Development of B2B Android Based Product Catalog Portal for EAPL

1RV21MC025

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Under the Guidance

of

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- Introduction

- Objectives of the Project Work

- Changes suggested in Phase I and Incorporation

- Tools and Technologies Used

- Hardware and Software Requirements

- Software Requirement Specifications

- References

- Introduction
  - Development of an android application platform for a product catalog portal
  - To develop a product catalog for showcasing the products and providing the staff to manipulate the data only after getting it validated by the administrator

- Objectives of the Project Work
  - To develop an android application to provide staff and administrator a smooth navigation through a product catalog portal
  - To use MongoDB as the backend and provide the CRUD operations for staff and the administrator

List the changes suggested in Phase I and explain the changes incorporated

Courses learnt apart from the syllabus

Sl No	Particulars / Details	Details of Implementation
1	Course on "Kotlin programming language"	Implemented in development of the android application for the staff and admin modules

Tools and technologies used-

- Kotlin programming language: it is used to provide the business logic and validations required for the development of the staff and admin modules

- MongoDB: it is used as the backend database to store the staff, admin and product details. The staff and admin details are required for providing the authentication functionality and the product details include the description of the products along with product images and product 360 degree view

- Android Studio IDE: it is the environment that integrates the front-end (XML layouts) with the business logic to develop the android application

- NodeJs: it is used to develop the APIs required for the CRUD operations with the help of ExpressJS

Details of Hardware and Software requirements

- Mobile device supporting android with a version of Android 8 (Ver. Oreo, API level 26) [1]
- Access to an active internet connection and the device file storage system
- Privileges to staff to add, update and delete products and submit the draft details of the products to the administrator for approval
- Privileges to the administrator to approve or reject the product details provided by the staff
- Privileges to the administrator to insert new or update the existing product details provided by the staff

General Description of the modules–

1. For Staff: The staff will be provided with the creation, reading, updation and deletion modules for performing the CRUD operations on the products into the pending database that would be sent to the administrator for approval. The updates made by the staff would not affect the main product collection

2. For Admin: The admin will be provided with the create, read, update and delete modules where he/she can approve the insertion of the new product details into the main product collection as proposed by the staff. The products approved by the administrator are added to the main product collection which will be displayed on the user screen. The products that are rejected will be deleted from the products collection which could be accessed by the staff

Module Description :

Module Name	Creation
Purpose	To insert the product details into the database
Input	Product title, category, description, features, applications, functions, specifications, downloadable product details file, product images, 360 view
Function	Accepts the input provided by the staff, and once submitted, places it in a pending collection that will be approved by the administrator
Output	A toast message to display the successful insertion of document in the collection.

Module Name	View
Purpose	To view the product details from the database
Input	Product category
Function	The category chosen by the staff or admin will be queried into the database and the corresponding documents under that category will be fetched
Output	Product title

Module Name	**Update**
Purpose	To update the product details in the database
Input	Product title, category, description, features, applications, functions, specifications, downloadable product details file, product images, 360 view
Function	The details of the products will be shown to the staff in an editable format. The staff can then update the changes and the whole document will be updated in the database.
Output	A toast message to display the successful insertion of document in the collection.

Module Name	**Delete**
Purpose	To delete the product details in the database
Input	Product ID
Function	The details of the products will be deleted from the database after getting it approved from the administrator
Output	A toast message to display the initiation of the process of deleting the product

Functional requirements-

● The changes made by the staff must be reflected into the pending product collection.
● The pending product collection is reviewed by the admin for the approval or the rejection of the new insertions, deletions and modifications.
● The decision of the admin must be reflected into the main product collection and the documents in the pending product collection must be removed.

