**CSc33600 – Final Exam**  
BS Computer Science Degree Program at City College of New York, Fall 2020

**Instructions & Important Information:  
This is a 2 hrs. live online exam as per the CCNY policy. This is an open book, open internet exam. NO consultations are permitted involving other human beings/resources either in person or over phone or online. The penalty of violation of this policy could be very severe including “fail” grade for all parties concerned. The case(s) will be reported to the Department for possible further penal action(s).**

**Answer all EACH Question is 10 Marks, unless shown otherwise. Total Marks= 100. Partial answer will be scored accordingly.**

**As stated in earlier classes this exam requires using the database, object and data generated from Project 1. Failure of having access to such data is not acceptable as this prerequisite has been repeatedly announced in earlier classes.**

**The answers to the Exam questions are to be provided as SQL files (as .sql or word doc) and the results from queries should be provided as Excel doc. Ideally there should be only ONE SQL/Word doc and one Excel spreadsheet. Each doc then can contain the answers that are properly labeled with Q.#. For Excel, create multiple tab and have data from one question in one tab. The tabs should be labeled with Q. No. Template for Excel spreadsheet is included. Question 10 will not generate output.**

**All Answers MUST be PROPERLY labeled with Question Number. All FILES submitted MUST carry student name. In case multiple files are generated these must refer to Question No. Failure to adhere to this policy can lead to lower marks and no subsequent excuses will be entertained.**

**The answers must be emailed to the professor (Prof. Kumud Majumder) at the end of the exam.**

**Good Luck to all the students.**

**QUESTIONS:**

1. Create a VIEW of ‘sales’ for all books sold before Jan 1, 1997 (stor\_id, title\_id, date).
   1. Run - SELECT \* FROM <VIEW NAME> and provide output. - **5 MARKS**
2. Create a VIEW of all books (pub\_ id, title\_id, price, num\_sold, pubdate) for books that are  
   number sold <5000 and published before Oct 06, 1990 (titles table).
   1. Run - SELECT \* FROM <VIEW NAME> and provide output. - **5 MARKS**
3. Create a new table BOOK\_SALES\_PROMO with columns

stor\_id (char (4)),

title\_id (varchar(20)),

title (varchar(80)),

pub\_id (char(4)), price (money), discount (integer) (assign default = 0), discounted\_price (money). – **5 MARKS**

* 1. Run - SELECT \* FROM BOOK\_SALES\_PROMO and provide output.

1. ALTER table BOOK\_SALES\_PROMO, add primary key constraint with composite key - stor\_id, title\_id.
   1. Run and Provide output of the ALTER Table statement.
2. Insert into table BOOK\_SALES\_PROMO, with data from Views from steps 1 & 2, joining with other tables as needed. Assign the value of discounted\_price = price.
   1. Run - SELECT \* FROM BOOK\_SALES\_PROMO and provide output

* Has 2 records that have different discount

1. Update BOOK\_SALES\_PROMO table. (**NOTE- MUST use CASE statement**)
   1. SET discount =20, discounted\_price = price \* ((100 – 20)/100) for all books with

pubdate <= Dec 31, 1986.

* 1. SET discount =10, discounted\_price = price \* ((100 – 10)/100) for all books with

pubdate >= Jan 1, 1987.

* 1. Run - SELECT \* FROM BOOK\_SALES\_PROMO and provide output.

1. **NOTE-**  The roysched table shows which author gets how much royalty based on how many copies of their books (title table) are sold. For example, the data in the roysched table shows that for title\_id BU1032, the author gets 10% of the price if the total number of copies (qty) sold are between the range of 0-5000. When more than 5000 copies are sold, then the author gets 12% for the additional copies sold between the range of 5001-50000. This means that if 6000 copies of BU1032 are sold, the author gets ((price\*0.1)\*5000) + ((price\*0.12)\*(6000-5000)).

Using this concept and using the data from the roysched table generate a report that shows the following for all authors. The report should contain - au\_id, author\_name, title\_id, title, qty, royalty\_amount. Note: The author name should be shown as “first name ‘ ‘ last name” e.g., “Sam Smith”. Hint- authors table has author info. roysched table has royalty and range info. The title\_id and copies sold (qty) info is available in the salesdetail table. Join with other tables title\_author, title, etc.as needed. - **20 Marks**

1. USE “ SELECT INTO “ Statement to backup the salesdetail table as salesdetail\_backup-
   1. Run - SELECT \* FROM salesdetail\_backup and provide output. - **5 MARKS**
2. Update salesdetail table and SET qty = qty \*3. Then, generate the same report as in step #7 above with the following changes. This new report should show the top 2 authors with highest royalty and the bottom 2 authors with the lowest royalty. – **20 Marks**

NOTE- MUST use UNION operator or temporary table for the query used to generate this report.

1. Describe clearly what will happen to the data and object when you run the following queries-
   1. TRUNCATE TABLE BLURBS
   2. DELETE FROM BLURBS
   3. DROP TABLE BLURBS

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