

# Zen Consulting Inc.

EXPENSIFY



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## ZEN CONSULTING INC. – EXPENSIFY

We are a consulting company named Zen Consulting Inc. and our product is Expensify.

Expensify is a procurement and expense management system. Our business model is to cater to small – medium sized companies and provide them with a customized solution for their procurement and expense needs.

Expensify is a one stop solution for streamlining all the procurement and expenses in any company. It will enable increased operational efficiency, better insight on spend management, help determine areas of cost control and provide relevant data to map business costs to revenues.

Our goal is to make procuring and payment a hassle free experience for our clients.

## CURRENT PROJECT



## AZURE DESIGNER BOUTIQUE

We are currently implementing Expensify for “AZURE Designer Boutique”. This is a small sized company rapidly expanding their business. They came to us seeking solution for streamlining and automating their procurement and expense processes and that's what we are doing here!

### AZURE DESIGNER BOUTIQUE - BUSINESS PROCESS DESCRIPTION

Based on the process description provided by Azure Designer Boutique we are customizing Expensify to meet their needs.

#### **1st Process: Item / Reimbursement Request**

##### **Boutique Item Request (2 Primary Users)**

1) Designer - The designer requests for items which are not available in inventory. These requests are placed in association with customized garment orders placed by in-store customers.  
Designer creates a boutique item request → Gets assigned to the creative head for approval → Once the creative head approves, the inventory manager creates a purchase order and assigns the order to the concerned supplier → The supplier views the purchase order assigned to them, processes it and ships the items to the inventory manager → The inventory manager takes a stock of the newly delivered items and makes an entry for these items in the boutique item datastore → Post recording the details in the datastore, the inventory manager updates the purchase order status to "Received".

2) Store Manager - He / She will create a request for readymade garments → The request will be assigned to the inventory manager who keeps a stock of all raw materials / readymade garments → The inventory manager will ship the requested garments to the store location → Once the garments are received by the store manager → The request status will be updated to 'Complete'

#### **Reimbursement Request** - All employees can claim reimbursements

Employee can create a reimbursement request to claim reimbursement for various business expenses like travel, food, accommodation etc. → The request will be assigned to the payments team → Once the request has been validated, the payments team will make direct payment to employee's bank account.

### [\*\*2nd Process: Inventory Management\*\*](#)

#### **Ordering Regular Items & Special Items** -

- 1) The inventory manager creates purchase order for regular items based on low / out of stock notification or upon request from creative head for items required for readymade garments.
- 2) Inventory manager also creates purchase orders for special item requests (approved) created by the designers for customized orders
- 3) Post creation of the purchase order, these PO are assigned to the concerned suppliers

#### **Updating & Reconciling Inventory items**

- 1) Inventory manager manually records inventory details of newly received items from the suppliers.
- 2) Inventory manager retrieves monthly report of the online stock and tallies them with physical stock → Inventory manager makes record of the reconciliation in the system

### [\*\*3rd Process: Order Fulfillment\*\*](#)

The supplier views the assigned purchase order and keeps updating the order status as per the progress of the order → Once the order is shipped, the supplier generates an invoice and uploads the same on the system → As and when the invoice is uploaded the system sends a notification to the payment team of an outstanding invoice

### [\*\*4th Process: Payment Fulfillment \(Two types of Payment\)\*\*](#)

#### **1) Invoice Payment**

Once invoice is received, the payments team checks the status on the order, if the order status is updated as Received by the inventory manager, then the payments team initiates the payment depending upon the payment terms

#### **2) Reimbursement payment**

The payment team verifies the reimbursement details against the supporting documents → Once the request is validated, the payment team initiates the payment directly to employee's bank account → Request status is updated to complete.

## SYSTEM REQUEST BY AZURE DESIGNER BOUTIQUE

### Business Need:

To streamline and automate procurement / expense related requests or payments.

### Business Requirements:

1. Provide an online user interface which can be accessed by employees to place, edit and approve boutique item requests or reimbursement requests.
2. Enable Inventory manager to place purchase orders & manually reconcile and update stock.
3. Enable suppliers to view and update order information.
4. Allow payments team to verify invoices / reimbursement bills and make payments.
5. Enable management to generate periodic expense reports for auditing purpose.

### Business Processes:

1. Item / Reimbursement Requests Placement
2. Inventory Management
3. Order Fulfillment
4. Payment Processing

### Business value:

1. Increase operational efficiency.
2. Reduction in employee headcount.
3. Data streamlining to enable better spend management, forecast and control

## FUNCTIONAL REQUIREMENTS

### 1. BOUTIQUE ITEM/ READYMADE ITEM/ REIMBURSEMENT REQUEST CREATION

#### Process Requirements:

1. The system must allow the users (designers & store managers) to submit either a boutique item request or readymade item request based on their role
2. The system must allow the designers to choose from a list of items (cotton or silk thread bundles, beads, designer stone work patches, embroidered patches etc.) while submitting a request and then direct it to creative head for approval
3. All the employees should be allowed to submit reimbursement requests for business related expenses like travel, food, accommodation etc.
4. For reimbursement requests, the system must allow the employees to input details of their business expenses such as the spend description, spend amount, spend date etc.
5. The store manager should be allowed to submit requests for ready-made garments to the inventory manager
6. The system must allow the requestors to modify or cancel their requests

#### **Information requirements:**

1. All the details of a request created for either boutique items, readymade items or reimbursements must be maintained in the boutique items request data store, readymade items data store and reimbursement request data store respectively.
2. The list of all boutique items and readymade items must be stored in respective boutique item data store and readymade item data store.
3. The system must provide real time status for created requests.
4. The details of all users must be stored in the User credentials data store as per their roles – Requestors, Approvers, Inventory Manager and Payments processor.

## **2. INVENTORY MANAGEMENT**

#### **Process Requirements:**

1. The system must allow the inventory manager to create purchase orders and assign them to the concerned suppliers
2. The system must allow the inventory manager to manually reconcile and update inventory based on incoming shipments

#### **Information Requirements:**

1. The system must contain boutique item request details and readymade items request details in the boutique item request data store and readymade item request data store.
2. The system must contain supplier information from supplier data store
3. The system must contain real time inventory in the Inventory data store
4. The system must contain order details for 5 years

## **3. PURCHASE ORDER FULFILLMENT**

#### **Process Requirements:**

1. System must allow the suppliers to update status of the purchase order.
2. System must allow suppliers to upload invoices for fulfilled PO and track their payment status.
3. The system must direct the invoice to the payments team

#### Information Requirements:

1. The system must contain a supplier data store with information about payment terms, supplier details and supplier bank account details
2. The system must include a repository for all suppliers (past – present)

#### 4. PAYMENT PROCESSING

##### Process Requirements:

1. System must allow the payments team representative to approve / reject payments
2. System must allow payments team to validate and make payment for approved expenses and reimbursement bills
3. System must allow payments team to update purchase order / reimbursement request status
4. System must allow the payment representative to overwrite the default payment terms

#### Information Requirements:

1. The payments made for the procurement of boutique items and readymade items along with payments made for reimbursements must be maintained in the data store
2. The system must retain all invoices for 3 years
3. The system must contain employee bank details in the employee data store and supplier bank details in the supplier data store
4. The system must contain supplier payment terms in supplier data store

#### NON - FUNCTIONAL REQUIREMENTS

##### Operational requirements

1. The system should be able to work on any Web browser
2. The system should be able to run on laptops and desktops
3. The system should be able accessible from different geographical locations

##### Performance Requirements

1. The system should support at least 200 concurrent users at any given time.
2. The system should respond to any user action within 3 seconds.
3. In the event of server crash, the system must switch to backup server within 5 minutes.
4. The system should enable download of invoices at an acceptable speed.

5. The system should reflect updates in status change of purchase requests within 5 seconds.
6. The system should be available 24X7 all days of the year.
7. Payment transactions should be redirected to the bank payment page within 10 seconds.

#### [Security requirements](#)

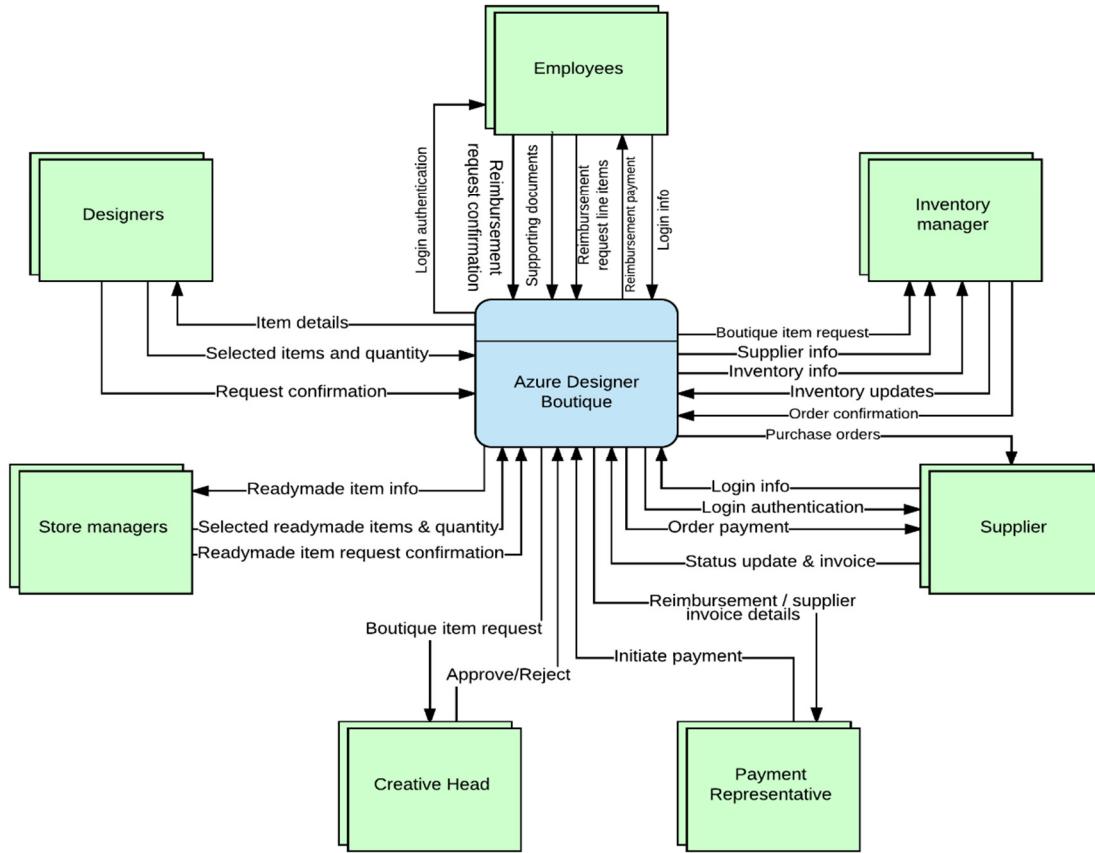
1. The system should authenticate registered customers before providing access to the system.
2. The system should provide role based privileges to access the system. For example, a manager can only view and approve purchase requests for his reportees.
3. Suppliers must have restricted access to the system enabling them to only view the purchase orders assigned to them and track status of an invoice.
4. The system should enable secure payment and must store supplier and employee payment information in an encrypted manner.
5. The system should timeout on the web browser after 5 minutes of inactivity by the customer.
6. Latest version of antivirus software must be made available through periodic updates.
7. The suppliers must be authenticated before they are allowed to login to the system.

#### [Cultural & Political Requirements](#)

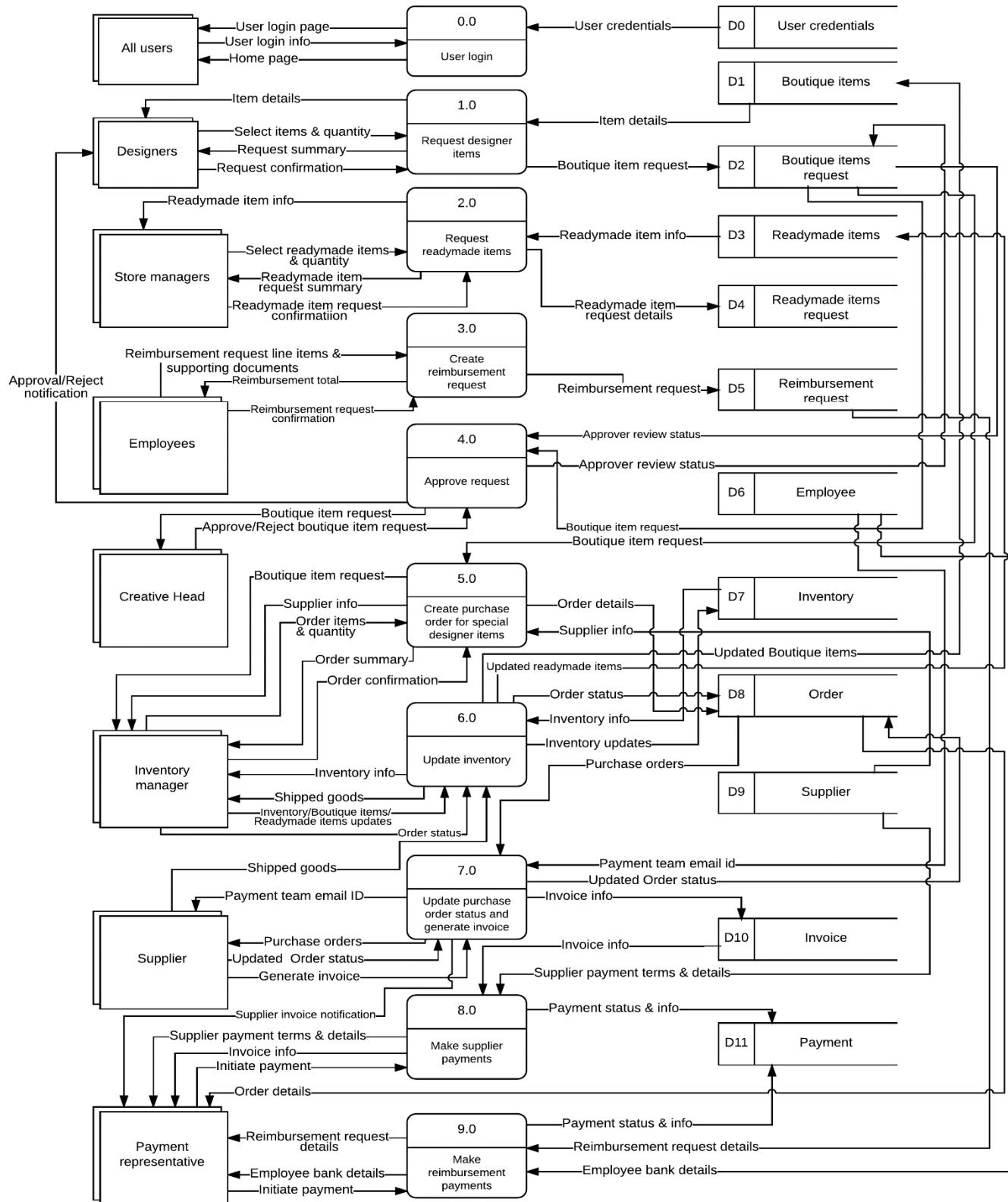
1. The system should enable payment of all major currencies to facilitate payment to suppliers worldwide.
2. The system should be able to support protection of personal information in compliance with the Data Protection Act.
3. Purchase order can be assigned to only registered suppliers who hold an active contract with the boutique.

