Transformations

-----Created Main Table -----

```
CREATE TABLE maternal_health
case id Int Primary key,
age_years_old Int,
color ethnicity Int,
hypertension past reported Int,
hypertension past treatment varchar(100),
diabetes mellitus dm reported Int,
diabetes mellitus disease gap varchar(100),
diabetes mellitus treatment varchar(100),
tobacco use Int,
tobacco use in months varchar(100),
tobacco_quantity_by_day varchar(100),
alcohol use Int,
alcohol quantity milliliters varchar(100),
alcohol preference varchar(100),
drugs_preference varchar(100),
drugs years use varchar(100),
drugs during pregnancy varchar(100),
past_newborn_1_weight varchar(100),
gestational age past newborn 1 varchar(100),
past newborn 2 weight varchar(100),
gestational age past newborn 2 varchar(100),
past newborn 3 weight varchar(100),
gestational age past newborn 3 varchar(100),
past_newborn_4_weight varchar(100),
gestational_age_past_4_newborn varchar(100),
breakfast meal Int,
morning snack Int,
lunch meal Int,
```

```
afternoon snack Int,
meal dinner Int,
supper meal Int,
bean Int.
fruits Int.
vegetables Int,
embedded food Int,
pasta Int.
cookies Int,
right systolic blood pressure varchar(100),
right diastolic blood pressure varchar(100),
left systolic blood pressure varchar(100),
left diastolic blood pressure varchar(100),
periumbilical subcutanous fat varchar(100),
periumbilical visceral fat varchar(100),
periumbilical total fat varchar(100),
preperitoneal subcutaneous fat Float,
preperitoneal visceral fat Float,
gestational age at inclusion Float,
fetal_weight_at_ultrasound varchar(100),
weight fetal percentile varchar(100),
past pregnancies number varchar(100),
miscarriage Int,
first trimester hematocrit float,
second trimester hematocrit varchar(100),
third_trimester_hematocrit varchar(100),
firt trimester hemoglobin float,
second trimester hemoglobin varchar(100),
third trimester hemoglobin varchar(100),
first tri fasting blood glucose Int,
second tri fasting blood glucose varchar(100),
third tri fasting blood glucose varchar(100),
"1st hour ogtt75 1st tri" varchar(100),
"1st hour ogtt75 2tri" varchar(100),
"1st hour ogtt75 3tri" varchar(100),
```

```
"2nd hour ogtt 1tri" varchar(100),
"2nd hour ogtt75 2tri" varchar(100),
"2nd hour ogtt 3tri" varchar(100),
hiv_1tri varchar(100),
syphilis 1tri varchar(100),
c hepatitis 1tri varchar(100),
prepregnant_weight varchar(100),
prepregnant bmi varchar(100),
bmi according who varchar(100),
current_maternal_weight_1st_tri varchar(100),
current maternal weight 2nd tri varchar(100),
current maternal weight 3rd tri varchar(100),
maternal weight at inclusion float,
hight at inclusion float,
current bmi float,
current bmi according who Int,
ultrasound gestational age float,
maternal brachial circumference float,
circumference maternal calf float,
maternal_neck_circumference float,
maternal hip circumference float,
maternal waist circumference float,
mean_tricciptal_skinfold float,
mean subscapular skinfold float,
mean supra iliac skin fold float,
gestational_age_at_birth float,
prepartum maternal weight varchar(100),
prepartum maternal heigh varchar(100),
delivery mode Int,
cesarean section reason varchar(100),
hospital systolic blood pressure varchar(100),
hospital diastolic blood pressure varchar(100),
hospital hypertension Int,
preeclampsia record pregnancy Int,
gestational diabetes mellitus Int,
```

```
chronic_diabetes varchar(100),
chronic diseases varchar(100),
disease diagnose during pregnancy varchar(100),
treatment_disease_pregnancy varchar(100),
number prenatal appointments varchar(100),
expected weight for the newborn varchar(100),
newborn_weight varchar(100),
newborn height varchar(100),
newborn_head_circumference varchar(100),
thoracic perimeter newborn Float,
meconium labor Int,
apgar_1st_min Int,
apgar_5th_min Int,
pediatric resuscitation maneuvers Int,
newborn intubation Int,
newborn airway aspiration Int,
mothers_hospital_stay Int);
select * from public.maternal health
-----Created Table Demographics-----
Create table demographics as
 select case id,
age_years_old,
Color ethnicity
FROM Maternal Health;
select * from demographics
-----Created Table Pregnancy Nutritional Details-----
create table Pregnancy Nutritional Details as
```

```
select case id,
breakfast meal, morning snack,
lunch meal,
afternoon_snack,
meal dinner,
supper meal,
bean,
fruits.
vegetables,
Embedded food,
pasta,
cookies FROM maternal health;
select * from Pregnancy_Nutritional_Details
-----Created Table Anthropometry-----
Create table Anthropometry as
select
case id,
maternal brachial circumference,
circumference_maternal_calf,
maternal neck circumference,
maternal waist circumference,
maternal_hip_circumference,
mean tricciptal skinfold,
mean subscapular skinfold,
mean supra iliac skin fold
from maternal health;
select * from Anthropometry
-----Created Table Ultrasound results-----
```

create table Ultrasound_results as select case_id, periumbilical_subcutanous_fat, periumbilical_visceral_fat, periumbilical_total_fat, preperitoneal_subcutaneous_fat, preperitoneal_visceral_fat, preperitoneal_visceral_fat, gestational_age_at_inclusion, fetal_weight_at_ultrasound, weight_fetal_percentile, ultrasound_gestational_age FROM maternal_health;

select * from Ultrasound_results

-----Created table Fetal_Development_Risk-----

create table Fetal_Development_Risk as select case_id, tobacco_use, tobacco_use_in_months, tobacco_quantity_by_day, alcohol_use, alcohol_quantity_milliliters, alcohol_preference, drugs_preference, drugs_years_use, drugs_during_pregnancy, hiv_1tri, syphilis_1tri, c_hepatitis_1tri,

gestational_diabetes_mellitus, chronic_diabetes, chronic_diseases, hypertension_past_reported, hypertension_past_treatment, diabetes_mellitus_dm_reported, diabetes_mellitus_disease_gap, diabetes_mellitus_treatment from maternal_health;

select * from Fetal_Development_Risk

----Created table BMI_metrics-----

Create table BMI_metrics as select case_id, prepregnant_weight, prepregnant_bmi, bmi_according_who, current_maternal_weight_1st_tri, current_maternal_weight_2nd_tri, current_maternal_weight_3rd_tri, maternal_weight_at_inclusion, hight_at_inclusion, current_bmi, current_bmi_according_who from maternal_health;

select * from BMI_metrics

-----Created table Hospitalization_Labor-----

Create table Hospitalization_Labor as select case_id, disease_diagnose_during_pregnancy, treatment_disease_pregnancy, prepartum_maternal_weight, prepartum_maternal_heigh, delivery_mode, cesarean_section_reason, hospital_systolic_blood_pressure, hospital_diastolic_blood_pressure, hospital_hypertension, preeclampsia_record_pregnancy, mothers_hospital_stay, number_prenatal_appointments FROM maternal_health;

select * from Hospitalization_Labor

-----Created table Previous_Pregnancy-----

Create Table Previous_Pregnancy as select case_id, past_newborn_1_weight, gestational_age_past_newborn_1, past_newborn_2_weight, gestational_age_past_newborn_2, past_newborn_3_weight, gestational_age_past_newborn_3, past_newborn_4_weight, gestational_age_past_4_newborn, past_pregnancies_number,

```
miscarriage
FROM maternal health;
select * from Previous_Pregnancy
-----Created table New Born Details-----
Create table New Born Details
as select
case id,
expected_weight_for_the_newborn,
newborn weight,
newborn height,
newborn head circumference,
thoracic perimeter newborn,
newborn intubation,
newborn_airway_aspiration,
gestational age at birth,
pediatric_resuscitation_maneuvers,
apgar 1st min,
apgar_5th_min,
meconium labor
from maternal health;
-----Created Table Labs-----
create table Labs
as select
case id,
first trimester hematocrit,
second trimester hematocrit,
third trimester hematocrit,
firt_trimester_hemoglobin,
second trimester hemoglobin,
```

third trimester hemoglobin,

```
first_tri_fasting_blood_glucose,
second_tri_fasting_blood_glucose,
third_tri_fasting_blood_glucose,
"1st_hour_ogtt75_1st_tri",
"1st_hour_ogtt75_2tri",
"1st_hour_ogtt75_3tri",
"2nd_hour_ogtt_1tri",
"2nd_hour_ogtt_3tri",
"2nd_hour_ogtt_3tri",
right_systolic_blood_pressure,
right_diastolic_blood_pressure,
left_systolic_blood_pressure,
left_diastolic_blood_pressure
from maternal_health;
```

select * from Labs

Column Transformations

Color_ethnicity -> Replaced 0 with White, 1 with black, 2 with brown, 3 with Asian

It alters the data type of the color_ethnicity column to VARCHAR(100), which allows storing text values up to 100 characters in length.

Alter table demographics
Alter Column color_ethnicity type varchar(100);

Updates the values in the color_ethnicity column based on predefined conditions.

```
update demographics
SET color_ethnicity = CASE
WHEN color_ethnicity = '0' THEN 'White'
WHEN color_ethnicity = '1' THEN 'Black'
```

```
WHEN color_ethnicity = '2' THEN 'Brown' ELSE 'Asian' END;
```

Expected_weight_for_the_newborn -> Changed gram to kgs upto 2 decimal places

This query updates the expected_weight_for_the_newborn column in the New_Born_Details table to convert its value from grams to kilograms, rounded to two decimal places.

```
UPDATE New_Born_Details
SET expected_weight_for_the_newborn =
ROUND(CAST(expected_weight_for_the_newborn_AS_NUMERIC) / 1000, 2);
```

Newborn_weight -> Changed gram to kgs upto 2 decimal places

This query updates the newborn_weight column in the New_Born_Details table to convert its value from grams to kilograms, rounded to two decimal places.

```
UPDATE New_Born_Details
SET newborn_weight = ROUND(CAST(newborn_weight AS NUMERIC) / 1000, 2);
```

Apgar_1st_min -> For case id: 176 the value 99 looks typo because as per 5th minute the data is 10 so it could be 9. Replaced 99 to 9 for case_id: 176.

This query updates the apgar_1st_min column in the new_born_Details table.

