1 DFD (Report Preparation)

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Feature: Report Preparation

1.1 DFD Level 0

Bubble Name: Report Preparation

Description:

The DFD Level 0 describes entire system as a single system. In this system, the process is interacting with two external entities (Customer and Admin). This is also called Context Diagram

External Entities:

- Customer: This external entity interacts with the system by requesting or viewing reports.
- Admin: The administrator manages report generation, approvals, and product-related processes.

Data Flow:

- From Customer to Report Preparation: Request for Purchase Report.
- From Admin to Report Preparation: Post the status of Purchase Request , it can be accepted or rejected.
- From Report Preparation to Customer: If admin approves, Purchase report is sent.
- From Report Preparation to Admin: With Relevant input, get sales report.
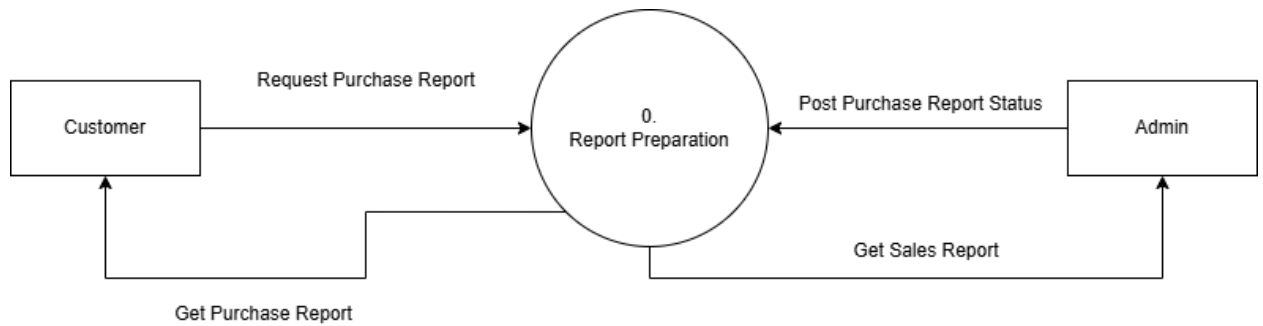
Figure 1: DFD Level 0

1.2 DFD Level 1

1.

Bubble Name: Generate Purchase Report

Description:

This process collects and compiles data related to product purchases.

Entities:

Customer: Request for Purchase report.

2.

Bubble Name: Generate Sales Report

Description:

This process compiles sales-related data, generating a report for business analysis.

Entities:

Admin: Request for sales report.

3.

Bubble Name: Purchase Report Status

Description:

This process tracks the progress or completion status of purchase reports, informing relevant stakeholders.

Entities:

Customer: Sends the request for purchase report generation

Admin: Receive the customer request and can decides weather to approve and reject.

Data Flows:

1. Generate Purchase Report

   Incoming Data Flows:

   1) Purchase Request (from Customer)
   2) Product Details (from Database)
   3) Approval Request (from Admin for report generation)

   Outgoing Data Flows:

   1) Generated Purchase Report (to Customer)
   2) Report Confirmation (to Admin)

2. Generate Sales Report

   Incoming Data Flows:

   1) Sales Data (from Database)
   2) Sales Request (from Admin)

   Outgoing Data Flows:

   1) Generated Sales Report (to Admin)

3. Purchase report Status

   Incoming Data Flows:

   1) Purchase Report Details (from Generated Purchase Report)
   2) Approval Status (from Admin)

   Outgoing Data Flows:

   1) Report Status Update (to Customer)

2) Completion Notice (to Admin)

Data Store

1) Purchase Info

   Stores all purchase-related information, including product details and customer requests.

2) Purchase Report

   It holds all the purchased report which have been approved by admin.

