. Retrieve the publisherCode and the number of books from from publisher from the book relation. Order the result by the count in descending order. Show the first five rows of the result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT publisherCode, COUNT(title) AS count FROM book**

**GROUP BY publisherCode**

**ORDER BY count DESC;**

**Output:**

**# publisherCode count**

**PE 4**

**JP 3**

**LB 3**

**PL 3**

**SC 2**

1. Retrieve the publisherCode and the number of books from that publisher from the book relation. Order the results by publisherCode and only show publishers who have 3 or more books in the relation. **Hint: will need to use the HAVING keyword.** Show your full result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT publisherCode, COUNT(title) AS count FROM book**

**GROUP BY publisherCode**

**HAVING count>2**

**ORDER BY publisherCode;**

**Output:**

# publisherCode count

JP 3

LB 3

PE 4

PL 3

1. Retrieve the number of books in the book relation whose prices is $20.00 or lower. Order does not matter. Show your full result. **(3 points)**

**SQL Statement:**

USE henry;

SELECT COUNT(price) FROM book

WHERE price<20;

**Output:**

**# COUNT(price)**

**28**

1. Retrieve the title of the most expensive book in the book relation. Use a subquery for this problem. Show your full result. **(3 points)**

**SQL Statement:**

**SELECT title**

**FROM book**

**WHERE price IN (**

**SELECT MAX(price)**

**FROM book);**

**Output:**

# title

A Guide to SQL

1. Retrieve the title of the least expensive book in the book relation. Use a subquery for this problem. Show your full result. **(3 points)**

**SQL Statement:**

**USE henry;**

**SELECT title**

**FROM book**

**WHERE price IN (**

**SELECT MIN(price)**

**FROM book);**

**Output:**

# title

Nine Stories

Franny and Zooey

The Catcher in the Rye

1. Retrieve the title of all books in the book relation that are not published in New York. Order result by the city ascending. Use a subquery for this query. **(5 points)**

**SQL Statement:**

**USE henry;**

**SELECT title**

**FROM book**

**WHERE publisherCode IN (**

**SELECT publisherCode**

**FROM publisher**

**WHERE city != "New York"**

**ORDER BY city);**

**Output:**

**# title**

**Treasure Chests**

**Van Gogh and Gauguin**

**Group: Six People in Search of a Life**

**Band of Brothers**

**A Guide to SQL**

**Godel, Escher, Bach**

1. Retrieve all of the columns from the book and publisher relations in one result. Use aliases in your query and use the simple JOIN syntax. Order does not matter. **(5 points)**