Non functional requirements-

● Scalability: the use of MongoDB ensures that the system is scalable. MongoDB is faster and can accommodate large amounts of data [2]
● Flexibility: the android application can be accessed anywhere with the availability of internet. This gives flexibility to the staff members and admin to perform the database operations over their mobile device without the requirement of desktop systems
● Authorization: the staff and the admin concerns can be separated using authorization
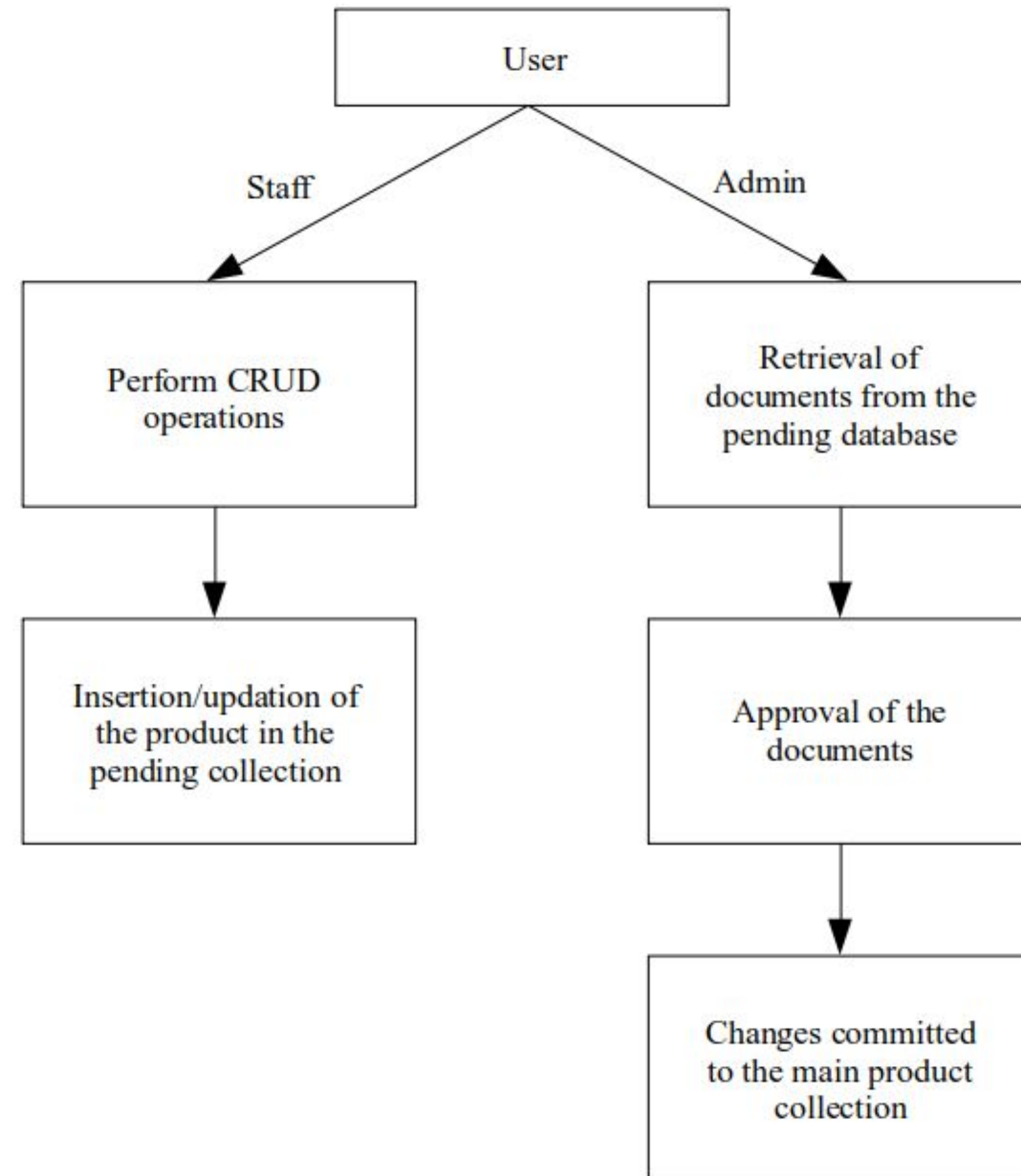
- The user (staff and admin) can log into the app
- If the user is staff then he can view the products and can add, delete or update an existing product
- The changes made by the staff will not be reflected in the main product collection
- It will get stored in a pending product collection which can be viewed by the admin
