

### PROJECT BACKGROUND

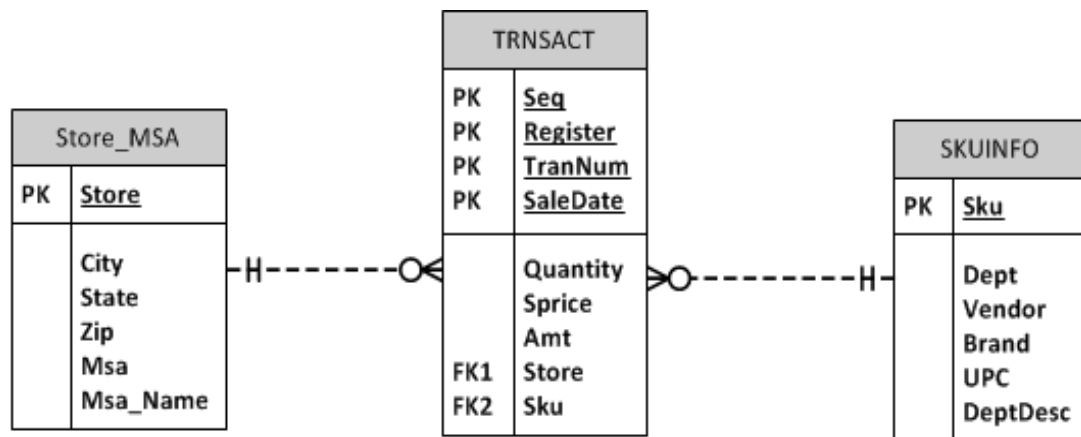
Business Intelligence, Analytics, and Big Data are all among the hottest buzzwords in today's IT as well as Business environment. The shared aims of these concepts is data management. The ultimate purpose of data management is to support decision making. Among all the Business Intelligence and Decision Support systems, the most fundamental one is a reporting. The main goal of this project is to build a web based reporting system based on a given data set. This report system is based on a real-time dataset from Dillard's Department store. We will utilize this dataset to build a sample data mart/data store. Using this data store, we will answer a few questions that are useful for decision making and generate reports that we think are important from the executive and the store manger's point of view.

We created a data warehouse based on the real time Dillard's data and below is the ER diagram for the design.

### DECISION MAKING QUESTIONS

1. Which store sells max quantity of products in a specific year?
2. Which store sells max number of different products (variety)?
3. What is the sales of a product in a store in a specific quarter?
4. What is the sales of a brand in a year?
5. Which store in a statistical area is better than the rest in terms of sales?
6. Which departments have the least and maximum sales in a year?
7. Which products in a department generated more sales?
8. Which register generated max number of sales in a quarter?
9. Which quarter resulted in maximum and minimum sales for a given store?
10. Which vendor is responsible for generating maximum amount of sales in a quarter?