**SQL Statement:**

**SELECT \***

**FROM book b, publisher p**

**WHERE b.publisherCode = p.publisherCode;**

**Output:**

# bookCode title publisherCode TYPE price paperback publisherCode publisherName city

0180 A Deepness in the Sky TB SFI 7.19 Y TB Tor books New York

0189 Magic Terror FA HOR 7.99 Y FA Fawcett books New York

0200 The Stranger VB FIC 8.00 Y VB Vintage books New York

0378 Venice SS ART 24.50 N SS Simon and Schuster New York

079X Second Wind PU MYS 24.95 N PU Putnam Publishing Group New York

0808 The Edge JP MYS 6.99 Y JP Jove Publications New York

1351 Dreamcatcher: A Novel SC HOR 19.60 N SC Scribner New York

1382 Treasure Chests TA ART 24.46 N TA Taunton Press Newtown CT

138X Beloved PL FIC 12.95 Y PL Plume New York

2226 Harry Potter and the Prisoner of Azkaban ST SFI 13.96 N ST SchoLASTic Trade New York

2281 Van Gogh and Gauguin WP ART 21.00 N WP Westview Press Boulder CO

2766 Of Mice and Men PE FIC 6.95 Y PE Penguin USA New York

2908 Electric Light FS POE 14.00 N FS Farrar Straus and Giroux New York

3350 Group: Six People in Search of a Life BP PSY 10.40 Y BP Berkley Publishing Boston

3743 Nine Stories LB FIC 5.99 Y LB Lb books New York

3906 The Soul of a New Machine BY SCI 11.16 Y BY Back Bay books New York

5163 Travels with Charley PE TRA 7.95 Y PE Penguin USA New York

5790 Catch-22 SC FIC 12.00 Y SC Scribner New York

6128 Jazz PL FIC 12.95 Y PL Plume New York

6328 Band of Brothers TO HIS 9.60 Y TO Touchstone books Westport CT

669X A Guide to SQL CT CMP 37.95 Y CT Course Technology Boston

6908 Franny and Zooey LB FIC 5.99 Y LB Lb books New York

7405 East of Eden PE FIC 12.95 Y PE Penguin USA New York

7443 Harry Potter and the Goblet of Fire ST SFI 18.16 N ST SchoLASTic Trade New York

7559 The Fall VB FIC 8.00 Y VB Vintage books New York

8092 Godel, Escher, Bach BA PHI 14.00 Y BA Basic books Boulder CO

8720 When Rabbit Howls JP PSY 6.29 Y JP Jove Publications New York

9611 Black House RH HOR 18.81 N RH Random House New York

9627 Song of Solomon PL FIC 14.00 Y PL Plume New York

9701 The Grapes of Wrath PE FIC 13.00 Y PE Penguin USA New York

9882 Slay Ride JP MYS 6.99 Y JP Jove Publications New York

9883 The Catcher in the Rye LB FIC 5.99 Y LB Lb books New York

9931 To Kill a Mockingbird HC FIC 18.00 N HC HarperCollins publishers New York

1. Rewrite the previous query using the ON keyword. **(5 points)**

**SQL Statement:**

USE henry;

SELECT \*

FROM book c

JOIN publisher p ON c.publisherCode = p.publisherCode;

