Task 6: SQL Queries and Reports

6.1 Choo Zhen Hao

6.1.1 Query/Report 1: Report of Invoice issued on a certain date

Purpose: The purpose of this query is to find out the invoice issued on a certain date

SQL Statement:

```
SET LINESIZE 120
SET pagesize 100
VARIABLE v date VARCHAR2 (10);
PROMPT 'Enter the invoice date in DD/MM/YYYY format:'
COLUMN customer name FORMAT A30 HEADING 'Customer Name'
COLUMN invoice_id FORMAT A15 HEADING 'Invoice ID'
COLUMN order date FORMAT A15 HEADING 'Order Date'
COLUMN total amount HEADING 'Total Amount (MYR)'
COLUMN customer id FORMAT A15 HEADING 'Customer ID'
TTITLE LEFT 'Invoice Report ' SKIP 1
SELECT i.invoice id, i.order date, i.total amount, c.customer id
FROM invoice i
INNER JOIN customer c ON i.customer id = c.customer id
WHERE i.order_date like '&v date';
CLEAR COLUMNS
CLEAR BREAKS
TTITLE OFF;
```

6.1.2 Query/Report 2: Inventory level report of warehouses

Purpose: To show the current inventory levels for each product in each warehouse. It can help to identify which products are running low on inventory and need to be restocked

```
SET LINESIZE 120
SET PAGESIZE 30
```

```
COLUMN product_id FORMAT A20 HEADING 'Product ID'
COLUMN product_name FORMAT A40 HEADING 'Product Name'
COLUMN warehouse_id FORMAT A30 HEADING 'Warehouse ID'
COLUMN stock_quantity FORMAT 9999 HEADING 'Stock Quantity'
```

```
TTITLE CENTER 'Current Inventory Levels by Product and Warehouse'

SKIP 2

SELECT p.product_id, p.product_name, w.warehouse_id, s.stock_quantity

FROM product p

JOIN stock s ON p.product_id = s.product_id

JOIN warehouse w ON s.warehouse_id = w.warehouse_id

ORDER BY p.product_id, w.warehouse_id;
```

	Current Inventor	y Levels by Product and Warehous	ie e
Product ID	Product Name	Warehouse ID	Stock Quantity
00000002	Kleenex Facial Tissue	W0000002	10
9000003	Colgate Toothpaste	W0000003	2
90000004		W0000004	219
90000006	Pantene Shampoo	W0000006	112
0000007	Pears Soap	W000007	232
8000000	Rexona Deodorant	W000005	212
8000000	Rexona Deodorant	W000008	423
0000010	Oral-B Toothbrush	W0000010	143
0000012	Ketchup	W0000012	222
0000014	Pepsi	W0000014	50
0000015	Sprite	W0000013	90
0000015	Sprite	W0000015	40
0000016	Fanta	W0000016	200
0000017	Doritos	W0000017	150
0000018	Pringles	W0000018	750
0000020	Tostitos	W0000020	910

6.1.3 Query/Report 3: Report of total sales to customers in a year

Purpose: To show the total sales for each customer in a year. This helps to identify the top / most valuable customers to our company.

```
SET LINESIZE 120

SET PAGESIZE 30

SET VERIFY OFF

ACCEPT enter_year PROMPT 'Enter the year to generate sales report: '

COLUMN customer_id FORMAT A20 HEADING 'Customer ID'

COLUMN sales_year FORMAT 9999 HEADING 'Year'

COLUMN total_sales FORMAT 9999999.99 HEADING 'Total Sales (RM)'

TTITLE LEFT 'Sales Report for Year &enter_year' SKIP 1

SELECT c.customer_id, TO_CHAR(i.order_date, 'YYYY') AS sales_year,

SUM(i.total_amount) AS total_sales

FROM customer c

JOIN invoice i ON c.customer_id = i.customer_id
```

```
WHERE TO_CHAR(i.order_date, 'YYYY') = '&enter_year'
GROUP BY c.customer_id, TO_CHAR(i.order_date, 'YYYY');
```