### ER - DIAGRAM

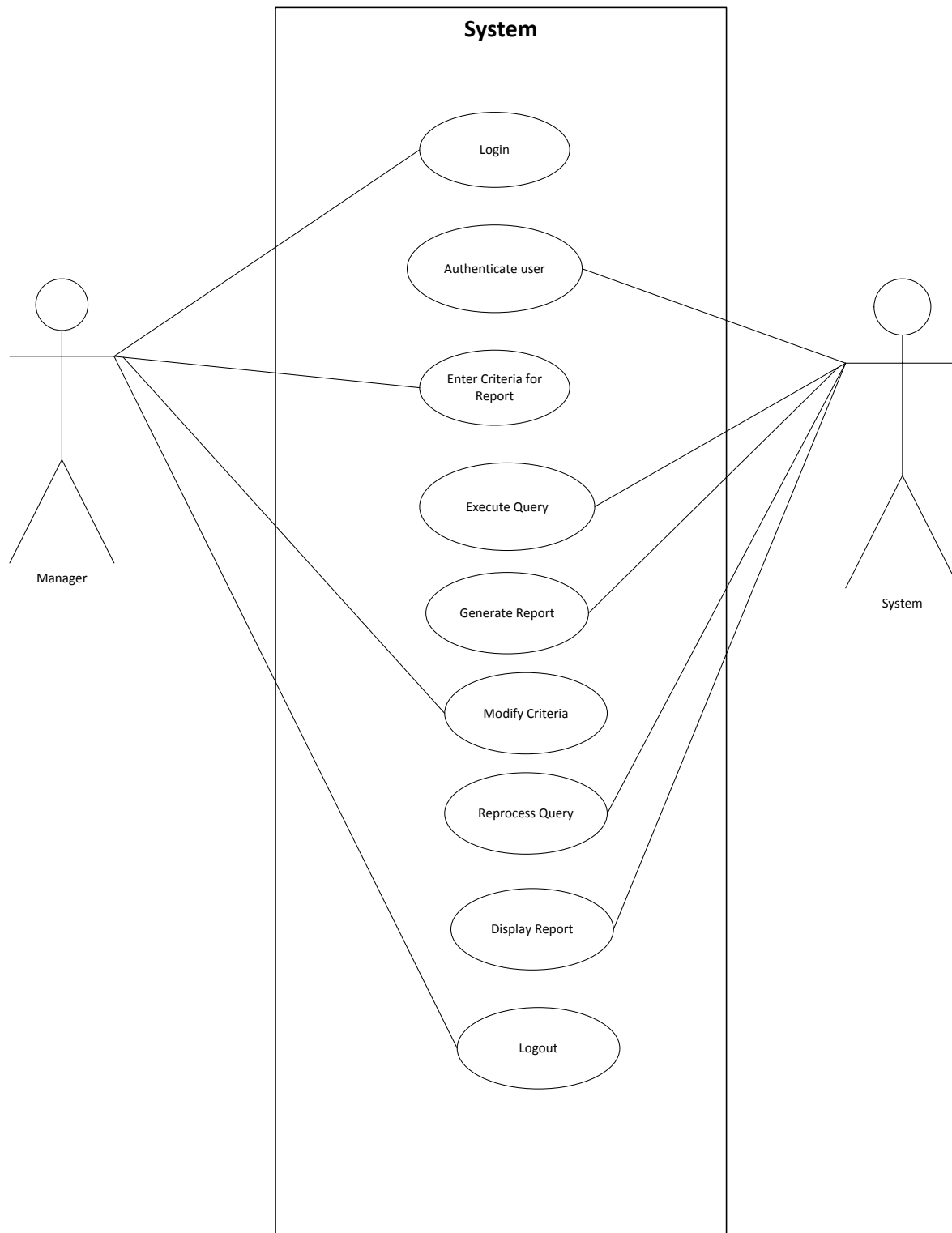


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### USE CASE DIAGRAM – REPORTING SYSTEM



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### FUNCTIONAL REQUIREMENTS

1. The very first page that manager sees on clicking the URL <http://uisacad.uis.edu/~kmlpu2/DillardsReporting.html> is the below login screen. This page will have fields for entering credentials – User ID, Password, Submit button and “Forgot Password?” link in order for the user to reset password

#### *Login Page:*



The screenshot shows a web browser window with the address bar displaying [uisacad.uis.edu/~kmlpu2/DillardsReporting.html](http://uisacad.uis.edu/~kmlpu2/DillardsReporting.html). The page title is "Welcome to Dillards Reporting System". On the left, there is a "Reference Links" section with the following links: [Requirements Documentation](#), [Data Migration Plan](#), [Data Insertion Plan](#), [Data Quality Problems](#), [Data Integrity Report](#), and [Data Access Plan](#). The main content area features a large blue banner with the Dillard's logo and the tagline "The Style of Your Life.". Below the banner, there is a login form with the text "Please enter your login credentials". The form includes a "User ID:" label, a text input field, a "Password:" label, a text input field, a "Forgot Password?" link, and a "Submit" button.