UPDATE new_born_Details
SET apgar_1st_min = 9 WHERE apgar_1st_min = 99 ;

Bmi_according_who -> Replaced dataset values

0 with Underweight,

1 with Normal weight,

2 with Overweight,

3 with Obesity

We categorized values with these ranges provided

Underweight: BMI < 18.5 Normal weight: BMI 18.5–24.9 Overweight: BMI 25.0–29.9

Obesity: BMI ≥ 30.0

Class I (Moderate obesity): BMI 30.0–34.9 Class II (Severe obesity): BMI 35.0–39.9 Class III (Morbid obesity): BMI ≥ 40.0

We found that one of the case_id (1) was in the range of obese instead of overweight and few (39,223,285) were overweight instead of Normal so we updated accordingly

```
UPDATE bmi_metrics
SET bmi_according_who = 'Overweight'
WHERE case_id = 1;

UPDATE bmi_metrics
SET bmi_according_who = 'Normal'
WHERE case_id IN (39, 223,285);
```

This query updates the bmi_according_who column in the bmi_metrics table by replacing coded numeric values with their corresponding textual labels based on the World Health Organization (WHO) BMI classification.

```
UPDATE bmi_metrics
SET bmi_according_who =
CASE

WHEN bmi_according_who = '0' THEN 'Underweight'
WHEN bmi_according_who = '1' THEN 'Normal'
WHEN bmi_according_who = '2' THEN 'Overweight'
WHEN bmi_according_who = '3' THEN 'Obese'
ELSE Null
END;
```

Weight_fetal_percentile -> "Updating the column values as WHEN

```
weight_fetal_percentile = '1' THEN '10-25'
WHEN weight_fetal_percentile = '2' THEN '25'
WHEN weight_fetal_percentile = '3' THEN '25-50'
WHEN weight_fetal_percentile = '4' THEN '50'
WHEN weight_fetal_percentile = '5' THEN '50-75'
WHEN weight_fetal_percentile = '6' THEN '75'
```

```
WHEN weight_fetal_percentile = '7' THEN '75-90'
WHEN weight_fetal_percentile = '8' THEN '90'
WHEN weight_fetal_percentile = 'not_applicable' THEN NULL
```

We found that case_id 283 has weight_fetal_percentile = 25 given range was (0-8) which was Outlier so we considered as Null

```
UPDATE Ultrasound_results
SET weight_fetal_percentile = NULL
WHERE case_id = 283;
```

This query updates the weight_fetal_percentile column in the Ultrasound_results table, mapping numeric codes to descriptive percentile ranges or values.

```
UPDATE Ultrasound_results
SET weight_fetal_percentile = CASE
WHEN weight_fetal_percentile = '1' THEN '10-25'
WHEN weight_fetal_percentile = '2' THEN '25'
WHEN weight_fetal_percentile = '3' THEN '25-50'
WHEN weight_fetal_percentile = '4' THEN '50'
WHEN weight_fetal_percentile = '5' THEN '50-75'
WHEN weight_fetal_percentile = '6' THEN '75'
WHEN weight_fetal_percentile = '7' THEN '75-90'
WHEN weight_fetal_percentile = '8' THEN '90'
ELSE weight_fetal_percentile
END;
```

cesarean_section_reason ->

1. Standardized the Text -Elective'

- 'Placental detachment'
- 'Acute fetal distress'
- 'Breech presentation'
- 'Not applicable'
- 'Cephalopelvic disproportion'
- 'Placenta previa'
- 'Fetal growth restriction'
- 'Maternal acute hypertension'
- 'Previous cesarean section'
- 'Fetal macrosomia'
- 'No answer'
- 'Non-reassuring fetal status (NRFS)'
- 'Unsuccessful induction'
- 2. Replaced 8 and 12 with null.
- 3. Replaced "not_applicable" & ""not_answered" to null

Query executed:

```
--- Changes in Cesearean section reason column
```

--1.Change 8,12

UPDATE hospitalization_labor
SET cesarean_section_reason = NULL
WHERE cesarean_section_reason IN ('8', '12');

--2.Standardize the Text in cesearean_section_reason column

UPDATE hospitalization_labor

SET cesarean_section_reason = CASE

WHEN cesarean_section_reason ILIKE 'eletiva' THEN 'elective'

WHEN cesarean_section_reason ILIKE 'placentae detachment' THEN 'placenta detachment'

WHEN cesarean_section_reason ILIKE 'Nonreassuring fetal status%' THEN 'nonreassuring fetal status (nrfs)'

WHEN cesarean_section_reason ILIKE 'previa' THEN 'placenta previa' WHEN cesarean_section_reason ILIKE 'fetal macrosomia%' THEN 'fetal macrosomia'

```
ELSE cesarean section reason
END:
chronic diabetes ->
1.caseid: 88 and caseid: 118 have values 888 and 88888 but these patients
have no DM hence can be replaced by 0
2. This column can be updated from values in 'disease diagnosed during
pregnancy 'column
Query executed:
--FOR chronic diabetes
---1. Updating Chronic diabetes values 888,88888 to 0
UPDATE fetal development risk
SET chronic diabetes =
  CASE
    WHEN chronic_diabetes IN ('888', '88888') THEN 0
    ELSE chronic diabetes::INTEGER
  END;
-2. Chronic diabetes column updated depending on 'disease diagnosed during
pregnancy 'column
UPDATE fetal development risk as f
SET
  chronic diabetes =
    CASE
      WHEN chronic diabetes IS NULL AND
disease_diagnose_during_pregnancy ILIKE '%DM' THEN '1'
      ELSE chronic_diabetes
    END
FROM hospitalization labor as h
where f.case id = h.case id
and disease diagnose during pregnancy IS NOT NULL;
```

treatment_disease_pregnancy->

Replacing foreign languages with english, medicine names is standardized

- 'diet' → 'Diet'
- Language translation: 'Sem tto' → 'No treatment'
- 'ac valproico' → 'Valproic acid'
- 'Medicamento' → 'Medication'
- 'insulina' → 'Insulin'
- 'tapazol' → 'Tapazole'
- 'aspirina' → 'Aspirin'
- 'metformina' → 'Metformin'
- 'Metildopa' → 'Methyldopa'
- 'sim' → 'Yes'
- Predinisolone' → 'Predinisolona'
- 'medication' → 'Medication'
- 0 and 45 values replace with null.

Query executed:

- --. Update treatment disease pregnancy
- --1.Standardize the text in treatment_disease_pregnancy

UPDATE hospitalization_labor

SET treatment_disease_pregnancy = CASE

WHEN treatment_disease_pregnancy ILIKE '%diet%' THEN 'Diet'

WHEN treatment_disease_pregnancy ILIKE '%Sem tto%' THEN 'No treatment'

WHEN treatment_disease_pregnancy ILIKE '%ac valproico%' THEN 'Valproic acid'

WHEN treatment_disease_pregnancy ILIKE '%Medicamento%' THEN 'Medication'

WHEN treatment_disease_pregnancy ILIKE '%insulina%' THEN 'Insulin'

WHEN treatment_disease_pregnancy ILIKE '%tapazol%' THEN 'Tapazole'

WHEN treatment_disease_pregnancy ILIKE '%aspirina%' THEN 'Aspirin'

WHEN treatment_disease_pregnancy ILIKE '%metformina%' THEN 'Metformin'

WHEN treatment_disease_pregnancy ILIKE '%Metildopa%' THEN 'Methyldopa'

WHEN treatment_disease_pregnancy ILIKE '%sim%' THEN 'Yes'

WHEN treatment_disease_pregnancy::TEXT = '0' OR treatment_disease_pregnancy::TEXT = '45' THEN NULL

WHEN treatment_disease_pregnancy ILIKE '%xetin%' THEN 'Fluoxetine'
WHEN treatment_disease_pregnancy ILIKE '%predinisolona%' THEN
'Predinisolone'

ELSE treatment_disease_pregnancy END;

-2.Converting not applicable to null

update hospitalization_labor set treatment_disease_pregnancy = null where treatment_disease_pregnancy = 'not_applicable';

update hospitalization_labor set treatment_disease_pregnancy = 'Medication' where treatment_disease_pregnancy = 'medication';

preperitoneal_total_fat->

- Changed the data types from varchar to float
- Updated not_applicable to null
- Updated missing values from Periumbilical Subcutaneous fat column from Periumbilical total fat and Periumbilical visceral fat columns for caseid 9.
- Added new column preperitoneal total fat by adding preperitoneal subcutaneous fat and preperitoneal visceral fat columns.

Query executed:

--1. Changing data types from VARCHAR to FLOAT

UPDATE ultrasound_results set periumbilical_subcutanous_fat = null where periumbilical subcutanous fat = 'not applicable';

UPDATE ultrasound_results set periumbilical_visceral_fat = null where periumbilical_visceral_fat = 'not_applicable';

UPDATE ultrasound_results set periumbilical_total_fat = null where periumbilical_total_fat = 'not_applicable';

ALTER TABLE ultrasound_results

ALTER COLUMN periumbilical_subcutanous_fat TYPE FLOAT USING periumbilical_subcutanous_fat::FLOAT;

ALTER TABLE ultrasound_results

ALTER COLUMN periumbilical_visceral_fat TYPE FLOAT USING periumbilical_visceral_fat::FLOAT;
ALTER TABLE ultrasound_results
ALTER COLUMN periumbilical_total_fat TYPE FLOAT USING periumbilical_total_fat::FLOAT;

--2.updating subcutaneous fat value using total- visceral fat

UPDATE ultrasound_results
SET periumbilical_subcutanous_fat = Round((periumbilical_total_fat periumbilical_visceral_fat)::NUMERIC,1)
WHERE case_id = 9;

--3.Add new column as preperitoneal_total_fat

ALTER TABLE ultrasound_results ADD COLUMN preperitoneal_total_fat Float:

--Update new column using sub fat and vis fat columns
UPDATE ultrasound_results

SET preperitoneal_total_fat = Round((preperitoneal_subcutaneous_fat + preperitoneal_visceral_fat)::NUMERIC,1);

third_trimester_hemoglobin->

- Case_id 177 has an outlier 121 which is corrected to 12.1
- data type conversion.
- Not_applicables to null.

Query executed:

---update third_trimester_hemoglobin column in Labs table from 121 to 12.1 update labs set third_trimester_hemoglobin = 12.1 where case_id = 177; update labs set third_trimester_hemoglobin = null where third_trimester_hemoglobin = 'not_applicable';

ALTER TABLE labs

ALTER COLUMN third_trimester_hemoglobin TYPE FLOAT USING third trimester hemoglobin::FLOAT;

hypertension_past_treatment->

• Replace not_applicable by null.

