**Local\_Coupon:**

**1. Insert**

**Insert local\_coupon information:**

INSERT INTO local\_coupon VALUES(610, ‘$3off any whole pizza’, ‘food’, ‘with purchase of 3 topping pizza’, ‘2019/02/15’, ‘2019/03/15, ‘LELO’S PIZZA’, ‘1880 Abbey Rd’, ‘s3.example.jpg’)

INSERT INTO local\_coupon VALUES(611, ‘90% off dinner’, ‘food’, ‘spend more than $30’, ‘2019/03/25’, ‘2019/04/25’, ‘Peter Chang’, ‘2162 Barracks Rd’, ‘s4.example.jpg’)

INSERT INTO local\_coupon VALUES(612, ‘70% off two hours of bowling’, ‘entertainment’, ‘Get 70% off for two guests’, ‘2019/04/02’, ‘2019/05/31’, ‘AMF Bowling Co’, ‘335 Rivanna Plaza Dr., Charlottesville, VA 22906’, ‘https://i.loli.net/2019/04/20/5cbb393342b45.jpg’)

INSERT INTO local\_coupon VALUES(613, ‘One month of unlimited yoga’, ‘fitness’, ‘Pay $30 and get one month of unlimited yoga!’, ‘2019/04/10’, ‘2019/8/31’, ‘Hot Yoga’, ‘216 West Water Street, Charlottesville, VA 22902’, ‘https://i.loli.net/2019/04/20/5cbb3933e78b4.jpg’)

INSERT INTO local\_coupon VALUES(614, ‘50% off casual dining’, ‘food’, ‘Pay $20 and get $40 worth of dining!’, ‘2019/04/15’, ‘2019/4/30’, ‘Brixx Charlottesville’, ‘1117 Emmet Street North 1133 Emmet St N., Charlottesville, VA 22903’, ‘https://i.loli.net/2019/04/20/5cbb3933e7d45.jpg’)

INSERT INTO local\_coupon VALUES(615, ‘40% off massage’, ‘health’, ‘Get 40% off one 60-minute massage’, ‘2019/04/15’, ‘2019/5/15’, ‘Transcending Health’, ‘1445 Rio Road East Suite 201, Charlottesville, VA 22901’, ‘https://i.loli.net/2019/04/20/5cbb3933e74d7.jpg’)

INSERT INTO local\_coupon VALUES(616, ‘20% off steak kabobs’, ‘food’, ‘Take 20% off when you order steak kabobs!’, ‘2019/04/18’, ‘2019/4/30’, ‘Zoes Kitchen’, ‘973 Emmet St, Charlottesville, VA 22903’, ‘https://i.loli.net/2019/04/20/5cbb3933e8413.jpg’)

INSERT INTO local\_coupon VALUES(617, ‘10% off groceries’, ‘grocery’, ‘Students take 10% off entire grocery order with student ID’, ‘2019/04/10’, ‘2019/5/10’, ‘Harris Teeter’, ‘975 Emmet St N, Charlottesville, VA 22903’, ‘https://i.loli.net/2019/04/20/5cbb3933e713d.jpg’)

**Insert information to Posts:**

INSERT INTO post VALUES (100, 610, ‘2019-02-09’)

INSERT INTO post VALUES (101, 611, ‘2019-03-01’)

INSERT INTO post VALUES (102, 612, ‘2019-04-01’)

INSERT INTO post VALUES (101, 613, ‘2019-04-10’)

INSERT INTO post VALUES (104, 614, ‘2019-04-14’)

INSERT INTO post VALUES (102, 615, ‘2019-04-15’)

INSERT INTO post VALUES (105, 616, ‘2019-04-17’)

INSERT INTO post VALUES (103, 617, ‘2019-04-09’)

**Insert information to Clicks\_1:**

INSERT INTO clicks\_1 VALUES (100, 810, ‘2019-2-21’)

INSERT INTO clicks\_1 VALUES (100, 811, ‘2019-3-1’)

INSERT INTO clicks\_1 VALUES (101, 812, ‘2019-3-25’)

INSERT INTO clicks\_1 VALUES (101, 813, ‘2019-3-5’)

INSERT INTO clicks\_1 VALUES (102, 813, ‘2019-3-5’)

INSERT INTO clicks\_1 VALUES (102, 812, ‘2019-3-27’)

INSERT INTO clicks\_1 VALUES (102, 810, ‘2019-3-15’)

INSERT INTO clicks\_1 VALUES (103, 813, ‘2019-3-25’)

INSERT INTO clicks\_1 VALUES (104, 811, ‘2019-2-28’)

INSERT INTO clicks\_1 VALUES (104, 814, ‘2019-3-25’)

INSERT INTO clicks\_1 VALUES (105, 813, ‘2019-3-25’)

**Insert information to Clicks\_2:**

INSERT INTO clicks\_2 VALUES (100, 611, ‘2019-03-26’)

INSERT INTO clicks\_2 VALUES (101, 610, ‘2019-03-14’)

**2. update**

**Update Title and Discount\_Desc for l\_id=611:**

UPDATE local\_coupon

SET title = ‘80% off dinner’

WHERE l\_id = 611

UPDATE local\_coupon

SET Discount\_Desc = ‘spend more than $50’

