Student Name	Lin Rui	
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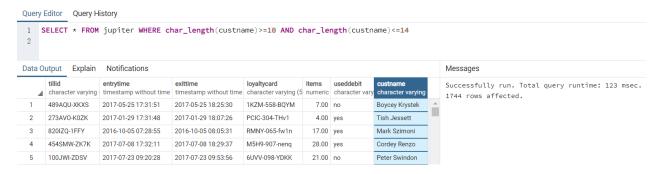
Student Name	林锐
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# CS130 Databases

# Lab 6 Report

QUESTION 1: Select all of the shop visits who have customer names with total length between 10 and 14 characters inclusive.

**SQL Language:** SELECT \* FROM jupiter WHERE char\_length(custname)>=10 AND char\_length(custname)<=14 **Running result:** 1744 rows returned



QUESTION 2: Write an SQL query which returns all of the shop visits where the number of items is between 9 and 13 inclusive and a debit card is not used.

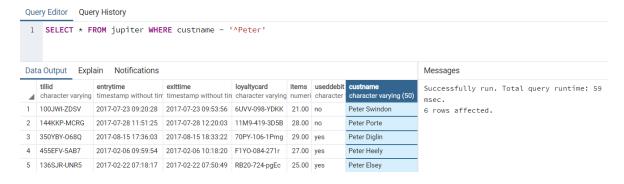
**SQL Language:** SELECT \* FROM jupiter WHERE items>=9 AND items<=13 AND useddebit='no' **Running result:** 249 rows returned



QUESTION 3: Write an SQL query which returns all of the shop visits where the first name of the customer is Peter.

**SQL Language:** SELECT \* FROM jupiter WHERE custname ~ '^Peter'

Running result: 6 rows returned



QUESTION 4: Write an SQL query which returns all of the shop visits where the entry time and exit time are both on the 27th day of January in 2017.

## SQL Language:

SELECT \* FROM jupiter

WHERE date\_part('year',entrytime)=2017 AND date\_part('year',exittime)=2017

AND EXTRACT(DOY FROM entrytime)=27 AND EXTRACT(DOY FROM exittime)=27

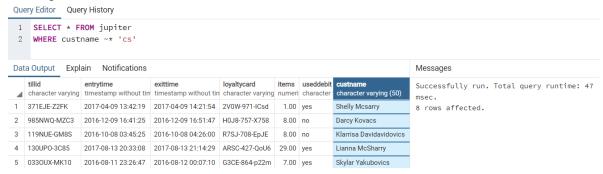
## Running result: 7 rows returned

Query Editor Query History									
1 SELECT * FROM jupiter 2 WHERE date_part('year',entrytime)=2017 AND date_part('year',exittime)=2017 3 AND EXTRACT(DOY FROM entrytime)=27 AND EXTRACT(DOY FROM exittime)=27									
Dat	Data Output Explain Notifications						Messages		
4	tillid character varying	entrytime timestamp without tim	exittime timestamp without tin	loyaltycard character varying			custname character varying (50)	Successfully run. Total query runtime: 49	
1	343ERD-7A9K	2017-01-27 02:49:33	2017-01-27 03:29:04	4X04-046-9WvV	12.00	yes	Martie Ayto	7 rows affected.	
2	611DSP-Y0UR	2017-01-27 05:23:54	2017-01-27 06:05:05	1IGA-152-Hiff	11.00	yes	Stillmann Gadault		
3	391ADA-FOMS	2017-01-27 08:32:55	2017-01-27 08:52:30	ZPHT-752-sYVI	27.00	yes	Roanna Cowlas		
4	637EKT-GIOK	2017-01-27 16:58:39	2017-01-27 17:45:17	2DBC-207-PeYT	28.00	no	Trey Askam		
5	500VEX-XF4P	2017-01-27 09:12:11	2017-01-27 09:35:24	56XW-325-mX	30.00	yes	Filip Brixey		

QUESTION 5: Write an SQL query to return all shop visits where the customer's name has a letter C followed by a letter S anywhere in the customer's name. The letters must be in this order and do not necessarily have to be beside each other. You should ignore the case of the characters.