Referring to the previous column, converted 0 to 1 and 1 to 0 indicating 0 means No Medication.1 means Medication.

```
Query executed:
--. convert hypertension past treatment column from 0 to 1 and 1 to 0
UPDATE fetal development risk
SET hypertension_past_treatment= CASE
  WHEN hypertension_past_treatment = '0' THEN '1'
  WHEN hypertension_past_treatment = '1' THEN '0'
  ELSE hypertension_past_treatment
     END;
-----Update bmi according who column for few case ids
UPDATE bmi metrics
SET bmi_according_who = 'Overweight'
WHERE case id = 1;
UPDATE bmi metrics
SET bmi according who = 'Normal'
WHERE case_id IN (39, 223,285);
-Update weight fetal percentile column to null for case id = 283
UPDATE Ultrasound results
SET weight_fetal_percentile = NULL
WHERE case_id = 283;
---modified the data types from integer to Float and converted grams to Kg for the
below list of columns
   1. past newborn 1 weight
   2. past newborn 2 weight
  3. past_newborn_3_weight
  4. past_newborn_4_weight
ALTER TABLE previous pregnancy
ALTER COLUMN past newborn 1 weight TYPE FLOAT USING
past newborn 1 weight::FLOAT;
```

```
ALTER TABLE previous pregnancy
ALTER COLUMN past newborn 2 weight TYPE FLOAT USING
past newborn 2 weight::FLOAT;
ALTER TABLE previous pregnancy
ALTER COLUMN past_newborn_3_weight TYPE FLOAT USING
past_newborn_3_weight::FLOAT;
ALTER TABLE previous pregnancy
ALTER COLUMN past newborn 4 weight TYPE FLOAT USING
past_newborn_4_weight::FLOAT;
UPDATE previous pregnancy
SET past_newborn_1_weight = past_newborn_1_weight/1000;
UPDATE previous pregnancy
SET past newborn 1 weight = round(past newborn 1 weight::numeric, 2);
UPDATE previous pregnancy
SET past newborn 2 weight = round((past newborn 2 weight/1000)::numeric,
2);
UPDATE previous pregnancy
SET past newborn 3 weight = round((past newborn 3 weight/1000)::numeric,
2);
UPDATE previous pregnancy
SET past newborn 4 weight = round((past newborn 4 weight/1000)::numeric,
2);
```

1.alcohol_preference

Changed 0 values to Fermented, and 1 values to Distilled. Not Applicable changed to null.

Query executed:

UPDATE public.fetal_development_risk SET alcohol_preference = CASE

```
WHEN alcohol_preference = '0' THEN 'Fermented'
WHEN alcohol_preference = '1' THEN 'Distilled'
WHEN alcohol_preference = 'not_applicable' THEN null
ELSE alcohol_preference
END;
```

2.drugs_preference

Not Applicable changed to 0 and data type changed to Integer.

Query executed:

```
UPDATE public.fetal_development_risk
SET drugs_preference = 0
WHERE drugs_preference = 'not_applicable';
```

ALTER TABLE fetal_development_risk

ALTER COLUMN drugs_preference TYPE INT USING

drugs_preference::INT;

3.past_pregnancies_number

case_id= 48 and 201, changed past_pregnancies_number to 2. case_id = 70, 182, 239, 263, 220 changed past_pregnancies_number to 1. case_id = 15 and 240 changed past_pregnancies_number to 0. Also, changed data type to Integer.

Query executed:

```
update public.previous_pregnancy
set past_pregnancies_number = 2
where case_id in (48,201);

update public.previous_pregnancy
set past_pregnancies_number = 1
where case_id in (70, 182, 239, 263, 220);

update public.previous_pregnancy
set past_pregnancies_number = 0
```

where case_id in (15,240);

ALTER TABLE previous_pregnancy
ALTER COLUMN past_pregnancies_number TYPE INT USING
past_pregnancies_number::INT;

4.periumbilical_subcutanous_fat

For case_id = 9 subcutanous_fat is not_applicable and visceral_fat is 39.6 and total fat is 55 so subcutanous_fat needs to be changed to 15.4

Query executed:

UPDATE public.ultrasound_results set periumbilical subcutanous fat = 15.4 where case id = 9;

5.periumbilical_total_fat

For case_id in (266,269,275,278,283,285,273,280,282,286,287) replaced blanks by adding M-sat n M-Vat.

Query executed:

UPDATE public.ultrasound_results
SET periumbilical_total_fat = ROUND(CAST(periumbilical_subcutanous_fat + periumbilical_visceral_fat AS NUMERIC), 2) :: FLOAT
WHERE case_id IN (266, 269, 275, 278, 283, 285, 273, 280, 282, 286,287);

6.maternal weight at inclusion

Updated the null value to 81.28 for case_ld = 124. Calculated from hight_at_inclusion and current_BMI.

Query executed:

update public.bmi_metrics set maternal_weight_at_inclusion = round(cast(current_bmi * hight_at_inclusion * hight_at_inclusion as numeric),2) :: float where case id = 124;

7.hiv 1tri

Replaced not_applicable with null and changed data type to integer. Also, where type_of_disease_diagnose_during_pregnancy is HIV, changed the value of this column to 1.

Query executed:

```
select * from fetal_development_risk where case_id = 1;
update public.fetal_development_risk
set hiv_1tri = null
where hiv_1tri = 'not_applicable';

ALTER TABLE public.fetal_development_risk
ALTER COLUMN hiv_1tri TYPE integer
USING hiv_1tri::integer;

update public.fetal_development_risk fd
set hiv_1tri = 1
from hospitalization_labor hl
where fd.case_id = hl.case_id
and disease_diagnose_during_pregnancy_ilike '%HIV%';
```

8.syphilis 1tri

Replaced not_applicable with null and changed data type to integer. Also, where type_of_disease_diagnose_during_pregnancy is Syphilis, changed the value of this column to 1.

Query executed:

```
update public.fetal_development_risk
set syphilis_1tri = null
where syphilis_1tri = 'not_applicable';

ALTER TABLE fetal_development_risk
ALTER COLUMN syphilis_1tri TYPE integer
USING syphilis_1tri::integer;

update fetal_development_risk fd
```

```
set syphilis_1tri =1
from hospitalization_labor hl
where fd.case_id = hl.case_id
and hl.disease_diagnose_during_pregnancy ilike '%syphilis%';
```

9.c_hepatitis_1tri

Replaced not_applicable with null and changed data type to integer. Also, where type_of_disease_diagnose_during_pregnancy is Hepatitis C, changed the value of this column to 1.

Query executed:

```
update public.fetal_development_risk
set c_hepatitis_1tri = null
where c_hepatitis_1tri = 'not_applicable';

ALTER TABLE public.fetal_development_risk
ALTER COLUMN c_hepatitis_1tri TYPE integer
USING c_hepatitis_1tri::integer;

update fetal_development_risk fd
set c_hepatitis_1tri = 1
from hospitalization_labor hl
where fd.case id = hl.case id
```

and hl.disease_diagnose_during_pregnancy like '%hepatitis c%';

10 & 11.hospital_systolic_blood_pressure and hospital_diastolic_blood_pressure

Case_id = 125 changed not_applicable to null
Case_id in
(14,26,42,64,65,67,70,119,121,122,195,205,212,218,85,87,112,113,134,
143,151) values of DBP and SBP were reversed.
Data Type of both columns changed to integer.

Query executed:

UPDATE public.hospitalization_labor

SET hospital_systolic_blood_pressure = CASE WHEN

hospital_systolic_blood_pressure= 'not_applicable' THEN null ELSE hospital_systolic_blood_pressure END,

hospital_diastolic_blood_pressure = CASE WHEN

hospital_diastolic_blood_pressure= 'not_applicable' THEN null ELSE

hospital_diastolic_blood_pressure END

WHERE hospital_systolic_blood_pressure= 'not_applicable' OR

hospital_diastolic_blood_pressure= 'not_applicable';

ALTER TABLE hospitalization_labor

ALTER COLUMN hospital_systolic_blood_pressure SET DATA TYPE INTEGER USING hospital_systolic_blood_pressure::INTEGER, ALTER COLUMN hospital_diastolic_blood_pressure SET DATA TYPE INTEGER USING hospital_diastolic_blood_pressure::INTEGER;

UPDATE public.hospitalization labor

SET hospital_systolic_blood_pressure = CASE WHEN

hospital_systolic_blood_pressure< hospital_diastolic_blood_pressure THEN hospital_diastolic_blood_pressure ELSE

hospital systolic blood pressure

END,

hospital_diastolic_blood_pressure = CASE WHEN

 $hospital_systolic_blood_pressure < hospital_diastolic_blood_pressure$

THEN hospital_systolic_blood_pressure ELSE

hospital_diastolic_blood_pressure

END

WHERE hospital_systolic_blood_pressure< hospital diastolic blood pressure;

Table name - fetal_development_risk
Column name: diabetes_mellitus_treatment

Changes made: Updated the diabetes_mellitus_treatment column as 0 - no medicines, 1 - medicine, 2 - diet and 'not_applicable' to null.

QUERY:

UPDATE public.fetal_development_risk

SET diabetes_mellitus_treatment = CASE

WHEN diabetes_mellitus_treatment = '0' THEN 'no medicines'

WHEN diabetes_mellitus_treatment = '1' THEN 'medicines'

WHEN diabetes_mellitus_treatment = '2' THEN 'diet'

WHEN diabetes_mellitus_treatment = 'not_applicable' THEN NULL

END;

Table name - previous_pregnancy Column name: miscarriage

Changes made: updated miscarriage value to 1 when miscarriage = 2 and miscarriage = 3

QUERY:

UPDATE public.previous_pregnancy SET miscarriage = CASE WHEN miscarriage = 2 THEN 1 WHEN miscarriage = 3 THEN 1 ELSE miscarriage END;

Table name - bmi_metrics

Column name: bmi_according_who

Changes made: Dropped the Corrupted Column and Created new column bmi_according_who and Updated 'bmi_according_who' value 0 - under weight, 1 - normal weight, 2 - over weight and 3 - obese and 'not_applicable' to null.

