Assignment: #3

UI/UXD (Mockup Dashboard)

INFO8655 – SECTION #1

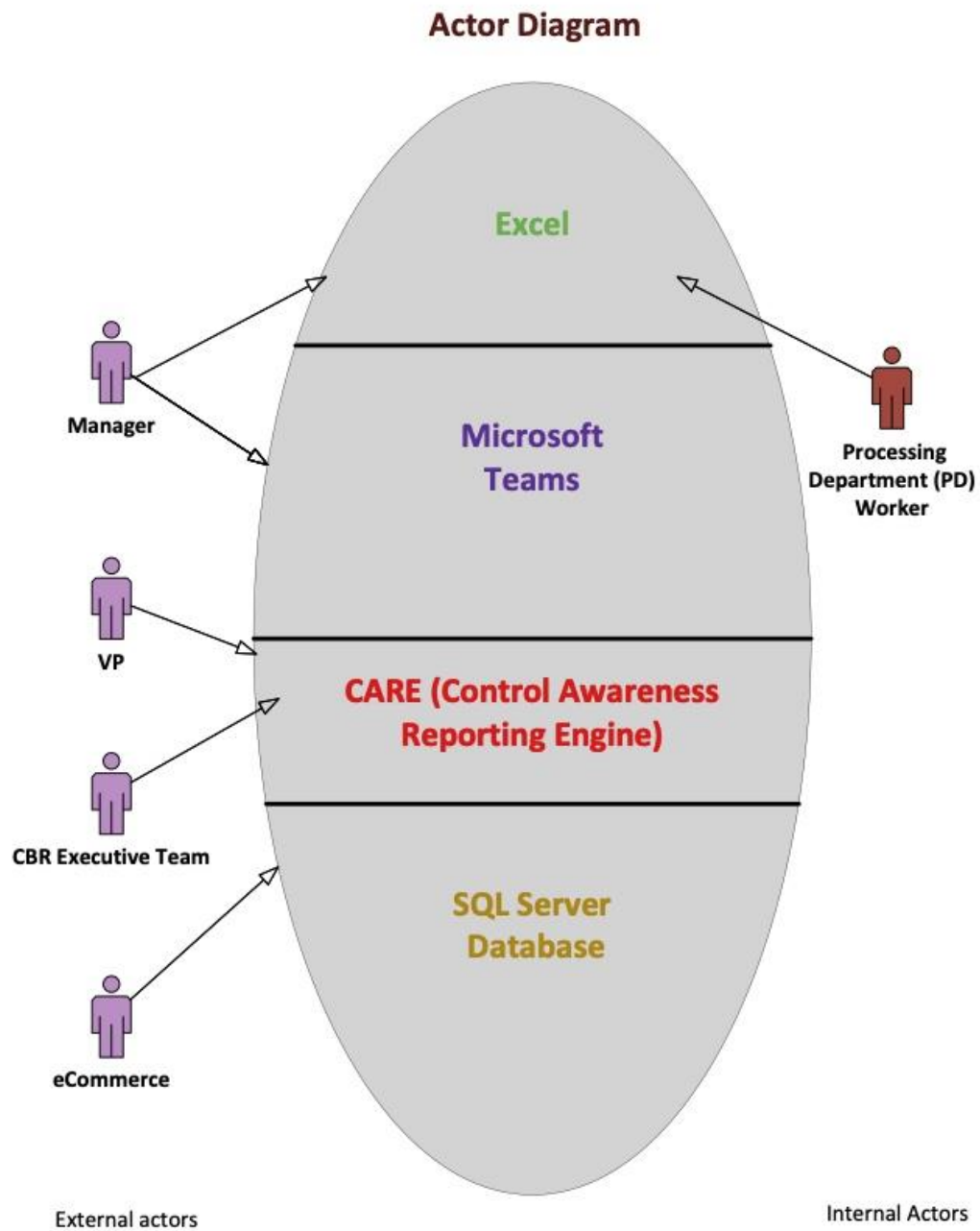GROUP – 02

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VERSION: v1.0

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Question 01: Actor Diagram

Actor Diagram

Excel

Manager

Microsoft Teams

Processing Department (PD) Worker

VP

CARE (Control Awareness Reporting Engine)

