CSC 315 - Phase IV
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Every table is in BCNF. We have shown why through the functional dependencies next
to each table. To normalize our old relational schema, we added several new relationships that ensures the database will now be far safer and have no deletion,
insertion, or update anomalies.

BCNF decomposition

Goat_Traits

{GOATID} -> {Vigor_score,Gender}

GoatID	Vigor_Score	Gender

Goat_Weight

{GOATID, Last_Weight, Birth_Weight_Birth_Date} -> {Overall_ADG}

Goat_ID	Birth_Weight	Last_Weight	Birth_Date	Overall_ADG

Birthdate

{ Birth_Date} -> {Birth_Month, Birth_Day, Birth_Year}

Birth_Date	Birth_Month	Birth_Day	Birth_Year

Conditions_Had

{GoatID, Condition, Date_Diagnosed}

GoatID	Condition	Date_Diagnosed

Vaccines Taken

{GoatID, Vaccine, Date_Administered}

GoatID	Vaccine	Date_Administered

Dam_Key

{GoatID, DamID}

GoatID	DamID

Sire_Key

{GoatID, SireID}

GoatID	SireID

Dam_kids

{DamID} -> {Avg_Kid_BW, No_of_Kids, Attempted_Births, Pregnancy_Status, Milk_Rating, Parental_Skills}

DamID	Avg_kid_BW(Dervied)	No_of_Kids(Derived)	Attempted_Births	Pregnancy_Status	Milk_Rating	Parental_Skill

Sire

{Sire_ID, Mate_ID} -> {Parental_Skills}

SireID	Parental_Skill	Mate_ID

Dam_Birthing

{Dam_ID, Date_Delivery} -> {Dam_Age_At_Birthing}

Dam_ID	Dam_Age_At_Birthing	Date_Delivery

Delivery Date

{Date_Delivery} -> {Delivery_Month, Delivery_Day, Delivery_Year}

Date_Delivery	Delivery_Month	Delivery_Day	Delivery_Year

Dam_Mom_status

{Dam_ID} ->{Successful_Births}

Dam_ID	Successful_Births

Dam_Singles

{Dam_ID, Delivery_Date} -> {Single_Wt}

DamID	Date_Delivery	Single_wt

Dam_Twins

{Dam_ID, Delivery_Date} -> {Kid1, Kid2, Twin_Avg_Wt}

DamID	Date_Delivery	Kid1_Weight	Kid2_Weight	Twin_Avg_wt(derived)

Dam_Triplets

{Dam_ID, Delivery_Date} -> {Kid1, Kid2, Kid3 Triplet_Avg_Wt}

DamID	Date_Delivery	Kid1_Weight	Kid2_Weight	Kid3_Weight	Triplet_Avg_wt(derived)

Assumptions

DamID and SireID will be uniquley based off 'Gender' constructed

Age is constanlty changing because it derived off time

Avg_kid_BW and No_of_Kids is derived after Dam_kids is naturally joined with Dam_singles, Dam_twins, and Dam_triplets