Sample output.			
SQL> start C:\User	's\TARUC\Des	ktop\query3.txt	
Enter the year to	generate sa	les report: 2021	
Sales Report for Year 2021			
Customer ID	Year Tot	al Sales (RM)	
C0000005	2021	929.00	
C0000023	2021	2052.00	
C0000007	2021	554.00	
C0000019	2021	1378.00	
C0000042	2021	2654.00	
C0000048	2021	1196.00	
C0000017	2021	1665.00	
C0000021	2021	719.00	
C0000029	2021	1825.00	
C0000031	2021	764.00	
C0000033	2021	2394.00	
C0000036	2021	924.00	
C0000015	2021	2026.00	
C0000027	2021	980.00	
C0000004	2021	829.00	
C0000008	2021	494.00	
C0000026	2021	1934.00	
C0000035	2021	2547.00	
C0000044	2021	219.00	
19 rows selected.			

6.2 Wong Kai Chen

6.2.1 Query/Report 1: Detail report of the total amount of the products available in one warehouse

Purpose: The purpose of this report is to inform about low quantity of products in the warehouse

SQL statement:

```
PROMPT 'Total amount of products in a single warehouse location'
PROMPT
PROMPT
COLUMN warehouse id HEADING 'Warehouse'
COLUMN location name HEADING 'Location Name'
COLUMN total products HEADING 'Amount'
TTITLE LEFT 'Total Amount of Products in a Warehouse Location'
SELECT w.warehouse_id, l.location_name, COUNT(s.product_id) as
total products
FROM warehouse w
JOIN location 1 ON w.location id = 1.location id
LEFT JOIN stock s ON w.warehouse id = s.warehouse id
GROUP BY w.warehouse id, l.location name
ORDER BY total products DESC;
CLEAR COLUMNS
CLEAR BREAKS
TTITLE OFF
```

```
'Total amount of products in a single warehouse location'
Total Amount of Products in a Warehouse Location
Warehouse Location Name Amount
-----
W0000005 Alor Setar
                                       1
W0000012 Petaling Jaya
W0000003 Batu Pahat
W0000017 Jasin
                                        1
W0000007 Keningau
                                        1
W0000008 Alor Setar
W0000010 Tumpat
W0000016 Kemaman
                                        1
W0000018 Kangar
                                        1
W0000020 Setiawangsa
                                        1
Total Amount of Products in a Warehouse Location
Warehouse Location Name Amount
W0000002 Batu Gajah
W0000004 Sarikei
                                       1
W0000004 Sarikei
W00000006 Bagan Serai
W0000015 Bentong
W0000014 Kota Tinggi
                                        1
                                       1
W0000013 Bentong
W0000009 Lumut
                                       0
W0000001 Port Dickson
                                        0
W0000019 Bangi
W0000011 Wangsa Maju
20 rows selected.
```

6.2.2 Query/Report 2: Detail report of customers that purchased the most

Purpose: The purpose of this report is to inform about who's the most loyal customer and what is the maximum of a person willing to spend on our company

```
PROMPT 'Most order purchased by customers'
PROMPT
PROMPT

COLUMN customer_id HEADING 'Customer ID'
COLUMN cust_name HEADING 'Customer Name'
COLUMN total_purchase_amount HEADING 'Total Purchase Amount'

TTITLE LEFT 'Most order purchased by customers'
```

```
SELECT c.customer id, c.cust name, SUM(sod.total price) as
total purchase amount
 FROM customer c
  JOIN sales order so ON c.customer id = so.customer id
  JOIN sales order detail sod ON so.order id = sod.order id
  GROUP BY c.customer_id, c.cust_name
  ORDER BY total purchase amount DESC;
TTITLE LEFT 'Most order purchased by customers'
SELECT *
FROM (
  SELECT c.customer id, c.cust name, SUM(sod.total price) as
total purchase amount
 FROM customer c
  JOIN sales order so ON c.customer id = so.customer id
  JOIN sales order detail sod ON so.order id = sod.order id
 GROUP BY c.customer_id, c.cust_name
 ORDER BY total purchase amount DESC
WHERE ROWNUM = 1;
CLEAR COLUMNS
CLEAR BREAKS
TTITLE OFF
```

```
SQL> start C:\query3s.txt
'Most order purchased by customers'
Most order purchased by customers
Customer Customer Name Total Purchase Amount
C0000002 Ramli Jani
                                                5155.7
C0000006 Jing Qi
                                                4948.06
C0000005 Wei Han
                                                4468.47
C0000003 Kingston
                                                3872.37
C0000004 Sandy
                                                3641.72
C0000007 Tang Jie
C0000010 Shanti Kaur
                                                3119.17
                                                2736.43
C0000001 Mat Sambas
                                                2007.09
C0000008 Intan Wahida
                                                1558.14
C0000009 Naidu
                                                1501.64
10 rows selected.
Most order purchased by customers
Customer Name
                                  Total Purchase Amount
C0000002 Ramli Jani
                                                5155.7
```

