

# README

**BUDT 703: Database Management Systems**

**GROUP: 0503\_11**

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**BRAND NAME: PHARMLABS**



## **Data Source:**

We have used Synthetic Data created by us. Due to privacy reasons in the Medical Industry, we could not obtain a dataset of clients to go with the drugs ordered.

## **Testing the Project:**

To the project, we run the DML commands that we have generated for our Mission statement. In addition, we have tested more business transactions in this.

**1. What are the names of the employees who are full time employees, with their hours worked and annual salary? (Full Time employees have hours worked greater than or equal to 25 hours)**

**ANS:**

```
DROP VIEW IF EXISTS FullTimeEmployees
```

```
GO
```

```
CREATE VIEW FullTimeEmployees
```

```
AS
```

```
SELECT e.employeeID AS 'Employee ID', CONCAT (e.employeeFirstName, ' ',  
e.employeeLastName) AS 'Employee Full Name', e.employeeHours AS 'Employee Hours',  
e.employeeAnnualSalary AS 'Employee Annual Salary'
```

```
FROM [Pharmlabs.Employee] e
```

```
WHERE e.employeeHours >= 25
```

Employee ID	Employee Full Name	Employee Hours	Employee Annual Salary
1210275566	John Wick	45	150000
1478559657	Oscar Smith	50	180000
1524163524	Kai Parker	60	175000
2341523167	Sam Stokes	45	160000
3217645321	Taylor Cox	40	96000
3257745865	Harry Garcia	45	95000
3359677845	Samantha Anderson	45	85000
3452014783	George Murphy	45	85000
3554896554	Kyle Martin	45	90000
3754889655	Jacob Johnson	40	80000

**2. What are the names of the employees who are part time employees, with their hours worked and annual salary? ( Part Time employees have hours worked less than 25 hours)**

**ANS:**

DROP VIEW IF EXISTS PartTimeEmployees

GO

CREATE VIEW PartTimeEmployees

AS

SELECT e.employeeID AS 'Employee ID', CONCAT (e.employeeFirstName, ' ',  
e.employeeLastName) AS 'Employee Full Name', e.employeeHours AS 'Employee Hours',  
e.employeeAnnualSalary AS 'Employee Annual Salary'  
FROM [Pharmlabs.Employee] e  
WHERE e.employeeHours < 25

SELECT pt.\*

FROM PartTimeEmployees pt

Employee ID	Employee Full Name	Employee Hours	Employee Annual Salary
1243544261	Lea Marco	18	28000
1477859655	Emily Taylor	18	28000
3581945242	Aria Cooper	20	32000
4391746539	Kylie Holmes	20	30000
4565748541	Noah Conner	20	32000
4856998745	Charles Miller	20	32000
5478965213	Ava Davies	20	32000
7796584224	Margaret Wang	20	32000
9018247536	Andrew Chen	20	35000

**3. What is the final amount of each product for each order?**

**ANS:**

SELECT c.orderID AS 'Order ID', p.productPrice AS 'Product Price', c.containedQuantity 'Product  
Quantity in order' ,(c.containedQuantity \* p.productPrice) as 'Total Product Price in Order'  
FROM [Pharmlabs.Contain] c, [Pharmlabs.Product] p

WHERE c.productID = p.productID

Order ID	Product Price	Product Quantity in order	Total Product Price in Order
003	15.50	22	341.00
102	15.50	26	403.00
407	15.50	11	170.50
408	15.50	3	46.50
420	15.50	21	325.50
436	15.50	16	248.00
452	15.50	18	279.00
466	15.50	5	77.50
609	15.50	2	31.00
612	24.99	2	49.98
709	24.99	19	474.81

#### 4. What is the final amount of each order?

ANS:

DROP VIEW IF EXISTS FinalOrderPrice

GO

CREATE VIEW FinalOrderPrice

AS

SELECT c.orderID AS 'Order ID', SUM(c.containedQuantity \* p.productPrice) AS 'Total Price of Order'

FROM [Pharmlabs.Contain] c, [Pharmlabs.Product] p

WHERE c.productID = p.productID

GROUP BY c.orderID

SELECT fop.\*

FROM FinalOrderPrice fop

Order ID	Total Price of Order
002	704.79
003	715.85
004	1157.64
100	670.78
101	372.00
102	403.00
103	531.72
104	1064.70
105	739.50
106	1376.73

#### 5. What is the average price of products?

ANS:

```
SELECT AVG(p.productPrice) AS 'Average Price of Products'
FROM [Pharmlabs.Product] p
```

Average Price of Products
33.493333

## 6.Details of products that have prices higher than avg price.

**ANS:**

```
SELECT p.productID AS 'Product ID',p.productName AS 'Product Name' , p.productPrice AS
'Product Price', p.productPrice - a.avgPrice AS "How much higher than Average"
FROM [Pharmlabs.Product] p, (
    SELECT AVG(p.productPrice) AS avgPrice
    FROM [Pharmlabs.Product] p
) AS a
WHERE p.productPrice > a.avgPrice
```