## DFD DIAGRAMS

### CONTEXT DIAGRAM



## LEVEL ZERO DIAGRAM (LO)



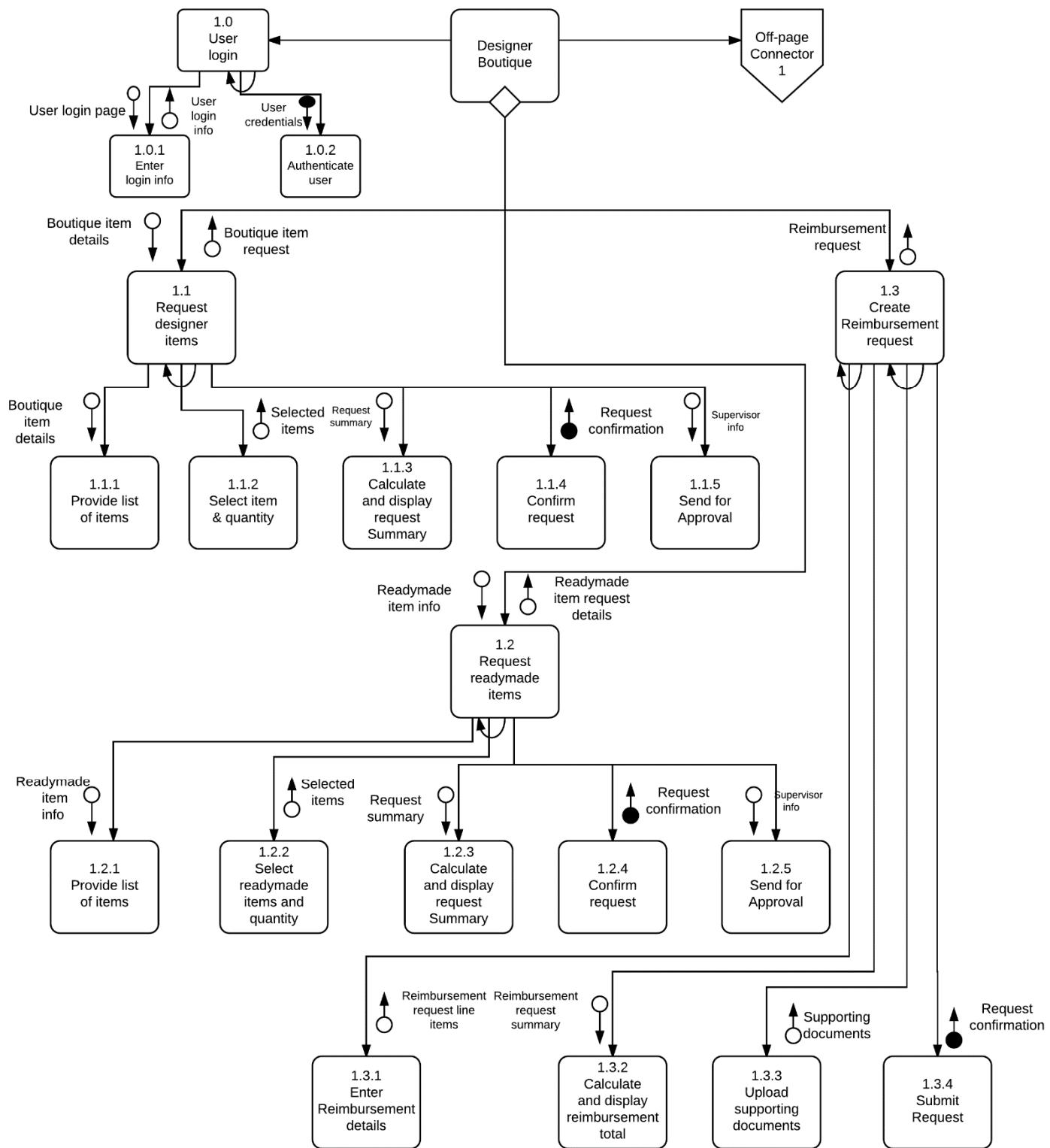
## DATA DICTIONARY

DATASTORE	COLUMN NAME	DATA TYPE	DEFAULT VALUE	RANGE	DESCRIPTION
EMPLOYEE	EMPLOYEE_ID	NUMBER	NOT NULL	E00001 - E99999	PRIMARY KEY, WHICH IS AUTO GENERATED
	EMPLOYEE_NAME	TEXT	NOT NULL	TEXT(30)	EMPLOYEE NAME
	EMAIL_ID	TEXT	NOT NULL	NA	EMPLOYEE EMAIL ID
	CONTACT_NO	TEXT	NULL	10-digit	EMPLOYEE CONTACT NO
	DESIGNATION	TEXT	NOT NULL	TEXT(15)	EMPLOYEE DESIGNATION
	DEPARTMENT	TEXT	NOT NULL	TEXT(20)	DEPARTMENT FOR WHICH EMPLOYEE WORKS
	WORK_LOCATION	TEXT	NULL	TEXT(20)	EMPLOYEE'S WORK LOCATION
	EXPENSE_LIMIT	NUMBER	NOT NULL	NA	EMPLOYEE'S EXPENSE LIMIT
	EMPLOYEE_BANK_ACCOUNT_NUMBER	NUMBER	NOT NULL	NA	EMPLOYEE'S BANK ACCOUNT NUMBER
SUPPLIER	SUPPLIER_ID	NUMBER	NOT NULL	S001-S9999	PRIMARY KEY, WHICH IS AUTO GENERATED
	SUPPLIER_NAME	TEXT	NOT NULL	TEXT(30)	SUPPLIER'S NAME
	SUPPLIER_BANK_ACCOUNT_NUMBER	NUMBER	NULL	NA	SUPPLIER'S BANK ACCOUNT NUMBER
	SUPPLIER_PAYMENT_TERMS	MEMO	NOT NULL	NA	PAYMENT TERMS-AS PER WHICH THE BOUTIQUE WILL MAKE PAYMENT
BOUTIQUE_ITEMS	BOUTIQUE_ITEM_CODE	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	BOUTIQUE_ITEM_DESCRIPTION	TEXT	NOT NULL	TEXT(100)	BOUTIQUE ITEM DESCRIPTION
	BOUTIQUE_ITEM_PRICE	NUMBER	NOT NULL	NA	BOUTIQUE ITEM PRICE
BOUTIQUE_ITEMS_REQUEST	BOUTIQUE_ITEMS_REQUEST_ID	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	REQUESTOR_ID	NUMBER	NOT NULL	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID ) REQUESTING EMPLOYEE'S ID
	APPROVED_BY	NUMBER	NOT NULL	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID ) APPROVING EMPLOYEE'S ID
	REQUEST_STATUS	VALUE SET	NULL	DOMAIN VALUES (AP = APPROVE / RJ = REJECT)	REQUEST STATUS
	ASSIGNED_TO	NUMBER	NOT NULL	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID )
	REQUEST_CREATION_DATE	DATE	NOT NULL	MMDDYYYY	REQUEST CREATION DATE
	TOTAL_REQUEST_AMOUNT	NUMBER	NOT NULL	NA	TOTAL REQUEST AMOUNT
	APPROVER REVIEW_DATE	DATE	NOT NULL	MMDDYYYY	APPROVER REVIEW DATE
	WORK_LOCATION	TEXT	NOT NULL	TEXT(20)	REQUESTOR'S WORK LOCATION
READYMADE_ITEMS	READYMADE_ITEM_CODE	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	READYMADE_ITEM_DESCRIPTION	TEXT	NOT NULL	TEXT(100)	READYMADE ITEMS (GARMENTS) DESCRIPTION

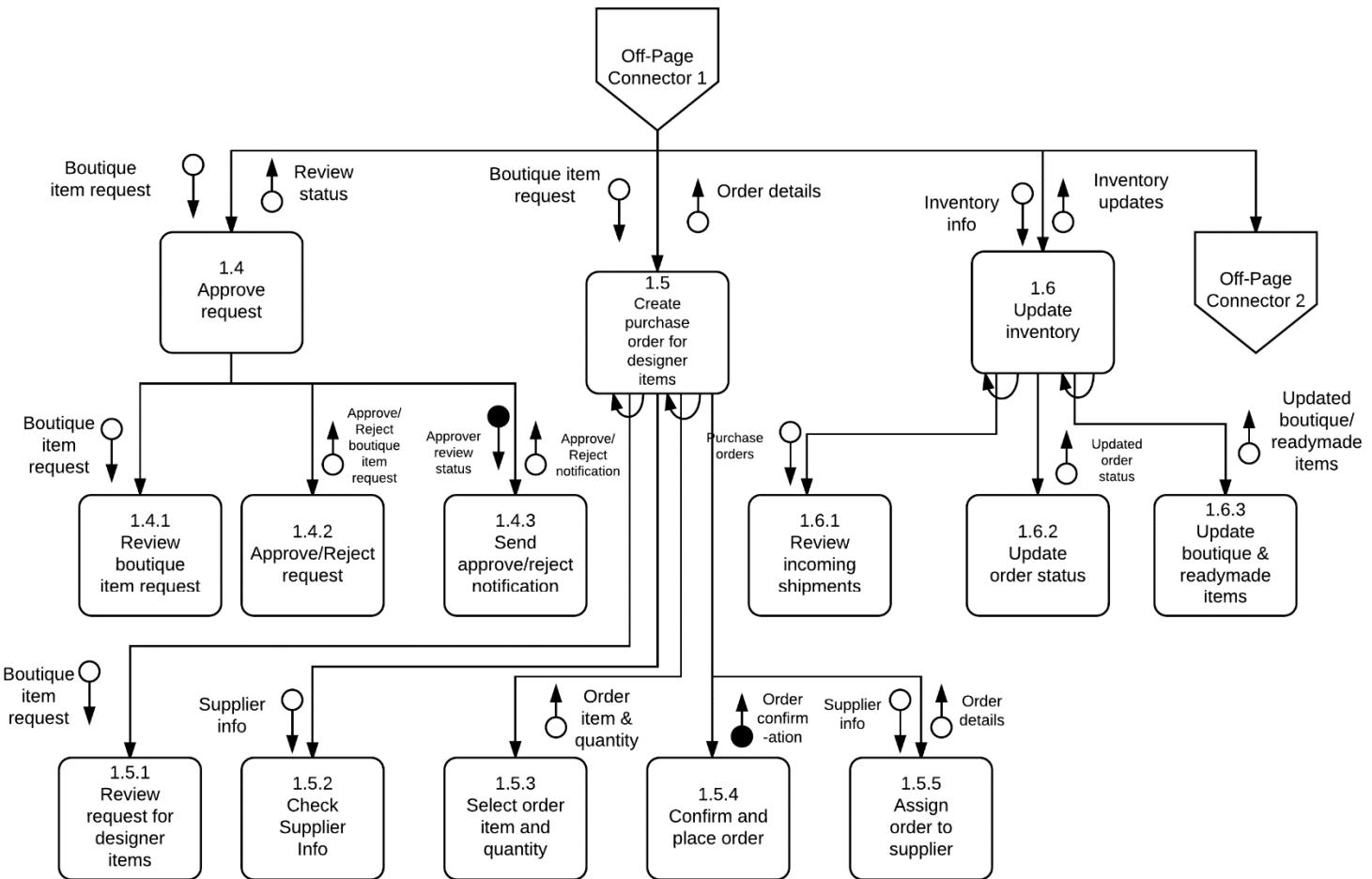
	READYMADE_ITEM_PRICE	NUMBER	NULL	NA	READYMADE ITEM PRICE
	READYMADE_ITEM_QTY_AVAILA BLE	NUMBER	NOT NULL	NA	READYMADE ITEMS - QTY AVAILABLE
READYMADE_I TEM _REQUEST	READYMADE_ITEMS_ REQUEST_ID	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	REQUESTOR_ID	NUMBER	NOT NULL	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID ) REQUESTING EMPLOYEE'S ID
	ASSIGNED_TO	NUMBER	NOT NULL	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID )
	REQUEST_CREATION_DATE	NUMBER	NOT NULL	MMDDYYYY	READYMADE REQUEST CREATION DATE
	TOTAL_REQUEST_AMOUNT	NUMBER	NULL	NA	TOTAL REQUEST AMOUNT
	DEPARTMENT(I don't think dept is required)	TEXT	NA	TEXT(20)	REQUESTOR DEPARTMENT
	WORK_LOCATION	TEXT	NOT NULL	TEXT(20)	REQUESTOR'S WORK LOCATION
REIMBURSEM ENT _REQUEST	REIMBURSEMENT_REQUEST_ID	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	REIMBURSEMENT_REQUEST_LINE _ITEM_ID	TEXT	NOT NULL	TEXT(40)	REIMBURSEMENT LINE ITEMS ID, AUTO GENERATED
	REIMBURSEMENT_ITEM_DESCRIPTION	TEXT	NOT NULL	TEXT(100)	REIMBURSEMENT CLAIM -ITEM DESCRIPTION
	REIMBURSEMENT_ITEM_AMOUN T	NUMBER	NOT NULL	NA	REIMBURSEMENT CLAIM -ITEM AMOUNT
	REQUESTOR_ID	NUMBER	NOT NULL	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID ) REQUESTING EMPLOYEE'S ID
	ASSIGNED_TO	NUMBER	NOT NULL	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID) ID OF PAYMENT REPRESENTATIVE
	REIMBURSEMENT_REQUEST_CRE ATION_DATE	DATE	NOT NULL	MMDDYYYY	REIMBURSEMENT REQUEST CREATION DATE
	REIMBURSEMENT_REQUEST_STA TUS	VALUE SET	NULL	DOMAIN VALUE (OPEN / COMPLETE)	REIMBURSEMENT REQUEST STATUS
	DEPARTMENT	TEXT	NULL	TEXT(20)	REQUESTOR'S DEPARTMENT
ORDER	ORDER_ID	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	BOUTIQUE_ITEMS_REQUEST_ID	NUMBER	NOT NULL	NA	FOREIGN KEY (REFERENCES BOUTIQUE_ITEMS --> BOUTIQUE_ITEMS_REQUEST_ID)
	ORDER_CREATION_DATE	DATE	NOT NULL	MMDDYYYY	ORDER CREATION DATE
	ORDER_STATUS	VALUE SET	NULL	DOMAIN VALUE (OP = OPEN /RCD = RECEIVED)	ORDER STATUS
	ORDER_FULFILLMENT_DATE	DATE	NULL	MMDDYYYY	ORDER FULFILLMENT DATE
	CREATED_BY	NUMBER	NOT NULL	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID ) ID OF INVENTORY MANAGER
	ASSIGNED_TO	NUMBER	NOT NULL	E00001 - E99999	ASSIGNED TO WHICH SUPPLIER