6.2.3 Query/Report 3: Detail report of the total amount of products sold

Purpose: The purpose of this report is to inform about which product made the most sales and if the decision to work together with the other company is beneficial or not.

```
PROMPT 'Total amount of products'
ACCEPT v_numberRows NUMBER DEFAULT 10 PROMPT 'Enter Row: '
COLUMN product_name HEADING 'Product Name'
COLUMN total ordered HEADING 'Amount ordered'
```

TTITLE LEFT 'Total Amount of Products'

SELECT p.product_name, SUM(sod.quantity) AS total_ordered
FROM sales_order_detail sod
JOIN product p ON sod.product_id = p.product_id
WHERE ROWNUM <= '&v_numberRows'
GROUP BY p.product_name
ORDER BY total_ordered DESC;</pre>

CLEAR COLUMNS CLEAR BREAKS TTITLE OFF

```
'Total amount of products'
Enter Row: 16
old 4: WHERE ROWNUM <= '&v numberRows'
new 4: WHERE ROWNUM <= ' 16'
Total Amount of Products
Product Name Amount ordered
Rexona Deodorant
                                 97471
                               92251
Scott Toilet Paper
Tostitos
                                86758
Ketchup
                                 82377
Kleenex Facial Tissue
                                 77450
Pringles
                                 75741
Doritos
Doritos
Oral-B Toothbrush
Lifebuoy Hand Sanitizer
                                74977
                                 65725
                                62560
Pantene Shampoo
                                 59385
Total Amount of Products
Product Name Amount ordered
Sprite
                                 41072
Colgate Toothpaste
                                31399
Coca-Cola
                                 29129
Fanta
                                 14194
Pepsi
                                 13000
Pears Soap
                                 12964
16 rows selected.
```

6.3 Leong Hon Yan

6.3.1 Query/Report 1: Report of customer information

Purpose: Find the information of the customer based on the alphabet that had been selected.

```
SQL statement:
SET LINESIZE 120
```

```
SET PAGESIZE 30
```

```
TTITLE CENTRE '----Sort customer name by A, S and N-- '
```

```
COLUMN customer_id FORMAT A8 HEADING "Customer ID";
COLUMN cust_name FORMAT A25 HEADING "Customer Name";
COLUMN cust phone FORMAT A12 HEADING "Customer Phone Number";
```

```
COLUMN cust_email FORMAT A25 HEADING "Customer Email Address";

SELECT c.customer_id, c.cust_name, c.cust_phone, c.cust_email

FROM customer c

WHERE cust_name LIKE 'A%'

OR cust_name LIKE 'S%'

OR cust_name LIKE 'N%';

CLEAR COLUMNS

CLEAR BREAKS

CLEAR COMPUTES

TTITLE OFF
```

Customer	Customer Name	Customer Pho	Customer Email Address
C0000004	Sandy	0124027309	sandy@gmail.com
C0000009	Naidu	0124494383	naidu@gmail.com
C0000010	Shanti Kaur	015339373	shanti@gmail.com
C0000012	Amirul Abdullah	0145937334	amirabdullah@gmail.com
C0000018	Nurul Nadiah	0143823343	nadiahn@gmail.com
C0000020	Azlin Cheong	0129474922	cazlin@gmail.com
C0000022	Siti Noraini	0183739839	sitinoraini@gmail.com
C0000027	Abdul Razak	0164938733	razakrahman@gmail.com
C0000033	Salmah Hassan	0139378388	salmah@gmail.com
C0000035	Shamini Krishnan	0123002822	shamini@gmail.com
C0000037	Anthony Fernandez	0129347333	anthonyfernendez@gmail.co
			m
C0000038	Norliza Abdullah	0123993833	norlizaa@gmail.com
C0000040	Nurul Aida	0148348733	nurulaida@gmail.com
C0000044	Norazah Razak	0149487449	norazahrazak@gmail.com
C0000045	Ah Kow	0132854933	ahkow@gmail.com
15 rows s	selected.		

