```
------- ------------------------------------------------------------
-- Group Project : Climate Data Analyis Datawarehouse Design
-- Author : Group 2
-- Schema : Star Schema
-----------------------------------------------------------------
-- Dimension table creation
-----------------------------------------------------------------
-- 1. Location Dimension Table creation
-----------------------------------------------------------------

CREATE OR REPLACE TABLE `data-225-group-project.climate_dwh.location_dim` AS
SELECT station_id,
city_name,
state,
`data-225-group-project.climate_data_staging.city_stage`.country as country,
`data-225-group-project.climate_data_staging.city_stage`.iso3 as iso3,
capital,
region,
continent
FROM `data-225-group-project.climate_data_staging.city_stage`
JOIN
`data-225-group-project.climate_data_staging.country_stage`
ON
`data-225-group-project.climate_data_staging.city_stage`.iso3=`data-225-group-
project.climate_data_staging.country_stage`.iso3;

-----------------------------------------------------------------
-- 2. Date Dimension Table creation
-----------------------------------------------------------------
CREATE OR REPLACE TABLE `data-225-group-project.climate_dwh.date_dim` AS
SELECT row_number() over() as date_id,
record_date,
EXTRACT(week from record_date) as record_week,
EXTRACT(month from record_date) as record_month,
EXTRACT(quarter from record_date) as record_quarter,
EXTRACT(year from record_date) as record_year,
season
FROM
(SELECT
safe.PARSE_DATE('%Y-%m-%d', date) as record_date,
season
from
`data-225-group-project.climate_data_staging.daily-weather-stage`) temp;

-----------------------------------------------------------------
-- 3. Greenhouse Gas Emission Dimension Table creation
-----------------------------------------------------------------
```

```sql
CREATE OR REPLACE TABLE `data-225-group-project.climate_dwh.ghgas_dim` AS
SELECT row_number() over() as ghgas_id,
CNTR_NAME as ghgas_country,
Gas,
Component,
Year
FROM `data-225-group-project.climate_data_staging.ghgas_stage`;

-----------------------------------------------------------------
-- Fact table creation
-----------------------------------------------------------------
-- 1. Climate Fact Table creation
-----------------------------------------------------------------

CREATE OR REPLACE TABLE `data-225-group-project.climate_dwh.climate_fact` AS
select stationid,
safe.PARSE_DATE('%Y-%m-%d', date) as record_date,
ifnull(safe_cast(avg_temp_c as FLOAT64),0) as avg_temp_c,
ifnull(safe_cast(min_temp_c as FLOAT64),0) as min_temp_c,
ifnull(safe_cast(max_temp_c as FLOAT64),0) as max_temp_c,
ifnull(safe_cast(precipitation_mm as FLOAT64),0) as precipitation_mm,
ifnull(safe_cast(snowdepth_mm as FLOAT64),0) as snow_depth_mm,
ifnull(safe_cast(avg_wind_dir_deg as FLOAT64),0) as avg_wind_dir_deg,
ifnull(safe_cast(avg_wind_speed_kmh as FLOAT64),0) as avg_wind_speed_kmh,
ifnull(safe_cast(peak_wind_gust_kmh as FLOAT64),0) as peak_wind_gust_kmh,
ifnull(safe_cast(avg_sea_level_pres_hpa as FLOAT64),0) as avg_sea_level_pres_hpa,
ifnull(safe_cast(sunshine_total_min as FLOAT64),0) as sunshine_total_min,
ifnull(safe_cast(`Data` as INT64),0) as ghgas_data

FROM
  `data-225-group-project.climate_data_staging.daily-weather-stage` as weather
right JOIN
  `data-225-group-project.climate_data_staging.city_stage` as city
ON
  weather.stationid = city.station_id
inner join
  `data-225-group-project.climate_data_staging.ghgas_stage` as ghgas
ON
(city.iso3 = ghgas.ISO3 and extract(Year from (safe.PARSE_DATE('%Y-%m-%d',
weather.date )))=ghgas.YEAR)
where city.iso3= 'USA' ;

-----------------------------------------------------------------
-- Updating avg temp  which is a derived column in fact table
--- avg temp=(min tem+ max temp)/2
-----------------------------------------------------------------

update `data-225-group-project.climate_dwh.climate_fact`
```

```
set avg_temp_c = (min_temp_c+max_temp_c)/2
where avg_temp_c=0;
```