Annotations:

it’s essential to consider various types of information that we might want to track

1. Basic Annotation Information

* ID: A unique identifier for each annotation.
* Image ID: A foreign key linking the annotation to a specific image.
* Annotation Text: A description or label for the annotation
* Coordinates: The spatial data that defines the location and shape of the annotation (e.g., bounding boxes, polygons, points)

2. Coordinate Data

* Bounding Box:
  + x: X-coordinate of the top-left corner.
  + y: Y-coordinate of the top-left corner.
  + width: Width of the bounding box.
  + height: Height of the bounding box
* Point:
  + x: X-coordinate of the point.
  + y: Y-coordinate of the point.
* Circle:
  + cx: X-coordinate of the center.
  + cy: Y-coordinate of the center.
  + radius: Radius of the circle.

3.Metadata about the Annotation:

* Created At: Timestamp when the annotation was created.
* Updated At: Timestamp when the annotation was last updated.
* Author/User ID: The ID of the user who created or edited the annotation
* Annotation Type: The type of annotation (e.g., “Bounding Box”, “Point”, “Circle”)
* Annotation Status: Indicates the status of the annotation (e.g., “Pending Review”, “Approved”, “Rejected”)

4. Annotation Relationships( it depends on frontend features)

* Parent Annotation ID: If the annotation is part of a hierarchical structure (e.g., sub-annotations within a larger annotation).
* Linked Annotations: References to other related annotations (e.g., “This point is part of this circle”)

5. Content Information

* Label/Category: A specific category or class label for the annotated object
* Tags: Tags or keywords associated with the annotation for easier searching or filtering.

6. User Interaction Data

* Edit History: Log of changes made to the annotation over time, including what was changed, by whom, and when.

Example Database Schema

CREATE TABLE images (

Id INT PRIMARY KEY,

Image\_name VARCHAR(255) NOT NULL,

Image\_path VARCHAR(255) NOT NULL,

Uploaded\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP

);

CREATE TABLE annotations (

Id INT PRIMARY KEY,

Image\_id INT,

Annotation\_text TEXT,

Coordinates JSON,

Annotation\_type VARCHAR(50),

Label VARCHAR(255),

Created\_at TIMESTAMP,

Updated\_at TIMESTAMP,

Author\_id INT,

Status VARCHAR(50),

Parent\_annotation\_id INT,

FOREIGN KEY (image\_id) REFERENCES images(id)

);