SQL Language: SELECT \* FROM jupiter WHERE custname ~\* 'cs'

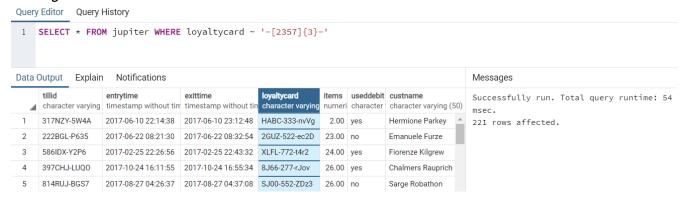
Running result: 8 rows returned



QUESTION 6: Write an SQL query which returns all loyalty cards where the three middle numbers are prime numbers (2,3,5,7). Loyaltycard strings are constructed with a block of characters followed by a hyphen then three digits then a hyphen and then a block of characters.

**SQL Language:** SELECT \* FROM jupiter WHERE loyaltycard ~ '-[2357]{3}-'

Running result: 221 rows returned



QUESTION 7: Write an SQL query to return all tillid where the first two characters of the tillid is are odd digits and the last two characters of the tillid are even numbers. You should note that zero is considered as an EVEN number.

**SQL Language:** SELECT tillid FROM jupiter WHERE tillid~'^[13579][02468]{2}'

Running result: 362 rows returned



QUESTION 8: Write an SQL query to return all shop visits where the loyaltycard attribute has at least TWO consecutive vowels ANYWHERE in the loyaltcard string. Impression: smile, eye contact, hand-shake.

SQL Language: SELECT \* FROM jupiter WHERE loyaltycard ~'[aeiou]{2,}'

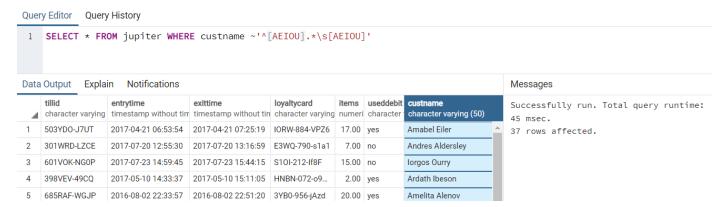
Running result: 59 rows returned



QUESTION 9: Write an SQL query to return all shop visits where the customer names have the following structure: the first name begins with a vowel and the second name or surname begins with a vowel. Please note that in this table there will be a space between the first name and the surname.

**SQL Language:** SELECT \* FROM jupiter WHERE custname ~'^[AEIOU].\*\s[AEIOU]'

Running result: 37 rows returned



QUESTION 10: Write an SQL query to return all shop visits where the entry time is at the weekend (Saturday or Sunday) and the customer used a debit card.

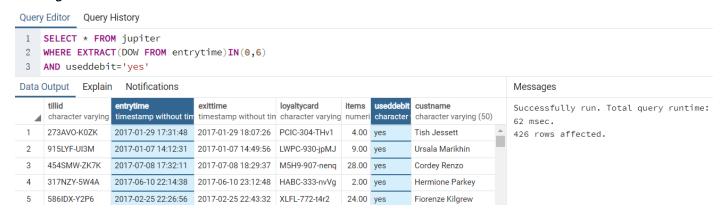
#### SQL Language:

SELECT \* FROM jupiter

WHERE EXTRACT(DOW FROM entrytime)IN(0,6)

AND useddebit='yes'

Running result: 426 rows returned



QUESTION 11: Write an SQL query to return the tillid for all shop visits where the customer spent more than one hour in the shop. Please note that even one second over an hour qualifies as more than one hour.

#### SQL Language:

SELECT tillid FROM jupiter

WHERE EXTRACT(HOUR FROM (exittime-entrytime))>=1

Running result: 67 rows returned

