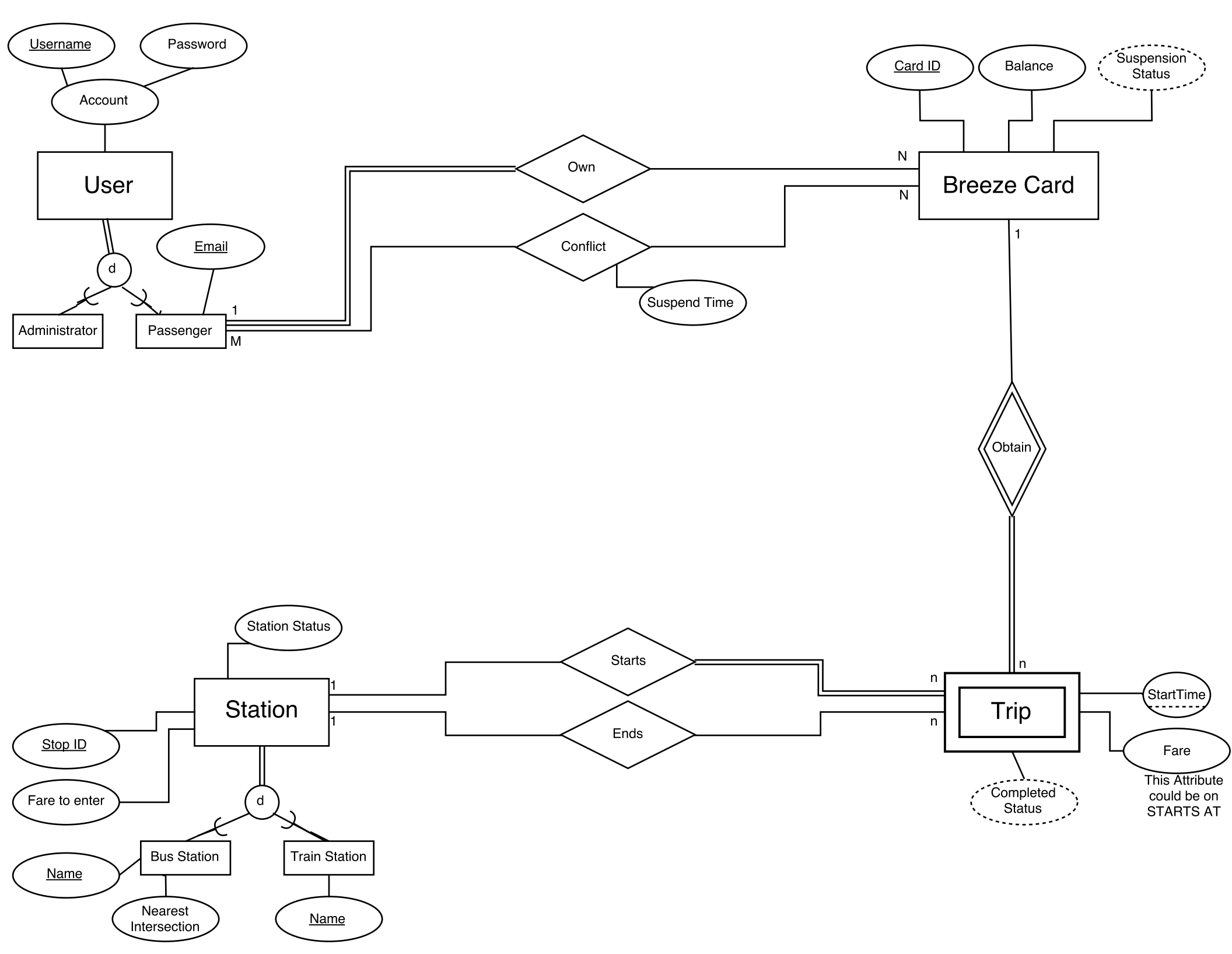




TEAM 91

Phase [2]

Zijin Luo (zluo68)
Jinghua Zhang (jzhang866)
Zhu Zhuang (zzhuang38)



USER

<u>Username</u>	Password
-----------------	----------

PASSENGER

<u>Passenger Username</u>	Email
---------------------------	-------

CONFLICT

<u>Passenger Username</u>	<u>BCNumber</u>	Suspended Time
---------------------------	-----------------	----------------

BREEZE CARD

<u>Card ID</u>	Balance	Passenger Username	Suspended Status
----------------	---------	--------------------	------------------

TRIP

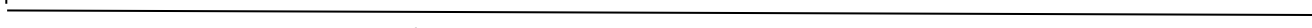
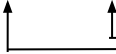
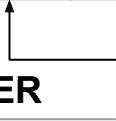
<u>Start Time</u>	Fare	<u>BCNumber</u>	StationStopID	Completed Status
-------------------	------	-----------------	---------------	------------------

