

## SQL Assignment 2 2020 T1 (17%)

**\*IMPORTANT\***

- (1) Only use the “join on” syntax for questions that require an inner join.

*SELECT column-list*

*FROM table 1 JOIN table 2 ON joint-condition*

*Where conditions*

- (2) For numeric attributes use the “=” sign, for example “percent\_time =100” not “percent\_time IS 100”.  
(3) No need to use sub-query in this assignment.

1. (a) List the total number of items published by each author and exclude author with no name. Sort the “Total Items Published” in descending.

Author	Total Items Published

- (b) List the total number of authors for each media code type published and exclude author with no name.

Media Code	Total Number of Authors

- (c) List the total number of distinct authors and the total number of items published exclude author with no name.

Total Number of Authors	Total Items Published

2. (a) Items that are not “checkedin” are shown as “NULL” in the loan table. List the total number of items that are not checked in.

Total Number of Non-Checked in Items

- (b) List the customer “Full Name” in ascending order, the “Title”, the “Due date” without the time component, and the “Condition” of the items that are not checked in. You can use the date() function to extract the date.

Full Name	Title	Due Date	Condition
Firstname, Lastname			

3. The account manager would like to compare between genders the number of customers, the number of times overdue, the total overdue fee and the overdue fee per customer. Sort the “Number of Customers” in descending order. The result displays only two rows. The overdue fee per customer displays 2 decimal places.

Gender	Number of Customers	Number of Times Overdue	Total Overdue Fee	Overdue Fee Per Customer

4. List the “CustomerID”, “Full Name”, “Number of Loans” and “Major” for each customer including customer with no loan and exclude customers with no major. The result in the “Number of Loans” column should display “0” for customer with no loan. Sort the CustomerID in ascending order.

CustomerID	Full Name	Number of Loans	Major
	Firstname, Lastname		

5. (a) List the “Full Name” and “Inventoryitemid” of customers who borrowed items with the inventoryitemid 3 or 5.

Full Name	Inventoryitemid
Firstname, Lastname	

- (b) Now, list the customers who borrowed the two items, inventoryitemid 3 and inventoryitemid 5. Modify the SQL in part (a) to display a list of distinct “Full Name” and “CustomerID” who meets the requirement. Use only the *aggregate* method. Note, a person who borrowed a single item with the same inventoryitemsid twice or more does not meet the requirement.

Full Name	CustomerID
Firstname, Lastname	

- (c) Repeat the question in (b) but use a *self-join* method to display a list of distinct “Full Name” and “CustomerID” who meets the requirement.
6. (a) The manager wants to know the yearly breakdown of the monthly total number of loans and the monthly total overdue fee for each month. Write the SQL that will meet the requirement. Sort the results in ascending order by Year and ascending order by Month. **Hint:** (1) Use CheckOut date to extract the year and month when the book is loaned; (2) Use strftime() function to deal with the year and month. The table below shows a partial example.

Year	Month	Number of Loans	Monthly Overdue Fee
2012	04	1	NULL
2012	05	1	NULL
2012	10	1	NULL
2013	05	1	NULL
2013	07	1	NULL
2013	09	1	NULL
...	...	...	...
2015	04	2	118.0

- (b) Modify (a) with one extra line of code to show only the rows with an overdue fee.