WHERE l\_id = 611

**3. Retrieve coupon information**

**Select tile and discount\_desc from Local\_Coupon**

SELECT title, l\_discount\_desc

FROM local\_coupon

WHERE l\_type = ‘food’ AND store\_name LIKE ‘%Cha%’

**Select users and coupon info posted by the users**

SELECT u\_id, l\_discount\_desc, store\_name

FROM User NATURAL JOIN post NATURAL JOIN local\_coupon

WHERE l\_type = ‘food’

ORDER BY store\_name

**/\* deleted ###### Select distinct user names who post local coupons**

SELECT COUNT (DISTINCT name)

FROM user NATURAL OUTER LEFT JOIN post

USING u\_id

WHERE name is not null\*/

**Select user id and user name who post local coupon and also click the local coupon**

SELECT u\_id, name

FROM user NATURAL JOIN post

WHERE name IN (

SELECT name

FROM user NATURAL JOIN clicks\_2)

**Select users id who have clicked more than once beauty online coupon and the corresponding click times for each u\_id. Those users should also have posted local food coupon.**

SELECT u\_id, COUNT(name)

FROM user NATURAL JOIN clicks\_1 NATURAL JOIN online\_coupon

WHERE o\_type = ‘beauty’ AND u\_id IN (

SELECT u\_id

FROM user NATURAL JOIN post NATURAL JOIN local\_coupon

WHERE l\_type = ‘food’)

GROUP BY u\_id

HAVING COUNT(name)>1

**Or**

SELECT u\_id, COUNT(\*)

FROM user NATURAL JOIN clicks\_1 NATURAL JOIN online\_coupon

WHERE o\_type = ‘beauty’ AND u\_id IN (

SELECT u\_id

FROM user NATURAL JOIN post NATURAL JOIN local\_coupon

WHERE l\_type = ‘food’)

GROUP BY u\_id

HAVING COUNT(\*)>1

**User Table**

**Add user account (assume starting point balance of 0)**

INSERT INTO coupon\_user VALUES (100, ‘Ann’, ‘ann123@gmail.com’, 0)

INSERT INTO coupon\_user VALUES (101, ‘Ben’, ‘ben456@gmail.com’, 0)

INSERT INTO coupon\_user VALUES (102, ‘Cathy’, ‘cat789@gmail.com’, 0)

INSERT INTO coupon\_user VALUES (103, ‘David’, ‘david199@gmail.com’, 0)

INSERT INTO coupon\_user VALUES (104, ‘John’, ‘john2@gmail.com’, 0)

INSERT INTO coupon\_user VALUES (105, ‘Mike’, ‘mike111@gmail.com’, 0)

**Update email address for user 100**

UPDATE user

SET Email = ‘ann\_new@gmail.com’

WHERE U\_ID = 100

**Update point balance for user 101**

UPDATE user

SET Point\_Balance = Point\_Balance + 30

WHERE u\_id = 101

**Retrieve user information on web application (info for user 100)**

SELECT \*

FROM user

WHERE u\_id = 100

**Online\_Coupon Table**

**Add/Insert online\_coupon information**

INSERT INTO online\_coupon VALUES (810, 0.25, ‘2019-2-20’, ‘2019-3-19’, ‘shoes’, ‘Crocs’, ‘Fashion’, ‘https://www.crocs.com/’)

INSERT INTO online\_coupon VALUES (811, 0.15, ‘2019-2-25’, ‘2019-3-2’, ‘makeup’, ‘Sephora’, ‘Beauty’, ‘https://www.sephora.com/’)

INSERT INTO online\_coupon VALUES (812, 0.15, ‘2019-3-20’, ‘2019-3-30’, ‘skincare’, ‘ULTA’, ‘Beauty’, ‘https://www.ulta.com/’)

INSERT INTO online\_coupon VALUES (813, 0.10, ‘2019-3-22’, ‘2019-4-5’, ‘fragrance’, ‘Sephora’, ‘Beauty’, ‘https://www.sephora.com/’)

INSERT INTO online\_coupon VALUES (814, 0.2, ‘2019-3-25’, ‘2019-4-25’, ‘handbag’, ‘Kate Spade’, ‘Fashion’, ‘www.katespade.com’)

**Delete expired coupon information**

DELETE FROM online\_coupon

WHERE o\_expiration\_date < ‘2019-3-26’

**Update information, e.g. discount, expiration date**

UPDATE online\_coupon

SET o\_discount\_desc = 0.3

WHERE u\_id = 101

**Retrieve online coupon information on web application**

SELECT \*

FROM online\_coupon

WHERE company\_name = ‘Sephora’

SELECT \*

FROM online\_coupon

WHERE o\_type = ‘Fashion’

**A view for all online beauty coupons**

CREATE VIEW o\_beauty\_coupon AS

(SELECT \*

FROM online\_coupon

WHERE o\_type = ‘Beauty’)

**A view showing the number of local coupons posted by each user**

CREATE VIEW l\_coupon\_count AS

(SELECT u\_id, COUNT(\*)

FROM post

GROUP BY u\_id )

**Find all the online coupon ids clicked by user 101, and click date**

SELECT o\_id, date

FROM online\_coupon NATURAL JOIN clicks\_1

WHERE u\_id = 101