6.3.2 Query/Report 2: Location report

Purpose: Find the location id in the Klang Valley (KL, Selangor and Putrajaya) based on the selected postcode .

```
SET LINESIZE 120
SET PAGESIZE 30

TTITLE CENTRE '----Location in Klang Valley--'

ACCEPT 1_location_id CHAR FORMAT A8 PROMPT 'Enter location ID: '
ACCEPT 1_location_name CHAR FORMAT A25 PROMPT 'Enter location name:
```

```
ACCEPT 1_address_post_code CHAR FORMAT A30 PROMPT 'Enter post code:

COLUMN location_id FORMAT A8 HEADING "Location ID";
COLUMN location_name FORMAT A25 HEADING "Location Name";
COLUMN address_post_code FORMAT A30 HEADING "Post Code";

SELECT 1.location_id, 1.location_name, 1.address_post_code
FROM location 1
WHERE 1.address_post_code BETWEEN '40000' AND '69999'
ORDER BY 1.address_post_code DESC;

CLEAR COLUMNS
CLEAR BREAKS
CLEAR COMPUTES
TTITLE OFF
```

Enter location ID: L000001 Enter location name: Port Dickson Enter post code: 71000		
Location	Location Name	Post Code
L000011	Setiawangsa Wangsa Maju Petaling Jaya Bangi	54200 53300 47800 43650

6.3.3 Query/Report 3: Warehouse and location report

Purpose: Find the location id based on the range of the warehouse id that had been selected.

SQL statement:

SET LINESIZE 120 SET PAGESIZE 30

```
TTITLE CENTRE '----List of Location based on location id--'

ACCEPT w_warehouse_id CHAR FORMAT A8 PROMPT 'Enter warehouse ID: '

ACCEPT l_location_id CHAR FORMAT A8 PROMPT 'Enter location ID: '

COLUMN warehouse_id FORMAT A8 HEADING "Warehouse ID";

COLUMN location_id FORMAT A8 HEADING "Location ID";

SELECT l.location_id, w.warehouse_id

FROM warehouse w

JOIN location l ON w.location_id = l.location_id

WHERE w.warehouse_id BETWEEN 'W0000006' AND 'W0000013'

ORDER BY l.location_id DESC;

CLEAR COLUMNS

CLEAR COMPUTES
```

TTITLE OFF

Location	Warehous
L000015	W0000013
L000012	W0000012
L000011	W0000011
L000010	W0000010
L000009	W0000009
L000008	800000W
L000007	W0000007
L000006	W000006
8 rows se	elected.

6.4 Cheah Zhen Hui

6.4.1 Query/Report 1: Report of customers who have made orders

Purpose: The purpose of this report is to find out customers who have made orders with shipment and invoice information, sorted by date and total amount.

```
SQL statement:
SET linesize 120
SET pagesize 30
PROMPT 'Customer order sorted by shipment date and amount'''
PROMPT
PROMPT
COLUMN customer id FORMAT A8 HEADING "Customer ID"
COLUMN customer name FORMAT A25 HEADING "Customer Name"
COLUMN shipment date FORMAT All HEADING "Shipment Date"
COLUMN total amount FORMAT 99999.99 HEADING "Amount"
TTITLE RIGHT 'Page No: ' FORMAT 999 SQL.PNO SKIP 2
SELECT c.customer id, c.cust name, s.shipment date, i.total amount
FROM customer c
JOIN sales_order so ON c.customer_id = so.customer_id
JOIN shipment s ON so.shipment_id = s.shipment_id
JOIN invoice i ON c.customer id = i.customer id AND so.order id =
i.order id
ORDER BY s.shipment date DESC, i.total amount DESC;
CLEAR COLUMNS
CLEAR BREAKS
TTITLE OFF
```

Customer CUST_NAME	Shipmer	nt Da Amount	
C0000006 Jing Qi		2023 977.00	
C0000007 Tang Jie	27/02/2	2023 554.00	
C0000008 Intan Wahid	a 27/02/2	1023 494.00	
C0000002 Ramli Jani	14/02/2	023 667.00	
C0000005 Wei Han	07/12/2	929.00	
C0000004 Sandy	07/12/2	829.00	
C0000003 Kingston	07/12/2	2021 429.00	
C0000010 Shanti Kauı	11/11/2	2021 2979.00	
C0000009 Naidu	11/11/2	2021 283.00	
9 rows selected.			