2. The credentials given by the user are then, verified by the system and an acknowledgement message appears on the next page. If the credentials entered are correct, then the user is allowed to view/generate reports.

#### *Credentials Page:*



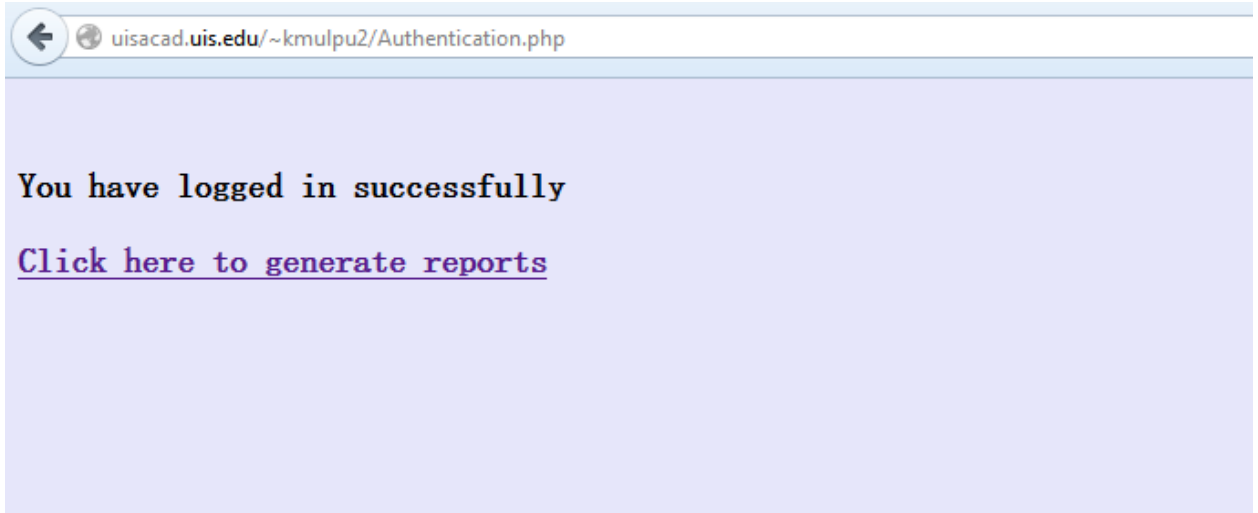
The screenshot shows the same web browser window as the login page, but with the login form filled out. The "User ID:" field contains the text "James1" and the "Password:" field contains a series of dots. The "Forgot Password?" link and the "Submit" button are still visible below the password field.

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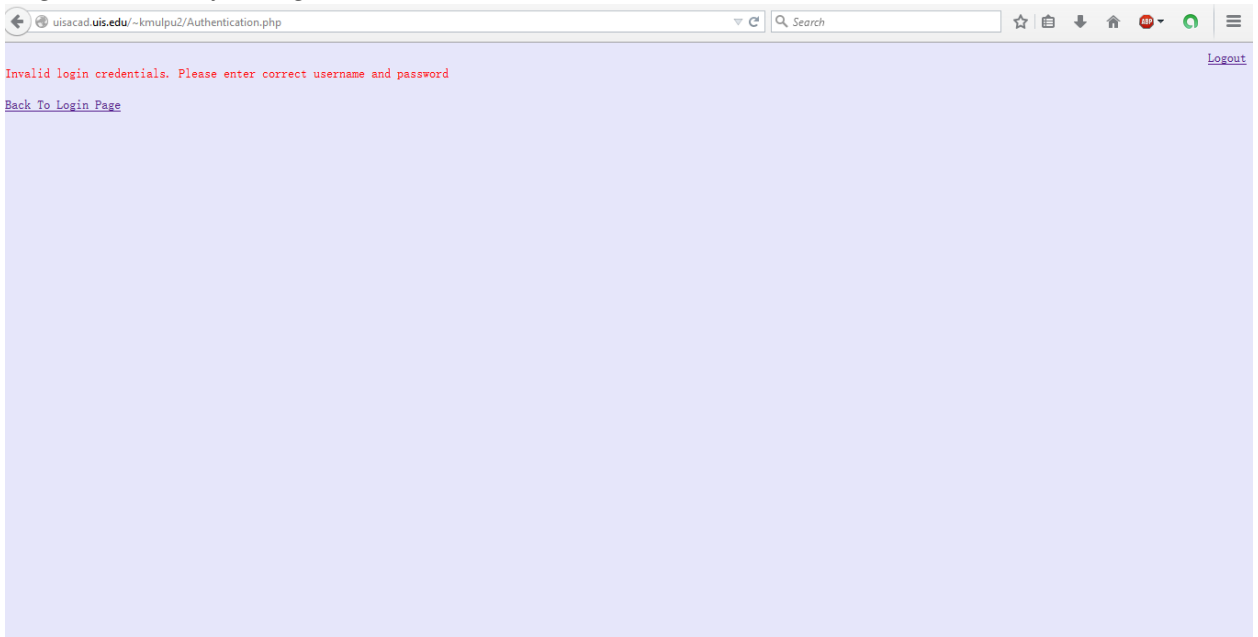
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*Login Successful page:*