QUERY:

```
ALTER TABLE bmi_metrics DROP COLUMN bmi_according_who;
SELECT * FROM bmi_metrics;
ALTER TABLE public.bmi_metrics
ADD COLUMN bmi_according_who TEXT;
Update bmi_according_who column values from maternal_health table---
UPDATE bmi metrics AS Tab1
SET bmi_according_who =
     (SELECT bmi_according_who FROM maternal_health AS Tab2)
     WHERE Tab1.case_id = Tab2.case_id);
UPDATE bmi metrics
SET bmi_according_who =
CASE
   WHEN bmi_according_who = '0' THEN 'Underweight'
   WHEN bmi_according_who = '1' THEN 'Normal'
   WHEN bmi_according_who = '2' THEN 'Overweight'
   WHEN bmi_according_who = '3' THEN 'Obese'
   ELSE NULL
 END;
```

Table name - bmi_metrics Column name:current_bmi_who_category

Changes made :Created new column 'current_bmi_who_category' and Updated as 0 - under weight, 1 - normal weight, 2 - over weight and 3 - obese and 'not_applicable' to null

QUERY:

```
ALTER TABLE public.bmi_metrics

ADD COLUMN current_bmi_who_category TEXT;

UPDATE public.bmi_metrics

SET current_bmi_who_category = CASE
```

WHEN CAST(current_bmi_according_who AS INTEGER) = 0 THEN 'Under weight'

WHEN CAST(current_bmi_according_who AS INTEGER) = 1 THEN 'Normal weight'

WHEN CAST(current_bmi_according_who AS INTEGER)= 2 THEN 'Over weight'

WHEN CAST(current_bmi_according_who AS INTEGER) = 3 THEN 'Obese' ELSE NULL END:

Table name - hospitalization_labor
Columnname:prepartum_bmi
,prepartum_bmi_who_category,prepartum_maternal_height

Changes made :Added new column 'prepartum_bmi' and 'prepartum_bmi_who_category' and Renamed 'prepartum_maternal_heigh' to 'prepartum_maternal_height' and Updated 'prepartum_bmi' column using bmi calculation with 'prepartum_maternal_weight' and 'prepartum_maternal_height' columns. Updated 'prepartum_bmi_who_category' column using 'prepartum_bmi' column WHO ranges.

QUERY:

ALTER TABLE hospitalization_labor ADD COLUMN prepartum_bmi DECIMAL;

ALTER TABLE hospitalization_labor
ADD COLUMN prepartum_bmi_who_category TEXT;

ALTER TABLE hospitalization_labor RENAME COLUMN prepartum_maternal_heigh TO prepartum_maternal_height;

UPDATE hospitalization_labor SET prepartum_bmi = ROUND((prepartum_maternal_weight::numeric /

```
(prepartum_maternal_height::numeric *
    prepartum_maternal_height::numeric)), 2)
WHERE prepartum_maternal_weight ~ '^\d+(\.\d+)?$'
AND prepartum_maternal_height ~ '^\d+(\.\d+)?$';

UPDATE hospitalization_labor
SET prepartum_bmi_who_category = CASE
        WHEN prepartum_bmi < 18.5 THEN 'Underweight'
        WHEN prepartum_bmi BETWEEN 18.5 AND 24.9 THEN 'Normal weight'
        WHEN prepartum_bmi BETWEEN 25 AND 29.9 THEN 'Overweight'
        WHEN prepartum_bmi >= 30 THEN 'Obese'
        ELSE NULL
END;
Table name - hospitalization_labor
Columname: delivery_mode
```

Changes made: Updated all the values having 12 in range to 5 using Update statement & set operator and Altered delivery_mode Column.

QUERY:

```
UPDATE hospitalization_labor SET delivery_mode= '5' WHERE delivery_mode = '12';

ALTER TABLE hospitalization_labor
ALTER COLUMN delivery_mode TYPE TEXT USING delivery_mode::TEXT;
UPDATE hospitalization_labor
SET delivery_mode = CASE
WHEN delivery_mode = '1' THEN 'vaginal'
WHEN delivery_mode = '2' THEN 'vaginal forcipe'
WHEN delivery_mode = '3' THEN 'miscarriage with curettage'
WHEN delivery_mode = '4' THEN 'miscarriage without curettage'
WHEN delivery_mode = '5' THEN 'cesarean section'
WHEN delivery_mode = '6' THEN 'cesarean by jeopardy'
WHEN delivery_mode = '7' THEN 'vaginal with episiotomy'
WHEN delivery_mode = '8' THEN 'vaginal without episiotomy'
```

WHEN delivery_mode = '9' THEN 'vaginal with episiotomy plus forcipe' ELSE delivery_mode END;

Table name - fetal_development_risk table Columnname: GESTATIONAL_DIABETES_MELLITUS

Changes made : updated query to change $g_d_m = 0$ when $c_d = 1$ in fetal_development_risk table.

QUERY:

UPDATE FETAL_DEVELOPMENT_RISK
SET GESTATIONAL_DIABETES_MELLITUS = 0
WHERE CHRONIC_DIABETES = 1;

Table name - hospitalization_labor
Columnname: disease_diagnose_during_pregnancy

Changes made: Updated 'not_applicable,', 'not_applicable+CX20', 'no_answer' and '0' to null and replaced 'HAS' to Hypertension,'ITU' to 'UTI,etc.'

Updated query to change the d_d_d_p to add 'DM' when c_d = '1' in hospitalization_labor and Concatenated 'DM' with existing values.

QUERY 1:

UPDATE hospitalization_labor SET disease_diagnose_during_pregnancy = null

WHEREdisease_diagnose_during_pregnancy IN('not_applicable','not_applicable+CX20','no_answer','0');

UPDATE hospitalization_labor

SET disease_diagnose_during_pregnancy = CASE

WHEN disease_diagnose_during_pregnancy = 'Has' THEN 'Hypertension'

WHEN disease_diagnose_during_pregnancy = 'itu' THEN 'UTI'

WHEN disease_diagnose_during_pregnancy = 'ITU' THEN 'UTI'

WHEN disease_diagnose_during_pregnancy='hepatitis b and ITU' THEN 'hepatitis b and UTI'

WHEN disease_diagnose_during_pregnancy = 'HAS na baixa hospitalar' THEN 'Hypertension'

WHEN disease_diagnose_during_pregnancy = 'bronchitis, itu' THEN 'bronchitis, UTI'

WHEN disease_diagnose_during_pregnancy = 'HAS na baixa hospitalar' THEN 'Hypertension'

WHEN disease_diagnose_during_pregnancy = 'bronchitis, itu' THEN 'bronchitis, UTI'

WHEN disease_diagnose_during_pregnancy = 'asthma' THEN 'Asthma' WHEN disease_diagnose_during_pregnancy = 'depression' THEN 'Depression'

WHEN disease_diagnose_during_pregnancy = 'Has + DMG' THEN 'Hypertension + DMG'

WHENdisease_diagnose_during_pregnancy = 'Has secundária' THEN 'Hypertension'

WHEN disease_diagnose_during_pregnancy = 'Pre-eclampsia and has gestational' THEN 'Pre-eclampsia and Hypertension gestational'

WHEN disease_diagnose_during_pregnancy = 'HAS' THEN 'Hypertension'

WHEN disease_diagnose_during_pregnancy = 'has' THEN 'Hypertension'

WHEN disease_diagnose_during_pregnancy = 'HAS +DMG' THEN 'Hypertension +DMG'

WHEN disease_diagnose_during_pregnancy = 'bronchitis itu' THEN 'bronchitis UTI'

WHEN disease_diagnose_during_pregnancy = 'depression + ITU' THEN 'depression + UTI'

WHEN disease_diagnose_during_pregnancy = 'Strepto + ITU' THEN 'Strepto + UTI'

WHEN disease_diagnose_during_pregnancy = 'Cognitive deficit - depression + HAS Gestation' THEN 'Cognitive deficit - depression + Hypertension Gestation'

ELSE disease_diagnose_during_pregnancy

END:

QUERY 2:

UPDATE hospitalization_labor
SET disease_diagnose_during_pregnancy = 'DM'
WHERE case_id in (SELECT A.case_id FROM hospitalization_labor A
INNER JOIN fetal_development_risk B ON A.case_id = B.case_id
WHERE B.chronic_diabetes = 1 and disease_diagnose_during_pregnancy is
null);

QUERY 3:

UPDATE hospitalization_labor

SET disease_diagnose_during_pregnancy =

disease_diagnose_during_pregnancy || ' + ' || 'DM'

WHERE case_id in (SELECT A.case_id FROM hospitalization_labor A

INNER JOIN fetal_development_risk B ON A.case_id = B.case_id

WHERE B.chronic_diabetes = 1 and disease_diagnose_during_pregnancy != 'DM');

Table name: Bmi_metrics

---Replaced not_applicable by NULL

UPDATE public.bmi_metrics
SET current_maternal_weight_1st_tri = NULL
WHERE current_maternal_weight_1st_tri = 'not_applicable';

UPDATE public.bmi_metrics
SET current_maternal_weight_2nd_tri = NULL
WHERE current_maternal_weight_2nd_tri = 'not_applicable';

UPDATE public.bmi_metrics
SET current_maternal_weight_3rd_tri = NULL
WHERE current_maternal_weight_3rd_tri = 'not_applicable';

UPDATE public.bmi_metrics
SET prepregnant_weight= NULL
WHERE prepregnant_weight= 'no_answer';

UPDATE public.bmi metrics

SET prepregnant_bmi = NULL WHERE prepregnant bmi = 'not applicable';

--- Changed Data Types

ALTER COLUMN public.bmi_metrics

ALTER COLUMN current_maternal_weight_1st_tri type numeric using current maternal weight 1st tri::NUMERIC(10,2),

ALTER COLUMN current_maternal_weight_2nd_tri type numeric using current maternal weight 2nd tri::NUMERIC(10,2),

ALTER COLUMN current_maternal_weight_3rd_tri type numeric using current maternal weight 3rd tri::NUMERIC(10,2),

ALTER COLUMN prepregnant_weight type numeric using prepregnant_weight::NUMERIC(10,1),

ALTER COLUMN prepregnant_bmi type numeric using prepregnant bmi::NUMERIC(10,2);

---Updated current_maternal_weight_3rd_tri Case_id=237 to 99.9 from 999 as it seems a typo.