- If the user is an admin, he can approve or reject the items in the pending product collection
- The documents which are approved are inserted into the main product collection which gets reflected in the user screen
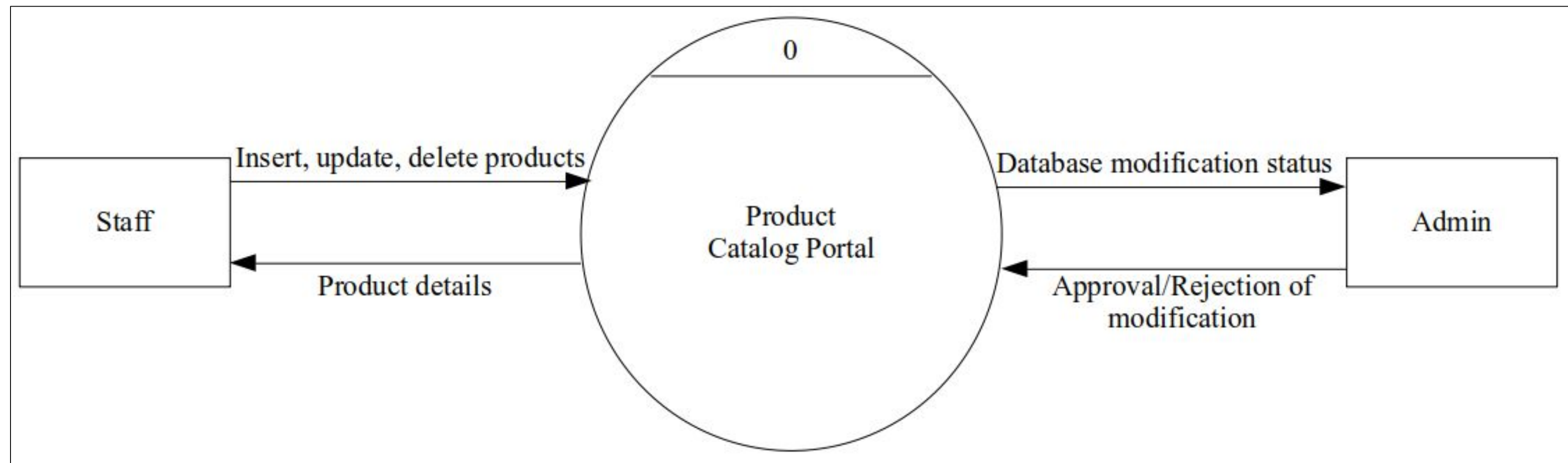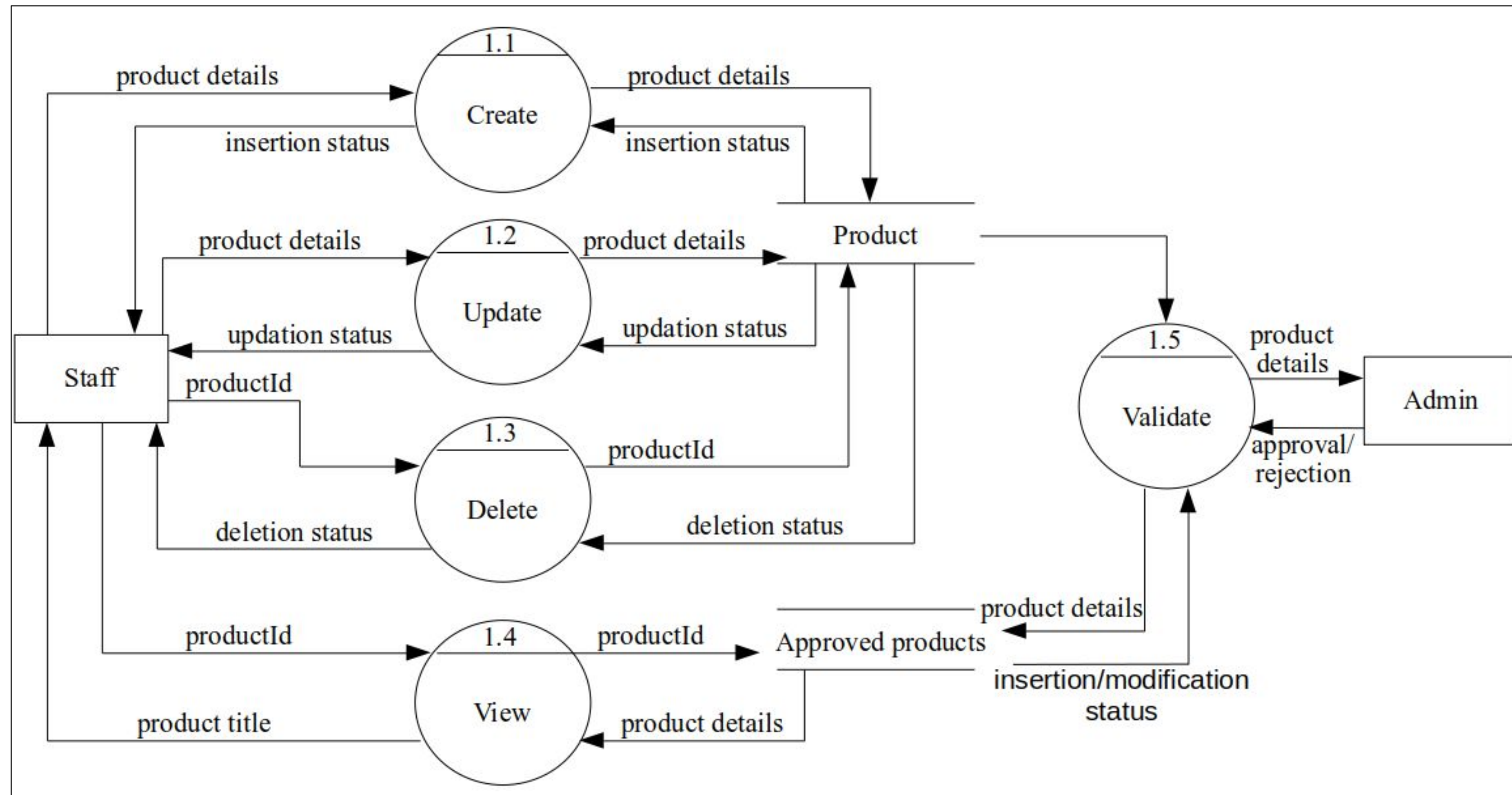
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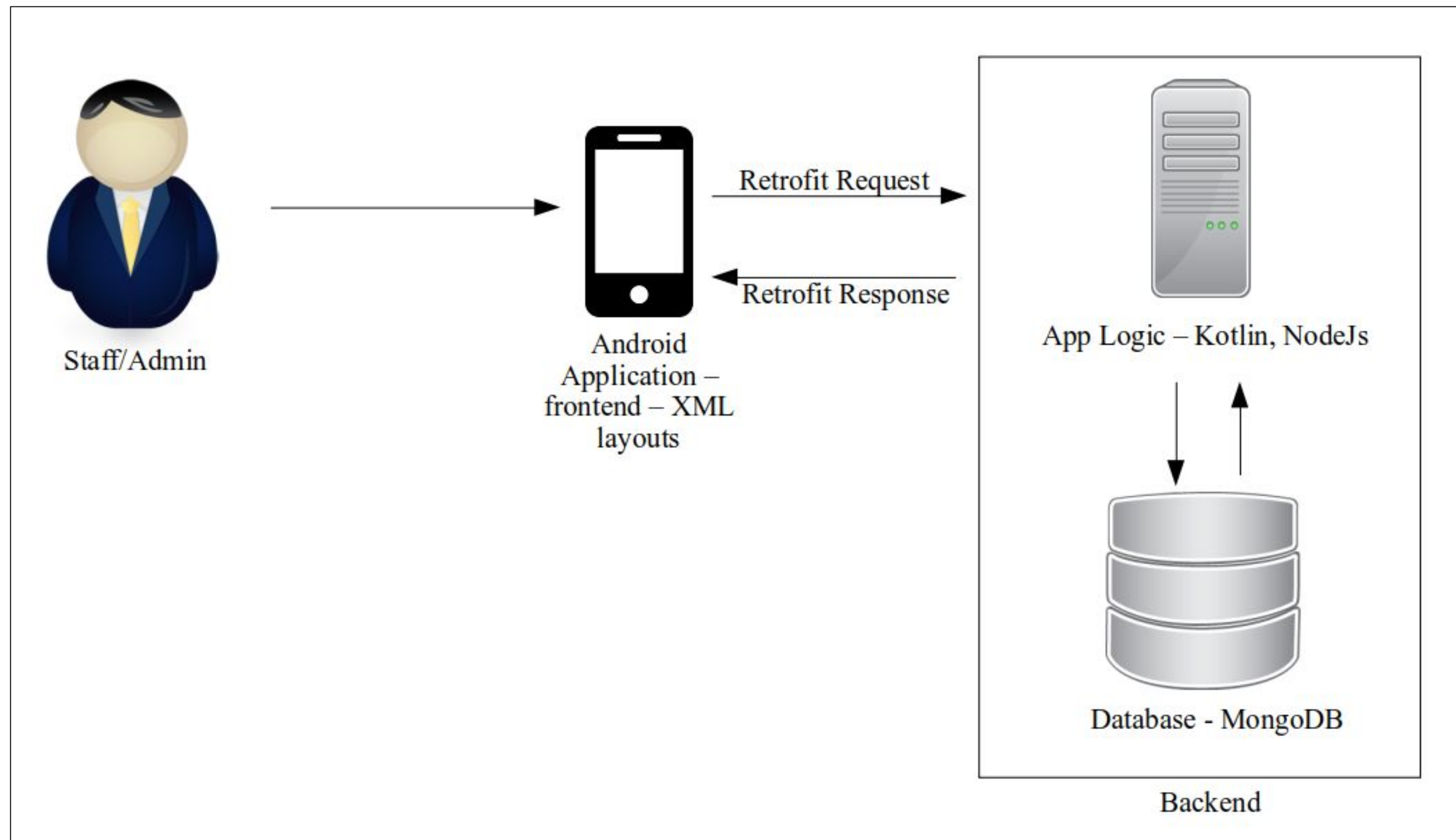