CBR Executive Team

SQL Server Database

eCommerce

External actors

Internal Actors

Question 02: Dashboard mockup

Control Awareness Reporting Engine in CBR
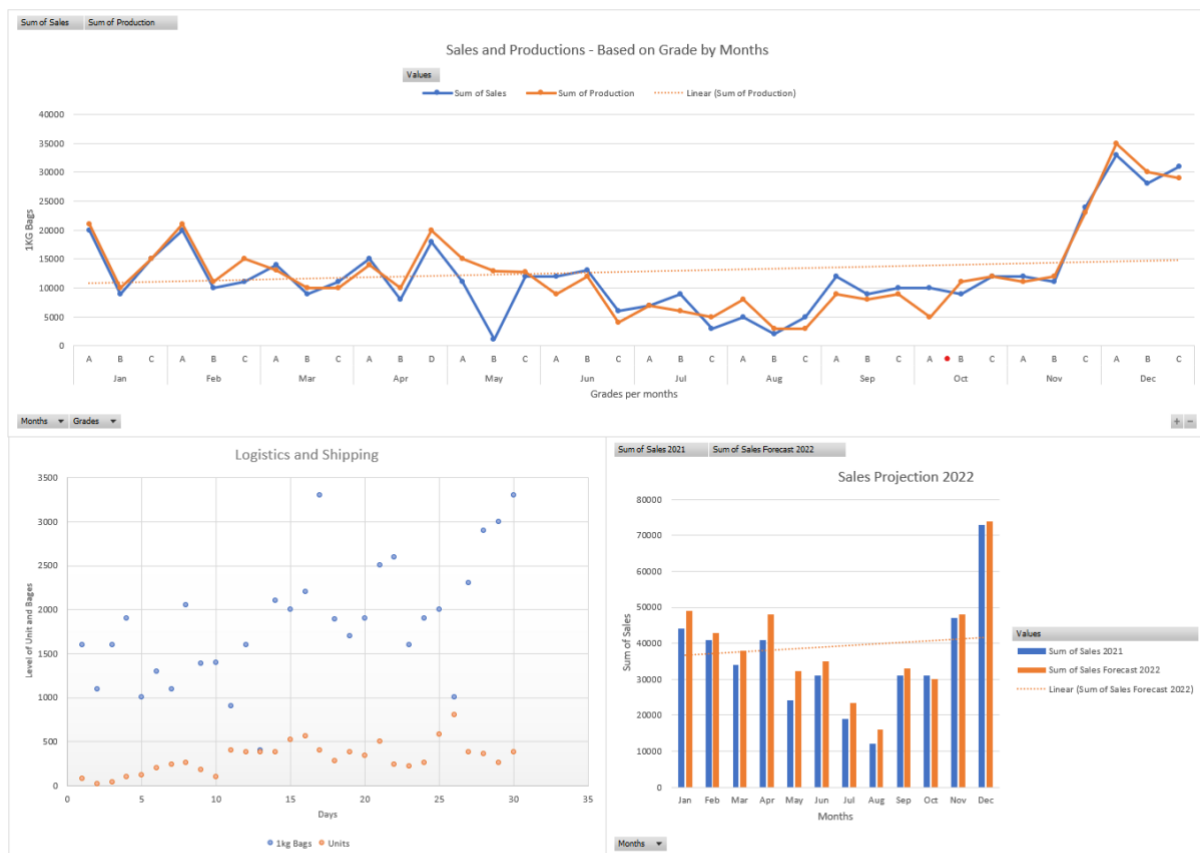
Logistics and Shipping - This chart shows the level of units and bags via days. The ideal way to show the distribution of level of units and bags against the days is the scatter chart.

