# Database Schema Design Documentation

The database schema includes two main collections:

1. **Requests**: Tracks the status of each image processing request.
2. **Products**: Stores product data and associated input and output image URLs.

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### Requests Collection

**Schema Name**: Request

**Fields:**

- **id** *(String, Required, Unique)*: The unique identifier for the request.
- **status** *(String, Enum, Required)*: The current status of the request. Possible values:
    - "PENDING"
    - "PROCESSING"
    - "COMPLETED"
    - "FAILED"
- **createdAt** *(Date, Default: Current Date)*: The timestamp when the request was created.
- **updatedAt** *(Date, Default: Current Date)*: The timestamp when the request was last updated.

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### Products Collection

**Schema Name**: Product

**Fields:**

- **requestId** *(String, Required)*: The unique identifier for the request this product is associated with.
- **serialNumber** *(Number, Required)*: The serial number of the product.
- **productName** *(String, Required)*: The name of the product.
- **inputImageUrls** *(Array of Strings, Required)*: A list of URLs pointing to the input images for this product.
- **outputImageUrls** *(Array of Strings, Default: [])*: A list of URLs pointing to the processed output images for this product.
- **createdAt** *(Date, Default: Current Date)*: The timestamp when the product entry was created.
- **updatedAt** *(Date, Default: Current Date)*: The timestamp when the product entry was last updated.

**Database Interaction**

**1.Storing and Tracking Requests**

- **Create Request**:
  - When a new CSV file is uploaded, a new request document is created with:
    - A unique request ID
    - Status set to "PENDING"
- **Update Request Status**:
  - As the worker processes the images, the request status is updated to:
    - "PROCESSING"
    - "COMPLETED"
    - "FAILED"

**2. Storing Product Data**

- **Create Product**:
  - For each row in the CSV file, a new product document is created with:
    - The associated requestId
    - serialNumber
    - productName
    - inputImageUrls
- **Update Product Data**:
  - Once the images are processed, the product document is updated with:
    - outputImageUrls