**Output:**

**# bookCode title publisherCode TYPE price paperback publisherCode publisherName city**

**0180 A Deepness in the Sky TB SFI 7.19 Y TB Tor books New York**

**0189 Magic Terror FA HOR 7.99 Y FA Fawcett books New York**

**0200 The Stranger VB FIC 8.00 Y VB Vintage books New York**

**0378 Venice SS ART 24.50 N SS Simon and Schuster New York**

**079X Second Wind PU MYS 24.95 N PU Putnam Publishing Group New York**

**0808 The Edge JP MYS 6.99 Y JP Jove Publications New York**

**1351 Dreamcatcher: A Novel SC HOR 19.60 N SC Scribner New York**

**1382 Treasure Chests TA ART 24.46 N TA Taunton Press Newtown CT**

**138X Beloved PL FIC 12.95 Y PL Plume New York**

**2226 Harry Potter and the Prisoner of Azkaban ST SFI 13.96 N ST SchoLASTic Trade New York**

**2281 Van Gogh and Gauguin WP ART 21.00 N WP Westview Press Boulder CO**

**2766 Of Mice and Men PE FIC 6.95 Y PE Penguin USA New York**

**2908 Electric Light FS POE 14.00 N FS Farrar Straus and Giroux New York**

**3350 Group: Six People in Search of a Life BP PSY 10.40 Y BP Berkley Publishing Boston**

**3743 Nine Stories LB FIC 5.99 Y LB Lb books New York**

**3906 The Soul of a New Machine BY SCI 11.16 Y BY Back Bay books New York**

**5163 Travels with Charley PE TRA 7.95 Y PE Penguin USA New York**

**5790 Catch-22 SC FIC 12.00 Y SC Scribner New York**

**6128 Jazz PL FIC 12.95 Y PL Plume New York**

**6328 Band of Brothers TO HIS 9.60 Y TO Touchstone books Westport CT**

**669X A Guide to SQL CT CMP 37.95 Y CT Course Technology Boston**

**6908 Franny and Zooey LB FIC 5.99 Y LB Lb books New York**

**7405 East of Eden PE FIC 12.95 Y PE Penguin USA New York**

**7443 Harry Potter and the Goblet of Fire ST SFI 18.16 N ST SchoLASTic Trade New York**

**7559 The Fall VB FIC 8.00 Y VB Vintage books New York**

**8092 Godel, Escher, Bach BA PHI 14.00 Y BA Basic books Boulder CO**

**8720 When Rabbit Howls JP PSY 6.29 Y JP Jove Publications New York**

**9611 Black House RH HOR 18.81 N RH Random House New York**

**9627 Song of Solomon PL FIC 14.00 Y PL Plume New York**

**9701 The Grapes of Wrath PE FIC 13.00 Y PE Penguin USA New York**

**9882 Slay Ride JP MYS 6.99 Y JP Jove Publications New York**

**9883 The Catcher in the Rye LB FIC 5.99 Y LB Lb books New York**

**9931 To Kill a Mockingbird HC FIC 18.00 N HC HarperCollins publishers New York**

1. Retrieve the title from the book relation and the city from the publisher relation using a JOIN query. Use aliases in your query. Order the result by title. **(5 points)**

**SQL Statement:**

USE henry;

SELECT title, city

FROM book c

JOIN publisher p ON c.publisherCode = p.publisherCode

ORDER BY title;

**Output:**

# title city

A Deepness in the Sky New York

A Guide to SQL Boston

Band of Brothers Westport CT

Beloved New York

Black House New York

Catch-22 New York

Dreamcatcher: A Novel New York

East of Eden New York

Electric Light New York

Franny and Zooey New York

Godel, Escher, Bach Boulder CO

Group: Six People in Search of a Life Boston

Harry Potter and the Goblet of Fire New York

Harry Potter and the Prisoner of Azkaban New York

Jazz New York

Magic Terror New York

Nine Stories New York

Of Mice and Men New York

Second Wind New York

Slay Ride New York

Song of Solomon New York

The Catcher in the Rye New York

The Edge New York

The Fall New York

The Grapes of Wrath New York

The Soul of a New Machine New York

The Stranger New York

To Kill a Mockingbird New York

Travels with Charley New York

Treasure Chests Newtown CT

Van Gogh and Gauguin Boulder CO

Venice New York

When Rabbit Howls New York

1. Retrieve the title from the book relation and the author lastName from the author relation. Order by author lastName. Use aliases in your query. **This will involve JOINING the book, author and wrote relations.** **(5 points)**

**SQL Statement:**

**USE henry;**

**SELECT title, lastName**

**FROM book b**

**JOIN wrote w ON b.bookCode = w.bookCode**

**JOIN author a ON a.authorNum = w.authorNum**

**ORDER BY lastName;**

**Output:**

# title lastName

Band of Brothers Ambrose

The Stranger Camus

The Fall Camus

When Rabbit Howls Chase

Van Gogh and Gauguin Collins

Van Gogh and Gauguin Collins, Jr.

Second Wind Francis

The Edge Francis

Slay Ride Francis

Electric Light Heaney

Catch-22 Heller

Godel, Escher, Bach Hofstadter

The Soul of a New Machine Kidder

Dreamcatcher: A Novel King

Black House King

To Kill a Mockingbird Lee

Jazz Morrison

Beloved Morrison

Song of Solomon Morrison

Treasure Chests O'Rourke

A Guide to SQL Pratt

Harry Potter and the Prisoner of Azkaban Rowling

Harry Potter and the Goblet of Fire Rowling

Nine Stories Salinger

Franny and Zooey Salinger

The Catcher in the Rye Salinger

Treasure Chests Schleining

Group: Six People in Search of a Life Solotaroff

East of Eden Steinbeck

The Grapes of Wrath Steinbeck

Travels with Charley Steinbeck

Of Mice and Men Steinbeck

Black House Straub

Magic Terror Straub

A Deepness in the Sky Vintage

Venice Wills

1. Retrieve the title from the book relation and branchNum and onHand from the inventory relation. Use aliases in your query. Order the result by title. **(5 points)**