3. If the credentials are invalid, an error message will appear as shown in the below screenshot

*Login unsuccessful Page:*



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4. “Forgot password?” option helps the user to reset password. Once the user click on “Forgot Password?” link, the following page appears.

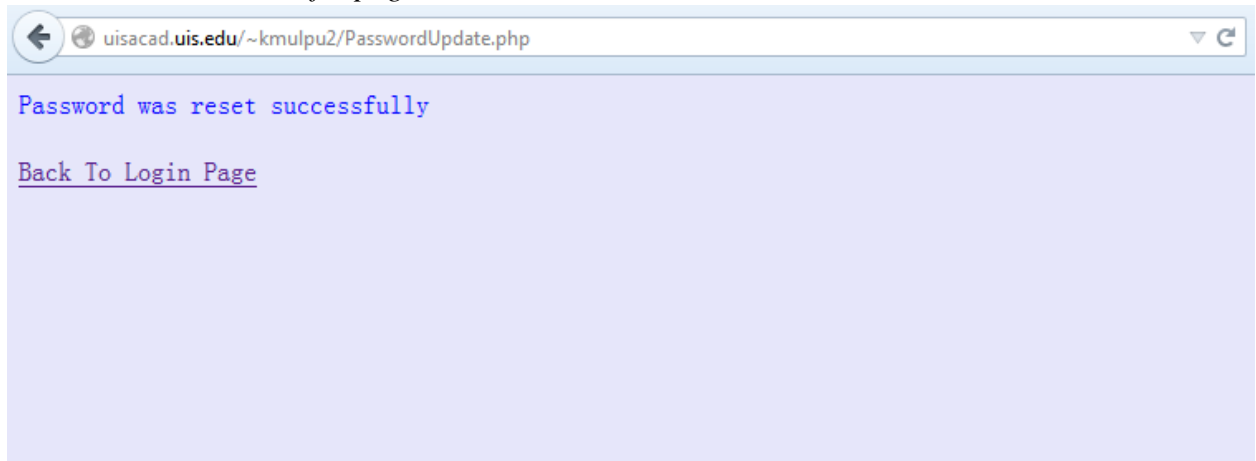
*Password Reset Page:*



The screenshot shows a web browser window with the address bar displaying "uisacad.uis.edu/~kmlpu2/PasswordReset.html". The page has a light blue background. At the top right, it says "Please reset your password here". Below this, the text "Password Reset" is centered. There are two input fields: "User ID:" with the value "Waded1" and "New Password:" with a masked password "••••••••". A "Reset" button is located below the password field.

