CPRG 250
Lab Module 4 Part 4
Single Row Functions

Create the SQL script for the following questions using the JustLee Books database. **Create a spool file that includes all of your SQL commands along with the results.** *Submit the script AND spool file via D2L.*

1. Add the following lines to your script:

        set echo on
        set linesize 132
        set pagesize 66

2. DISPLAY the last names of authors, the title of all books they have published, date published and final price. Format the date published as: *January 1, 2014*. The final price of each book is the retail price – discounts, be careful here as the DISCOUNT value may be NULL. Sort the book title. You can use the following COLUMN command to limit the width of the publication date column:

        COLUMN "Pub Date" FORMAT A20

do a:

        CLEAR COLUMNS

after the query to clear out the column width settings.

Format as shown below:

```
Surname     Book Title                  Pub Date             Final Price
---------   -------------------------   ------------------   -----------
Robinson    Big Bear And Little Dove    November 8, 2005            8.95
Porter      Bodybuild In 10 Minutes A Day  January 21, 2005        30.95
Smith       Bodybuild In 10 Minutes A Day  January 21, 2005        30.95
Kzochsky    Building A Car With Toothpicks March 18, 2006          56.95
Baker       Cooking With Mushrooms      February 28, 2004         19.95
Peterson    Database Implementation     June 4, 2003             55.95
Austin      Database Implementation     June 4, 2003             55.95
Adams       Database Implementation     June 4, 2003             55.95
Jones       E-Business The Easy Way     March 1, 2006            54.5
White       Handcranked Computers       January 21, 2005          25
White       Handcranked Computers       January 21, 2005          25
Austin      Holy Grail Of Oracle        December 31, 2005        72.15
Smith       How To Get Faster Pizza     November 11, 2006        28.45
White       How To Manage The Manager   May 9, 2003             31.95
Baker       Painless Child-Rearing      July 17, 2004           85.45
Robinson    Painless Child-Rearing      July 17, 2004           85.45
Fields      Painless Child-Rearing      July 17, 2004           85.45
Jones       Revenge Of Mickey           December 14, 2005         22
White       Shortest Poems              May 1, 2005             39.95
Smith       The Wok Way To Cook         September 11, 2004       28.75

20 rows selected.
```

3. Typically the publisher reviews the success of a book exactly six months after it is published. Print a report showing all book titles, the published date, and review date. Sort by book title. Headings on the columns should be "Title", "Date Published" and "Review Date". Use the COLUMN command to make the columns wide enough to display the headers correctly.

     COLUMN "colname" FORMAT A20

do a:

     CLEAR COLUMNS

after the query to clear out the column width settings.

```
Book Title                     Date Published    Review Date
------------------------------ ----------------- --------------------
Big Bear And Little Dove       08-NOV-05         08-MAY-06
Bodybuild In 10 Minutes A Day  21-JAN-05         21-JUL-05
Building A Car With Toothpicks  18-MAR-06         18-SEP-06
Cooking With Mushrooms         28-FEB-04         28-AUG-04
Database Implementation        04-JUN-03         04-DEC-03
E-Business The Easy Way        01-MAR-06         01-SEP-06
Handcranked Computers          21-JAN-05         21-JUL-05
Holy Grail Of Oracle           31-DEC-05         30-JUN-06
How To Get Faster Pizza        11-NOV-06         11-MAY-07
How To Manage The Manager      09-MAY-03         09-NOV-03
Painless Child-Rearing         17-JUL-04         17-JAN-05
Revenge Of Mickey              14-DEC-05         14-JUN-06
Shortest Poems                 01-MAY-05         01-NOV-05
The Wok Way To Cook            11-SEP-04         11-MAR-05

14 rows selected.
```

4. Produce a profit report of all books. The price of a book is 'retail-discount', if the discount price is null substitute in a value of 0 (consider using NVL). Notice that all output is formatted to two digits of precision (consider using TO_CHAR). Include the headings shown in the report below. Sort by highest profit book first and lowest profit book last. Use single row functions to format the output (Do NOT use the SQL*PLUS COLUMN command to format the output columns).

Sample profit calculation:
retail = $33.95
discount = $2.00
cost = $15.40
final price = retail – discount = 33.95 – 2 = 31.95
$ profit = (31.95-15.40) = $16.55
% profit = 16.55/15.40*100 = 107.47%

```
Book Title                       Price     Cost       % Profit
------------------------------   --------- ---------  ---------
How To Manage The Manager        31.95     15.40      107.47
Shortest Poems                   39.95     21.85       82.84
Database Implementation          55.95     31.40       78.18
Painless Child-Rearing           85.45     48.00       78.02
Big Bear And Little Dove          8.95      5.32       68.23
Bodybuild In 10 Minutes A Day    30.95     18.75       65.07
Cooking With Mushrooms           19.95     12.50       59.60
How To Get Faster Pizza          28.45     17.85       59.38
Revenge Of Mickey                22.00     14.20       54.93
Holy Grail Of Oracle             72.15     47.25       52.70
The Wok Way To Cook              28.75     19.00       51.32
Building A Car With Toothpicks   56.95     37.80       50.66
E-Business The Easy Way          54.50     37.90       43.80
Handcranked Computers            25.00     21.80       14.68

14 rows selected.
```

5. Produce a Margin Report for the JustLee Bookstore. The % margin of a book is:

$$(Retail\ price - cost\ price)/cost\ price * 100.0$$

The Margin Report is based on the cost and retail price and does NOT include the discount. Do not use the discount column in the % margin calculation.

The pricing structure is based on the following logic:

  if there is a discount then the pricing structure is 'Discounted, will NOT be restocked'.
  Else if margin >= 60 then the pricing structure is 'Very High Profit'
  Else if margin >= 30 then the pricing structure is 'High Profit'
  Else if margin >= 0 then the pricing structure is 'Loss Leader'

Sort by title. Use TO_CHAR to format the 'Margin' and 'Discount' columns, use CASE to manage the 'Pricing Structure' column. Sort by book title. The following is the expected output:

```
Book Title                       Margin   Discount  Pricing Structure
-------------------------------- -------- --------- ----------------------------------
Big Bear And Little Dove          68.23             Very high profit
Bodybuild In 10 Minutes A Day     65.07             Very high profit
Building A Car With Toothpicks    58.60      3.00   Discounted, will NOT be restocked
Cooking With Mushrooms            59.60             High profit
Database Implementation           78.18             Very high profit
E-Business The Easy Way           43.80             High profit
Handcranked Computers             14.68             Loss Leader
Holy Grail Of Oracle              60.74      3.80   Discounted, will NOT be restocked
How To Get Faster Pizza           67.79      1.50   Discounted, will NOT be restocked
How To Manage The Manager        107.47             Very high profit
Painless Child-Rearing            87.40      4.50   Discounted, will NOT be restocked
Revenge Of Mickey                 54.93             High profit
Shortest Poems                    82.84             Very high profit
The Wok Way To Cook               51.32             High profit

14 rows selected.
```