INVENTORY	INVENTORY_ID	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	INVENTORY_DESCRIPTION	TEXT	NULL	TEXT(100)	INVENTORY DESCRIPTION
	QUANTITY_AVAILABLE	NUMBER	NOT NULL	NA	INVENTORY QTY AVAILABLE
	INVENTORY_CLASSIFICATION	VALUE SET	NOT NULL	DOMAIN VALUES (INV = INVENTORY / BI = BOUTIQUE ITEMS / RDY = REDAYMADE ITEMS)	TYPES OF INVENTORY MAINTAINED
INVOICE	INVOICE_ID	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	ORDER_ID	NUMBER	NOT NULL	NA	FOREIGN KEY (REFERENCES ORDER --> ORDER_ID)
	SUPPLIER_ID	NUMBER	NOT NULL	S001-S9999	FOREIGN KEY (REFERENCES SUPPLIER --> SUPPLIER_ID)
	INVOICE_AMOUNT	NUMBER	NOT NULL	NA	INVOICE AMOUNT
	PAYMENT_DUE_DATE	DATE	NOT NULL	MMDDYYYY	INVOICE PAYMENT DUE DATE
PAYMENT	PAYMENT_ID	NUMBER	NOT NULL	NA	PRIMARY KEY, WHICH IS AUTO GENERATED
	PAYMENT_AMOUNT	NUMBER	NA	NA	REIMBURSEMENT/INVOICE PAYMENT AMOUNT
	PAYMENT_DATE	DATE	NA	MMDDYYYY	WHEN PAYMENT IS MADE
	PAYMENT_TYPE	TEXT	NA	SUPPLIER/REIMB URSEMENT	TYPE OF PAYMENT CAN BE EITHER SUPPLIER PAYMENT OR REIMBURSEMENT PAYMENT
	INVOICE_ID	NUMBER	NULL	NA	FOREIGN KEY (REFERENCES INVOICE -->INVOICE ID)
	REIMBURSEMENT_REQUEST_ID	NUMBER	NULL	NA	FOREIGN KEY(REFERENCES REIMBURSEMENT_REQUEST -->REIMBURSEMENT_REQUEST_ID)
	PAID_BY	NUMBER	NA	E00001 - E99999	FOREIGN KEY (REFERENCES EMPLOYEE --> EMPLOYEE ID )

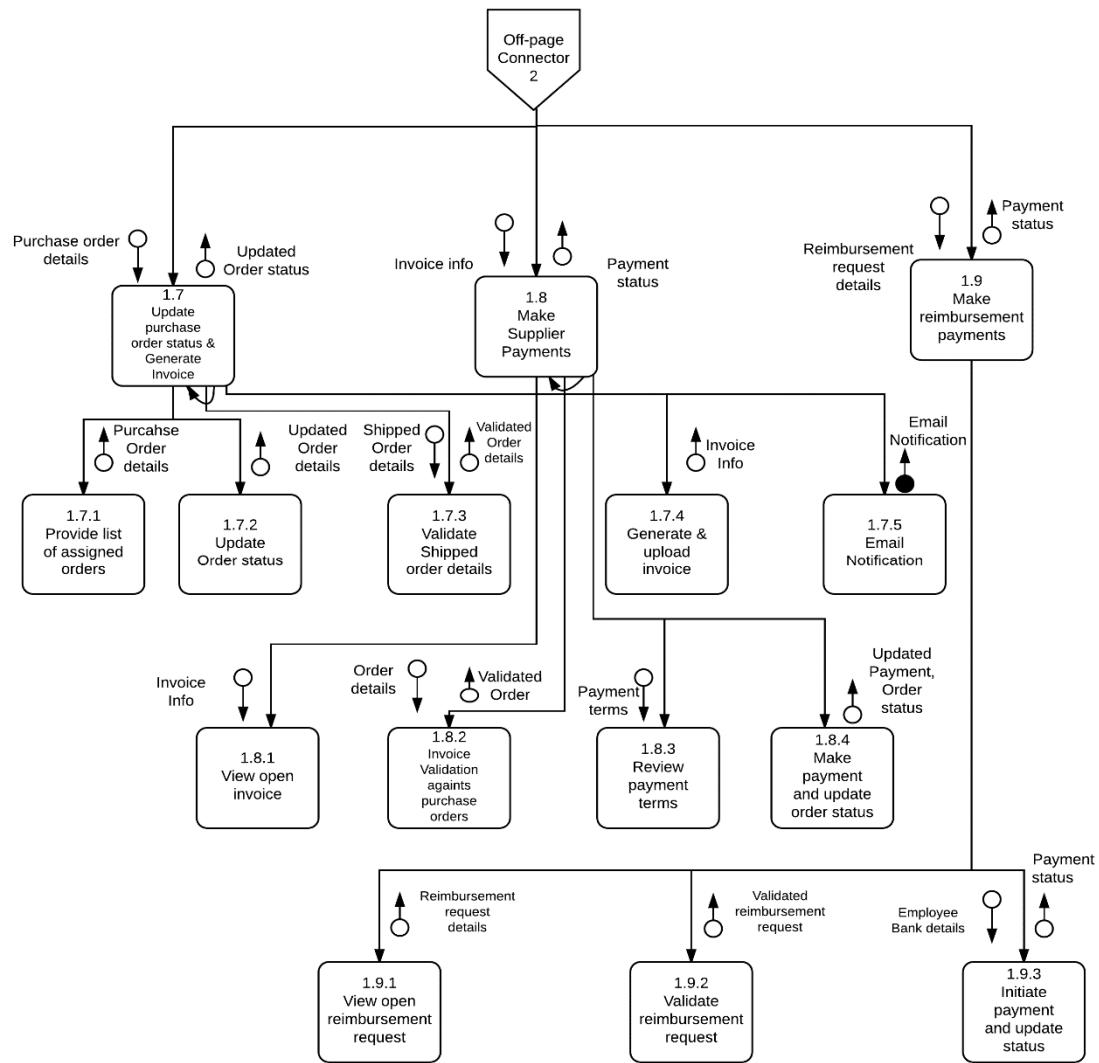
## PROGRAM CHART



## PROGRAM CHART CONTD.



## PROGRAM CHART CONTD.



## USE CASES

<b>Use Case Name:</b> User login	<b>ID:</b> 0	<b>Importance Level:</b> High	
<b>Primary Actor:</b> All users of the system			
<b>Short Description:</b> This use case describes how a user logs into the system			
<b>Trigger:</b> User tries to access the system online <b>Type:</b> External / Temporal			
<b>Preconditions:</b>			
1. System is available and online 2. User data store is available and online			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
User login info	User	User home page	User
User login page	System		
User credentials	User credentials datastore		
<b>Major Steps Performed</b>		<b>Information for Steps</b>	
<b>Normal course: 1.0</b>			
1. User is provided with the login page by the system		← User login page	
2. User types in their login details and clicks submit button		→ User login info	
3. Once the user is authenticated the systems displays the user home page based on the user's access level (Alternative course 2.1)		← User credentials User home page	
<b>Alternative course 2.0:</b>			
2.1 Users enters incorrect credentials (Branch at step 3)			
1. The user is prompted to enter correct login details and click submit once again		← User login page	
2. Once the user is authenticated the systems displays the user home page based on the user's access level		← User credentials → User home page	
<b>Post conditions:</b>			
1. The user is authenticated and logged in successfully			

<b>Use Case Name:</b> Request designer items	<b>ID:</b> 1	<b>Importance Level:</b> High	
<b>Primary Actor:</b> Designers			
<b>Short Description:</b> The designers create a request for designer items needed for customer orders			
<b>Trigger:</b> The designer needs special items to fulfill customer order <b>Type:</b> External / Temporal			
<b>Preconditions:</b> 1. The designer's login credentials are authenticated 2. The Boutique item data store has all the items available and is online			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
Item details	Boutique Item datastore	Boutique Item request	Boutique Item request datastore
Supervisor info	Employee datastore		
Selected items	Designer		
Item quantity	Designer		
Request summary	System		
Request confirmation	Designer		
<b>Major Steps Performed</b>		<b>Information for Steps</b>	
<b>Normal course:</b>			
<b>1.0 Request designer items for customer orders</b>			
1. The designers are provided with a list of items like cotton or silk thread bundles, beads, designer stone work patches, embroidered patches, men's wear, women's wear, kids' wear, etc.		Item details	
2. The designer selects the items and required quantity from the displayed list (Alternative course 2.1)		Selected item Item quantity	
3. The system calculates the total for the request and displays it to the designer		Request summary	
4. The designer verifies the request and submits it		Request confirmation Boutique item request	
5. The system moves the request to the creative head for approval		Supervisor Info	
<b>Alternative course</b>			
<b>2.1 The item that designer wants to add is not found in the item list (Branch at step 2)</b>			
1. The designer specifies the items needed with their description and quantity in a text field		Selected item Item quantity	
2. The designer verifies the request and submits it		Request confirmation Boutique item request	
3. The system moves the request to the creative head for approval		Supervisor Info	
<b>Post conditions:</b>			
1. The request is stored successfully in Boutique item request datastore. 2. The Boutique Item datastore is updated to reflect the latest count after request submission. 3. The request is assigned to the creative head for approval.			

<b>Use Case Name:</b> Create reimbursement request	<b>ID:</b> 3	<b>Importance Level:</b> High	
<b>Primary Actor:</b> Employee			
<b>Short Description:</b> The employees submit reimbursement requests for business related expenses like travel, food, accommodation etc.			
<b>Trigger:</b> The employee logs in to the system <b>Type:</b> External / Temporal			
<b>Preconditions:</b> 1. The employee's login credentials are authenticated. 2. The Reimbursement request data store is up and running.			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
Reimbursement request line items	Employee	Reimbursement request	Reimbursement request data store
Supporting documents	Employee		
Reimbursement request summary	System		
Readymade item request summary	System		
<b>Major Steps Performed</b>		<b>Information for Steps</b>	
<b>Normal course:</b>			
1. The employee adds line items for reimbursement of bills related to business expenses like travel, food, accommodation etc.		→ Reimbursement request line items	
2. The system calculates the total for the request and prompts to upload supporting documents.		← Reimbursement request summary	
3. The employee uploads the supporting documents.		→ Supporting documents	
4. The employee edits the request or chooses to submit it		→ Reimbursement request	
<b>Post conditions:</b>			
1. The request is stored successfully in Reimbursement request data store. 2. The request is assigned to the payments representative for processing.			