Sales and Productions - Based on Grade by Months: It shows the total number of sales and production based on the coffee grade for 12 months of a given year. Using a line chart, it can quickly identify changes over long periods of time.

Sales Projection 2022 - It shows the sales projection for 2022 using past year sales data. A bar chart can easily deliver the difference between two more data sets (in this case, sales data in 2022 and 2021) for a specific segment.

Question 2.3 Data matrix for each chart

Sales and Productions - Based on Grade by Months

Note: The Sales and Production measurement is how many 1kg bags produced and sales per grade A/B/C coffee per month.

Name of the data	Type	Example 1	Example 2
Month	Date	Jan	May
1KG Bags sales amount	Integer	9000	2800
1KG Bags Production amount	Integer	10000	3000
Coffee Grade	String	A	B

Logistic and Shipping

The inventory (logistic) measurement is 'how many units are used to make a 1 kg bag of coffee.'

Name of the data	Type	Example 1	Example 2
Number of units	Integer	100	250
Number of Bags	Integer	5000	12500
Days	Date	1	3

Sales Projection 2022

The measurement is how many 1kg bags were sold in 2021.

Name of the data	Type	Example 1	Example 2
Sum of Sales in 2021	Integer	8000	9000
Sum of Sales in 2022	Integer	9800	12000
Moths	Date	May	Aug

Question 03: Pseudocode

Database that is used for the dashboard creation.

Inventory Table

PK Inventory ID (INT)

Unit Amount (INT)

Production Table

PK Production ID (INT)

FK Inventory ID (INT)

Date (DateTime)

Grade (String)

Number of Bags Produced (INT)

Sales Table

PK Sales ID (INT)

Date (DateTime)

Grade (String)

Number of Bags Sold (INT)

Pseudocode

Program Start

Initialize variable v_year
Initialize variable v_month
Initialize variable v_date
Initialize variable v_sumof_bags
Initialize variable v_grades
Initialize variable v_sum_of_units
Initialize dataset v_output_of_sales_data
Initialize dataset v_output_of_logistics_data

IF the number of sold 1KG bags IS NOT NULL in the Sales table

THEN

Retrieve YEAR(Date) as Year
         MONTH(Date) as Month
         SUM(bags) as 1KGBags
         Grade
FROM the sales table
GROUP BY the output data using 'Year, Month, Grade'
ORDER BY the output data using 'Year, Month, Grade'
Set v_output_of_sales_data to the output dataset of this query

Set i = length of retrieved sales table dataset v_output_of_logistics_data
WHILE (the variable i count becomes 0)

Set v_year = Year
Set v_month = Month
Set v_sum_of_bags = 1KGBags
Set v_grades = Grade

Send data to the CARE dashboard 'Sales and Production- Based on Grade by Months' chart
Display X axis as v_month and v_grades
Display Y axis as v_sum_of_bags
Draw the chart

END the While loop

ELSE
Display message "There are no sold 1KG bags records found in the sales table."

IF the number of 1KG bags IS NOT NULL AND the number of units IS NOT NULL in production and inventory tables.

THEN
Retrieve GETDATE (Date) as Date
         SUM (units) as Units
         SUM (bags) as 1KGBags
FROM the production and Inventory Tables
GROUP BY the output data by Date
ORDER BY the output data by Date
Set v_output_of_logistics_data to the output dataset of this query

Set i = length of retrieved production and inventory tables dataset
v_output_of_logistics_data

WHILE (the variable i count becomes 0)

Set v_date to Date
Set v_sum_of_units to Units
Set v_sum_of_bags 1KGBags

Send data to the CARE dashboard Logistics and shipping
Display X axis as v_date
Display Y axis as v_sum_of_units and v_sum_of_bags
Draw the chart
END the While loop

ELSE
Display message "There are no units or produced 1KG bags found in the production and inventory tables ."

Program End

Note: Used color codes to identify loops, dataset variables and action words easily.