UPDATE public.bmi_metrics SET current_maternal_weight_3rd_tri = '99.9' WHERE case_id = '237';

Table name: labs

---Replaced not_applicable by NULL

UPDATE public.labs
SET second_trimester_hematocrit = NULL
WHERE second_trimester_hematocrit = 'not_applicable';

UPDATE public.labs
SET third_trimester_hematocrit = NULL
WHERE third_trimester_hematocrit = 'not_applicable';

UPDATE public.labs

SET second_trimester_hemoglobin = NULL

WHERE second_trimester_hemoglobin = 'not_applicable';

UPDATE public.labs

```
SET second tri fasting blood glucose= NULL
WHERE second tri fasting blood glucose = 'not applicable';
UPDATE public.labs
SET third_tri_fasting_blood_glucose= NULL
WHERE third tri fasting blood glucose = 'not applicable';
UPDATE public.labs
SET "1st hour ogtt75 1st tri"= NULL
WHERE "1st hour ogtt75 1st tri" = 'not applicable';
UPDATE public.labs
SET "1st hour ogtt75 2tri" = NULL
WHERE "1st hour ogtt75 2tri" = 'not applicable';
UPDATE public.labs
SET "1st hour ogtt75 3tri"= NULL
WHERE "1st hour ogtt75 3tri" = 'not applicable';
UPDATE public.labs
SET "2nd hour ogtt 1tri" = NULL
WHERE "2nd hour ogtt 1tri" = 'not applicable';
UPDATE public.labs
SET "2nd hour ogtt75 2tri" = NULL
WHERE "2nd hour ogtt75 2tri"= 'not applicable';
UPDATE public.labs
SET "2nd hour ogtt 3tri" = NULL
WHERE "2nd hour ogtt 3tri" = 'not applicable';
UPDATE public.labs
SET right systolic blood pressure = NULL
WHERE right systolic blood pressure = 'not applicable';
UPDATE public.labs
SET right diastolic blood pressure = NULL
WHERE right diastolic blood pressure= 'not applicable';
```

UPDATE public.labs

SET left_systolic_blood_pressure= NULL WHERE left systolic blood pressure = 'not applicable';

UPDATE public.labs
SET left_diastolic_blood_pressure= NULL
WHERE left_diastolic_blood_pressure= 'not_applicable';

---Changed Data Types

ALTER TABLE PUBLIC.LABS

ALTER COLUMN second_trimester_hematocrit TYPE double precision USING second trimester hematocrit::double precision,

ALTER COLUMN third_trimester_hematocrit TYPE double precision USING third_trimester_hematocrit::double precision,

ALTER COLUMN second_trimester_hemoglobin TYPE double precision USING second trimester hemoglobin::double precision,

ALTER COLUMN second_tri_fasting_blood_glucose TYPE double precision USING second_tri_fasting_blood_glucose::integer,

ALTER COLUMN third_tri_fasting_blood_glucose TYPE integer USING third_tri_fasting_blood_glucose::integer,

ALTER COLUMN "1st_hour_ogtt75_1st_tri" TYPE integer USING "1st_hour_ogtt75_1st_tri"::integer,

ALTER COLUMN "1st_hour_ogtt75_2tri" TYPE integer USING "1st_hour_ogtt75_2tri"::integer,

ALTER COLUMN "1st_hour_ogtt75_3tri" TYPE integer USING "1st_hour_ogtt75_3tri"::integer,

ALTER COLUMN "2nd_hour_ogtt_1tri" TYPE integer USING "2nd_hour_ogtt_1tri"::integer,

ALTER COLUMN "2nd_hour_ogtt75_2tri" TYPE integer USING "2nd hour ogtt75 2tri"::integer,

ALTER COLUMN "2nd_hour_ogtt_3tri" TYPE integer USING "2nd_hour_ogtt_3tri"::integer,

ALTER COLUMN right_systolic_blood_pressure TYPE integer USING right_systolic_blood_pressure::integer,

ALTER COLUMN left_systolic_blood_pressure TYPE integer USING left_systolic_blood_pressure::integer,

ALTER COLUMN right_diastolic_blood_pressure TYPE integer USING right_diastolic_blood_pressure::integer,

ALTER COLUMN left_diastolic_blood_pressure TYPE integer USING left_diastolic_blood_pressure::integer;

-- Created New Column

ALTER TABLE public.labs

ADD COLUMN mean_systolic_blood_pressure integer;

-- Updated The New Column By Taking Mean Of Right Systolic And Left Systolic

UPDATE public.labs

SET mean_systolic_blood_pressure = ROUND((right_systolic_blood_pressure + left systolic blood pressure) / 2, 0);

-- Created New Column

ALTER TABLE public.labs

ADD COLUMN mean diastolic blood pressure integer;

-- Updated The New Column With The Values By Taking Mean Of Right Diastolic And Left Diastolic

UPDATE public.labs

SET mean_diastolic_blood_pressure = ROUND((right_diastolic_blood_pressure + left_diastolic_blood_pressure) / 2, 0);

Table name: new born details

---Replacing not_applicable to NULL

UPDATE public.new_born_details SET newborn_height = NULL

WHERE newborn_height IN ('not_applicable');

UPDATE public.new_born_details

SET newborn_head_circumference = NULL

WHERE newborn_head_circumference IN ('not_applicable');

----Changing Data Types

ALTER TABLE public.new_born_details

ALTER COLUMN expected_weight_for_the_newborn TYPE double precision USING expected_weight_for_the_newborn::double precision;

ALTER TABLE public.new_born_details

ALTER COLUMN newborn_weight TYPE double precision USING

newborn_weight::double precision;

ALTER TABLE public.new_born_details

ALTER COLUMN newborn_height TYPE double precision USING newborn_height::

double precision;

ALTER TABLE public.new_born_details
ALTER COLUMN newborn_head_circumference TYPE double precision USING
newborn_head_circumference :: double precision

Table name: fetal_development_risk

-----Replacing not_applicable & no_answer to NULL

UPDATE fetal development risk SET tobacco use in months = NULL WHERE tobacco use in months IN ('not applicable', 'no answer'); UPDATE fetal development risk SET tobacco_quantity_by_day = NULL WHERE tobacco_quantity_by_day IN ('not_applicable', 'no_answer'); UPDATE fetal development risk SET alcohol quantity milliliters = NULL WHERE alcohol quantity milliliters IN ('not applicable', 'no answer'); UPDATE fetal development risk SET drugs_years_use = NULL WHERE drugs_years_use IN ('not_applicable', 'no_answer'); UPDATE fetal development risk SET drugs_during_pregnancy = NULL WHERE drugs during pregnancy IN ('not applicable', 'no answer'); UPDATE fetal development risk SET chronic diabetes = NULL WHERE chronic diabetes IN ('not applicable', 'no answer'); UPDATE fetal development risk SET chronic diseases = NULL

WHERE chronic diseases IN ('not applicable', 'no answer');

UPDATE fetal_development_risk
SET hypertension_past_treatment = NULL
WHERE hypertension past treatment IN ('not applicable', 'no answer');

UPDATE fetal_development_risk

SET diabetes_mellitus_disease_gap = NULL

WHERE diabetes mellitus disease gap IN ('not applicable', 'no answer');

-----Changing Data Types

ALTER TABLE fetal_development_risk

ALTER COLUMN tobacco_use_in_months TYPE double precision USING tobacco use in months::double precision;

ALTER TABLE fetal_development_risk

ALTER COLUMN tobacco_quantity_by_day TYPE double precision USING tobacco_quantity_by_day::double precision;

ALTER TABLE fetal_development_risk

ALTER COLUMN alcohol_quantity_milliliters TYPE integer USING alcohol_quantity_milliliters::integer;

ALTER TABLE fetal_development_risk
ALTER COLUMN drugs_years_use TYPE integer USING drugs_years_use::integer;

ALTER TABLE fetal_development_risk
ALTER COLUMN drugs_during_pregnancy TYPE integer USING
drugs_during_pregnancy::integer;

ALTER TABLE fetal_development_risk
ALTER COLUMN chronic_diabetes TYPE integer USING chronic_diabetes::integer;

ALTER TABLE fetal_development_risk
ALTER COLUMN chronic_diseases TYPE integer USING chronic_diseases::integer;

ALTER TABLE fetal_development_risk

ALTER COLUMN hypertension_past_treatment TYPE integer USING hypertension_past_treatment::integer;

ALTER TABLE fetal_development_risk

Table name: public.previous_pregnancy

```
-----Replacing not_applicable & no_answer to NULL
Update public.previous pregnancy
Set past newborn 1 weight = NULL
Where past newborn 1 weight in ('not applicable', 'no answer');
Update public.previous pregnancy
Set gestational age past newborn 1 = NULL
Where gestational age past newborn 1 in ('not applicable', 'no answer');
Update public previous pregnancy
Set past newborn 2 weight = NULL
Where past newborn 2 weight in ('not applicable', 'no answer');
Update public.previous pregnancy
Set gestational_age_past_newborn 2 = NULL
Where gestational age past newborn 2 in ('not applicable', 'no answer');
Update public previous pregnancy
Set past newborn 3 weight = NULL
Where past newborn 3 weight in ('not applicable', 'no answer');
Update public.previous pregnancy
Set gestational age past newborn 3 = NULL
Where gestational age past newborn 3 in ('not applicable', 'no answer');
Update public.previous pregnancy
Set past newborn 4 weight = NULL
Where past newborn 4 weight in ('not applicable', 'no answer');
Update public.previous pregnancy
Set gestational age past 4 newborn = NULL
```

Where gestational age past 4 newborn in ('not applicable', 'no answer');

-----Changing Data Types

ALTER TABLE public.previous_pregnancy
ALTER COLUMN past_newborn_1_weight TYPE integer USING
past_newborn_1_weight::integer;

ALTER TABLE public.previous_pregnancy
ALTER COLUMN gestational_age_past_newborn_1 TYPE integer USING
gestational_age_past_newborn_1::integer;

ALTER TABLE public.previous_pregnancy
ALTER COLUMN past_newborn_2_weight TYPE integer USING
past_newborn_2_weight::integer;

ALTER TABLE public.previous_pregnancy
ALTER COLUMN gestational_age_past_newborn_2 TYPE integer USING
gestational_age_past_newborn_2::integer;

ALTER TABLE public.previous_pregnancy
ALTER COLUMN past_newborn_3_weight TYPE integer USING
past_newborn_3_weight::integer;

ALTER TABLE public.previous_pregnancy
ALTER COLUMN gestational_age_past_newborn_3 TYPE integer USING
gestational_age_past_newborn_3::integer;

ALTER TABLE public.previous_pregnancy
ALTER COLUMN past_newborn_4_weight TYPE integer USING
past_newborn_4_weight::integer;

ALTER TABLE public.previous_pregnancy
ALTER COLUMN gestational_age_past_4_newborn TYPE integer USING
gestational_age_past_4_newborn::integer;

Table name: public.hospitalization_labor

----Replacing not_applicable & no_answer to NULL UPDATE public.hospitalization labor

SET prepartum_maternal_weight = NULL WHERE prepartum maternal weight ='not applicable';

UPDATE public.hospitalization_labor
SET prepartum_maternal_height = NULL
WHERE prepartum maternal height ='not applicable';

UPDATE public.hospitalization_labor
SET cesarean_section_reason = NULL
WHERE cesarean_section_reason IN('not_applicable','no_answer');