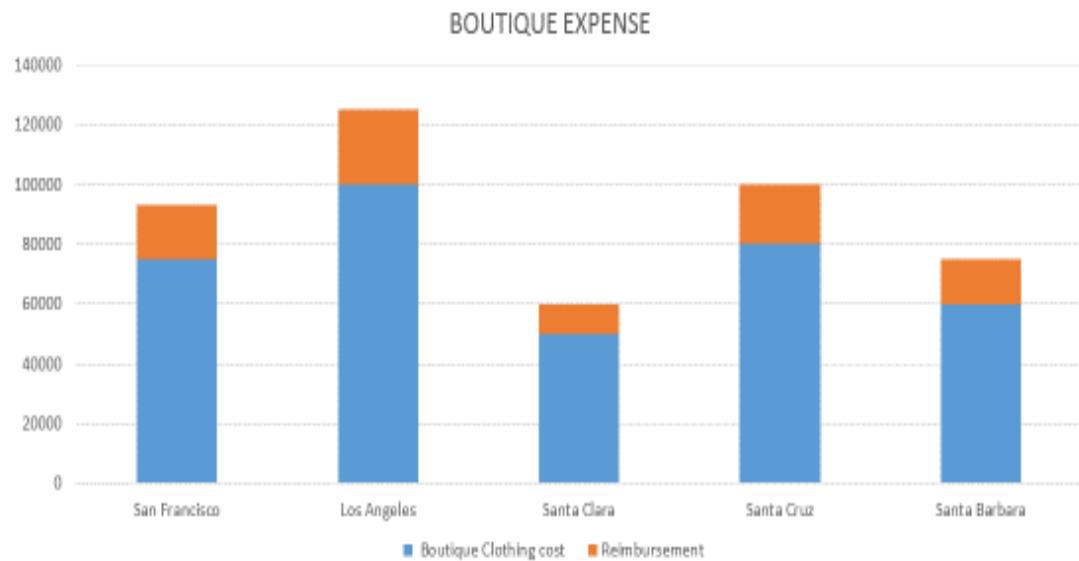
<b>Use Case Name:</b> Create Purchase Orders for special designer items	<b>ID:</b> 5	<b>Importance Level:</b> High	
<b>Primary Actor:</b> Inventory Manager			
<b>Short Description:</b> This use case describes how inventory manager creates new purchase orders for special designer items			
<b>Trigger:</b> Creative head approves boutique item requests from designers <b>Type:</b> <u>External / Temporal</u>			
<b>Preconditions:</b>			
1. Inventory Manager credentials are authenticated. 2. Boutique Item request datastore, Supplier datastore, Order datastore must be up to date and online.			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
Boutique item request details	Boutique Item request datastore	Order details	Order datastore
Order details	Inventory Manager		
Order quantity	Inventory Manager		
Supplier Info	Supplier datastore		
Order Confirmation	Inventory Manager		
<b>Major Steps Performed</b>		<b>Information for Steps</b>	
<b>Normal course:</b>			
1. The inventory manager reviews request placed by the designer for special items and checks for approval		← Boutique item request details	
2. The inventory manager checks which supplier provides all the required items and the estimated time for delivery.		← Supplier info	
3. The inventory manager creates a purchase order specifying the list of special items and quantity		→ Order details Order quantity	
4. The inventory manager confirms the order and assigns the request to the appropriate supplier.		→ Order confirmation	
<b>Post conditions:</b>			
1. Purchase Order is successfully placed, assigned to supplier and stored in Order datastore.			

<b>Use Case Name:</b> Update purchase order status & generate Invoice	<b>ID:</b> 7	<b>Importance Level:</b> High	
<b>Primary Actor:</b> Supplier <b>Secondary actor:</b> System			
<b>Short Description:</b> This use case describes how the suppliers update the status of purchase orders and generates invoice			
<b>Trigger:</b> Any progress in processing of a purchase order <b>Type:</b> <u>External / Temporal</u>			
<b>Preconditions:</b>			
1. Supplier credentials are authenticated. 2. Order datastore and employee datastore is up to date and available.			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
Order info	Order datastore	Order status	Order datastore
Supplier Invoice notification	System	Estimated delivery time	Order datastore
Order status	Order datastore	Actual delivery date	Order datastore
Payments team email ID	Employee datastore	Invoice info	Invoice datastore
<b>Major Steps Performed</b>		<b>Information for Steps</b>	
<b>Normal course:</b>			
1. The Supplier views the list of orders assigned to him/her		Order info	
2. As the supplier starts working on a purchase order, he/she starts updating the status of a Purchase order according to the stages in which the order is, such as 'In progress' / 'Shipped' / 'Delivered' / 'Delayed'		Order status Order info	
3. The supplier retrieves the list of purchase orders for which shipment has been initiated.		Order status Order info	
4. The supplier verifies if all order items in the purchase order have been shipped		Order status Order info	
5. If all order items for a purchase order have been shipped, then the supplier generates and uploads the invoice for a purchase order specifying the amount due and the payment due date.		Order status Inventory info	
6. The system sends an email notification to the payments representative informing them about the newly generated invoice.		Payments team email ID Supplier Invoice notification	
<b>Post conditions:</b>			
1. The order datastore is updated to reflect the current status. 2. The invoice is stored successfully in invoice datastore 3. The invoice is successfully assigned to a payment representative			

<b>Use Case Name:</b> Make Supplier Payments	<b>ID:</b> 8	<b>Importance Level:</b> High	
<b>Primary Actor:</b> Payment Representative			
<b>Short Description:</b> This use case describes how a payment representative makes Supplier payments			
<b>Trigger:</b> Payment team receives an invoice for Supplier payment <b>Type:</b> External / Temporal			
<b>Preconditions:</b>			
1. Payment representative's credentials are authenticated. 2. Invoice datastore, Order datastore, Supplier datastore and Payment datastore are up to date and online			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
Invoice details	Invoice datastore	Payment status update	Payment Data Store
Order info	Order datastore		
Supplier payment terms	Supplier datastore		
Supplier payment details	Supplier datastore		
<b>Major Steps Performed</b>		<b>Information for Steps</b>	
<b>Normal course:</b>			
1. The payment representative views open invoices		Invoice details	
2. Payment representative then validates the invoices against the purchase orders		Order info	
3. Payment representative reviews the payment terms and conditions for supplier invoices		Supplier payment terms and details	
4. Post review of the the terms and conditions, payment is made and the purchase order status is updated to 'Complete'		Payment status update	
<b>Post conditions:</b>			
1. Payment is successfully initiated by the Payments representative. 2. Payment datastore reflects the payment status.			

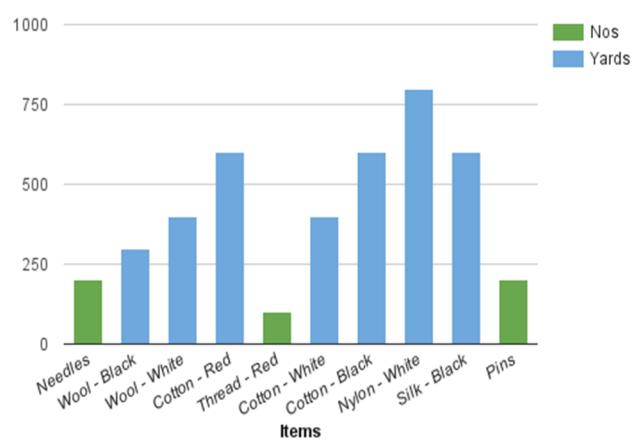
## BUSINESS METRICS

### STORE WISE EXPENSE



From the above chart, the cost for reimbursements and boutique clothing for the year 2015 - 16 can be gauged.

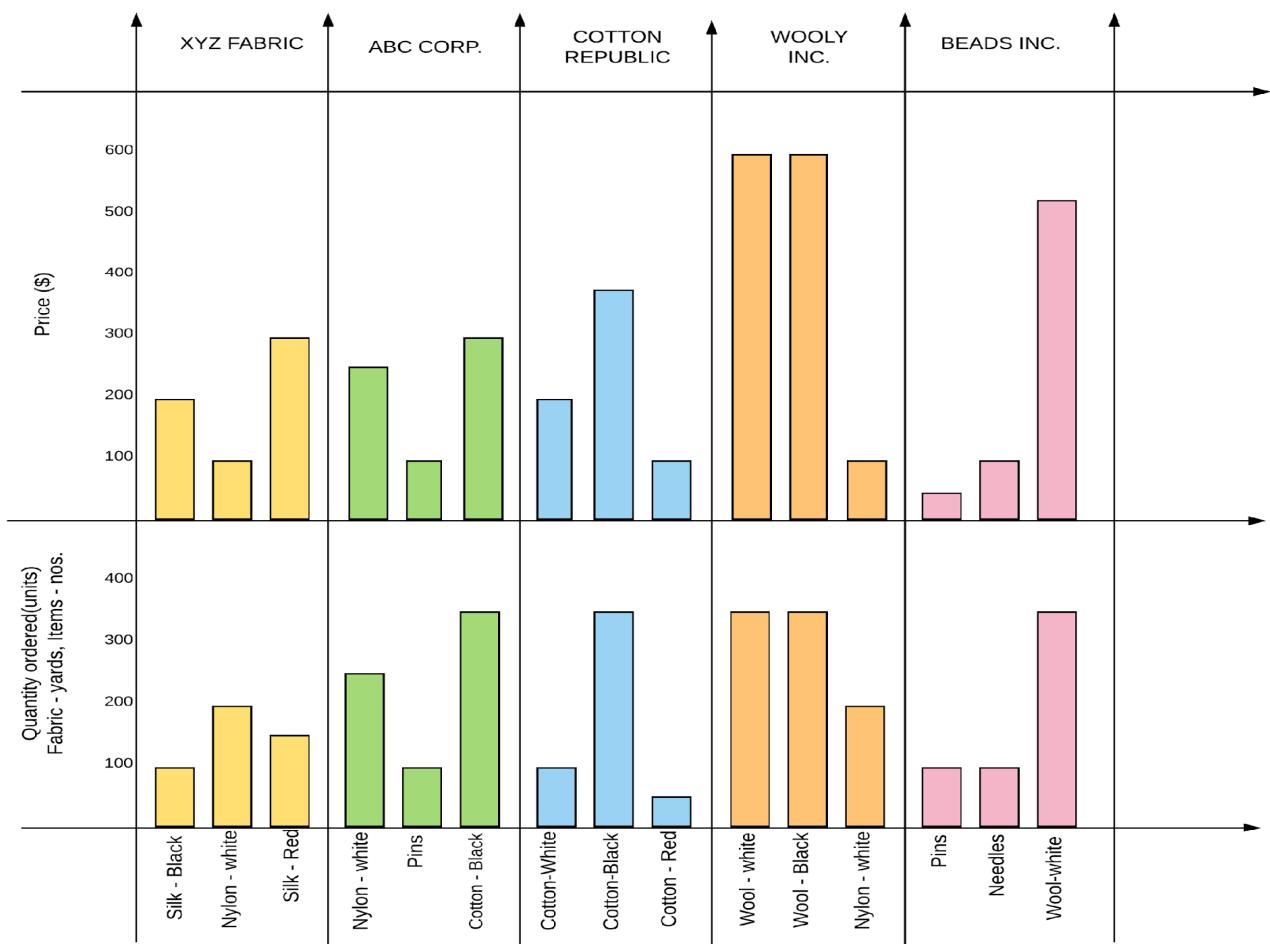
### Items Ordered



### BUSINESS METRICS – POPULAR ITEMS

In the above chart, the quantity of items ordered is denoted. It is noted that the item 'Nylon - white' is the most popular item to order. This would help in planning timing of item procurement and enable better budgeting.

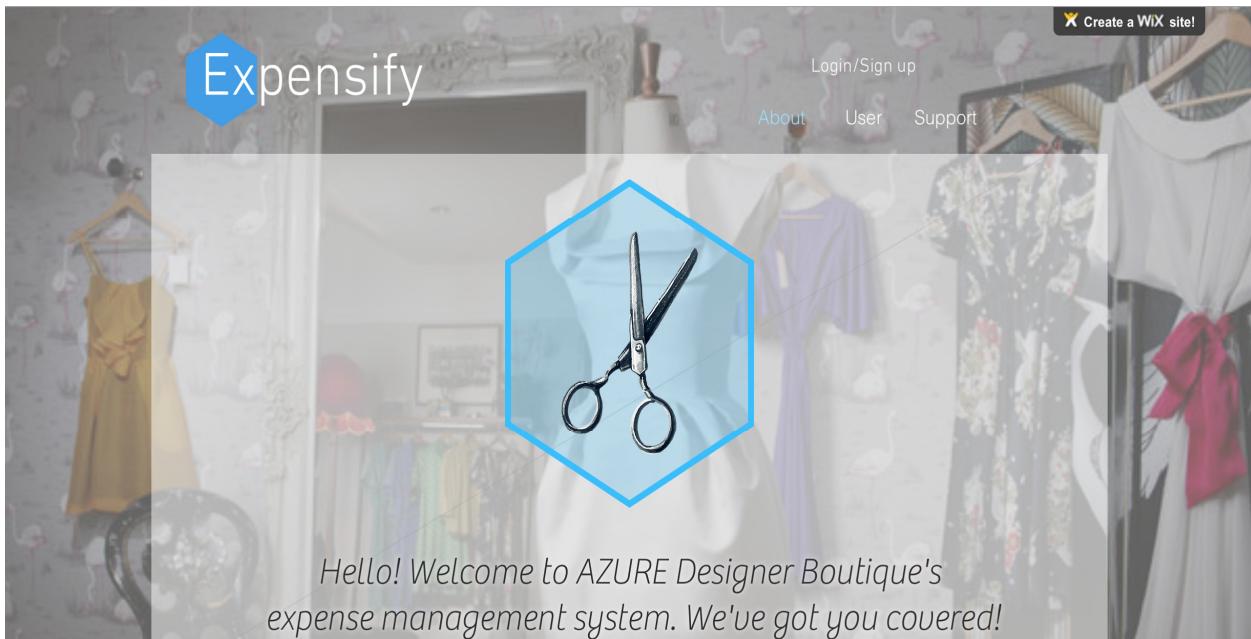
### BUSINESS METRICS – SUPPLIER PRICE ANALYSIS