STATION

<u>StopID</u>	Name	Station Type	Enter Fare	Station Status
---------------	------	--------------	------------	----------------

BUS STATION

<u>Station StopID</u>	Nearest Intersection
-----------------------	----------------------



CREATE TABLE USER

```
(
    Username            VARCHAR(25)        NOT NULL,
    Password            VARCHAR(25)        NOT NULL,
    CONSTRAINT USER_PK
        PRIMARY KEY (Username)
);
```

CREATE TABLE PASSENGER

```
(
    Username            VARCHAR(25)        NOT NULL,
    Email              VARCHAR(50)        NOT NULL,
    CONSTRAINT PASSENGER_PK
        PRIMARY KEY (Username),
    CONSTRAINT PASSENGER_UNIQUE
        UNIQUE (Email)
        CHECK (Email like '^[A-Z0-9._%~]+@[A-Z0-9.-]+\.[A-Z]{2,4}$'),
    CONSTRAINT PASSENGER_FK
        FOREIGN KEY ('Username') REFERENCES USER('Username')
        ON DELETE CASCADE ON UPDATE CASCADE
);
```

CREATE TABLE BREEZECARD

```
(
    Card_ID            CHAR(16)            NOT NULL,
    Balance            DECIMAL(6, 2)        NOT NULL,
    Passenger_Username VARCHAR(25),
    Suspended_Status   BOOLEAN            NOT NULL,
    CONSTRAINT BREEZECARD_PK
        PRIMARY KEY (Card_ID),
    CONSTRAINT BREEZECARD_VALUE
        CHECK (Balance >= 0 and Balance <= 1000),
    CONSTRAINT BREEZECARD_FK
        FOREIGN KEY ('Passenger_Username') REFERENCES PASSENGER ('Username')
        ON DELETE SET NULL ON UPDATE CASCADE
);
```

CREATE TABLE STATION

```
(
    StopID            VARCHAR(30)        NOT NULL,
    Station_Name      VARCHAR(30)        NOT NULL,
    Station_Type      VARCHAR(5)         NOT NULL,
    Enter_Fare        DECIMAL(4, 2)        NOT NULL,
    Station_Status    BOOLEAN            NOT NULL,
    CONSTRAINT STATION_PK
        PRIMARY KEY (StopID),
    CONSTRAINT STATION_UNIQUE
        UNIQUE (Station_Name, Station_Type),
    CONSTRAINT STATION_FARE
        CHECK (Enter_Fare >= 0 and Enter_Fare <= 50)
);
```

CREATE TABLE BUSSTATION

```
(
    Station_StopID          VARCHAR(30) NOT NULL,
    Intersection             VARCHAR(30),
    CONSTRAINT BUSSTATION_PK
        PRIMARY KEY (Station_StopID),
    CONSTRAINT BUSSTATION_FK
        FOREIGN KEY ('Station_StopID') REFERENCES STATION ('StopID')
        ON DELETE CASCADE ON UPDATE CASCADE
);
```

CREATE TABLE TRIP

```
(
    Start_Time              TIMESTAMP          NOT NULL,
    Fare                   DECIMAL(4, 2)      NOT NULL,
    BCNumber               CHAR(16)           NOT NULL,
    Station_StopID         VARCHAR(30)        NOT NULL,
    Completed_Status       BOOLEAN            NOT NULL,
    CONSTRAINT TRIP_PK
        PRIMARY KEY (Start_Time, BCNumber)
    CONSTRAINT TRIP_FK_1
        FOREIGN KEY ('Station_StopID') REFERENCES STATION ('StopID')
        ON DELETE CASCADE ON UPDATE CASCADE,
    CONSTRAINT TRIP_FK_2
        FOREIGN KEY ('BCNumber') REFERENCES BREEZECARD ('card_Number')
        ON DELETE CASCADE ON UPDATE CASCADE
);
```

CREATE TABLE CONFLICT

```
(
    Passenger_Username      VARCHAR(25)       NOT NULL,
    BCNumber               CHAR(16)           NOT NULL,
    Suspended_Time         DATE               NOT NULL,
    CONSTRAINT CONFLICT_PK
        PRIMARY KEY (PassengerUsername, BCNumber),
    CONSTRAINT CONFLICT_FK_1
        FOREIGN KEY ('Passenger_Username') REFERENCES PASSENGER ('Username')
        ON DELETE CASCADE ON UPDATE CASCADE,
    CONSTRAINT CONFLICT_FK_2
        FOREIGN KEY ('BCNumber') REFERENCES BREEZECARD ('Card_ID')
        ON DELETE CASCADE ON UPDATE CASCADE
);
```