5. After user ID and new password are entered, the user clicks on “Reset” button and the following page appears.

*Password Reset successful page:*



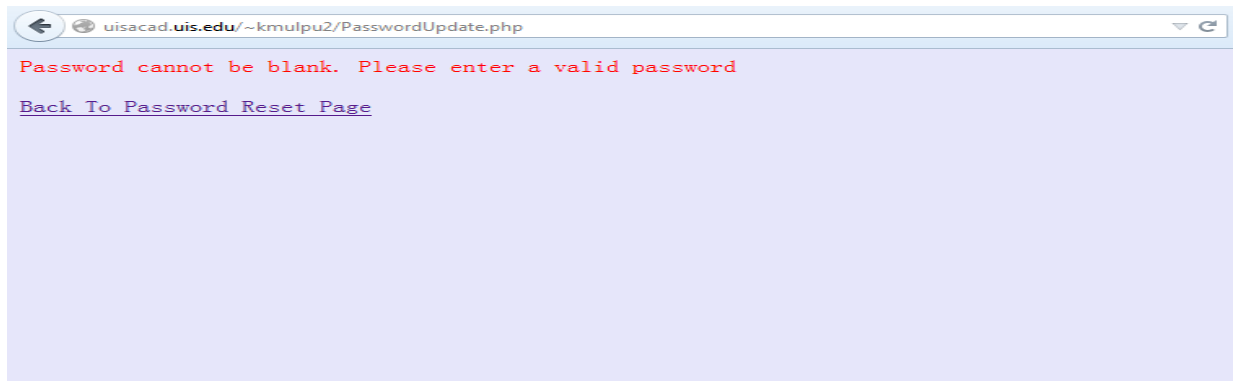
The screenshot shows a web browser window with the address bar displaying "uisacad.uis.edu/~kmlpu2/PasswordUpdate.php". The page has a light blue background. It displays the message "Password was reset successfully" in blue text. Below this, there is a link labeled "Back To Login Page" in blue text.

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6. If new password is blank, then an error message appears as shown below



7. In the next step, the manager enters the criteria, for which he wants the reports to be generated. This page has 3 drop down boxes and 1 text box as shown in the below screenshot.

Values in Category dropdown – Product, Department, Brand, Vendor, Product And Department, Register And SKU

Year – 2004, 2005

Quarter – None, First Quarter, Second Quarter, Third Quarter, Fourth Quarter

*Criteria*

*Page:*

A screenshot of a web browser window showing the 'Criteria for Report Generation' page. The browser's address bar shows 'uisacad.uis.edu/~kmulpu2/criteriaForReport.html'. The page has a light blue background. At the top right, there is a 'Logout' link. The main content area is titled 'Criteria for Report Generation'. Below the title, there are three dropdown menus: 'Category' (with 'Product' selected), 'Year' (with '2004' selected), and 'Quarter' (with 'None' selected). Below these is a text box for 'Store ID' with a link 'Click here to see the valid list of store IDs' next to it. At the bottom left, there is a 'Submit' button.