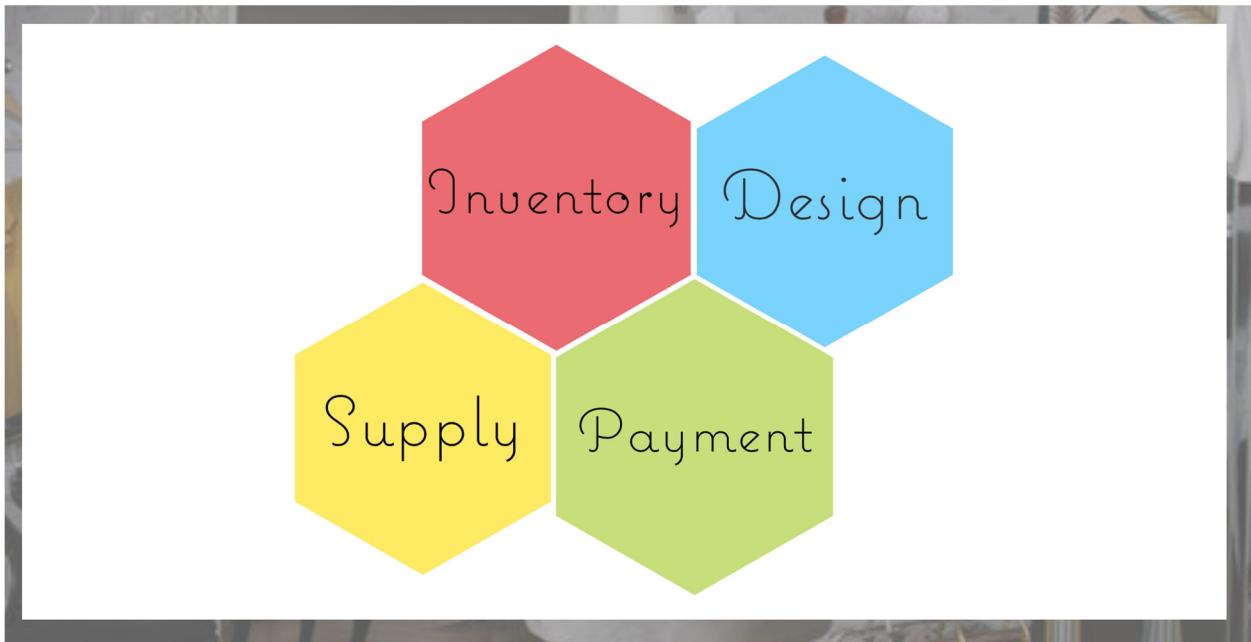
Price differentiation between suppliers for the period April 2015 - April 2016

The above bar chart shows the price difference of the inventory items from four suppliers for the year 2015 - 16. It is noted that, for the item 'Cotton - Black', ABC Corp. offers a better price than the price offered by Cotton Republic for the same quantity ordered. This information would help in the planning of order placement and inventory budgeting for the year.

## USER INTERFACE SCREENSHOTS

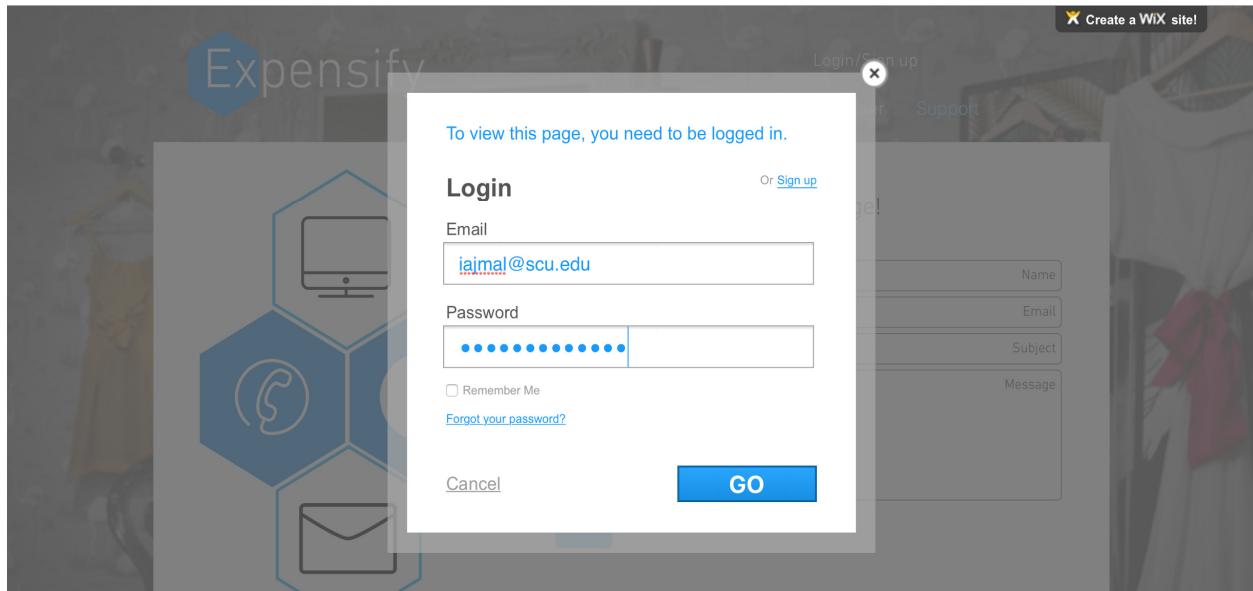


[Expensify - Home Page](#)



[User Login](#)

## User Login

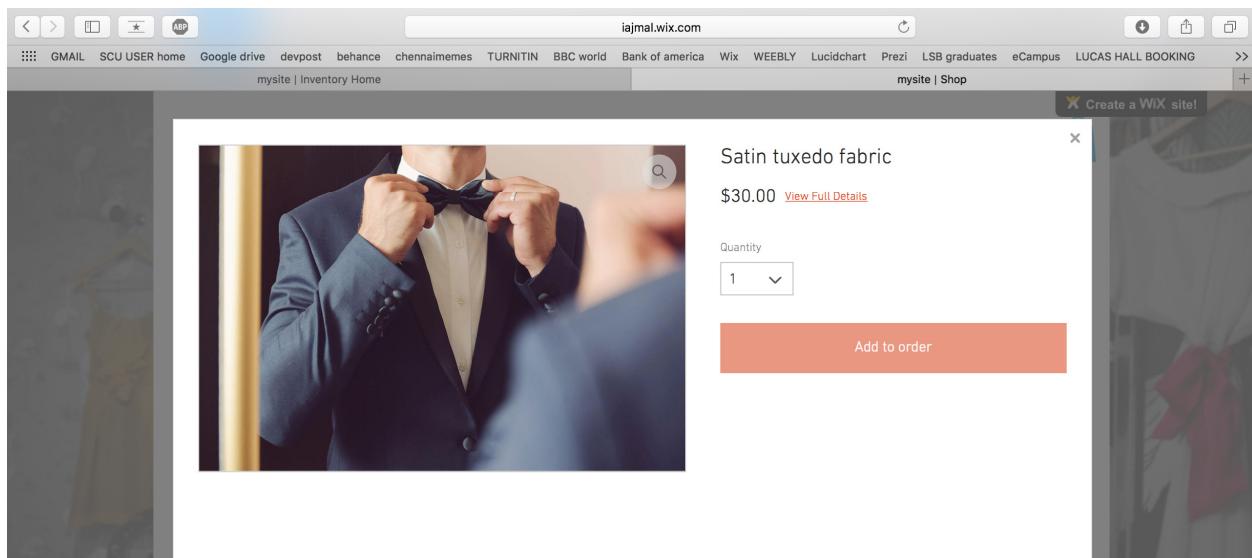


## USER INTERFACE SCREENSHOTS - DESIGNER

### Inventory page for new request

A screenshot of a Wix website inventory page titled 'Fabric Inventory'. The page has a header with a navigation bar and a 'Create a Wix site!' button. The main content area shows a grid of eight fabric items with images, names, and prices. The items are arranged in two rows of four. The first row includes: 'Green cotton' (\$55.00), 'Chiffon - Green' (\$35.00), 'Satin - ivory' (\$30.00), and 'Velvet purple' (\$50.00). The second row includes: 'Lace - Black' (\$50.00), 'Velvet - pink' (\$20.00), 'White lace' (\$50.00), and 'Satin tuxedo fabric' (\$30.00). Each item has a 'QUICK VIEW' button below its image. The background of the page shows a blurred image of a clothing store interior.

Adding items to request



### Submitting the request

PRODUCT	ITEM	QUANTITY	TO
	Satin tuxedo fabric Price: \$30.00	<input type="button" value="-"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$30.00

Add note to seller

Subtotal: \$30.00  
*Discounts, shipping and tax will be calculated in checkout.*

SSL SECURE SHOPPING  
Your data is safe and secure.

[Submit request](#)

This site was created using WIX.com. Create your own for FREE >>

### USER INTERFACE SCREENSHOTS - INVENTORY MANAGER

#### Creating new purchase order

mysite | Inventory Home      mysite | Inventory create order      +

**X Create a WIX site!**

Order Number 4567890-09876543

\*Choose supplier  
- Select -

\*Add item      \*Qty

Cotton - Black      - Select -

Add item      Qty

Silk - White      - Select -

Add item      Qty

- Select -      - Select -

Add item      Qty

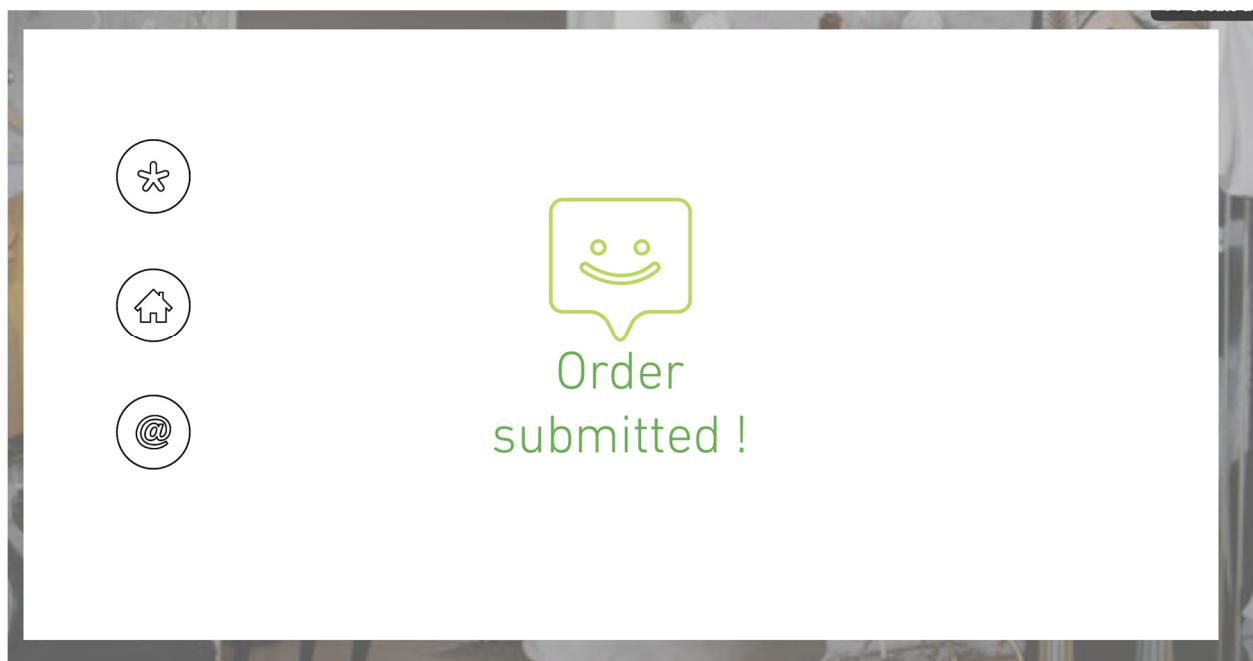
- Select -      - Select -

Made with POWR

Submit

**X This site was created using WIX.com. Create your own for FREE >>**

Message displayed after submitting the purchase order



Viewing details of delivered order

About User Support [Create a Wix](#)

Order Number 98765  
 Supplier : WOOLY Corp.  
 Status : Delivered

Attachment - [\(1\)](#)

Item Description	Qty Ordered	Qty Delivered	Price
Lace - purple	30 yards	25 yards	300\$
Lace - white	40 yards	30 yards	250\$
Chiffon - red	30 yards	30 yards	120\$
Chiffon - white	100 yards	70 yards	450\$

Supplier Contact : 123, ABC street, Suite 20, XY 56478  
 +1 (123) 456 789  
 support@wooly.com

[Update Inventory](#)

### Updating inventory

GMAIL SCU USER name Google drive devpost denance chennaimemes TURNITIN BBC WORLD Bank of america WIX WEBSITE LUCIDCHART Prezi LSb graduates ecampus LUCAS HALL BOOKING [Create a Wix site!](#)

mysite | Inventory Home      mysite | Inventory - Update

Hello iajmal  
[Log out](#)

About User Support

[Expensify](#)

Update Inventory

Item Description	Qty Delivered	Qty Available
Lace - purple	25 yards	0 yards
Lace - white	30 yards	15 yards
Chiffon - red	30 yards	10 yards
Chiffon - white	70 yards	30 yards

[Cancel](#) [Confirm](#) [Modify](#)

This site was created using WIX.com. Create your own for FREE >>

### USER INTERFACE SCREENSHOTS - PAYMENT REPRESENTATIVE

The screenshot shows a web browser window with the URL [iajmal.wix.com](http://iajmal.wix.com) in the address bar. The page title is "mysite | Inventory Home". The header includes links to various services like GMAIL, SCU USER home, Google drive, devpost, behance, chennaimemes, TURNITIN, BBC world, Bank of america, Wix, WEEBLY, Lucidchart, Prezi, LSB graduates, eCampus, and LUCAS HALL BOOKING. On the right, there's a "Create a WIX site!" button. The main content area features a blue hexagonal logo with the word "Expensify" and a stylized house icon. The background is a blurred image of a clothing store. The top right corner shows a greeting "Hello iajmal", a "Log out" link, and navigation links for "About", "User", and "Support". A search bar is at the top right. Below the logo is a table titled "Request No." with columns for Date, Description, and Status. The table contains five rows of data:

