CODEFLIX CHURN RATES

BY: LORI ALWARD

TABLE OF CONTENTS

GETTING TO KNOW CODEFLIX

HOW LONG HAS CODEFLIX BEEN OPERATING?

- Codeflix began December 1st, 2016 and operated for 4 months according to the data provided.

```sql
SELECT MIN(Subscription_start), MAX(subscription_end)
FROM subscriptions;
```

MIN(Subscription_start)	MAX(subscription_end)
2016-12-01	2017-03-31

GETTING TO KNOW CODEFLIX

MONTHS USED TO DETERMINE A CHURN RATE

- Because Codeflix started in December, we do not have information about memberships prior to December to determine cancellations, therefore, we used **January, Februrary, and March of 2017** to determine the Churn Rates.

```
1   WITH months AS (SELECT '2017-01-01' AS first_day, '2017-
    01-31' AS last_day UNION SELECT '2017-02-01' AS
    first_day, '2017-02-28' AS last_day UNION SELECT '2017-
    03-01' AS first_day, '2017-03-31' AS last_day)
2   SELECT * FROM months;
```

Query Results	
first_day	last_day
2017-01-01	2017-01-31
2017-02-01	2017-02-28
2017-03-01	2017-03-31

GETTING TO KNOW CODEFLIX

WHAT SEGMENTS OF USERS EXIST?

- Codeflix has 2 different user groups, 87 and 30

```
1    SELECT segment from subscriptions GROUP BY segment;
```

Query Results
segment
30
87

OVERALL CHURN RATE

WHAT IS THE OVERALL CHURN TREND OF THE COMPANY?

- Codeflix has lost 22% of their starting memberships in the 3 month time span that data was provided.

$$\frac{620}{2796} = .2217$$

```
1   WITH months AS (SELECT '2017-01-01' AS first_day, '2017-
    01-31' AS last_day UNION SELECT '2017-02-01' AS
    first_day, '2017-02-28' AS last_day UNION SELECT '2017-
    03-01' AS first_day, '2017-03-31' AS last_day),
2   cross_join AS (SELECT months.*, subscriptions.* FROM
    months CROSS JOIN subscriptions), status AS (select id,
    first_day AS 'month', CASE
3     WHEN segment =87 AND (subscription_start< first_day)
    AND (subscription_end > first_day OR subscription_end IS
    NULL) THEN 1
4       ELSE 0
5     END as 'is_active_87', CASE WHEN segment =87 AND
    (subscription_start< first_day) AND (subscription_end
    BETWEEN first_day AND last_day) THEN 1 ELSE 0 END as
    'is_canceled_87', CASE
6       WHEN segment =30 AND (subscription_start < first_day)
    AND (subscription_end > first_day OR subscription_end IS
    NULL) THEN 1 ELSE 0 END as 'is_active_30', CASE WHEN
    segment = 30 AND (subscription_start< first_day) AND
    (subscription_end BETWEEN first_day AND last_day) THEN 1
    ELSE 0 END as 'is_canceled_30'
7     FROM cross_join
8     ), status_aggregate AS (SELECT SUM(is_active_87) AS
    'sum_active_87', SUM(is_active_30) AS 'sum_active_30',
    SUM(is_canceled_87) AS 'sum_canceled_87',
    SUM(is_canceled_30) AS 'sum_canceled_30' FROM status)
```

Query Results			
sum_active_87	sum_active_30	sum_canceled_87	sum_canceled_30
1271	1525	476	144

COMPARING CHURN RATE BETWEEN USERS

- For the overall churn rate, 83 had a 37.5% Churn Rate while 30 had only a 9.5% overall churn rate.

```sql
SELECT 1.00*(sum_canceled_87)/(sum_active_87) AS
'Churn_Rate_87', 1.00*(sum_canceled_30)/(sum_active_30) AS
'Churn_Rate_30' FROM status_aggregate;
```

Query Results	
Churn_Rate_87	Churn_Rate_30
0.374508261211644	0.0944262295081967

COMPARING CHURN RATE BETWEEN USERS

- With each month of operation, user 87 showed a consistently higher churn rate than user 30. Each month, user 87's churn rate grew at a much faster rate than 30's. The first month, 87's churn rate started at 25.1% and then grew to 48.6% by the end of March. User 30's churn rate started out at a much lower rate, 7.6% and did not grow very much by the end of March, (11.7%).

```sql
status_aggregate AS (SELECT month, SUM(is_active_87)
AS 'sum_active_87', SUM(is_canceled_87) AS
'sum_canceled_87', SUM(is_active_30) AS
'sum_active_30', SUM(is_canceled_30) AS
'sum_canceled_30' FROM status GROUP BY month),
churn_rates AS (SELECT month, 1.0*
(sum_canceled_87)/(sum_active_87) AS
'churn_rate_87', 1.0*
(sum_canceled_30)/(sum_active_30) AS 'churn_rate_30'
FROM status_aggregate)
SELECT * FROM churn_rates;
```

	Query Results	
month	churn_rate_87	churn_rate_30
2017-01-01	0.251798561151079	0.0756013745704467
2017-02-01	0.32034632034632	0.0733590733590734
2017-03-01	0.485875706214689	0.11731843575419

COMPARING CHURN RATES BETWEEN USERS

- Based on the monthly analysis of Churn rates from the previous slide, the company should focus on expanding segment 30 because their churn rate is much lower than segment 87. Choosing a segment with fewer cancellations each month should result in an overall growth for Codeflix.