-----Changing Data Types

ALTER TABLE public.hospitalization_labor
ALTER COLUMN prepartum_maternal_weight TYPE numeric USING
prepartum_maternal_weight::numeric(10,2);

ALTER TABLE public.hospitalization_labor
ALTER COLUMN prepartum_maternal_height TYPE numeric USING
prepartum_maternal_height::numeric(10,2);

ALTER TABLE public.hospitalization_labor
ALTER COLUMN cesarean_section_reason TYPE text USING cesarean section reason::text;

ALTER TABLE public.hospitalization_labor ALTER COLUMN number_prenatal_appointments TYPE integer USING number_prenatal_appointments::integer;

Table name: ultrasound_results

-- CREATING NEW COLUMN

ALTER TABLE ULTRASOUND_RESULTS
ADD COLUMN PERIUMBILICAL_VFT_SFT_RATIO NUMERIC(10,2);

-- UPDATING THE NEW COLUMN WITH THE VALUES

UPDATE ULTRASOUND_RESULTS
SET
PERIUMBILICAL_VFT_SFT_RATIO = PERIUMBILICAL_VISCERAL_FAT /
PERIUMBILICAL SUBCUTANOUS FAT;

-- CREATING NEW COLUMN

ALTER TABLE ULTRASOUND_RESULTS
ADD COLUMN PREPERITONEAL_VFT_SFT_RATIO NUMERIC(10,2);

-- UPDATING THE NEW COLUMN WITH THE VALUES

UPDATE ULTRASOUND_RESULTS
SET
PREPERITONEAL_VFT_SFT_RATIO = PREPERITONEAL_VISCERAL_FAT /
PREPERITONEAL_SUBCUTANEOUS_FAT;

---Replaced not applicable by NULL

UPDATE public.ultrasound_results
SET fetal_weight_at_ultrasound = NULL
WHERE fetal_weight_at_ultrasound= 'not applicable';

UPDATE ultrasound_results
SET weight_fetal_percentile = NULL
WHERE weight_fetal_percentile= 'not_applicable';

--- Changing data types

ALTER TABLE PUBLIC.ULTRASOUND_RESULTS
ALTER COLUMN gestational_age_at_inclusion TYPE NUMERIC(10, 0);

ALTER TABLE PUBLIC.ULTRASOUND_RESULTS
ALTER COLUMN fetal_weight_at_ultrasound TYPE Integer USING fetal_weight_at_ultrasound::integer;

--CREATING NEW COLUMN weight_percentile to recalculate the percentiles based on gestational_age_at_inclusion and fetal_weight_at_ultrasound

ALTER TABLE ultrasound_results ADD COLUMN weight_percentile INTEGER;

---Updating the values in the new column weight_percentile based on the reference table in this link

https://www.medhealthtv.com/blog/blogs/item/89-small-for-gestation

---- Used this python script to write the sql query

```
# Define the percentile ranges for each gestational age
data = {
  14: [70, 73, 78, 83, 90, 98, 104, 109, 113],
  15: [89, 93, 99, 106, 114, 124, 132, 138, 144],
  16: [113, 117, 124, 133, 144, 155, 166, 174, 181],
  17: [141, 146, 154, 165, 177, 190, 203, 217, 225],
  18: [174, 181, 192, 206, 222, 239, 255, 268, 278],
  19: [214, 223, 235, 252, 272, 292, 313, 328, 340],
  20: [260, 271, 286, 307, 330, 355, 380, 399, 413],
  21: [314, 327, 345, 370, 398, 428, 458, 481, 497],
  22: [375, 392, 412, 443, 476, 512, 548, 575, 595],
  23: [445, 465, 489, 525, 565, 608, 650, 682, 705],
  24: [523, 548, 576, 618, 665, 715, 765, 803, 830],
  25: [611, 641, 673, 723, 778, 838, 894, 938, 970],
  26: [707, 743, 780, 838, 902, 971, 1038, 1087, 1125],
  27: [813, 855, 898, 964, 1039, 1118, 1196, 1251, 1295],
  28: [929, 977, 1026, 1102, 1189, 1279, 1368, 1429, 1481],
  29: [1053, 1108, 1165, 1251, 1350, 1453, 1554, 1622, 1682],
  30: [1185, 1247, 1313, 1410, 1523, 1640, 1753, 1828, 1897],
  31: [1326, 1394, 1470, 1580, 1707, 1838, 1964, 2046, 2126],
  32: [1473, 1548, 1635, 1757, 1901, 2047, 2187, 2276, 2367],
  33: [1626, 1708, 1807, 1942, 2103, 2266, 2419, 2516, 2619],
  34: [1785, 1872, 1985, 2134, 2312, 2492, 2659, 2764, 2880],
  35: [1948, 2038, 2167, 2330, 2527, 2723, 2904, 3018, 3148],
  36: [2113, 2205, 2352, 2531, 2745, 2959, 3153, 3277, 3422].
  37: [2280, 2372, 2537, 2733, 2966, 3195, 3403, 3538, 3697],
  38: [2446, 2536, 2723, 2935, 3186, 3432, 3652, 3799, 3973],
  39: [2612, 2696, 2905, 3135, 3403, 3664, 3897, 4058, 4247],
}
# Percentile labels
percentiles = [2, 5, 10, 25, 50, 75, 90, 95, 97.5]
# Start generating SQL
sql output = []
for gest_age, weights in data.items():
  for i in range(len(weights) - 1):
    sql_output.append(
       f"WHEN gestational_age_at_inclusion = {gest_age} AND fetal_weight_at_ultrasound >= {weights[i]}
AND fetal_weight_at_ultrasound < {weights[i+1]} THEN {percentiles[i]}"
  sql output.append(
    f"WHEN gestational_age_at_inclusion = {gest_age} AND fetal_weight_at_ultrasound >= {weights[-1]}
THEN {percentiles[-1]}"
  )
# Print SQL code
print("\n".join(sql_output))
```

Query

```
UPDATE ultrasound_results
SET weight_percentile =
CASE
```

-- Gestational Age 14 Weeks

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 70 AND fetal_weight_at_ultrasound < 73 THEN 2

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 73 AND fetal_weight_at_ultrasound < 78 THEN 5

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 78 AND fetal_weight_at_ultrasound < 83 THEN 10

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 83 AND fetal_weight_at_ultrasound < 90 THEN 25

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 90 AND fetal_weight_at_ultrasound < 98 THEN 50

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 98 AND fetal_weight_at_ultrasound < 104 THEN 75

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 104 AND fetal_weight_at_ultrasound < 109 THEN 90

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 109 AND fetal_weight_at_ultrasound < 113 THEN 95

WHEN gestational_age_at_inclusion = 14 AND fetal_weight_at_ultrasound >= 113 THEN 97.5

-- Gestational Age 15 Weeks

WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 89 AND fetal_weight_at_ultrasound < 93 THEN 2

WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 93 AND fetal_weight_at_ultrasound < 99 THEN 5

WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 99 AND fetal_weight_at_ultrasound < 106 THEN 10

WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 106 AND fetal_weight_at_ultrasound < 114 THEN 25

WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 114 AND fetal_weight_at_ultrasound < 124 THEN 50

WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 124 AND fetal_weight_at_ultrasound < 132 THEN 75

WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 132 AND fetal_weight_at_ultrasound < 138 THEN 90

WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 138 AND fetal_weight_at_ultrasound < 144 THEN 95

```
WHEN gestational_age_at_inclusion = 15 AND fetal_weight_at_ultrasound >= 144 THEN 97.5
```

-- Gestational Age 16 Weeks

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 113 AND fetal_weight_at_ultrasound < 117 THEN 2

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 117 AND fetal_weight_at_ultrasound < 124 THEN 5

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 124 AND fetal_weight_at_ultrasound < 133 THEN 10

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 133 AND fetal_weight_at_ultrasound < 144 THEN 25

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 144 AND fetal_weight_at_ultrasound < 155 THEN 50

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 155 AND fetal_weight_at_ultrasound < 166 THEN 75

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 166 AND fetal_weight_at_ultrasound < 174 THEN 90

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 174 AND fetal_weight_at_ultrasound < 181 THEN 95

WHEN gestational_age_at_inclusion = 16 AND fetal_weight_at_ultrasound >= 181 THEN 97.5

-- Gestational Age 17 Weeks

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 141 AND fetal_weight_at_ultrasound < 146 THEN 2

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 146 AND fetal_weight_at_ultrasound < 154 THEN 5

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 154 AND fetal_weight_at_ultrasound < 165 THEN 10

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 165 AND fetal_weight_at_ultrasound < 177 THEN 25

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 177 AND fetal_weight_at_ultrasound < 190 THEN 50

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 190 AND fetal_weight_at_ultrasound < 203 THEN 75

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 203 AND fetal_weight_at_ultrasound < 217 THEN 90

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 217 AND fetal_weight_at_ultrasound < 225 THEN 95

WHEN gestational_age_at_inclusion = 17 AND fetal_weight_at_ultrasound >= 225 THEN 97.5

-- Gestational Age 18 Weeks

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 174 AND fetal_weight_at_ultrasound < 181 THEN 2

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 181 AND fetal_weight_at_ultrasound < 192 THEN 5

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 192 AND fetal_weight_at_ultrasound < 206 THEN 10

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 206 AND fetal_weight_at_ultrasound < 222 THEN 25

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 222 AND fetal_weight_at_ultrasound < 239 THEN 50

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 239 AND fetal_weight_at_ultrasound < 255 THEN 75

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 255 AND fetal_weight_at_ultrasound < 268 THEN 90

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 268 AND fetal_weight_at_ultrasound < 278 THEN 95

WHEN gestational_age_at_inclusion = 18 AND fetal_weight_at_ultrasound >= 278 THEN 97.5

-- Gestational Age 19 Weeks

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 214 AND fetal_weight_at_ultrasound < 223 THEN 2

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 223 AND fetal_weight_at_ultrasound < 235 THEN 5

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 235 AND fetal_weight_at_ultrasound < 252 THEN 10

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 252 AND fetal_weight_at_ultrasound < 272 THEN 25

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 272 AND fetal_weight_at_ultrasound < 292 THEN 50

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 292 AND fetal_weight_at_ultrasound < 313 THEN 75

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 313 AND fetal_weight_at_ultrasound < 328 THEN 90

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 328 AND fetal_weight_at_ultrasound < 340 THEN 95

WHEN gestational_age_at_inclusion = 19 AND fetal_weight_at_ultrasound >= 340 THEN 97.5