Request No.	Date	Description	Status
1234	1/1/2016	Hotel bill	Approved
2345	1/2/2016	Air ticket	Approved
8967	2/2/2016	Realtor fees	Pending
9876	2/4/2016	Realtor fees	Pending

At the bottom, a banner says "This site was created using WIX.com. Create your own for FREE >>"

### Viewing a submitted reimbursement request

This screenshot shows a detailed view of a reimbursement request. The top navigation and user info are identical to the previous screen. The main content displays the following information:

Request Number 8967  
Employee ID : AA123  
Status : Pending

Attachment - [\(eye icon\)](#)

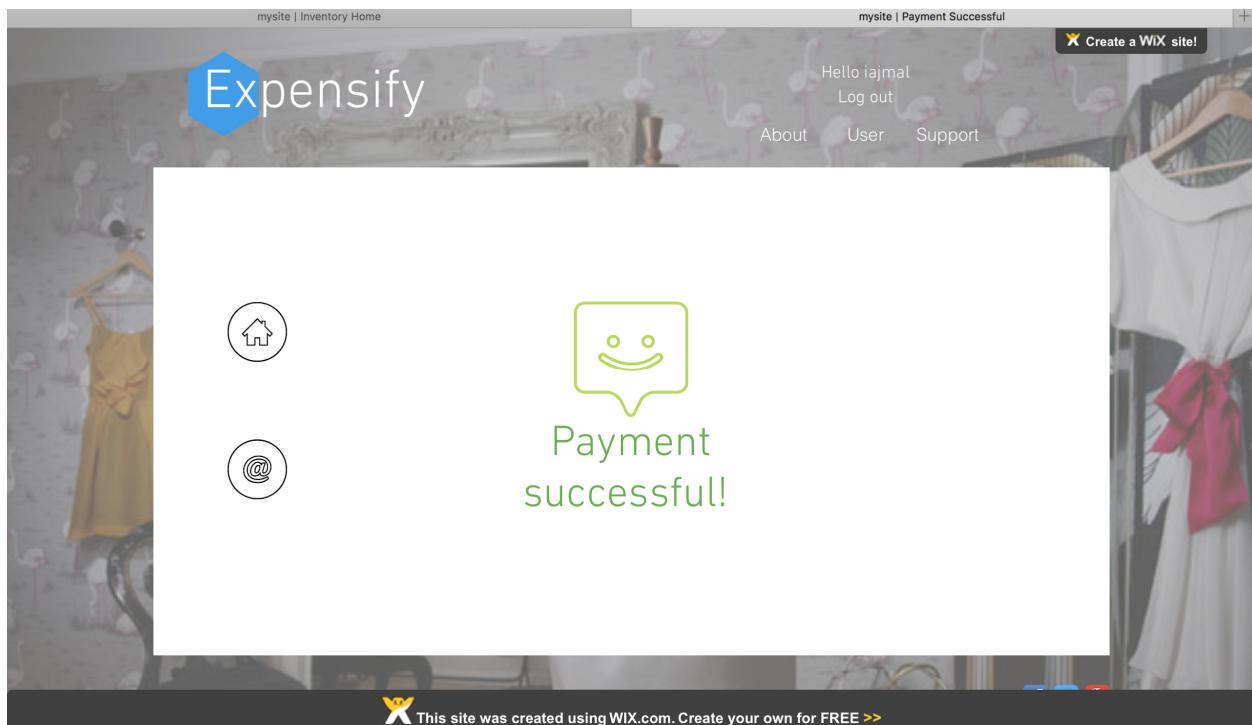
Search

Date	Info	Amount
2/2/2023	Lunch	70\$
2/2/2023	Taxi	20\$
2/2/2023	Realtor consult	See attachment
2/2/2023	Taxi	40\$

[Make payment](#)

At the bottom, a banner says "This site was created using WIX.com. Create your own for FREE >>"

### Message displayed after making a payment



#### USER INTERFACE SCREENSHOTS - SUPPLIER

##### Viewing orders

This screenshot shows the supplier's order history page. The top navigation bar includes the 'mysite | Payment Successful' tab, the 'Expensify' logo, and user-specific links like 'Hello iajmal', 'Log out', 'About', 'User', and 'Support'. A 'Create a WIX site!' button is also present. The main content area displays the heading 'Order history for WOOLY Corp.' Below this, there is a search bar and a table listing eight orders. The table has columns for 'Order No.', 'Date', and 'Status'. The status column uses color-coding: blue for delivered, orange for processing, and green for new. The table rows are as follows:

Order No.	Date	Status
560987	1/5/2016	Delivered
679609	1/10/2016	Delivered
69608	2/2/2016	Package in transit
09867987	2/3/2016	Processing
5698765	2/5/2016	New
123498	2/6/2016	New
0912345	2/7/2016	New

A 'Search' input field is located at the top right of the table. The background of the page shows a blurred image of a clothing store interior.

##### Viewing details of an order

mysite | Inventory Home      mysite | Supplier - Update order status      Create a WIX site!

# Expensify

Hello iajmal  
Log out

About    User    Support

Order Number 69608  
Customer : AZURE Designer Boutique  
Status : Package in transit

Search

Item Description	Qty Ordered
Wool - purple	20 yards
Wool - white	40 yards
Wool - red	30 yards
Wool - white	100 yards

AZURE Designer Boutique : 654, XYZ street, Suite 100, OI 57633  
+1 (123) 678 098  
warehouse@azureboutique.com

Update Status      Complete Order

This site was created using WIX.com. Create your own for FREE >>

Updating order status as completed

mysite | Supplier - Home      mysite | Supplier - Update order status      Create a WIX site!

# Expensify

Hello iajmal  
Log out

About    User    Support

Order Number 69608  
Customer : AZURE Designer Boutique  
Status : Package in transit

Search

Item Description	Qty Ordered
Wool - purple	20 yards
Wool - white	40 yards
Wool - red	30 yards
Wool - white	100 yards

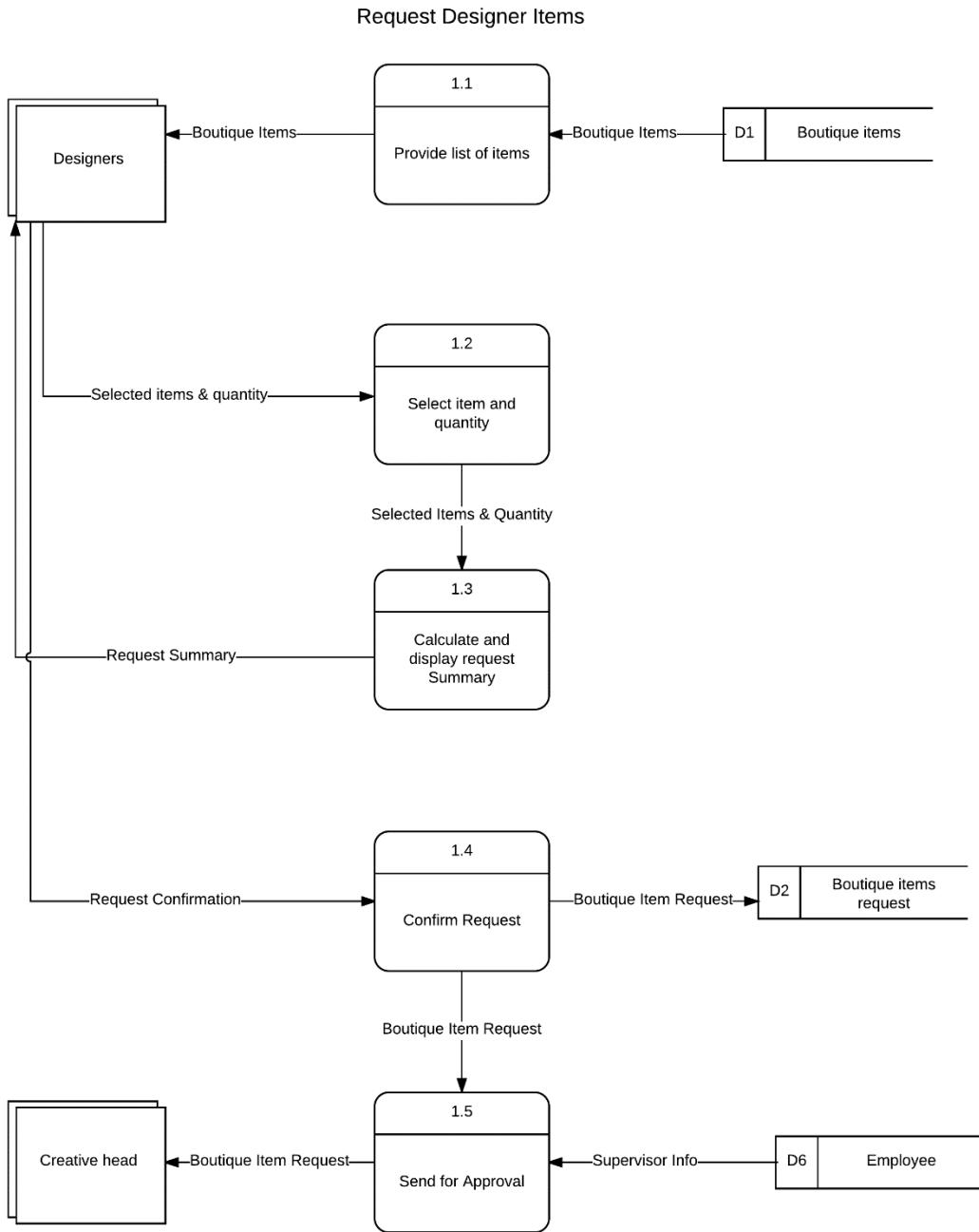
AZURE Designer Boutique : 654, XYZ street, Suite 100, OI 57633  
+1 (123) 678 098  
warehouse@azureboutique.com

Update Status      Complete Order

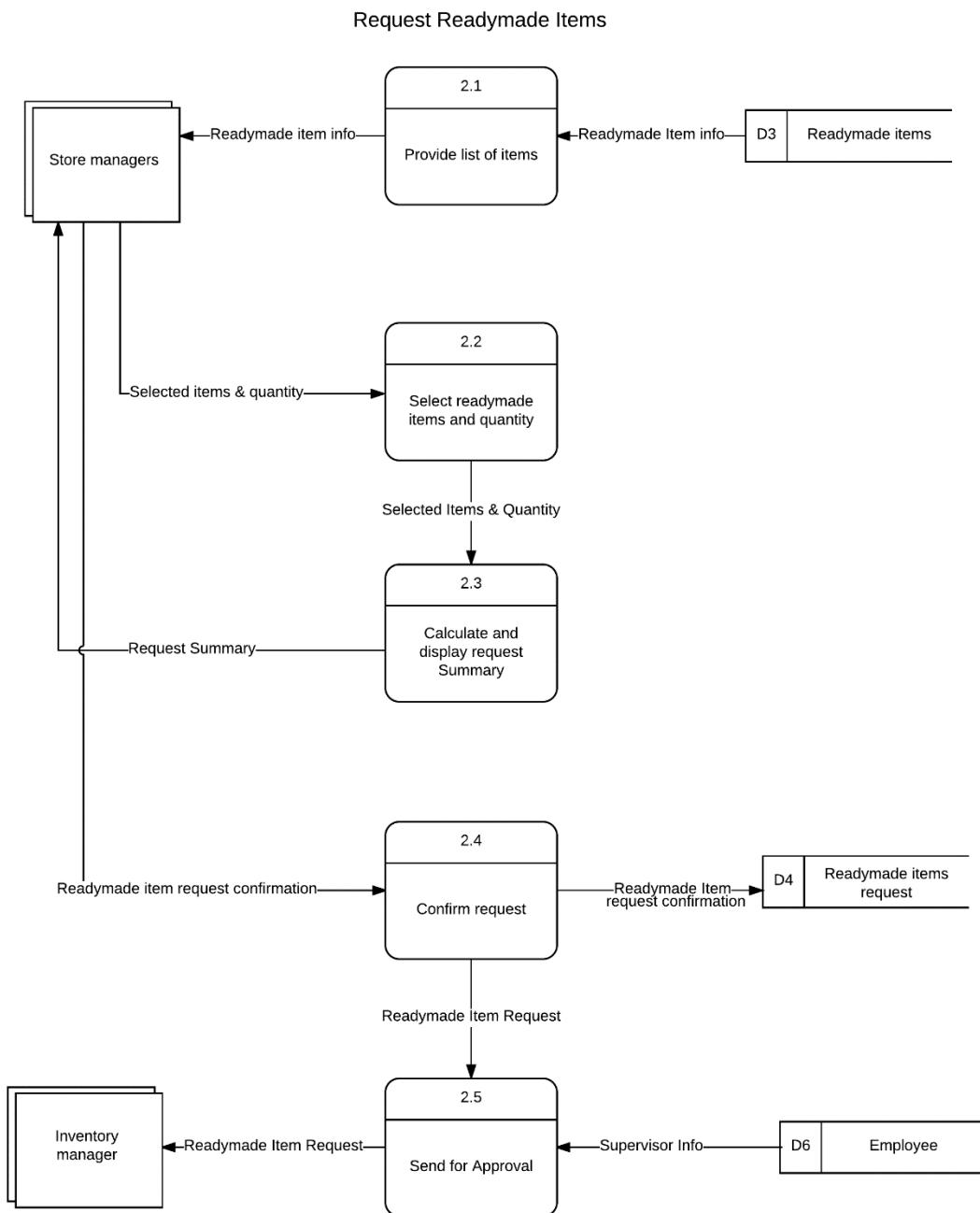
This site was created using WIX.com. Create your own for FREE >>

