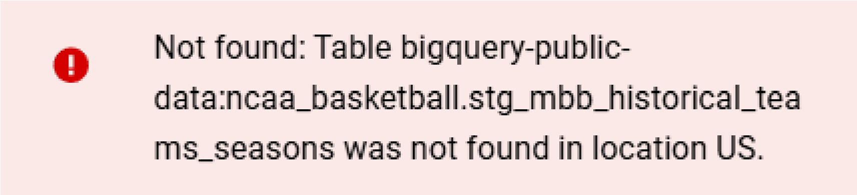
Optimal Approach:

- Source Declaration (Easier referencing, ensure linearity)
- Data Transformation:
  - Retrieve data from source, conduct small alterations to tidy up raw data
- Modular Transformation:
  - Cleaning up data and merging necessary tables to ensure modularity and readability
- Query from the modular tables

Reason optimal approach was not achieved:



Not found: Table bigquery-public-data:ncaa_basketball.stg_mbb_historical_teams_seasons was not found in location US.

Due to the error above, unable to utilize reference point to conduct modularity, thus star schema table was not produced

Setup Intructions:

1. Open the dataset in Google BigQuery
2. Go to IAM, ensure the service account has the following roles:

   a. BigQuery Admin
   b. BigQuery Data Editor
   c. BigQuery Data Viewer
   d. BigQuery Job User
   e. BigQuery User
3. Ensure *workflow_settings.yaml* has the following settings:

```
defaultProject: bigquery-public-data
defaultLocation: US
defaultDataset: ncaa_basketball
defaultAssertionDataset: dataform_assertions
dataformCoreVersion: 3.0.0
```

4. Declare source
5. Conduct data and modular transformation
6. Query from the transformed tables

Star Schema:

Fact Table:

mbb_pbp_sr

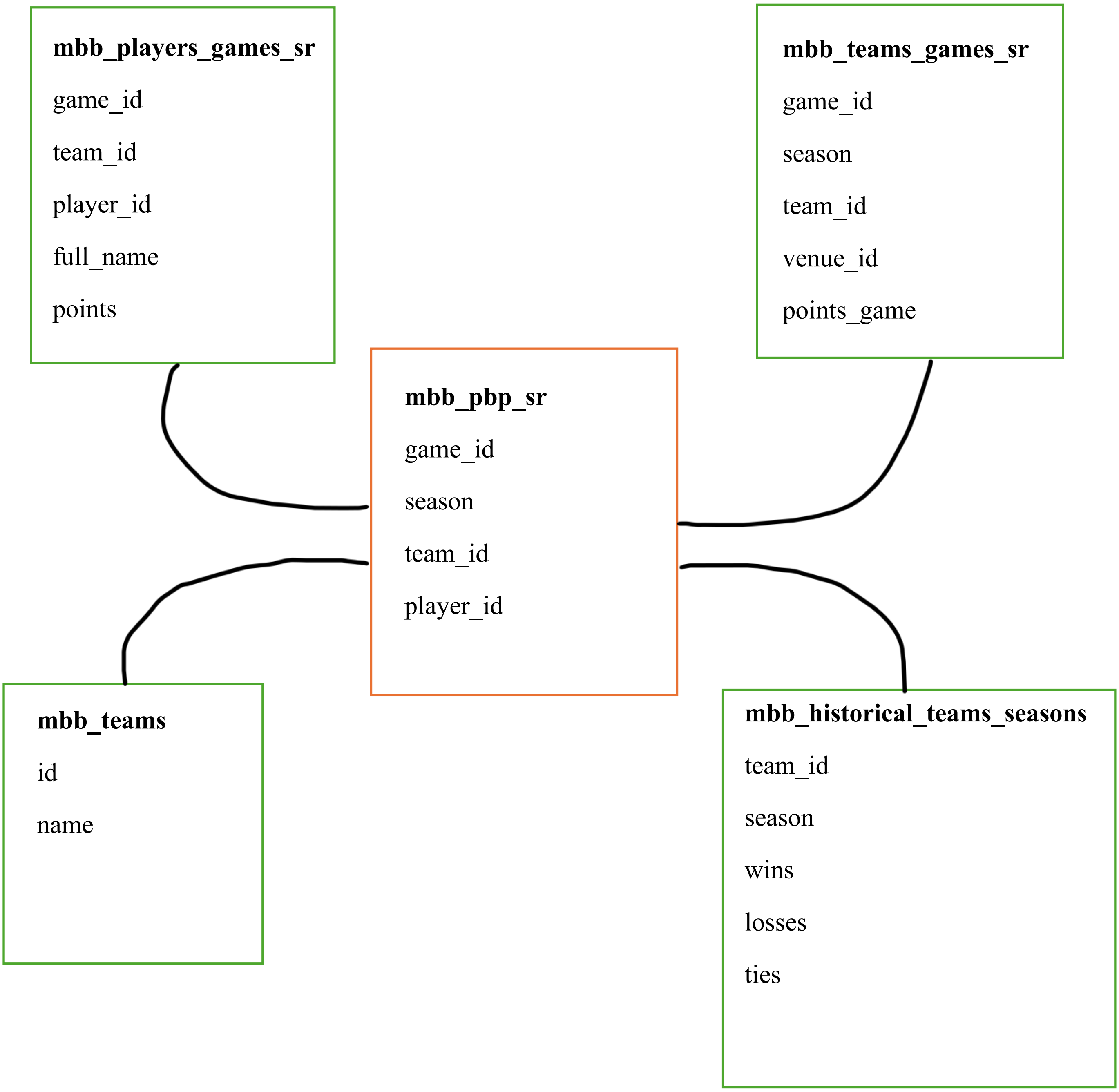
Dimension Table:

mbb_players_games_sr

mbb_teams

mbb_teams_games_sr

mbb_historical_teams_seasons



mbb_players_games_sr

game_id

team_id

player_id

full_name

points

mbb_teams_games_sr

game_id

season

team_id

venue_id

points_game

mbb_pbp_sr

game_id

season

team_id

player_id

mbb_teams

id

name

mbb_historical_teams_seasons

team_id

season

wins

losses

ties

mbb_php_sr is chosen as fact table because it contains the most foreign keys to different primary keys.

Directory Structure Explanation:

source_declarations folder: Contains source declarations files

staging folder : Contains data transformed files (supposedly to include modular transformed files, and then to create star schema tables from there)

Queries folder : Contains query files(SQL) for the 3 selected questions (q1-3)

Tables folder : Contains output tables from queries

README.pdf : Contains explanations, approaches and setup intructions