**SQL Statement:**

**USE henry;**

**SELECT title, branchNum, onHand**

**FROM book b, inventory i**

**WHERE b.bookCode = i.bookCode**

**ORDER BY title;**

**Output:**

# title branchNum onHand

A Deepness in the Sky 1 2

A Guide to SQL 1 1

Band of Brothers 2 2

Beloved 2 3

Black House 1 2

Catch-22 4 2

Dreamcatcher: A Novel 2 4

Dreamcatcher: A Novel 3 2

East of Eden 3 2

Electric Light 1 3

Electric Light 4 1

Franny and Zooey 2 2

Godel, Escher, Bach 3 1

Group: Six People in Search of a Life 1 2

Harry Potter and the Goblet of Fire 4 1

Harry Potter and the Prisoner of Azkaban 1 3

Harry Potter and the Prisoner of Azkaban 3 2

Harry Potter and the Prisoner of Azkaban 4 1

Jazz 2 4

Jazz 3 3

Magic Terror 2 2

Nine Stories 2 1

Of Mice and Men 3 2

Second Wind 2 1

Second Wind 3 2

Second Wind 4 3

Slay Ride 3 3

Song of Solomon 3 5

Song of Solomon 4 2

The Catcher in the Rye 2 3

The Catcher in the Rye 4 2

The Edge 2 1

The Fall 2 2

The Grapes of Wrath 1 2

The Grapes of Wrath 2 1

The Grapes of Wrath 3 3

The Grapes of Wrath 4 2

The Soul of a New Machine 2 1

The Soul of a New Machine 3 2

The Stranger 1 1

The Stranger 2 3

To Kill a Mockingbird 1 2

Travels with Charley 1 1

Treasure Chests 2 1

Van Gogh and Gauguin 4 3

Venice 3 2

When Rabbit Howls 1 3

1. Retrieve the title from the book relation, the branchName from the branch relation and number of copies onHand from the inventory relation. Use aliases in your query. Order the result by title ascending. **(5 points)**

**SQL Statement:**

USE henry;

SELECT title, branchName, onHand

FROM book b, inventory i, branch br

WHERE b.bookCode = i.bookCode AND br.branchNum = i.branchNum

ORDER BY title;