## APPENDIX LEVEL 1 DIAGRAMS

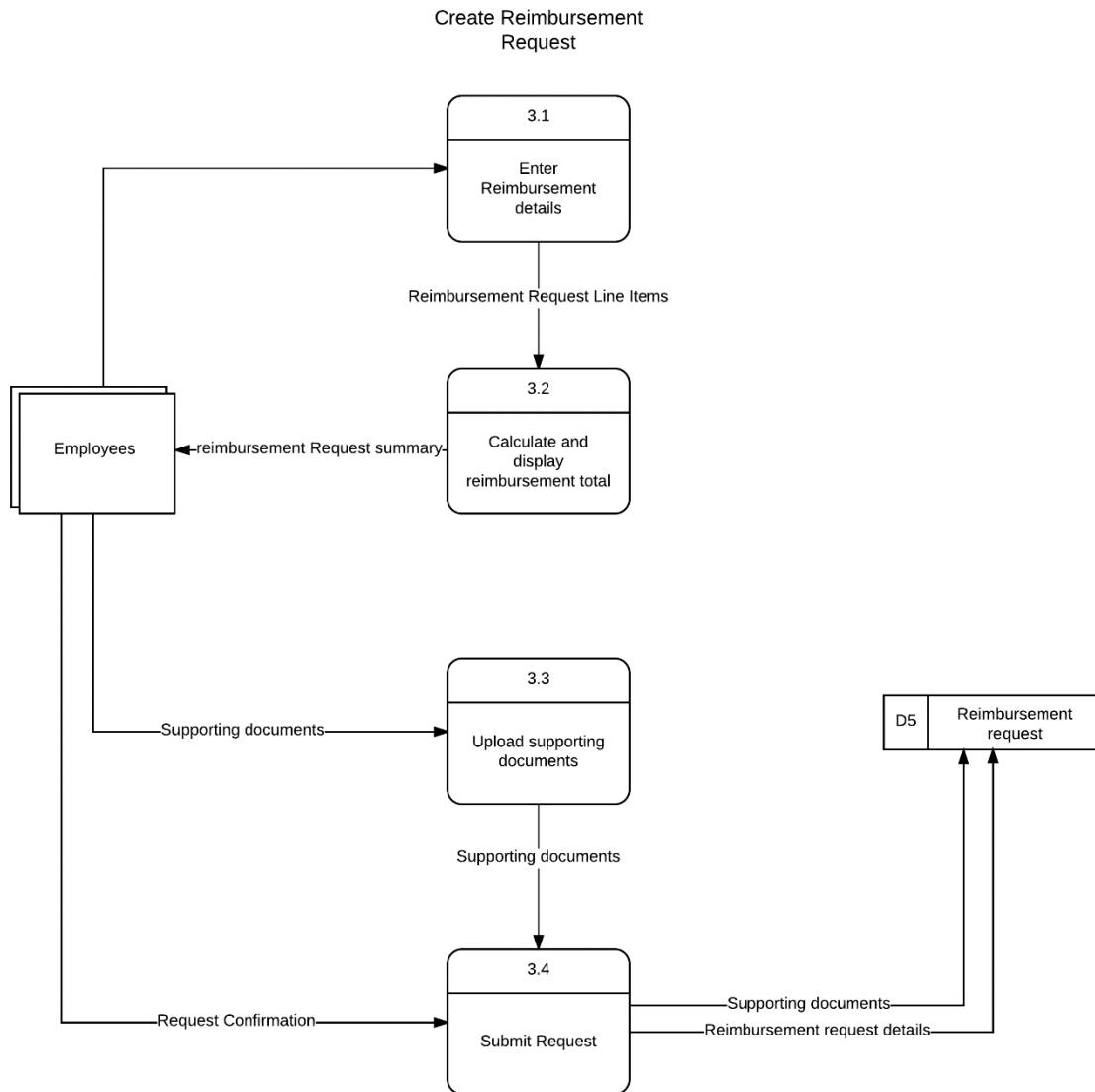
### LEVEL 1 DFD - REQUEST DESIGNER ITEMS



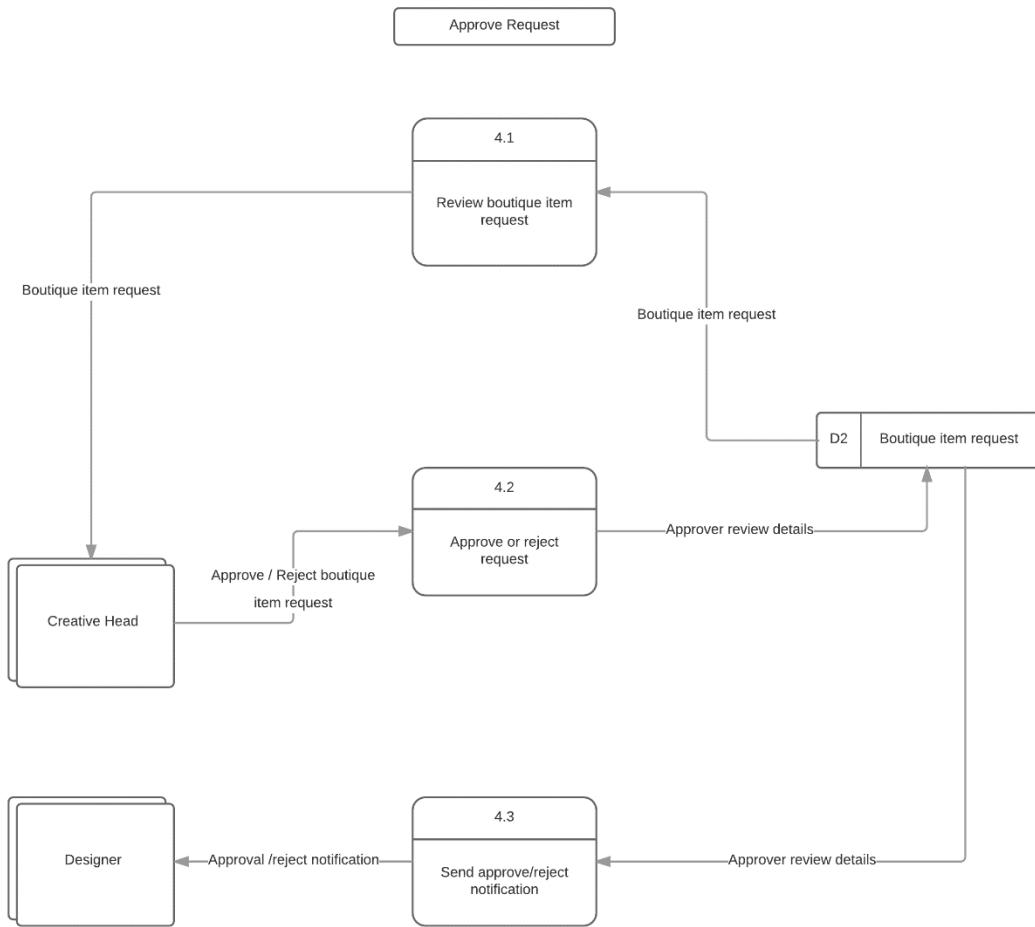
LEVEL 1 DFD DIAGRAM - REQUEST READYMADE ITEMS



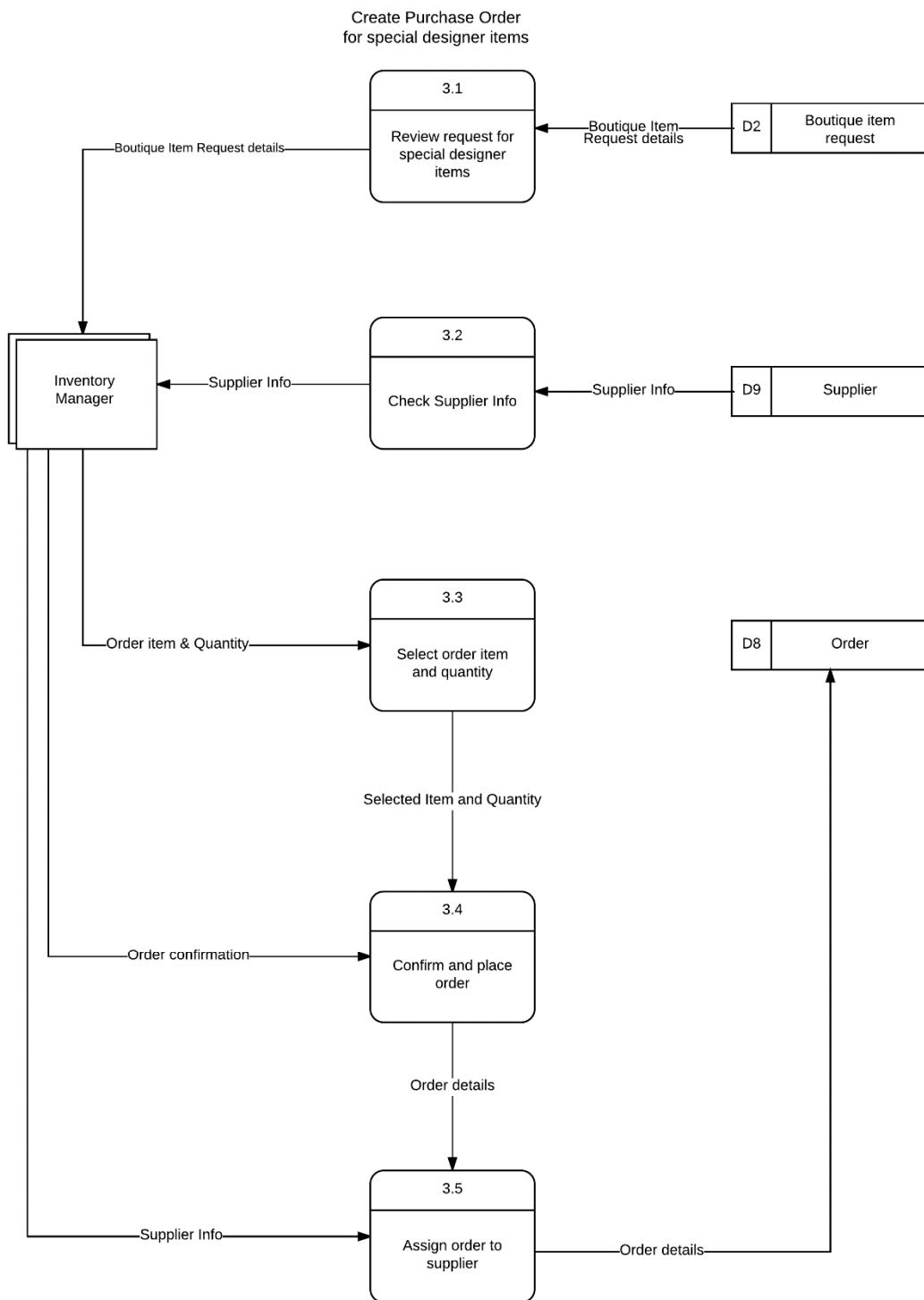
LEVEL 1 DFD DIAGRAM – CREATE REIMBURSEMENT REQUEST



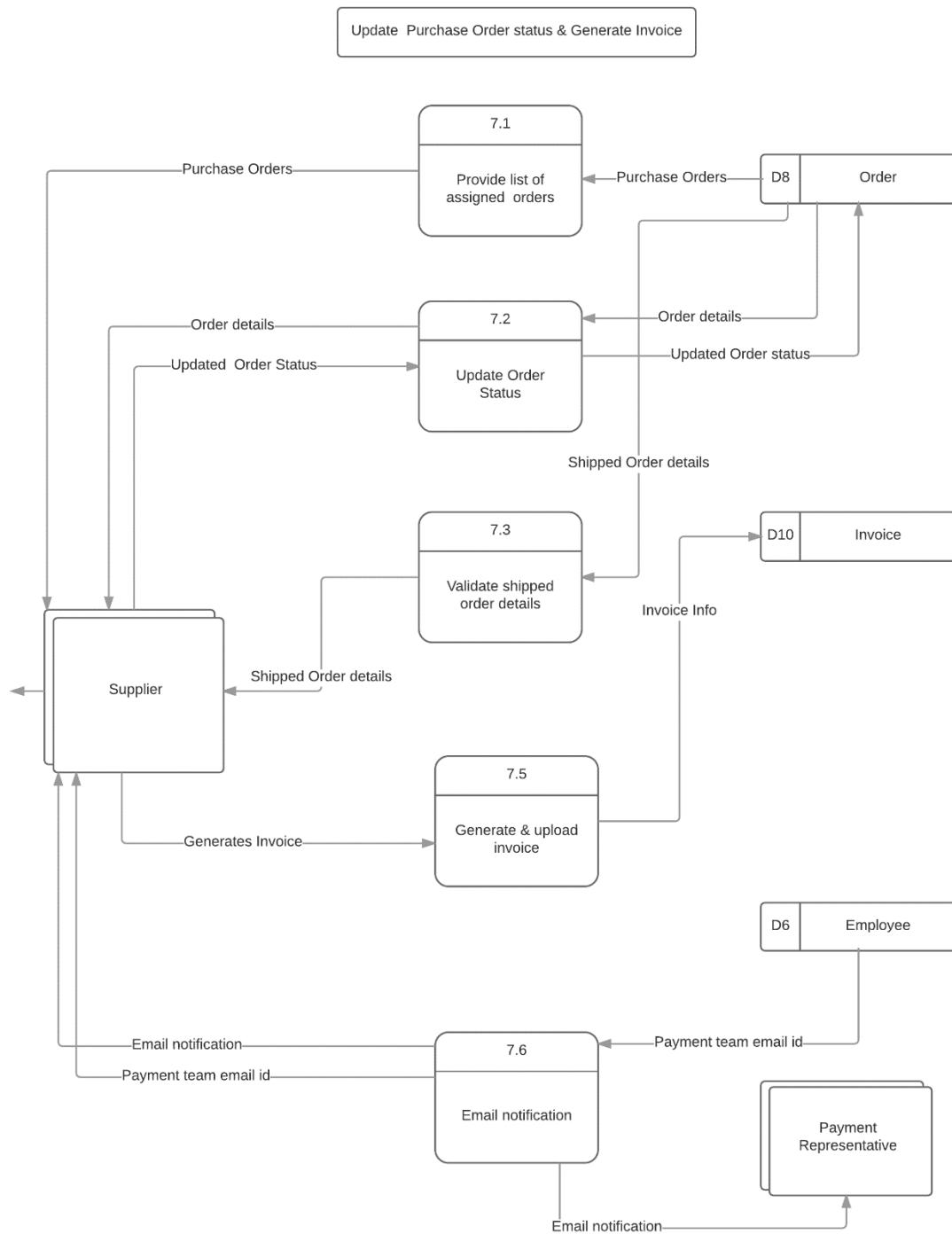
## LEVEL 1 DFD DIAGRAM – APPROVE REQUEST



