### book128 DBS201 Assignment (15% of final mark)

### Normalization of CanAmazing.com User Views

Due- Monday April 16, 2018 -3:30 pm

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Please note that 3:30 pm is the time the assignment is due.

Hand in your **printed** solution of this assignment. Email and drop box submissions will **not** be accepted.

Late assignments incur a penalty of 20% per “working day”.

Assignment is to be done in groups of 4 or 5.  An assignment done by less people will incur a penalty of 20%.

All group members must sign the assignment submission form found in course standards section on BB.

1) Assignments will be marked on

a) Correctness - All 3NF relations have been identified with correct attributes, Primary Keys and all Foreign Keys.

b) Meaningfulness - use of meaningful relation (table) and attribute names.

c) Relations are shown in alphabetic order when requested (i.e. after step 2.6 for each user view and after step 7).

d) ERD of final design using crow’s foot notation

e) Collections with the appropriate tables, views and constraints are created using DB2 on the IBMi with the data shown in the user views.

f) Collections and tables are secured with appropriate access.

g) System printouts are submitted showing table contents and views and use the DSPFD command to show all constraints

**TO HAND-IN**

2) For each user view:

2.1) Print the UNF relation including the Primary Key and Multi-Valued Dependencies.

2.2) Convert the UNF to 1st Normal Form and print the 1st Normal Form.

2.3) Convert the 1st Normal Form to 2nd Normal Form and print the 2nd Normal Form

2.4) Convert the 2nd Normal Form to 3rd Normal Form and print the 3rd Normal Form

2.5) Simplify primary keys wherever possible and print any relations that changed. (Note: often no simplification is possible)

2.6) Name the relations (tables) and print the recommended tables from this User View.

**NOTE: When showing the results of step 2.6, the tables must be shown in alphabetic order by table name!**

3) Merge all 3rd Normal Form relations from step 2.6 coming from the six User Views.

4) If any of the merged relations is in 2nd Normal Form, convert it to 3rd Normal Form.

5) Perform any new merging opportunities and repeat steps 4 and 5 until there are no more merging or 2NF-to-3NF conversions possible.

6) Identify all Foreign Keys

7) Explode multi-field attributes into many fields and list your final list of tables that you recommend for the CanAmazing.com database.

**NOTE: When showing the results of step 7, the tables must be shown in alphabetic order by table name!**

book128**CanAmazing.com**

CanAmazing.com is an internet based company that sells books of all types. It is a great Canadian success story. There are hard cover books, paperpback books, audio books, downloadable books and various other types as well.

The following 6 user views allow you to understand their business. By using normalization you will be able to recommend the best database design. The database you recommend will be free of data redundancies and data inconsistencies as well as update, insert and deletion anomalies.

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*BOOK INFORMATION*

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BOOK PRIZES

Book Prize

Prize ISBN Title Amount Author(s) .

Annual Presentation Los Angeles 9781416513285 THE PURSUIT OF HAPPINESS $55,000. May Looking

Times Book Prize Alice Fore

Alison Joy

Kiriyama-Leno Pacific Rim 9780310205715 THE ASSOCIATE $235,000. John Grisham

Book Prize

Man Booker International 9780743296410 HANDLE WITH MUCH CARE $145,000. Jodi Picoult

Prize

National Book Critics Circle 9780310205715 THE ASSOCIATE $100,000. John Grisham

Awards

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Note: CanAmazing.com keeps track of the current year’s winners only. On Jan 1 of the new year the prize information is copied to a “historical” database to make room for current year prizes. After copying, the information for each prize is set to null. Do not include any tables or attributes for any historical data.

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YEAR OF THE

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AUTHOR BIRTH SOLD(Y/N) BOOKS CATEGORY BOOKS IN THIS LANGUAGE

1009- John Grisham 03/03/1953 Y The Associate 1-Fiction English 1982

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America’s Economic Collapse 6-Politics French 1999

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The Real Canadian Challenge 6- Politics

Le Schism Civile du Sudan 6-Politics

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English 1998

French 1999

Swahili 2001

Urdu 2003

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