6.4.2 Query/Report 2: Report of the products that are out of stock

Purpose: Retrieve a list of products that are stocked in multiple warehouses, along with the total stock quantity in each warehouse, sorted by the total stock quantity in descending order. In this way, it is easier for us to know which warehouse is to be out of stock for a certain product, and we can restock it in time.

SQL statement:

```
ACCEPT product id PROMPT 'Enter product ID: '
COLUMN product id FORMAT A12 HEADING "Product ID"
COLUMN product name FORMAT A25 HEADING "Product Name"
COLUMN location id FORMAT A12 HEADING "Location ID"
COLUMN stock quantity FORMAT 99999 HEADING "Stock Quantity"
SELECT p.product id, w.location id, p.product name, SUM(s.stock quantity)
AS total quantity
FROM product p
JOIN stock s ON p.product id = s.product id
JOIN warehouse w ON s.warehouse id = w.warehouse id
WHERE p.product id = '&product id'
GROUP BY p.product id, w.location id, p.product name
HAVING COUNT(DISTINCT w.warehouse id) > 1
ORDER BY total quantity DESC;
CLEAR COLUMNS
CLEAR BREAKS
TTITLE OFF
```

Purpose: To retrieve information about a specific customer's past purchases based on their customer ID..

SQL statement:

```
COLUMN customer id FORMAT A12 HEADING "Customer ID"
COLUMN order_date FORMAT A15 HEADING "Order Date"
COLUMN product name FORMAT A25 HEADING "Product Name"
COLUMN quantity FORMAT 99999 HEADING "Quantity"
COLUMN total amount FORMAT 99999.99 HEADING "Total Amount"
BREAK ON Customer ID ON Order date
ACCEPT customer id PROMPT 'ENTER CUSTOMER ID : '
SELECT c.customer_id as Customer_ID, i.order_date as Order_date,
p.product name
FROM customer c
JOIN sales order so ON c.customer id = so.customer id
JOIN invoice i ON so.order_id = i.order_id
JOIN shipment s ON so.shipment id = s.shipment id
JOIN sales order detail sod ON so.order id = sod.order id
JOIN product p ON sod.product id = p.product id
WHERE c.customer id = '&customer id'
ORDER BY i.order date;
CLEAR COLUMNS
CLEAR BREAKS
TTITLE OFF
```

```
Enter value for customer_id: C0000006
      8: WHERE c.customer_id = '&customer_id'
old
      8: WHERE c.customer_id = 'C0000006'
new
Customer ID Order Date
                             Product Name
C0000006
             24-AUG-22
                             Pantene Shampoo
                             Fanta
                             Swiffer WetJet Starter Ki
                             MM's
                             Nivea Men Deodorant
                             Kotex Maxi Pads
                             Milo Chocolate Malt Drink
7 rows selected.
```

