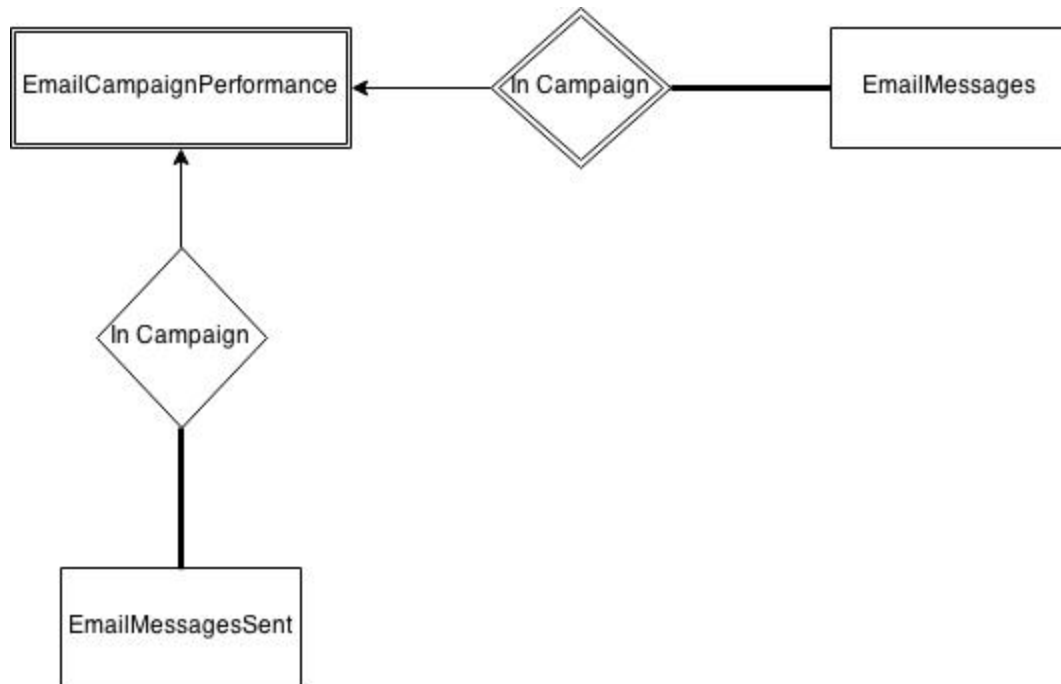# GREEN TEAM - Lab 6

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ENTITY SETS

Warehouse 1

EmailMessages
- <u>Number EmailMessageID</u>
- String Version
- String Audience
- String SubjectLine
- String CampaignName

EmailCampaignPerformance
Weak entity set

- String CampaignName
- String Audience
- String Version
- String SubjectLine
- Date DeploymentDate
- Number EmailsSent
- Number EmailsBounced
- Number EmailsComplained
- Number EmailsClicked
- Number EmailsOpened
- Number EmailsUnsubscribed

EmailMessagesSent

- <u>Number EmailMessageID</u>
- <u>Number EmailID</u>
- NumberDeploymentID
- Date DeploymentDate

Warehouse 2

RegistrationsXCustomersXDevices

RELATIONSHIP SETS

InCampaign(EmailMessages, EmailCampaignPerformance)

Many-to-one relationship

Identifying relationship for EmailCampaignPerformance

Required for EmailMessages

InCampaign(EmailMessagesSent, EmailCampaignPerformance)

Many-to-one relationship

Required for EmailMessagesSent

DATABASE MODEL

EmailCampaignPerformance

- varchar CampaignName
- varchar Audience
- varchar Version
- date DeploymentDate NOT NULL
- bigint EmailsSent NOT NULL DEFAULT 0
- decimal EmailsBounced NOT NULL DEFAULT 0
- bigint EmailsComplained NOT NULL DEFAULT 0
- bigint EmailsClicked NOT NULL DEFAULT 0
- bigint EmailsOpened NOT NULL DEFAULT 0
- bigint EmailsUnsubscribed NOT NULL DEFAULT 0

EmailMessages

- <u>primary key int EmailMessageID</u>
- varchar Audience NOT NULL
- varchar Version NOT NULL
- varchar SubjectLine NOT NULL
- int DeploymentID NOT NULL
- varchar CampaignName NOT NULL

EmailMessagesSent

- <u>primary key int EmailMessageID</u>
- <u>primary key int EmailID</u>
- int DeploymentID NOT NULL
- date DeploymentDate NOT NULL
- foreign key EmailMessageID references EmailMessages(EmailMessageID)
- foreign key EmailID references EmailAddresses(EmailID)

Data Warehouse & Report Generation SQL

Base table for second and third reports:
CREATE TABLE RegistrationsXCustomersXDevices
AS (

```
    SELECT Registrations.CustomerID AS CustomerID, State,
MONTH(RegistrationDate) AS Month, YEAR(RegistrationDate) AS Year,
Permission, Carrier, Devices.DeviceModel FROM Registrations
    LEFT JOIN Customers ON Registrations.CustomerID = Customers.CustomerID
    LEFT JOIN Devices ON Registrations.DeviceID = Devices.DeviceID
    LEFT JOIN DeviceModels ON Devices.DeviceModel =
DeviceModels.DeviceModel
);
```

2. Account Registration Report Data Warehouse:

```
CREATE TABLE AccountRegDW AS (
        SELECT State, Month, Year, Permission, COUNT(CustomerID) AS
NumRegistrations FROM RegistrationsXCustomersXDevices
        GROUP BY State, Month, Year, Permission
);
```

3. Device Registration Report Data Warehouse:

```
CREATE TABLE DeviceRegDW AS (
        SELECT Carrier, Month, DeviceModel, COUNT(CustomerID) AS
NumRegistrations FROM RegistrationsXCustomersXDevices
        GROUP BY Carrier, Month, Year, DeviceModel
);
```