-- Gestational Age 20 Weeks

```
WHEN gestational age at inclusion = 20 AND fetal weight at ultrasound >=
260 AND fetal weight at ultrasound < 271 THEN 2
      WHEN gestational age at inclusion = 20 AND fetal weight at ultrasound >=
271 AND fetal weight at ultrasound < 286 THEN 5
      WHEN gestational_age_at_inclusion = 20 AND fetal weight at ultrasound >=
286 AND fetal weight at ultrasound < 307 THEN 10
      WHEN gestational age at inclusion = 20 AND fetal weight at ultrasound >=
307 AND fetal weight at ultrasound < 330 THEN 25
      WHEN gestational age at inclusion = 20 AND fetal weight at ultrasound >=
330 AND fetal weight at ultrasound < 355 THEN 50
      WHEN gestational age at inclusion = 20 AND fetal weight at ultrasound >=
355 AND fetal weight at ultrasound < 380 THEN 75
      WHEN gestational age at inclusion = 20 AND fetal weight at ultrasound >=
380 AND fetal weight at ultrasound < 399 THEN 90
      WHEN gestational age at inclusion = 20 AND fetal weight at ultrasound >=
399 AND fetal weight at ultrasound < 413 THEN 95
      WHEN gestational age at inclusion = 20 AND fetal weight at ultrasound >=
413 THEN 97.5
      -- Gestational Age 21 Weeks
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
314 AND fetal weight at ultrasound < 327 THEN 2
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
327 AND fetal weight at ultrasound < 345 THEN 5
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
345 AND fetal weight at ultrasound < 370 THEN 10
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
370 AND fetal weight at ultrasound < 398 THEN 25
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
398 AND fetal weight at ultrasound < 428 THEN 50
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
428 AND fetal weight at ultrasound < 458 THEN 75
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
458 AND fetal weight at ultrasound < 481 THEN 90
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
481 AND fetal weight at ultrasound < 497 THEN 95
      WHEN gestational age at inclusion = 21 AND fetal weight at ultrasound >=
497 THEN 97.5
```

-- Gestational Age 22 Weeks

WHEN gestational_age_at_inclusion = 22 AND fetal_weight_at_ultrasound >= 375 AND fetal_weight_at_ultrasound < 392 THEN 2

```
WHEN gestational age at inclusion = 22 AND fetal weight at ultrasound >=
392 AND fetal weight at ultrasound < 412 THEN 5
      WHEN gestational age at inclusion = 22 AND fetal weight at ultrasound >=
412 AND fetal weight at ultrasound < 443 THEN 10
      WHEN gestational_age_at_inclusion = 22 AND fetal_weight_at_ultrasound >=
443 AND fetal weight at ultrasound < 476 THEN 25
      WHEN gestational age at inclusion = 22 AND fetal weight at ultrasound >=
476 AND fetal weight at ultrasound < 512 THEN 50
      WHEN gestational age at inclusion = 22 AND fetal weight at ultrasound >=
512 AND fetal weight at ultrasound < 548 THEN 75
      WHEN gestational age at inclusion = 22 AND fetal weight at ultrasound >=
548 AND fetal weight at ultrasound < 575 THEN 90
      WHEN gestational age at inclusion = 22 AND fetal weight at ultrasound >=
575 AND fetal weight at ultrasound < 595 THEN 95
      WHEN gestational age at inclusion = 22 AND fetal weight at ultrasound >=
595 THEN 97.5
      -- Gestational Age 23 Weeks
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
445 AND fetal weight at ultrasound < 465 THEN 2
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
465 AND fetal weight at ultrasound < 489 THEN 5
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
489 AND fetal weight at ultrasound < 525 THEN 10
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
525 AND fetal weight at ultrasound < 565 THEN 25
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
565 AND fetal weight at ultrasound < 608 THEN 50
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
608 AND fetal weight at ultrasound < 650 THEN 75
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
650 AND fetal weight at ultrasound < 682 THEN 90
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
682 AND fetal weight at ultrasound < 705 THEN 95
      WHEN gestational age at inclusion = 23 AND fetal weight at ultrasound >=
705 THEN 97.5
```

-- Gestational Age 24 Weeks

WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 523 AND fetal_weight_at_ultrasound < 548 THEN 2

WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 548 AND fetal_weight_at_ultrasound < 576 THEN 5

```
WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 576 AND fetal_weight_at_ultrasound < 618 THEN 10
```

WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 618 AND fetal_weight_at_ultrasound < 665 THEN 25

WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 665 AND fetal_weight_at_ultrasound < 715 THEN 50

WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 715 AND fetal_weight_at_ultrasound < 765 THEN 75

WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 765 AND fetal_weight_at_ultrasound < 803 THEN 90

WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 803 AND fetal_weight_at_ultrasound < 830 THEN 95

WHEN gestational_age_at_inclusion = 24 AND fetal_weight_at_ultrasound >= 830 THEN 97.5

-- Gestational Age 25 Weeks

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 611 AND fetal_weight_at_ultrasound < 641 THEN 2

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 641 AND fetal_weight_at_ultrasound < 673 THEN 5

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 673 AND fetal_weight_at_ultrasound < 723 THEN 10

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 723 AND fetal_weight_at_ultrasound < 778 THEN 25

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 778 AND fetal_weight_at_ultrasound < 838 THEN 50

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 838 AND fetal_weight_at_ultrasound < 894 THEN 75

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 894 AND fetal_weight_at_ultrasound < 938 THEN 90

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 938 AND fetal_weight_at_ultrasound < 970 THEN 95

WHEN gestational_age_at_inclusion = 25 AND fetal_weight_at_ultrasound >= 970 THEN 97.5

-- Gestational Age 26 Weeks

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 707 AND fetal_weight_at_ultrasound < 743 THEN 2

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 743 AND fetal_weight_at_ultrasound < 780 THEN 5

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 780 AND fetal_weight_at_ultrasound < 838 THEN 10

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 838 AND fetal_weight_at_ultrasound < 902 THEN 25

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 902 AND fetal_weight_at_ultrasound < 971 THEN 50

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 971 AND fetal_weight_at_ultrasound < 1038 THEN 75

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 1038 AND fetal_weight_at_ultrasound < 1087 THEN 90

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 1087 AND fetal_weight_at_ultrasound < 1125 THEN 95

WHEN gestational_age_at_inclusion = 26 AND fetal_weight_at_ultrasound >= 1125 THEN 97.5

-- Gestational Age 27 Weeks

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 813 AND fetal_weight_at_ultrasound < 855 THEN 2

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 855 AND fetal_weight_at_ultrasound < 898 THEN 5

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 898 AND fetal_weight_at_ultrasound < 964 THEN 10

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 964 AND fetal_weight_at_ultrasound < 1039 THEN 25

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 1039 AND fetal_weight_at_ultrasound < 1118 THEN 50

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 1118 AND fetal_weight_at_ultrasound < 1196 THEN 75

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 1196 AND fetal_weight_at_ultrasound < 1251 THEN 90

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 1251 AND fetal_weight_at_ultrasound < 1295 THEN 95

WHEN gestational_age_at_inclusion = 27 AND fetal_weight_at_ultrasound >= 1295 THEN 97.5

-- Gestational Age 28 Weeks

WHEN gestational_age_at_inclusion = 28 AND fetal_weight_at_ultrasound >= 929 AND fetal_weight_at_ultrasound < 977 THEN 2

WHEN gestational_age_at_inclusion = 28 AND fetal_weight_at_ultrasound >= 977 AND fetal_weight_at_ultrasound < 1026 THEN 5

WHEN gestational_age_at_inclusion = 28 AND fetal_weight_at_ultrasound >= 1026 AND fetal_weight_at_ultrasound < 1102 THEN 10

WHEN gestational_age_at_inclusion = 28 AND fetal_weight_at_ultrasound >= 1102 AND fetal_weight_at_ultrasound < 1189 THEN 25

```
WHEN gestational age at inclusion = 28 AND fetal weight at ultrasound >=
1189 AND fetal weight at ultrasound < 1279 THEN 50
      WHEN gestational age at inclusion = 28 AND fetal weight at ultrasound >=
1279 AND fetal weight at ultrasound < 1368 THEN 75
      WHEN gestational_age_at_inclusion = 28 AND fetal_weight_at_ultrasound >=
1368 AND fetal weight at ultrasound < 1429 THEN 90
      WHEN gestational age at inclusion = 28 AND fetal weight at ultrasound >=
1429 AND fetal weight at ultrasound < 1481 THEN 95
      WHEN gestational age at inclusion = 28 AND fetal weight at ultrasound >=
1481 THEN 97.5
      -- Gestational Age 29 Weeks
      WHEN gestational age at inclusion = 29 AND fetal weight at ultrasound >=
1053 AND fetal weight at ultrasound < 1108 THEN 2
      WHEN gestational age at inclusion = 29 AND fetal weight at ultrasound >=
1108 AND fetal weight at ultrasound < 1165 THEN 5
      WHEN gestational age at inclusion = 29 AND fetal weight at ultrasound >=
1165 AND fetal weight at ultrasound < 1251 THEN 10
      WHEN gestational age at inclusion = 29 AND fetal weight at ultrasound >=
1251 AND fetal weight at ultrasound < 1350 THEN 25
      WHEN gestational age at inclusion = 29 AND fetal weight at ultrasound >=
1350 AND fetal weight at ultrasound < 1453 THEN 50
      WHEN gestational age at inclusion = 29 AND fetal weight at ultrasound >=
1453 AND fetal_weight_at_ultrasound < 1554 THEN 75
      WHEN gestational_age_at_inclusion = 29 AND fetal_weight_at_ultrasound >=
1554 AND fetal_weight_at_ultrasound < 1622 THEN 90
      WHEN gestational age at inclusion = 29 AND fetal weight at ultrasound >=
1622 AND fetal weight at ultrasound < 1682 THEN 95
      WHEN gestational age at inclusion = 29 AND fetal weight at ultrasound >=
1682 THEN 97.5
      -- Gestational Age 30 Weeks
      WHEN gestational age at inclusion = 30 AND fetal weight at ultrasound >=
1185 AND fetal weight at ultrasound < 1247 THEN 2
      WHEN gestational age at inclusion = 30 AND fetal weight at ultrasound >=
1247 AND fetal weight at ultrasound < 1313 THEN 5
      WHEN gestational age at inclusion = 30 AND fetal weight at ultrasound >=
1313 AND fetal weight at ultrasound < 1410 THEN 10
      WHEN gestational age at inclusion = 30 AND fetal weight at ultrasound >=
1410 AND fetal weight at ultrasound < 1523 THEN 25
      WHEN gestational age at inclusion = 30 AND fetal weight at ultrasound >=
1523 AND fetal weight at ultrasound < 1640 THEN 50
```