3) Sales DB

   It stores whole sales data, it helps in helps in preparation of generation sales report.
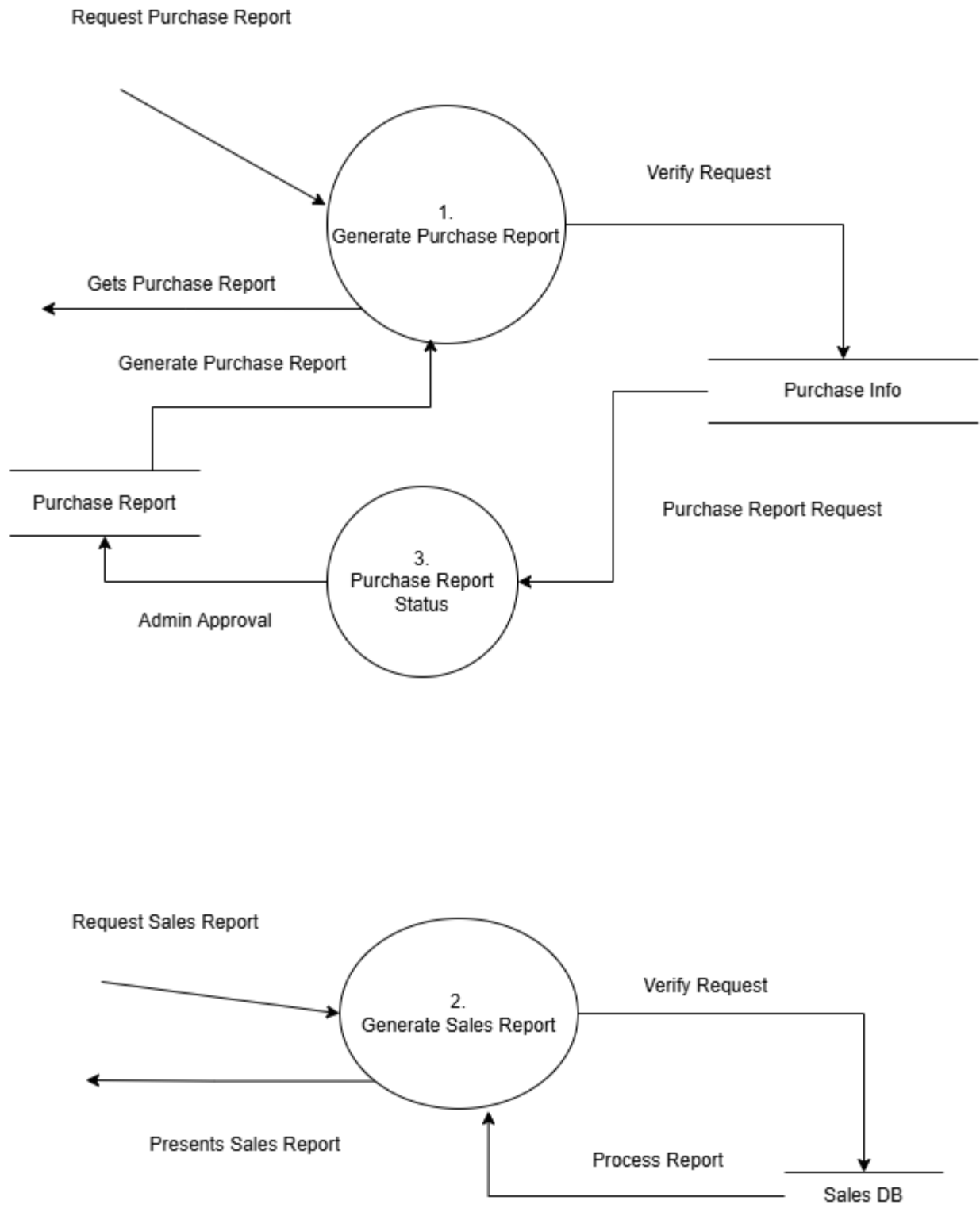
Request Purchase Report

1.
Generate Purchase Report

Verify Request

Gets Purchase Report

Generate Purchase Report

Purchase Info

Purchase Report

Purchase Report Request

3.
Purchase Report Status

Admin Approval

Request Sales Report

2.
Generate Sales Report

Verify Request

Presents Sales Report

Process Report

Sales DB

Figure 2: DFD Level 1

1.3 DFD Level 2

Bubble: Generate Purchase Report

Sub-bubbles:

1.1 Verify Request
1.2 Checks Purchase Product
1.3 Checks Admin Approval

Data Flows:

1. Verify Request

Incoming Data Flows:

Purchase Request (from Customer)

Outgoing Data Flows:

Validated Request (to Check Purchase Product)

Rejection Notice (to Customer if request is invalid)

2. Check Purchase Product

Incoming Data Flows:

Validated Request (from Verify Request)

Product Inventory Details (from Product Database)

Outgoing Data Flows:

Product Availability Status (to Check Admin Approval)

Out-of-Stock Notification (to Customer if unavailable)

3. Check Admin Approval

Incoming Data Flows:

Product Availability Status (from Check Purchase Product)

Approval Request (from Admin)

Outgoing Data Flows:

Approved Purchase Report (to Generate Purchase Report process)

Rejection Notice (to Customer if not approved)

Data Store

1. **Purchase Info**

Stores all purchase-related data, including product details, customer purchase requests, and historical transactions.

2. **Purchase Report**

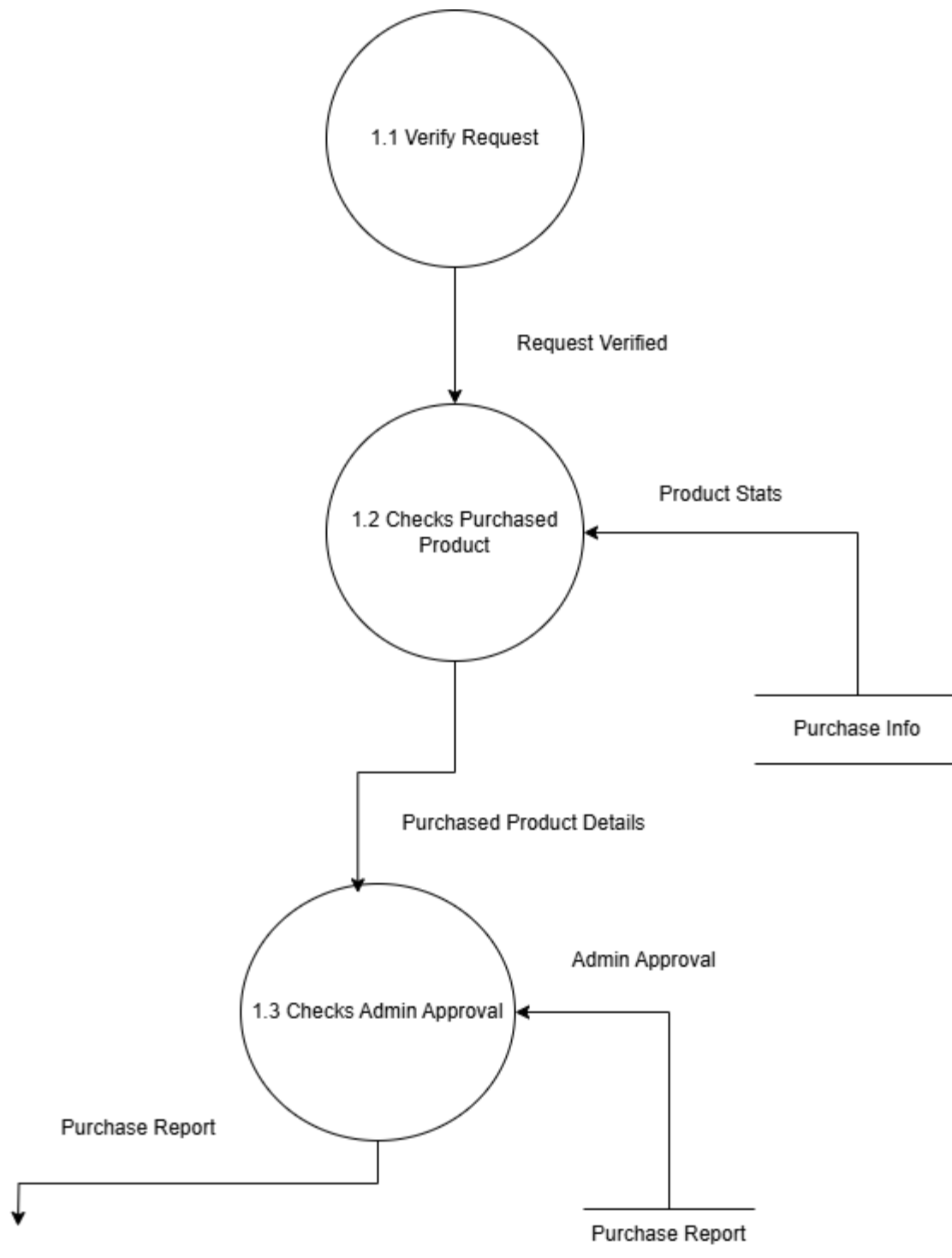Holds all approved purchase reports after validation and admin approval.

Figure 3: DFD Level 2