# Customer Features Database design

* Tables

A screenshot of a cell phone

Description automatically generated

FeatureTable: Holds list of features and attributes.

CustomerFeature: Holds customer’s feature enrollment and settings.

* **Install docker container with SQL Server (Optional)**

docker run -e 'ACCEPT\_EULA=Y' -v mysql-data:/var/lib/mysql -e 'SA\_PASSWORD=Password@123' -p 1433:1433 -d mcr.microsoft.com/mssql/server:2017-latest

* **Set Up database Objects & sample data (copy and paste of SQL Client console)**

CREATE Database CustomerFeatures;

CREATE TABLE Features (

    FeatureId int NOT NULL,

    FeatureName nvarchar(100) NULL,

    DefaultState bit NULL,

    CreationDate date null,

    EffectiveDate date null,

    ExpirationDate date null

);

GO

Insert into features (FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate) values (2, 'Moneywatch', 1, getdate() -1, getdate() -1, getdate() +360);

Insert into features (FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate) values (3, 'MoveMoney', 1, getdate() -1, getdate() -1, getdate() +360);

Insert into features (FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate) values (4, 'QuickTransfer', 1, getdate() -1, getdate() -1, getdate() +360);

Insert into features (FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate) values (5, 'ServiceAvailibilityBanner', 1, getdate() -1, getdate() -1, getdate() +360);

Insert into features (FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate) values (6, 'PersonalSettings', 1, getdate() -1, getdate() -1, getdate() +360);

Insert into features (FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate) values (7, 'InternationalTransactions', 1, getdate() -1, getdate() -1, getdate() +360);

Insert into features (FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate) values (8, 'ImpulseSaver', 1, getdate() -1, getdate() -1, getdate() +360);

Insert into features (FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate) values (9, 'RoundUpDown', 1, getdate() -1, getdate() -1, getdate() +360);

update features set defaultstate = 0 where featureid in (6,7);

SET QUOTED\_IDENTIFIER ON

GO

SET ANSI\_NULLS ON

GO

CREATE PROCEDURE [GetFeaturesList]

AS

BEGIN

    SET NOCOUNT ON;

    SELECT FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate

    FROM Features

    Order BY FeatureId asc

 END;

GO

CREATE TABLE CustomerFeatures (

CustomerNumber varchar(10),

FeatureId int NOT NULL,

    EnrollmentDate date null,

    FeaturesSetting nvarchar(200)

);

GO

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('1234567890', 1, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('1234567890', 2, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('1234567890', 3, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('1234567890', 4, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('1234567890', 5, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('1234567890', 8, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('1234567890', 9, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('4041234567', 9, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('4041234567', 8, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('4041234567', 7, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('4041234567', 6, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('2345678912', 1, getdate()-1, null);

Insert into CustomerFeatures (CustomerNumber, FeatureId , EnrollmentDate , FeaturesSetting ) values ('2345678912', 2, getdate()-1, null);

SET QUOTED\_IDENTIFIER ON

GO

SET ANSI\_NULLS ON

GO

CREATE PROCEDURE [GetCustomerFeaturesList]

@CustomerNumber varchar(10)

AS

BEGIN

    SET NOCOUNT ON;

    Select FT.FeatureId, FT.FeatureName, FT.DefaultState, FT.CreationDate, FT.EffectiveDate, FT.ExpirationDate, CT.EnrollmentDate, CT.FeaturesSetting  From

    (SELECT FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate

    FROM Features Where DefaultState = 1) as FT

    Left outer join

    (Select CustomerNumber, FeatureId, EnrollmentDate, FeaturesSetting From CustomerFeatures Where CustomerNumber = @CustomerNumber) as CT

    On FT.FeatureId = CT.FeatureId

Order by CT.CustomerNumber, FT.FeatureId

END;

GO

SET QUOTED\_IDENTIFIER ON

GO

SET ANSI\_NULLS ON

GO

CREATE PROCEDURE [GetCustomerFeature]

@CustomerNumber varchar(10),

@FeatureId Int

AS

BEGIN

    SET NOCOUNT ON;

    Select FT.FeatureId, FT.FeatureName, FT.DefaultState, FT.CreationDate, FT.EffectiveDate, FT.ExpirationDate, CT.EnrollmentDate, CT.FeaturesSetting From

    (SELECT FeatureId ,FeatureName, DefaultState, CreationDate, EffectiveDate, ExpirationDate

    FROM Features Where DefaultState = 1 and FeatureId = @FeatureId) as FT

    Left outer join

    (Select CustomerNumber, FeatureId, EnrollmentDate, FeaturesSetting From CustomerFeatures Where CustomerNumber = @CustomerNumber) as CT

    On FT.FeatureId = CT.FeatureId

END;

GO

update customerfeatures set FeaturesSetting = '[{"featureId": 5, "Notification": true, "Frequency": "00:00:30", "DefaultExpiry": "2020-01-30" }]' where CustomerNumber = '1234567890' and featureid = 5