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WHEN gestational age at inclusion = 30 AND fetal weight at ultrasound >=
1640 AND fetal weight at ultrasound < 1753 THEN 75
      WHEN gestational age at inclusion = 30 AND fetal weight at ultrasound >=
1753 AND fetal_weight at ultrasound < 1828 THEN 90
      WHEN gestational_age_at_inclusion = 30 AND fetal_weight_at_ultrasound >=
1828 AND fetal weight at ultrasound < 1897 THEN 95
      WHEN gestational age at inclusion = 30 AND fetal weight at ultrasound >=
1897 THEN 97.5
      -- Gestational Age 31 Weeks
      WHEN gestational age at inclusion = 31 AND fetal weight at ultrasound >=
1326 AND fetal weight at ultrasound < 1394 THEN 2
      WHEN gestational age at inclusion = 31 AND fetal weight at ultrasound >=
1394 AND fetal weight at ultrasound < 1470 THEN 5
      WHEN gestational age at inclusion = 31 AND fetal weight at ultrasound >=
1470 AND fetal weight at ultrasound < 1580 THEN 10
      WHEN gestational age at inclusion = 31 AND fetal weight at ultrasound >=
1580 AND fetal weight at ultrasound < 1707 THEN 25
      WHEN gestational age at inclusion = 31 AND fetal weight at ultrasound >=
1707 AND fetal weight at ultrasound < 1838 THEN 50
      WHEN gestational age at inclusion = 31 AND fetal weight at ultrasound >=
1838 AND fetal weight at ultrasound < 1964 THEN 75
      WHEN gestational age at inclusion = 31 AND fetal weight at ultrasound >=
1964 AND fetal_weight_at_ultrasound < 2046 THEN 90
      WHEN gestational_age_at_inclusion = 31 AND fetal_weight_at_ultrasound >=
2046 AND fetal weight at ultrasound < 2126 THEN 95
      WHEN gestational age at inclusion = 31 AND fetal weight at ultrasound >=
2126 THEN 97.5
      -- Gestational Age 32 Weeks
      WHEN gestational age at inclusion = 32 AND fetal weight at ultrasound >=
1473 AND fetal_weight_at_ultrasound < 1548 THEN 2
      WHEN gestational age at inclusion = 32 AND fetal weight at ultrasound >=
1548 AND fetal weight at ultrasound < 1635 THEN 5
      WHEN gestational age at inclusion = 32 AND fetal weight at ultrasound >=
1635 AND fetal weight at ultrasound < 1757 THEN 10
      WHEN gestational age at inclusion = 32 AND fetal weight at ultrasound >=
1757 AND fetal weight at ultrasound < 1901 THEN 25
      WHEN gestational age at inclusion = 32 AND fetal weight at ultrasound >=
1901 AND fetal weight at ultrasound < 2047 THEN 50
      WHEN gestational age at inclusion = 32 AND fetal weight at ultrasound >=
2047 AND fetal weight at ultrasound < 2187 THEN 75
```

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WHEN gestational age at inclusion = 32 AND fetal weight at ultrasound >=
2187 AND fetal weight at ultrasound < 2276 THEN 90
      WHEN gestational age at inclusion = 32 AND fetal weight at ultrasound >=
2276 AND fetal weight at ultrasound < 2367 THEN 95
      WHEN gestational_age_at_inclusion = 32 AND fetal_weight_at_ultrasound >=
2367 THEN 97.5
      -- Gestational Age 33 Weeks
      WHEN gestational age at inclusion = 33 AND fetal weight at ultrasound >=
1626 AND fetal weight at ultrasound < 1708 THEN 2
      WHEN gestational age at inclusion = 33 AND fetal weight at ultrasound >=
1708 AND fetal weight at ultrasound < 1807 THEN 5
      WHEN gestational age at inclusion = 33 AND fetal weight at ultrasound >=
1807 AND fetal weight at ultrasound < 1942 THEN 10
      WHEN gestational age at inclusion = 33 AND fetal weight at ultrasound >=
1942 AND fetal weight at ultrasound < 2103 THEN 25
      WHEN gestational age at inclusion = 33 AND fetal weight at ultrasound >=
2103 AND fetal weight at ultrasound < 2266 THEN 50
      WHEN gestational age at inclusion = 33 AND fetal weight at ultrasound >=
2266 AND fetal weight at ultrasound < 2419 THEN 75
      WHEN gestational age at inclusion = 33 AND fetal weight at ultrasound >=
2419 AND fetal weight at ultrasound < 2516 THEN 90
      WHEN gestational age at inclusion = 33 AND fetal weight at ultrasound >=
2516 AND fetal weight at ultrasound < 2619 THEN 95
      WHEN gestational age_at_inclusion = 33 AND fetal_weight_at_ultrasound >=
2619 THEN 97.5
      -- Gestational Age 34 Weeks
      WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
1785 AND fetal_weight at ultrasound < 1872 THEN 2
      WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
1872 AND fetal weight at ultrasound < 1985 THEN 5
      WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
1985 AND fetal weight at ultrasound < 2134 THEN 10
      WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
2134 AND fetal weight at ultrasound < 2312 THEN 25
      WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
2312 AND fetal weight at ultrasound < 2492 THEN 50
      WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
2492 AND fetal weight at ultrasound < 2659 THEN 75
      WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
2659 AND fetal weight at ultrasound < 2764 THEN 90
```

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WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
2764 AND fetal weight at ultrasound < 2880 THEN 95
      WHEN gestational age at inclusion = 34 AND fetal weight at ultrasound >=
2880 THEN 97.5
      -- Gestational Age 35 Weeks
      WHEN gestational age at inclusion = 35 AND fetal weight at ultrasound >=
1948 AND fetal weight at ultrasound < 2038 THEN 2
      WHEN gestational age at inclusion = 35 AND fetal weight at ultrasound >=
2038 AND fetal weight at ultrasound < 2167 THEN 5
      WHEN gestational age at inclusion = 35 AND fetal weight at ultrasound >=
2167 AND fetal weight at ultrasound < 2330 THEN 10
      WHEN gestational age at inclusion = 35 AND fetal weight at ultrasound >=
2330 AND fetal weight at ultrasound < 2527 THEN 25
      WHEN gestational age at inclusion = 35 AND fetal weight at ultrasound >=
2527 AND fetal weight at ultrasound < 2723 THEN 50
      WHEN gestational age at inclusion = 35 AND fetal weight at ultrasound >=
2723 AND fetal weight at ultrasound < 2904 THEN 75
      WHEN gestational age at inclusion = 35 AND fetal weight at ultrasound >=
2904 AND fetal weight at ultrasound < 3018 THEN 90
      WHEN gestational age at inclusion = 35 AND fetal weight at ultrasound >=
3018 AND fetal weight at ultrasound < 3148 THEN 95
      WHEN gestational_age_at_inclusion = 35 AND fetal weight at ultrasound >=
3148 THEN 97.5
      -- Gestational Age 36 Weeks
      WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
2113 AND fetal weight at ultrasound < 2205 THEN 2
      WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
2205 AND fetal_weight at ultrasound < 2352 THEN 5
      WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
2352 AND fetal weight at ultrasound < 2531 THEN 10
      WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
2531 AND fetal weight at ultrasound < 2745 THEN 25
      WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
2745 AND fetal weight at ultrasound < 2959 THEN 50
      WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
2959 AND fetal weight at ultrasound < 3153 THEN 75
      WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
3153 AND fetal weight at ultrasound < 3277 THEN 90
      WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
3277 AND fetal weight at ultrasound < 3422 THEN 95
```

```
WHEN gestational age at inclusion = 36 AND fetal weight at ultrasound >=
3422 THEN 97.5
      -- Gestational Age 37 Weeks
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
2280 AND fetal_weight_at_ultrasound < 2372 THEN 2
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
2372 AND fetal weight at ultrasound < 2537 THEN 5
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
2537 AND fetal weight at ultrasound < 2733 THEN 10
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
2733 AND fetal weight at ultrasound < 2966 THEN 25
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
2966 AND fetal weight at ultrasound < 3195 THEN 50
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
3195 AND fetal weight at ultrasound < 3403 THEN 75
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
3403 AND fetal weight at ultrasound < 3538 THEN 90
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
3538 AND fetal weight at ultrasound < 3697 THEN 95
      WHEN gestational age at inclusion = 37 AND fetal weight at ultrasound >=
3697 THEN 97.5
      -- Gestational Age 38 Weeks
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
2446 AND fetal weight at ultrasound < 2536 THEN 2
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
2536 AND fetal weight at ultrasound < 2723 THEN 5
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
2723 AND fetal weight at ultrasound < 2935 THEN 10
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
2935 AND fetal weight at ultrasound < 3186 THEN 25
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
3186 AND fetal weight at ultrasound < 3432 THEN 50
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
3432 AND fetal weight at ultrasound < 3652 THEN 75
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
3652 AND fetal weight at ultrasound < 3799 THEN 90
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
3799 AND fetal weight at ultrasound < 3973 THEN 95
      WHEN gestational age at inclusion = 38 AND fetal weight at ultrasound >=
3973 THEN 97.5
```

-- Gestational Age 39 Weeks

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 2612 AND fetal_weight_at_ultrasound < 2696 THEN 2

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 2696 AND fetal_weight_at_ultrasound < 2905 THEN 5

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 2905 AND fetal_weight_at_ultrasound < 3135 THEN 10

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 3135 AND fetal_weight_at_ultrasound < 3403 THEN 25

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 3403 AND fetal_weight_at_ultrasound < 3664 THEN 50

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 3664 AND fetal_weight_at_ultrasound < 3897 THEN 75

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 3897 AND fetal_weight_at_ultrasound < 4058 THEN 90

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 4058 AND fetal_weight_at_ultrasound < 4247 THEN 95

WHEN gestational_age_at_inclusion = 39 AND fetal_weight_at_ultrasound >= 4247 THEN 97.5

ELSE NULL -- Default value if no condition matches END;

-- CREATING NEW COLUMN weight_percentile_group

ALTER TABLE ultrasound_results ADD COLUMN weight_percentile_group text;

- ---Updating the values in the new column weight_percentile_group based on percentile groups
- ---If weight_percentile is less than 10 its SGA(Small Gestational Age),
- ---if between 10 and 90 its NGA(Normal Gestational Age),
- ---if greater than 90 its LGA(Large Gestational Age).

UPDATE ultrasound_results SET weight_percentile_group= CASE

WHEN weight_percentile <10 THEN 'SGA'
WHEN weight_percentile >=10 AND weight_percentile<90 THEN 'NGA'
WHEN weight_percentile>=90 THEN 'LGA'
ELSE NULL

END: