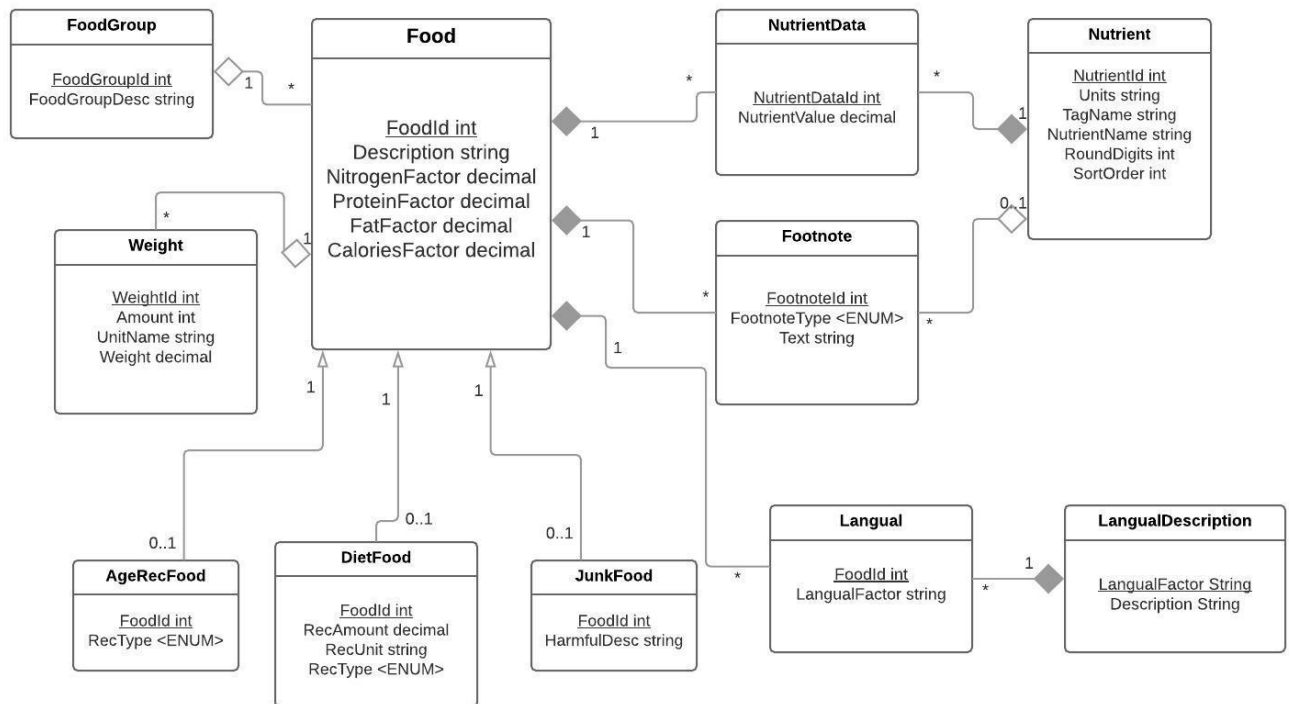Team Name: B-tree
Team Members: Xian Qu, Jingyuan Zhang, Yinglao Liu
Project Name: Eat Healthy

UML Diagram

CREATE TABLE

Create the schema if necessary.
CREATE SCHEMA IF NOT EXISTS FoodApp;
USE FoodApp;