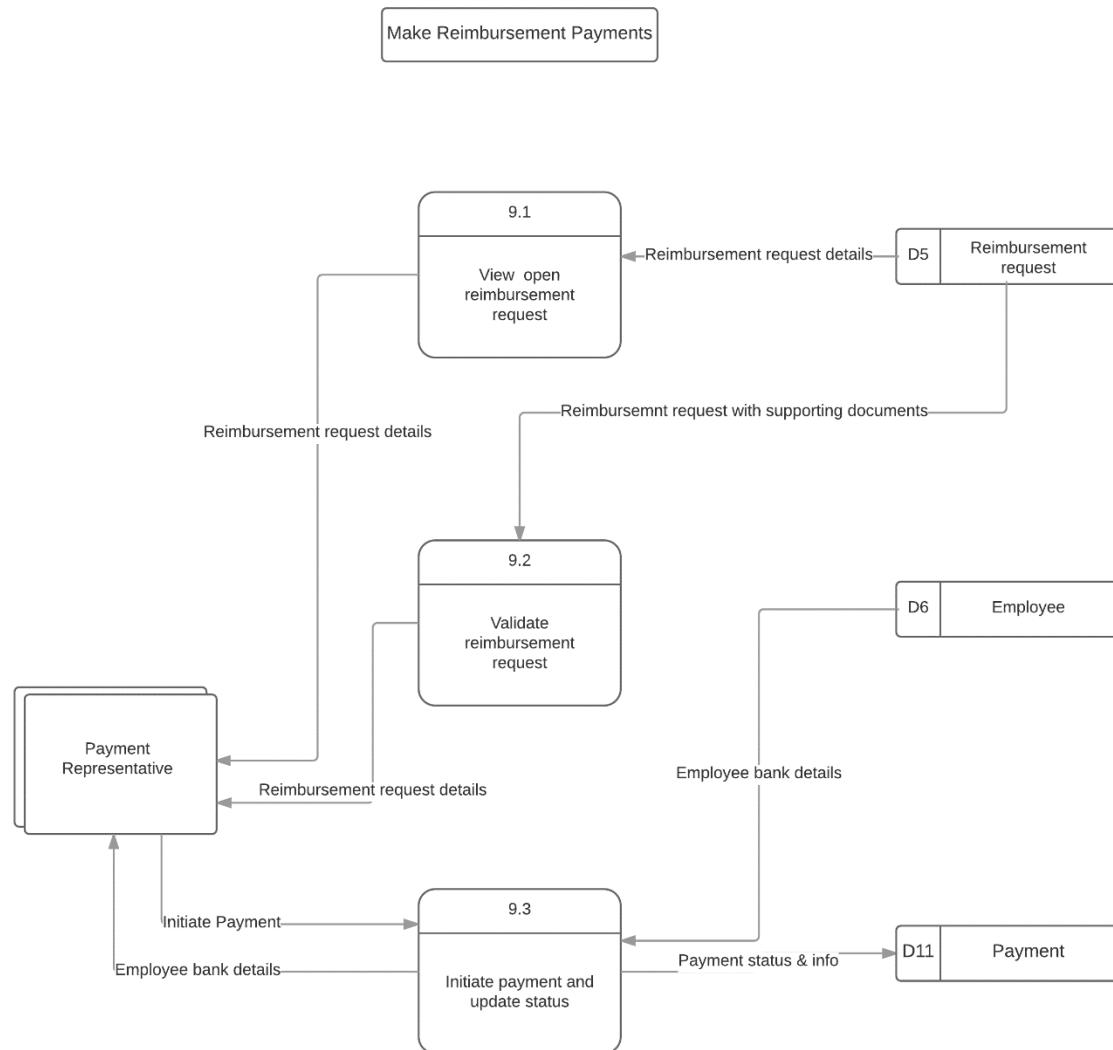
LEVEL 1 DFD DIAGRAM – CREATE PURCHASE ORDER FOR SPECIAL DESIGNER ITEMS



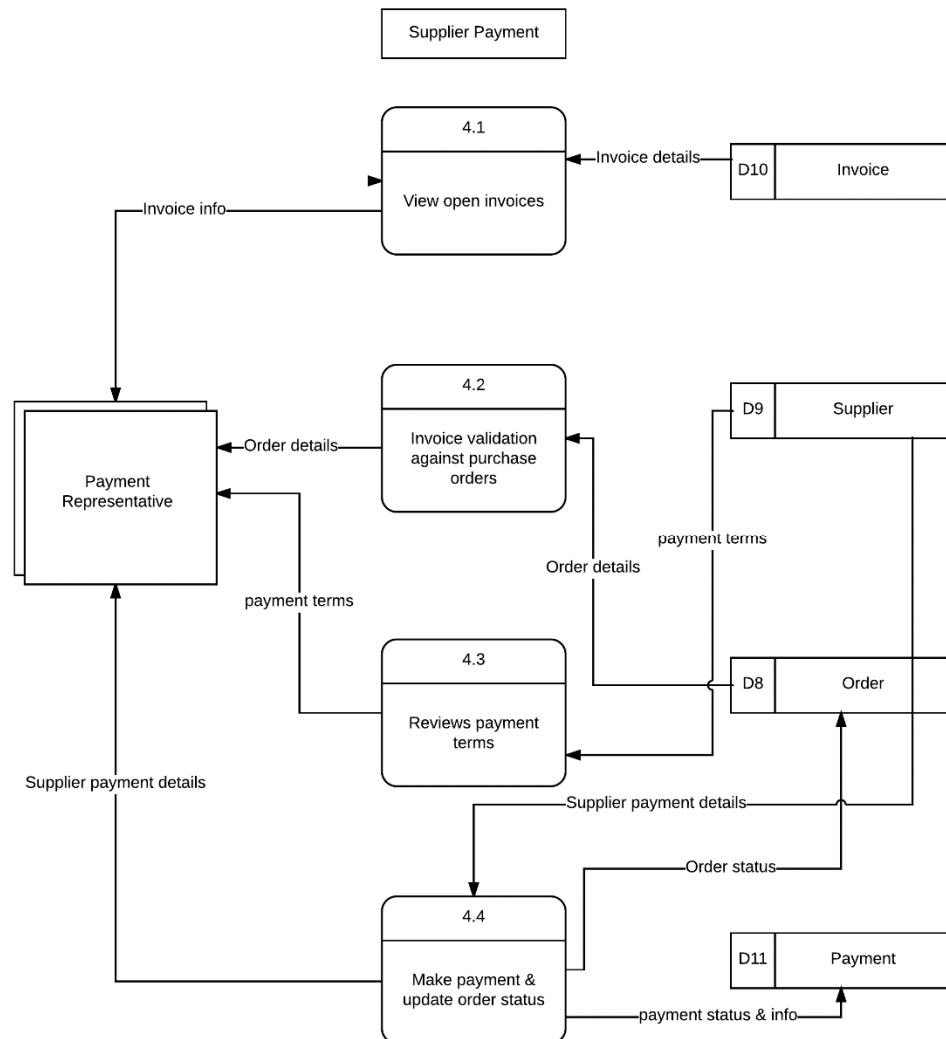
LEVEL 1 DFD DIAGRAM – UPDATE PURCHASE ORDER STATUS & GENERATE INVOICE



LEVEL 1 DFD DIAGRAM – MAKE REIMBURSEMENT PAYMENTS



LEVEL 1 DFD – SUPPLIER PAYMENT



## USE CASES

<b>Use Case Name:</b> Request readymade items	<b>ID:</b> 2	<b>Importance Level:</b> High	
<b>Primary Actor:</b> Store manager			
<b>Short Description:</b> The store manager submits requests for readymade garments to the inventory manager			
<b>Trigger:</b> The store is in need of additional readymade garments. <b>Type:</b> External / Temporal			
<b>Preconditions:</b> 1. The store manager credentials are authenticated. 2. The Readymade items datastore is up-to-date and running.			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
Readymade item info	Readymade items data store	Readymade item request details	Readymade Items request datastore
Selected readymade items	Store manager		
Readymade item quantity	Store manager		
Readymade item request summary	System		
Readymade item request confirmation	Store manager		
Employee info	Employee datastore		
Major Steps Performed	Information for Steps		
<b>Normal course:</b>			
1. The store manager is provided with a list of readymade items	← Readymade item info		
2. The store manager selects the items needed and specifies the quantity	→ Selected item Item quantity		
3. The system calculates the total for the request and displays to employee	← Request summary		
4. The employee verifies and edits or chooses to submit the request			
4. The designer verifies the request and submits it	→ Request confirmation Readymade item request		
5. The system directs the request to inventory manager for approval	← Employee Info		
<b>Post conditions:</b>			
1. The request is stored successfully in Readymade items request datastore. 2. The request is assigned to the Inventory Manager for processing.			

<b>Use Case Name:</b> Approve request	<b>ID:</b> 4	<b>Importance Level:</b> High			
<b>Primary Actor:</b> Creative Head					
<b>Short Description:</b> The creative head approves the Boutique item request placed by the designer					
<b>Trigger:</b> The creative head receives a request for approval <b>Type:</b> External / Temporal					
<b>Preconditions:</b> 1. The creative head's credentials are authenticated					
<b>Major Inputs:</b>					
Description	Source	Description	Destination		
Boutique item request details	Boutique item request datastore	Approval status	Boutique item request datastore		
Creative head email id	Employee datastore	Approve/reject notification	Designer		
<b>Major Steps Performed</b>		<b>Information for Steps</b>			
<b>Normal course:</b>					
1. The creative head receives a request submitted by designer for boutique items		Boutique item request details			
2. The Creative head reviews the details of the request		Boutique item request details			
3. The Creative head either approves or rejects the request		Approval status			
4. The designer is notified of the approver's action		Designer email id			
		Approve/Reject notification			
<b>Post conditions:</b>					
1. The approval status is updated successfully in the Boutique item request datastore 2. The designer receives an email regarding the request approval or denial					

<b>Use Case Name:</b> Update inventory	<b>ID:</b> 6	<b>Importance Level:</b> Moderate	
<b>Primary Actor:</b> Inventory Manager <b>Secondary actor:</b> System			
<b>Short Description:</b> This use case describes updation and re-conciliation of new / on hand inventory			
<b>Trigger:</b> Arrival of new ordered material <b>Type:</b> <u>External</u> / Temporal			
<b>Preconditions:</b>  1.Inventory Manager credentials are authenticated. 2.Order datastore, Inventory datastore are up to date and available			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
Newly received inventory details	Supplier	Updated boutique items	Boutique item datastore
Order info	Order datastore	Updated readymade items	Readymade item datastore
Order status	Order datastore	Updated order status	Order datastore
Updated boutique items Updated readymade items	Inventory manager		
<b>Major Steps Performed</b>		<b>Information for Steps</b>	
<b>Normal course:</b>			
1.Inventory manager reviews the incoming shipment details against the purchase order created		Newly received inventory details Order info	
2. Inventory manager changes the order status to 'Received'		Updated order status	
3. Inventory manager updates boutique items and readymade items based on incoming shipments		Updated boutique items Updated readymade items	
<b>Post conditions:</b>			
1. Inventory datastore is updated to reflect the newly recorded inventory items 2. Reconciliation details are recorded in the inventory datastore 3. Newly received boutique items and readymade items are updated in the boutique item datastore and readymade item datastore respectively			

<b>Use Case Name:</b> Make Reimbursement Payments	<b>ID:</b> 9	<b>Importance Level:</b> Moderate	
<b>Primary Actor:</b> Payment Representative			
<b>Short Description:</b> This use case describes how a payment representative makes reimbursement			
<b>Trigger:</b> Payment team receives reimbursement request <b>Type:</b> External / Temporal			
<b>Preconditions:</b> <ol style="list-style-type: none"> <li>1. Payment Representative credentials are authenticated</li> <li>2. Reimbursement Data store is up to date and online</li> <li>3. Employee Data store is up to date and online</li> <li>4. Payment Data store is up to date and online</li> </ol>			
<b>Major Inputs:</b>			
Description	Source	Description	Destination
Reimbursement request details	Reimbursement request datastore	Payment status update	Payment Data Store
Employee Bank details	Employee datastore	Payment Info	Payment Data Store
Supporting documents	Employees		
<b>Major Steps Performed</b>		<b>Information for Steps</b>	
Normal course:			
1. The payment representative views open reimbursement requests		Reimbursement request details	
2. The payment representative validates them against the supporting documents submitted by the employees		Supporting documents	
3. The payment representative initiates the payment and updates the reimbursement request status to 'Complete'		Employee Bank details Payment info Payment status update	
<b>Post conditions:</b>			
<ol style="list-style-type: none"> <li>1. Payment is successfully initiated by the Payments representative.</li> <li>2. Payment status is updated in the payment datastore</li> </ol>			