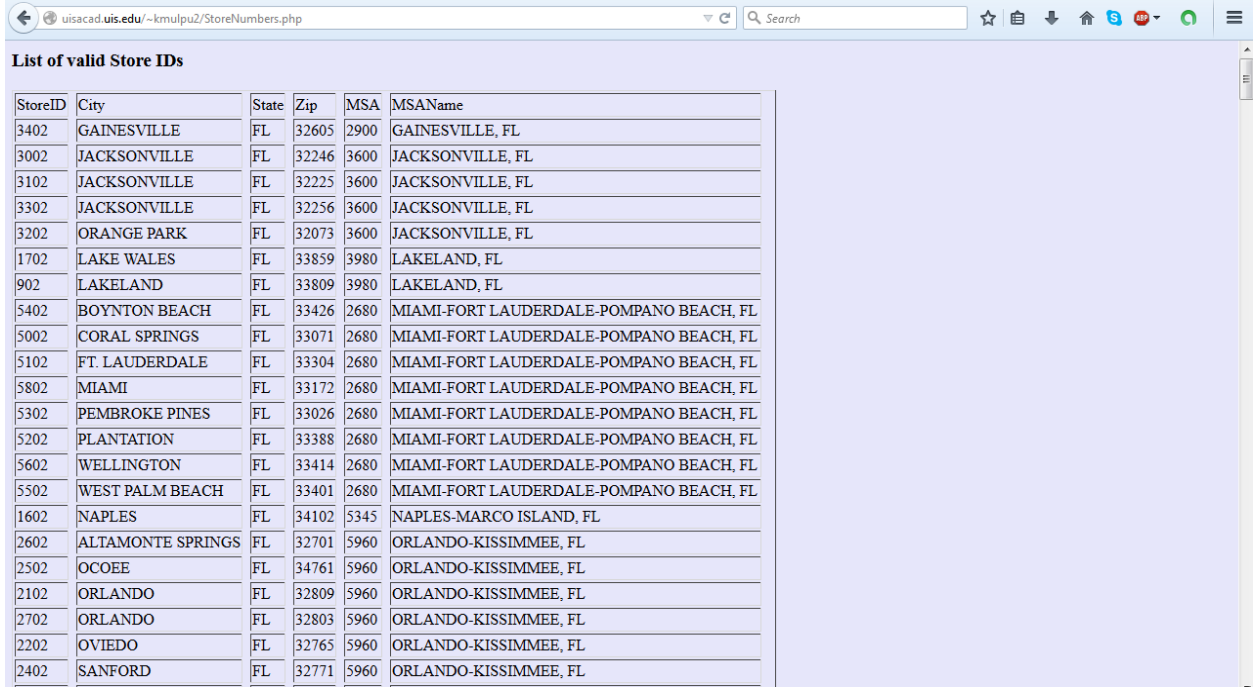
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- The manager can also click on the “Click here to see the valid list of store IDs” link to know correct store ID.

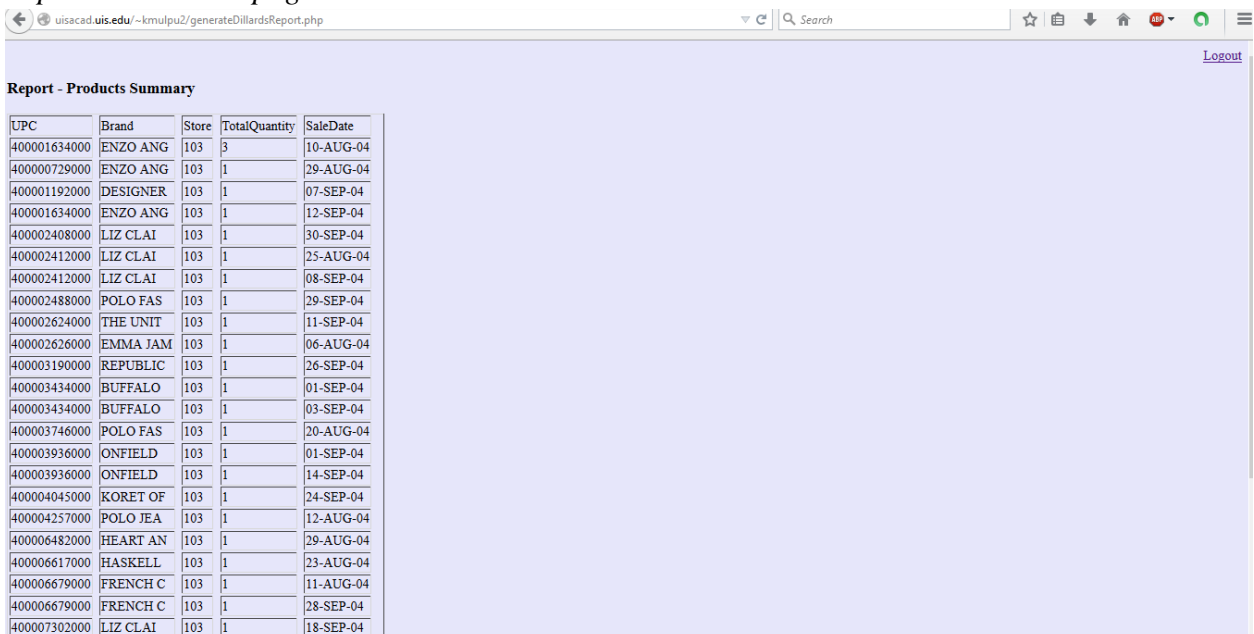
*Store ID page:*



StoreID	City	State	Zip	MSA	MSAName
3402	GAINESVILLE	FL	32605	2900	GAINESVILLE, FL
3002	JACKSONVILLE	FL	32246	3600	JACKSONVILLE, FL
3102	JACKSONVILLE	FL	32225	3600	JACKSONVILLE, FL
3302	JACKSONVILLE	FL	32256	3600	JACKSONVILLE, FL
3202	ORANGE PARK	FL	32073	3600	JACKSONVILLE, FL
1702	LAKE WALES	FL	33859	3980	LAKELAND, FL
902	LAKELAND	FL	33809	3980	LAKELAND, FL
5402	BOYNTON BEACH	FL	33426	2680	MIAMI-FORT LAUDERDALE-POMPANO BEACH, FL
5002	CORAL SPRINGS	FL	33071	2680	MIAMI-FORT LAUDERDALE-POMPANO BEACH, FL
5102	FT. LAUDERDALE	FL	33304	2680	MIAMI-FORT LAUDERDALE-POMPANO BEACH, FL
5802	MIAMI	FL	33172	2680	MIAMI-FORT LAUDERDALE-POMPANO BEACH, FL
5302	PEMBROKE PINES	FL	33026	2680	MIAMI-FORT LAUDERDALE-POMPANO BEACH, FL
5202	PLANTATION	FL	33388	2680	MIAMI-FORT LAUDERDALE-POMPANO BEACH, FL
5602	WELLINGTON	FL	33414	2680	MIAMI-FORT LAUDERDALE-POMPANO BEACH, FL
5502	WEST PALM BEACH	FL	33401	2680	MIAMI-FORT LAUDERDALE-POMPANO BEACH, FL
1602	NAPLES	FL	34102	5345	NAPLES-MARCO ISLAND, FL
2602	ALTAMONTE SPRINGS	FL	32701	5960	ORLANDO-KISSIMMEE, FL
2502	OCOE	FL	34761	5960	ORLANDO-KISSIMMEE, FL
2102	ORLANDO	FL	32809	5960	ORLANDO-KISSIMMEE, FL
2702	ORLANDO	FL	32803	5960	ORLANDO-KISSIMMEE, FL
2202	OVIDO	FL	32765	5960	ORLANDO-KISSIMMEE, FL
2402	SANFORD	FL	32771	5960	ORLANDO-KISSIMMEE, FL

- After the manager enters criteria, the system executes query and a report is generated for the query.

*Report Generation page:*



UPC	Brand	Store	TotalQuantity	SaleDate
400001634000	ENZO ANG	103	3	10-AUG-04
400000729000	ENZO ANG	103	1	29-AUG-04
400001192000	DESIGNER	103	1	07-SEP-04
400001634000	ENZO ANG	103	1	12-SEP-04
400002408000	LIZ CLAI	103	1	30-SEP-04
400002412000	LIZ CLAI	103	1	25-AUG-04
400002412000	LIZ CLAI	103	1	08-SEP-04
400002488000	POLO FAS	103	1	29-SEP-04
400002624000	THE UNIT	103	1	11-SEP-04
400002626000	EMMA JAM	103	1	06-AUG-04
400003190000	REPUBLIC	103	1	26-SEP-04
400003434000	BUFFALO	103	1	01-SEP-04
400003434000	BUFFALO	103	1	03-SEP-04
400003746000	POLO FAS	103	1	20-AUG-04
400003936000	ONFIELD	103	1	01-SEP-04
400003936000	ONFIELD	103	1	14-SEP-04
400004045000	KORET OF	103	1	24-SEP-04
400004257000	POLO JEA	103	1	12-AUG-04
400004820000	HEART AN	103	1	29-AUG-04
400006617000	HASKELL	103	1	23-AUG-04
400006679000	FRENCH C	103	1	11-AUG-04
400006679000	FRENCH C	103	1	28-SEP-04
400007302000	LIZ CLAI	103	1	18-SEP-04

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10. The manager can then modify the criteria.

*Modify Criteria:*

A screenshot of a web browser window showing a form titled "Criteria for Report Generation". The browser's address bar displays "uisacad.uis.edu/~kmulpu2/criteriaForReport.html". The form includes several dropdown menus and a text input field. The "Category" dropdown is set to "Product And Department". The "Year" dropdown is set to "2004". The "Quarter" dropdown is set to "None". The "Store ID" text input field contains "3402". Below the input fields is a "Submit" button. A link "Click here to see the valid list of store IDs" is positioned to the right of the "Store ID" field.

**Criteria for Report Generation**

**Category**

Product And Department ▼

**Year**

2004 ▼

**Quarter**

None ▼

**Store ID**

3402 [Click here to see the valid list of store IDs](#)

Submit

11. The system will again reprocess query and generate report for the same.

*Reprocess Query:*

A screenshot of a web browser window showing a report titled "Report - Product And Department Summary". The browser's address bar displays "uisacad.uis.edu/~kmulpu2/generateDillardsReport.php". The report is presented as a table with five columns: Store, Department, UPC, TotalAmount, and SaleDate. The table contains 18 rows of data, all for Store ID 3402, showing various departments and their corresponding sales amounts and dates.

Store	Department	UPC	TotalAmount	SaleDate
3402	POLOMEN	400003746000	130	08-SEP-04
3402	SPERRY	400004190000	103.99	18-DEC-04
3402	BE2	400006179000	89.78	20-DEC-04
3402	ESPRIT	400007092000	68	08-OCT-04
3402	R & Y	400001192000	60	02-SEP-04
3402	POLOMEN	400006293000	56.25	03-DEC-04
3402	BE2	400004286000	52.92	15-DEC-04
3402	ESPRIT	400006686000	46	26-OCT-04
3402	ESPRIT	400006686000	46	21-NOV-04
3402	BCH	400006845000	42.5	26-NOV-04
3402	POLOMEN	400002032000	39.99	12-AUG-04
3402	POLOMEN	400002488000	39.99	15-SEP-04
3402	R LAUREN	400003734000	39.5	01-SEP-04
3402	ESPRIT	400007031000	39	22-NOV-04
3402	ESPRIT	400007031000	39	01-DEC-04

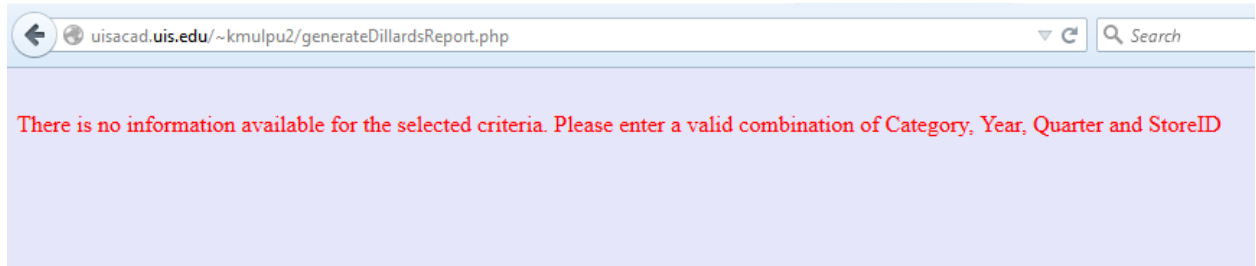


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12. If there is no information available for selected criteria, the following error message appears.



13. In order to logout of the reporting system, user may choose to click on “Logout” link that is present at top right part of the screen. Once the user clicks on the link, an alert pops up as shown below

*Logout page:*