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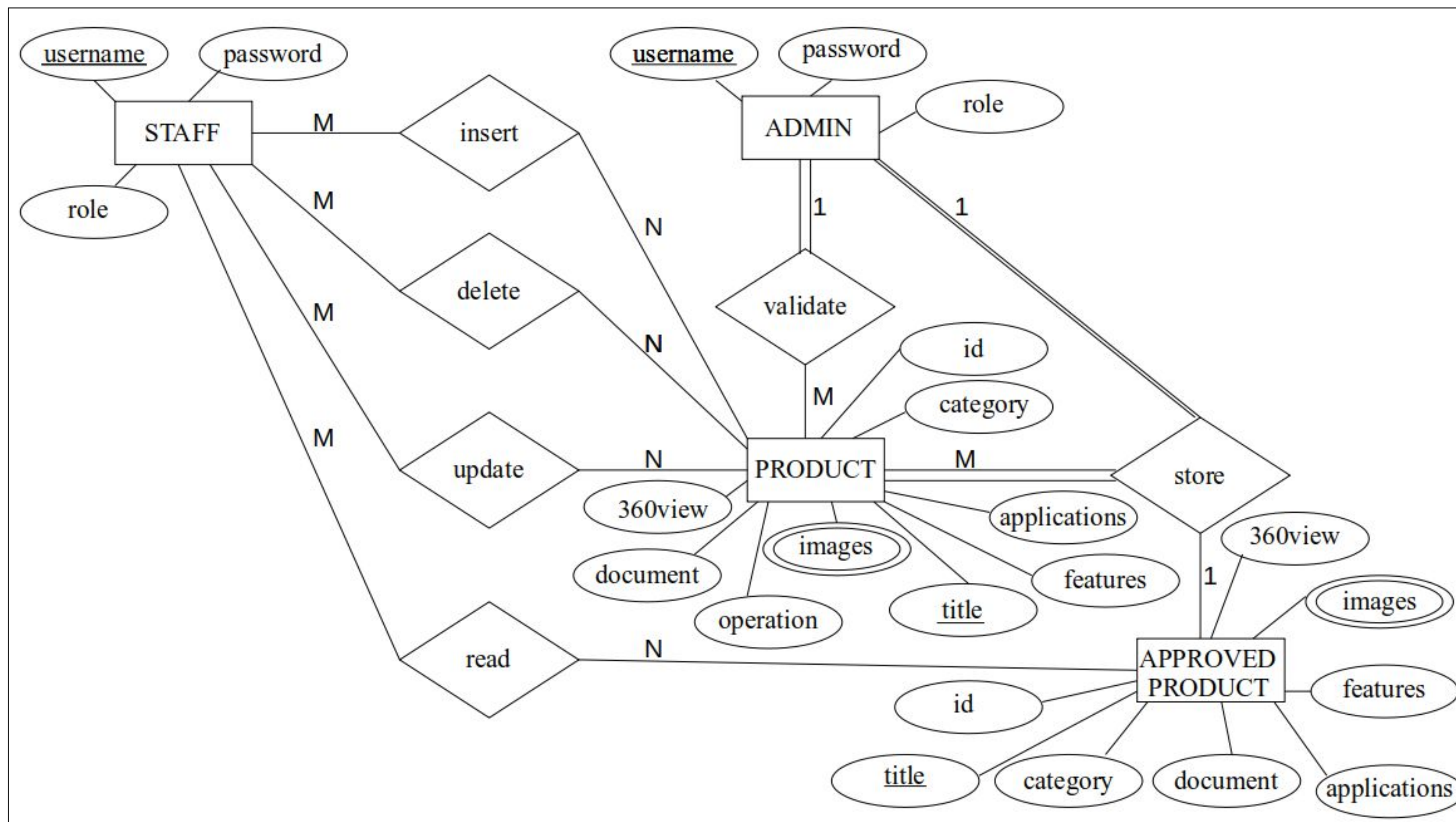
Data Flow Diagrams -

Level 0

Data Flow Diagrams -

Level 1

Plan for further work

  1.completing the modules for admin

  2.completing the update and delete modules for staff

[1] Android API Levels. (2023, May 6). *API Levels* [Online]. Available: https://apilevels.com/

[2] IBM. *What is MongoDB?* [Online]. Available: https://www.ibm.com/topics/mongodb