DATA DICTIONARY (All Tables Explained)

Below is the complete data dictionary describing each table, field, type, purpose, and constraints.

FARMERS TABLE

Field Name	Data Type	Description	Constraints
farmer_id	NUMBER	Unique identifier of a farmer	Primary Key
farmer_name	VARCHAR2(100)	Full name of the farmer	Not Null
phone_number	VARCHAR2(20)	Phone number used for advisories (SMS)	Nullable
location	VARCHAR2(100)	Farmer's district or sector	Not Null

2. CROPS Table

Field Name	Data Type	Description	Constraints
crop_id	NUMBER	Unique identifier for a crop	Primary Key
crop_name	VARCHAR2(100)	Name of the crop (e.g., maize, beans)	Not Null
season	VARCHAR2(20)	Growing season (A, B, C)	Nullable

3. WEATHER_DATA Table

Field Name	Data Type	Description	Constraints
weather_id	NUMBER	Unique weather record ID	Primary Key
location	VARCHAR2(100)	Location where weather was recorded	Not Null
reading_date	DATE	Date of the weather reading	Not Null
temperature	NUMBER(5,2)	Measured temperature in °C	Nullable
rainfall	NUMBER(5,2)	Rainfall in mm	Nullable
humidity	NUMBER(5,2)	Humidity in percentage	Nullable

4. CROP_REQUIREMENTS Table

Field Name	Data Type	Description	Constraints
req_id	NUMBER	Unique ID for crop requirement record	Primary Key
crop_id	NUMBER	Crop this requirement belongs to	Foreign Key → CROPS(crop_id)
min_temp	NUMBER(5,2)	Minimum ideal temperature	Not Null

Field Name	Data Type	Description	Constraints
max_temp	NUMBER(5,2)	Maximum ideal temperature	Not Null
min_rainfall	NUMBER(5,2)	Minimum ideal rainfall	Not Null
max_rainfall	NUMBER(5,2)	Maximum ideal rainfall	Not Null
min_humidity	NUMBER(5,2)	Minimum required humidity	Not Null
max_humidity	NUMBER(5,2)	Maximum required humidity	Not Null

4. ADVISORIES Table

Field Name	Data Type	Description	Constraints
advisory_id	NUMBER	Unique ID for each advisory	Primary Key
farmer_id	NUMBER	Farmer receiving the advisory	Foreign Key → FARMERS(farmer_id)
crop_id	NUMBER	Crop related to the advisory	Foreign Key → CROPS(crop_id)
weather_id	NUMBER	Weather record linked to the advisory	Foreign Key → WEATHER_DATA(weather_id)
advisory_message	VARCHAR2(500)	The recommendation sent to the farmer	Not Null
advisory_date	DATE	Date the advisory was generated	Not Null