DROP TABLE IF EXISTS Langual;
DROP TABLE IF EXISTS LangualDescription;
DROP TABLE IF EXISTS FootNote;
DROP TABLE IF EXISTS NutrientData;
DROP TABLE IF EXISTS Nutrient;
DROP TABLE IF EXISTS Weight;
DROP TABLE IF EXISTS Unit;
DROP TABLE IF EXISTS Junk;
DROP TABLE IF EXISTS DietFood;
DROP TABLE IF EXISTS AgeRecFood;

```sql
DROP TABLE IF EXISTS Food;
DROP TABLE IF EXISTS FoodGroup;

CREATE TABLE FoodGroup (
  FoodGroupId int not null,
  FoodGroupDesc text not null,
  CONSTRAINT pk_FoodGroup_FoodGroupId PRIMARY KEY (FoodGroupId)
);

create table Food(
  FoodId int not null,
  FoodGroupId int,
  Description text,
  N_Factor float(4,2),
  PRO_Factor float(4,2),
  FAT_Factor float(4,2),
  CHO_Factor float(4,2),
  constraint pk_Food_FoodId primary key (FoodId),
  constraint fk_Food_FoodGroupId foreign key (FoodGroupId)
    references FoodGroup(FoodGroupId)
    on update cascade on delete set null
);

create table AgeRecFood (
        FoodId int,
   RecType enum('Infant', 'Elderly', 'Pregnant'),
   constraint pk_AgeRecFood_FoodId primary key (FoodId),
   constraint fk_AgeRecFood_FoodId foreign key (FoodId)
     references Food(FoodId) ON UPDATE CASCADE ON DELETE CASCADE
);

create table DietFood (
        FoodId int,
   RecAmount decimal,
   RecUnit varchar(255),
   constraint pk_DietFood_FoodId primary key (FoodId),
   constraint fk_DietFood_FoodId foreign key (FoodId)
     references Food(FoodId) ON UPDATE CASCADE ON DELETE CASCADE
);
```

```sql
create table JunkFood (
        FoodId int,
   HarmfulDesc varchar(255),
   constraint pk_JunkFood_FoodId primary key (FoodId),
   constraint fk_JunkFood_FoodId foreign key (FoodId)
     references Food(FoodId) ON UPDATE CASCADE ON DELETE CASCADE
);


create table Weight(
  WeightId int auto_increment,
  FoodId int not null,

  Amount float(8,4) not null,
  Unit text not null,
  WeightInGram float(8,4) not null,

  constraint pk_Weight_weightId primary key(WeightId),
  constraint fk_Weight_NDB_NO foreign key(FoodId)
    references Food(FoodId)
    on update cascade on delete cascade
);

create table Nutrient(
  NutrientId int,
  Unit varchar(255),
  TagName varchar(255),
  Description text,

  constraint pk_Nutrient_NutrientId primary key(NutrientId));

create table NutrientData(
  NutrientDataId int auto_increment,
  FoodId int not null,
  NutrientId int not null,
  NutrientValue float(15,8),
  constraint pk_NutrientData_NutrientDataId primary key(NutrientDataId),
  constraint fk_NutrientData_FoodId foreign key(FoodId)
    references Food(FoodId)
```

```
    on update cascade on delete cascade,
  constraint fk_NutrientData_NutrientId foreign key(NutrientId)
    references Nutrient(NutrientId)
    on update cascade on delete cascade
);

create table Footnote(
  FootnoteId int auto_increment,
  FoodId int,
  FootnoteType enum('D', 'M', 'N'),
  NutrientId int,
  FootnoteText text,
  constraint pk_Footnote_FootnoteId primary key(FootnoteId),
  constraint fk_Footnote_NutrientId foreign key(NutrientId)
    references Nutrient(Nutrientid)
    on update cascade on delete set null,
  constraint fk_Footnote_FoodId foreign key(FoodId)
    references Food(FoodId)
);
# D: adds information to the food description
# M: adds information to the measure description
# N: provides additional information on a nutrient value

create table LangualDescription(
  Factor varchar(255),
  Description text,
  constraint pk_LangualDescription_Factor primary key(Factor)
);

create table Langual(
  LangualId int auto_increment,
  FoodId int,
  Factor varchar(255),
  constraint pk_Langual_LangualId primary key (LangualId),
  constraint fk_Langual_Factor foreign key (Factor)
    references LangualDescription(Factor)
    on update cascade on delete cascade,
  constraint fk_Langual_FoodId foreign key (FoodId)
    references Food(FoodId)
    on update cascade on delete cascade
```

```
  );
```

INSERT TABLE

```
use FoodApp;

delete from foodgroup;
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server
5.7\\Uploads\\FD_GROUP.csv'
INTO TABLE foodgroup
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 LINES
(@col1, @col2)
set FoodGroupId = @col1, FoodGroupDesc = @col2;

delete from food;
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server
5.7\\Uploads\\FOOD_DES.csv'
INTO TABLE food
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 LINES
(@col1, @col2, @col3, @col4, @col5, @col6, @col7, @col8,
 @col9, @col10, @col11, @col12, @col13, @col14)
set FoodId = @col1, FoodGroupId = @col2, Description = @col3,
 N_Factor = if(@col11 = '', null, @col11),
 PRO_Factor = if(@col12 = '', null, @col12) ,
 FAT_Factor = if(@col13 = '', null, @col13) ,
 CHO_Factor = if(@col14 = '', null, @col14) ;

delete from weight;
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\\WEIGHT.csv'
into table weight
FIELDS TERMINATED BY ','
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 LINES
```

```
(@col1, @col2, @col3, @col4, @col5, @col6, @col7)
set FoodId = @col1, Amount = @col3, Unit = @col4, WeightInGram = @col5;


delete from nutrient;
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server
5.7\\Uploads\\NUTR_DEF.csv'
into table nutrient
FIELDS TERMINATED BY ','
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 LINES
(@col1, @col2, @col3, @col4, @col5, @col6)
set NutrientId = @col1, Unit = @col2, TagName = @col3, Description = @col4;
;

delete from NutrientData;
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server
5.7\\Uploads\\NUT_DATA.csv'
INTO TABLE NutrientData
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 LINES
(@col1, @col2, @col3, @col4, @col5, @col6, @col7, @col8,
  @col9, @col10, @col11, @col12, @col13, @col14, @col15, @col16, @col17)
set FoodId = @col1,
  NutrientId = @col2,
  NutrientValue = @col3;

delete from Footnote;
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server
5.7\\Uploads\\FOOTNOTE.csv'
INTO TABLE Footnote
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 LINES
(@col1, @col2, @col3, @col4, @col5)
set FoodId = @col1,
```

NutrientId = if(@col4 = '', null, @col4),
 FootnoteType= @col3,
 FootnoteText = @col5;

delete from LangualDescription;
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server
5.7\\Uploads\\LANGDESC.csv'
INTO TABLE LangualDescription
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 LINES;

delete from Langual;
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server
5.7\\Uploads\\LANGUAL.csv'
INTO TABLE Langual
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 LINES
(@col1, @col2)
set FoodId = @col1, Factor = @col2;

Table Row Counts
**Totally 705761 row of records of eight classes are inserted . Row counts for each table
could be consulted in the following screenshot.**
**Research is being done on how to categorize the inherited classes of "AgeRecFood",
"DietFood", and "JunkFood", whose data is not inserted yet.**

#	Time	Action	Message	Duration / Fetch
21	12:46:08	use FoodApp	0 row(s) affected	0.000 sec
22	12:46:08	delete from foodgroup	0 row(s) affected	0.000 sec
23	12:46:08	LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\...	25 row(s) affected Records: 25 Deleted: 0 Skipped: 0 Warnings: 0	0.000 sec
24	12:46:08	delete from food	0 row(s) affected	0.000 sec
25	12:46:08	LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\...	7793 row(s) affected Records: 7793 Deleted: 0 Skipped: 0 Warnings: 0	0.203 sec
26	12:46:08	delete from weight	0 row(s) affected	0.000 sec
27	12:46:08	LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\...	14449 row(s) affected Records: 14449 Deleted: 0 Skipped: 0 Warnings: 0	0.234 sec
28	12:46:08	delete from nutrient	0 row(s) affected	0.000 sec
29	12:46:08	LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\...	149 row(s) affected Records: 149 Deleted: 0 Skipped: 0 Warnings: 0	0.015 sec
30	12:46:08	delete from NutrientData	0 row(s) affected	0.000 sec
31	12:46:08	LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\...	644125 row(s) affected Records: 644125 Deleted: 0 Skipped: 0 Warnings: 0	21.828 sec
32	12:46:30	delete from Footnote	0 row(s) affected	0.016 sec
33	12:46:30	LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\...	537 row(s) affected Records: 537 Deleted: 0 Skipped: 0 Warnings: 0	0.047 sec
34	12:46:30	delete from LangualDescription	0 row(s) affected	0.000 sec
35	12:46:30	LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\...	773 row(s) affected Records: 773 Deleted: 0 Skipped: 0 Warnings: 0	0.015 sec
36	12:46:30	delete from Langual	0 row(s) affected	0.000 sec
37	12:46:30	LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server 5.7\\Uploads\...	37910 row(s) affected Records: 37910 Deleted: 0 Skipped: 0 Warnings: 0	0.500 sec