The University of British Columbia

Computer Science 304

Midterm Examination

October 29, 2013

Time: 80 minutes Total marks: 30

Instructor: Rachel Pottinger

Name_____Student No_____

(PRINT) (Last) (First)

Signature_____

This examination has 4 doublesided pages.

Check that you have a complete paper.

This is a closed book, closed notes exam. No books or other material may be used.

Answer all the questions on this paper.

Give very **short but precise** answers.

State any assumptions you make

Work fast and do the easy questions first. Leave some time to review your exam at the end.

Good Luck

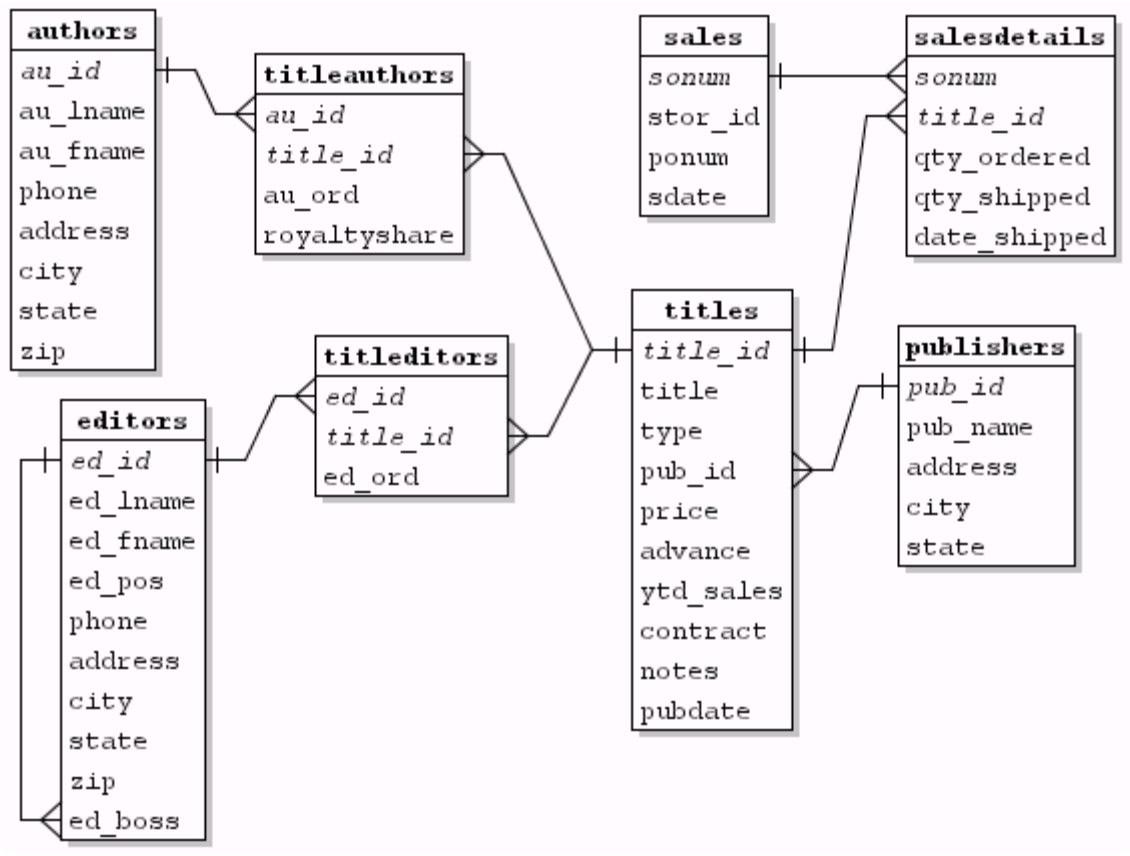
Question	Mark	Out of
1.a		5
1.b		5
1.c		5
1.d		5
2.a		5
2.b		5
TOTAL		Out of 30

