### **Database Schema Design**

This schema will support storing details about the requests, the associated images, and their processing status.

#### **Tables:**

1. **requests**
   * This table will store information about the processing requests.
   * **Columns**:
     + request\_id (UUID) - Unique identifier for each request.
     + status (VARCHAR) - The current status of the request (e.g., "pending", "completed", "error").
     + created\_at (TIMESTAMP) - Timestamp when the request was created.
     + completed\_at (TIMESTAMP, nullable) - Timestamp when the request was completed (nullable as it is updated when the process finishes).

CREATE TABLE requests (

request\_id UUID PRIMARY KEY,

status VARCHAR(50),

created\_at TIMESTAMP,

completed\_at TIMESTAMP

);

1. **image**
   * This table will store information about each image processed for a given request.
   * **Columns**:
     + image\_id (SERIAL PRIMARY KEY) - Unique identifier for each image record.
     + request\_id (UUID, ForeignKey) - Foreign key referencing the request\_id from the requests table.
     + product\_name (VARCHAR) - Name of the product associated with the image.
     + original\_url (VARCHAR) - URL of the original image stored in Blob Storage.
     + compressed\_url (VARCHAR) - URL of the compressed image stored in Blob Storage.
     + status (VARCHAR) - Status of the image processing (e.g., "pending", "processed").

CREATE TABLE image (

image\_id SERIAL PRIMARY KEY,

request\_id UUID REFERENCES requests(request\_id),

product\_name VARCHAR(255),

original\_url VARCHAR(512),

compressed\_url VARCHAR(512),

status VARCHAR(50)

);