6.5 Chin Wen Yee

6.5.1 Query/Report 1: Detail report of total amount of product supplied by supplier

Purpose: The purpose of this report is to generate a report that shows the total amount of product supplied by each supplier, it is useful for analyzing supplier performance and making informed decisions about inventory management and purchasing.

```
BREAK ON SUPPLIER

SET linesize 120

SET pagesize 30

ACCEPT supplier_name PROMPT 'Enter supplier name: '

PROMPT

PROMPT 'Total amount of product supplied by &supplier_name '

PROMPT

COLUMN supplier_name FORMAT A25 HEADING "Supplier Name"

COLUMN product_name FORMAT A25 HEADING "Product Name"

COLUMN total_quantity_supplied FORMAT 99999 HEADING "Total Quantity Supplied"

TTITLE RIGHT 'Page No: ' SQL.PNO SKIP 2

SELECT s.supplier_name AS Supplier, p.product_name AS Product_Name,

SUM(poi.POIquantity) AS total_quantity_supplied
```

```
FROM supplier s

JOIN purchase_order po ON s.supplier_id = po.supplier_id

JOIN purchase_order_item poi ON po.purchase_order_id = poi.purchase_order_id

JOIN product p ON poi.product_id = p.product_id

WHERE s.supplier_name = '&supplier_name'

GROUP BY s.supplier_name, p.product_name

ORDER BY s.supplier_name;

CLEAR COLUMNS

CLEAR BREAKS

TTITLE OFF
```

```
Enter supplier name: Zoe
'Total amount of product supplied by Zoe '
old 6: WHERE s.supplier_name = '&supplier_name'
new 6: WHERE s.supplier_name = 'Zoe'
                                                                                                      Page No:
SUPPLIER
                          Product Name
                                                     Total Quantity Supplied
Zoe
                          Pringles
                          Downy Fabric Softener
                          Pepsi
                          Ketchup
                          Pears Soap
                          Pantene Shampoo
                          Coca-Cola
                                                                          10
7 rows selected
```

6.5.2 Query/Report 2: Detail report of list of products by category and warehouse.

Purpose: The purpose of this report is to categorize products by their respective categories and warehouses where they are stocked, useful for inventory management and tracking the movement of the products within the warehouse.

```
BREAK ON CATEGORY

SET linesize 120

SET pagesize 30

PROMPT 'List of products by category and warehouse'

PROMPT

PROMPT

COLUMN description FORMAT A25 HEADING "Category";

COLUMN product_name FORMAT A25 HEADING "Product";

COLUMN warehouse id FORMAT A8 HEADING "Warehouse";
```

```
TTITLE RIGHT 'Page No: ' FORMAT 999 SQL.PNO SKIP 2

SELECT c.description AS category, p.product_name AS product, s.warehouse_id AS warehouse

FROM category c

JOIN product p ON c.category_id = p.category_id

JOIN stock s ON p.product_id = s.product_id

GROUP BY c.description, p.product_name , s.warehouse_id

ORDER BY c.description;

CLEAR COLUMNS

CLEAR BREAKS

TTITLE OFF
```

```
'List of products by category and warehouse'
                                                                                                                    Page No:
CATEGORY
                            PRODUCT
                                                         WAREHOUSE
Almeta
                                                          W0000014
                            Pepsi
                            Scott Toilet Paper
                                                          W0000004
Andria
                            Pringles
                                                          W0000018
                                                         W0000005
                            Rexona Deodorant
                            Rexona Deodorant
                                                          W0000008
Clayson
                                                          W0000017
                            Doritos
                            Pears Soap
                                                          W0000007
Guido
                                                          W0000016
                            Fanta
                            Pantene Shampoo
                                                          W0000006
Jude
                            Sprite
                                                          W0000013
                            Sprite
                                                          W0000015
Kassey
                                                          W0000012
                            Ketchup
                            Kleenex Facial Tissue
Oral-B Toothbrush
                                                          W0000002
Pattie
                                                          W0000010
                            Tostitos
Colgate Toothpaste
                                                          W0000020
Piotr
                                                          W0000003
16 rows selected.
```

6.5.3 Query/Report 3: Detail report of number of customers assigned to each employee

Purpose: The purpose of this report is used to generate a report of the number of customers assigned to each employee, useful to determine the workload of each employee.

```
SET linesize 120
SET pagesize 30
PROMPT 'Numbers of customers assigned to each employee'
PROMPT
PROMPT
COLUMN employee name FORMAT A25 HEADING "Employee Name"
COLUMN num customers FORMAT 99999 HEADING "No. of customer"
RIGHT 'Page No: ' FORMAT 999 SQL.PNO SKIP 2
SELECT e.employee_name, COUNT(c.customer_id) as num_customers
FROM employee e
JOIN customer c ON e.employee_id = c.employee id
GROUP BY e.employee name
ORDER BY num customers DESC;
CLEAR COLUMNS
CLEAR BREAKS
TTITLE OFF
```

Employee Name	No. of customer
Alex Brown	 7
Olivia Taylor	6
Tom Wilson	6
Luke Perez	6
Grace Lee	5
Emily Davis	5
Bob Johnson	5
Jane Smith	4
John Doe	4
Sophia Nguyen	1
10 rows selected.	