All queries for this exam use the same schema as in some of the SQL tutorials:

authors(au_id, au_lname, au_fname, phone, address, city, state, zip)
titleauthors(au_id, title_id, au_ord, royaltyshare)
sales(sonum, stor_id, ponum, sdate)
salesdetails(sonum, qty_ordered, qty_shipped, title_id, date_shipped)
editors (ed_id, ed_lname, ed_fname, ed_pos, phone, address, city, state, zip,ed_boss)
titleditors(ed_id, title_id, ed_ord)
titles(title_id, title, type, pub_id, price, advance, ytd_sales, contract, notes, pubdate)
publishers(pub_id, pub_name, address, city, state)

The schema will be repeated on following pages for easy reference

Foreign Keys are shown in the following diagram, where the referring attribute is marked by a + and the referencing attribute is marked by a ∢ (e.g., au_id in titleauthors references au_id in authors)



The schema again:

authors(au_id, au_lname, au_fname, phone, address, city, state, zip)
titleauthors(au_id, title_id, au_ord, royaltyshare)
sales(sonum, stor_id, ponum, sdate)
salesdetails(sonum, qty_ordered, qty_shipped, title_id, date_shipped)
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titleditors(ed_id, title_id, ed_ord)
titles(title_id, title, type, pub_id, price, advance, ytd_sales, contract, notes, pubdate)
publishers(pub_id, pub_name, address, city, state)

1. a.**SQL:** Find the first name of all authors who are not editors. Remove duplicates and alphabetize.

The schema again:

authors(au_id, au_lname, au_fname, phone, address, city, state, zip)
titleauthors(au_id, title_id, au_ord, royaltyshare)
sales(sonum, stor_id, ponum, sdate)
salesdetails(sonum, qty_ordered, qty_shipped, title_id, date_shipped)
editors (ed_id, ed_lname, ed_fname, ed_pos, phone, address, city, state, zip)
titleditors(ed_id, title_id, ed_ord)
titles(title_id, title, type, pub_id, price, advance, ytd_sales, contract, notes, pubdate)
publishers(pub_id, pub_name, address, city, state)

b. **SQL:** "List the last names of all authors who have a letter 'k' in their last name?" If a last name occurs more than once, only list it once

The schema again:

authors(au_id, au_lname, au_fname, phone, address, city, state, zip)
titleauthors(au_id, title_id, au_ord, royaltyshare)
sales(sonum, stor_id, ponum, sdate)
salesdetails(sonum, qty_ordered, qty_shipped, title_id, date_shipped)
editors (ed_id, ed_lname, ed_fname, ed_pos, phone, address, city, state, zip)
titleditors(ed_id, title_id, ed_ord)
titles(title_id, title, type, pub_id, price, advance, ytd_sales, contract, notes, pubdate)
publishers(pub_id, pub_name, address, city, state)

c: **SQL**. For each editor who has edited more than two books, return the last name of the editor and how many books she/he has edited

- The schema again:
  authors(au_id, au_lname, au_fname, phone, address, city, state, zip)
  titleauthors(au_id, title_id, au_ord, royaltyshare)
  sales(sonum, stor_id, ponum, sdate)
  salesdetails(sonum, qty_ordered, qty_shipped, title_id, date_shipped)
  editors (ed_id, ed_lname, ed_fname, ed_pos, phone, address, city, state, zip)
  titleditors(ed_id, title_id, ed_ord)
  titles(title_id, title, type, pub_id, price, advance, ytd_sales, contract, notes, pubdate)
  publishers(pub_id, pub_name, address, city, state)

  d. Find the last name of the first author(s) of the book(s) that has had the most number of copies ordered. Remove duplicates.

The schema again:

authors(au_id, au_lname, au_fname, phone, address, city, state, zip)
titleauthors(au_id, title_id, au_ord, royaltyshare)
sales(sonum, stor_id, ponum, sdate)
salesdetails(sonum, qty_ordered, qty_shipped, title_id, date_shipped)
editors (ed_id, ed_lname, ed_fname, ed_pos, phone, address, city, state, zip)
titleditors(ed_id, title_id, ed_ord)
titles(title_id, title, type, pub_id, price, advance, ytd_sales, contract, notes, pubdate)
publishers(pub_id, pub_name, address, city, state)

2. THIS QUESTION IS FOR DATALOG

a. **DATALOG:** Find the first name of all people who have been either editors *or* authors

b. **DATALOG:** Find the titles of all books by an author with the last name 'Smith' where the author's zip is greater than 15232

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