**Output:**

# title branchName onHand

A Deepness in the Sky Henry Downtown 2

A Guide to SQL Henry Downtown 1

Band of Brothers Henry On The Hill 2

Beloved Henry On The Hill 3

Black House Henry Downtown 2

Catch-22 Henry Eastshore 2

Dreamcatcher: A Novel Henry On The Hill 4

Dreamcatcher: A Novel Henry Brentwood 2

East of Eden Henry Brentwood 2

Electric Light Henry Eastshore 1

Electric Light Henry Downtown 3

Franny and Zooey Henry On The Hill 2

Godel, Escher, Bach Henry Brentwood 1

Group: Six People in Search of a Life Henry Downtown 2

Harry Potter and the Goblet of Fire Henry Eastshore 1

Harry Potter and the Prisoner of Azkaban Henry Downtown 3

Harry Potter and the Prisoner of Azkaban Henry Brentwood 2

Harry Potter and the Prisoner of Azkaban Henry Eastshore 1

Jazz Henry Brentwood 3

Jazz Henry On The Hill 4

Magic Terror Henry On The Hill 2

Nine Stories Henry On The Hill 1

Of Mice and Men Henry Brentwood 2

Second Wind Henry On The Hill 1

Second Wind Henry Brentwood 2

Second Wind Henry Eastshore 3

Slay Ride Henry Brentwood 3

Song of Solomon Henry Brentwood 5

Song of Solomon Henry Eastshore 2

The Catcher in the Rye Henry Eastshore 2

The Catcher in the Rye Henry On The Hill 3

The Edge Henry On The Hill 1

The Fall Henry On The Hill 2

The Grapes of Wrath Henry Downtown 2

The Grapes of Wrath Henry On The Hill 1

The Grapes of Wrath Henry Eastshore 2

The Grapes of Wrath Henry Brentwood 3

The Soul of a New Machine Henry Brentwood 2

The Soul of a New Machine Henry On The Hill 1

The Stranger Henry On The Hill 3

The Stranger Henry Downtown 1

To Kill a Mockingbird Henry Downtown 2

Travels with Charley Henry Downtown 1

Treasure Chests Henry On The Hill 1

Van Gogh and Gauguin Henry Eastshore 3

Venice Henry Brentwood 2

When Rabbit Howls Henry Downtown 3

1. Retrieve the title from the book relation and compute the number of copies of the title that all branches have on hand. Name this computed column ‘Inventory’ **Hint: You will need to join book and inventory and do an aggregate query.** Use aliases in your query. Order the result by the total number of copies of the book in descending order. Show the first two rows of your result. **(5 points)**

**SQL Statement:**

**SELECT title, SUM(onHand) AS inventory**

**FROM book b**

**JOIN inventory i ON b.bookCode=i.bookCode**

**GROUP BY b.title**

**ORDER BY inventory DESC;**

**Output:**

**# title inventory**

**The Grapes of Wrath 8**

**Jazz 7**

1. Retrieve the first name and last name from the author relation and the title from the book relation for all paperback books in the book relation. Order the result by the author last name and title. **(5 points)**

**SQL Statement:**

**USE henry;**

**SELECT firstName, lastName, title**

**FROM book b, author a, wrote w**

**WHERE w.authorNum = a.authorNum AND b.bookCode = w.bookCode AND paperback = "Y"**

**ORDER BY lastName, title;**

**Output:**

**# firstName lastName title**

**Stephen E. Ambrose Band of Brothers**

**Albert Camus The Fall**

**Albert Camus The Stranger**

**Truddi Chase When Rabbit Howls**

**Dick Francis Slay Ride**

**Dick Francis The Edge**

**Joseph Heller Catch-22**

**Douglas R. Hofstadter Godel, Escher, Bach**

**Tracy Kidder The Soul of a New Machine**

**Toni Morrison Beloved**

**Toni Morrison Jazz**

**Toni Morrison Song of Solomon**

**Philip Pratt A Guide to SQL**

**J.D. Salinger Franny and Zooey**

**J.D. Salinger Nine Stories**

**J.D. Salinger The Catcher in the Rye**

**Paul Solotaroff Group: Six People in Search of a Life**

**John Steinbeck East of Eden**

**John Steinbeck Of Mice and Men**

**John Steinbeck The Grapes of Wrath**

**John Steinbeck Travels with Charley**

**Peter Straub Magic Terror**

**Vernor Vintage A Deepness in the Sky**

1. Insert a new branch into the branch relation with the following data branch number = 5, branch name = Henry Lexington Green, branch location = 127 South Road, numEmployees = 7. Then write the query to show all of the branches in the branch relation. **(4 points)**

**SQL Statement:**

**USE henry;**

**INSERT INTO branch**

**VALUES(5, "Henry Lexington Green", "127 South Road", 7);**

**SELECT \* FROM branch;**

**Output:**

**# branchNum branchName branchLocation numEmployees**

**1 Henry Downtown 16 Riverview 10**

**2 Henry On The Hill 1289 Bedford 6**

**3 Henry Brentwood Brentwood Mall 15**

**4 Henry Eastshore Eastshore Mall 9**

**5 Henry Lexington Green 127 South Road 7**

1. The Henry Downtown branch moved to 184 St. John’s Way. Update the branch table with the new address. **(3 points)**

**SQL Statement:**

**USE henry;**

**UPDATE branch**

**SET branchLocation="184 St. John's Way"**

**WHERE branchNum=1;**

**SELECT \* FROM branch;**

**Output:**

**# branchNum branchName branchLocation numEmployees**

**1 Henry Downtown 184 St. John's Way 10**

**2 Henry On The Hill 1289 Bedford 6**

**3 Henry Brentwood Brentwood Mall 15**

**4 Henry Eastshore Eastshore Mall 9**

**5 Henry Lexington Green 127 South Road 7**