Product ID	Product Name	Product Price	How much higher than Average
11111	Pantoprazole	80.49	46.996667
40342	Paracetamol	90.49	56.996667
51244	Haldol	50.99	17.496667
70000	Tylenol	35.49	1.996667
90002	Lyrica	40.99	7.496667

## 7. Give the receipt of each order? (Receipt contains order details with the client ID and client name, along with the ID and name of the employee who made the sale)

**ANS:**

```
SELECT DISTINCT o.orderID AS 'Order ID', o.orderDate AS 'Order Date' , o.orderPaymentType AS
'Mode of Payment', cl.clientID AS 'Client ID',
    CONCAT (cl.clientFirstName,',',cl.clientLastName) AS 'Client Full Name' , e.employeeID
AS 'Employee ID',
    CONCAT (e.employeeFirstName,',',e.employeeLastName) AS 'Employee Full Name' ,
    SUM(c.containedQuantity * p.productPrice) AS ' Total Price of Order'
FROM [Pharmlabs.Contain] c, [Pharmlabs.Product] p, [Pharmlabs.Order] o, [Pharmlabs.Client] cl,
[Pharmlabs.Employee] e
WHERE c.productID = p.productID AND c.orderID = o.orderID AND
    o.clientID = cl.clientID AND o.employeeID = e.employeeID
GROUP BY o.orderID, o.orderDate, o.orderPaymentType, cl.clientID, CONCAT
(cl.clientFirstName,',',cl.clientLastName), e.employeeID, CONCAT (e.employeeFirstName,',',e.employeeLastName)
```

Order ID	Order Date	Mode of Payment	Client ID	Client Full Name	Employee ID	Employee Full Name	Total Price of Order
002	2022-09-10	Cash	3454	Dylan Brien	1477859655	Emily Taylor	704.79
003	2022-08-09	Cash	0001	Jim Hooper	1477859655	Emily Taylor	715.85
004	2021-07-30	Online	9314	Nancy Wheeler	9018247536	Andrew Chen	1157.64
100	2022-05-21	Online	3021	Louis Litt	1477859655	Emily Taylor	670.78
101	2022-06-23	Online	9456	Mike Ross	9018247536	Andrew Chen	372.00
102	2021-08-04	Online	0987	Tom Hank	4391746539	Kylie Holmes	403.00
103	2022-01-30	Online	1451	Harvey Specter	9018247536	Andrew Chen	531.72
104	2021-07-09	Online	9314	Nancy Wheeler	9018247536	Andrew Chen	1064.70
105	2021-06-07	Online	8520	John Doe	1477859655	Emily Taylor	739.50
106	2022-09-23	Online	0987	Tom Hank	9018247536	Andrew Chen	1376.73

### 8. Give the name and hours of employees who made sales with order details.

ANS:

```
SELECT e.employeeID AS 'Employee ID', CONCAT (e.employeeFirstName,',',
e.employeeLastName) AS 'Employee Full Name', e.employeeHours AS 'Employee Hours',
o.orderID AS 'Order ID', o.clientID AS 'Client ID', o.orderDate AS 'Order Date',
o.orderPaymentType AS 'Order Payment Type'
FROM [Pharmlabs.Employee] e, [Pharmlabs.Order] o
WHERE e.employeeID = o.employeeID
```

Employee ID	Employee Full Name	Employee Hours	Order ID	Client ID	Order Date	Order Payment Type
1243544261	Lea Marco	18	410	1092	2022-06-17	Online
1243544261	Lea Marco	18	411	0001	2021-02-04	Online
1243544261	Lea Marco	18	418	9456	2021-05-08	Online
1243544261	Lea Marco	18	419	3021	2021-04-28	Online
1243544261	Lea Marco	18	429	5212	2022-02-20	Online
1243544261	Lea Marco	18	453	5212	2022-11-24	Online
1243544261	Lea Marco	18	457	3021	2022-09-19	Online
1243544261	Lea Marco	18	459	0987	2022-09-28	Online
1243544261	Lea Marco	18	461	3454	2022-03-11	Online
1243544261	Lea Marco	18	465	3454	2022-08-12	Online
1243544261	Lea Marco	18	469	9456	2022-05-22	Online
1243544261	Lea Marco	18	687	1092	2022-06-05	Online
1477859655	Emily Taylor	18	615	9657	2022-02-15	Online
1477859655	Emily Taylor	18	473	6063	2021-08-22	Cash
1477859655	Emily Taylor	18	445	7113	2022-02-21	Online

### 9. How many sales did each employee make from highest number of sales to lowest number of sales?

ANS:

```
SELECT o.employeeID AS 'Employee ID', COUNT( o.employeeID) AS 'Number of Sales made'
FROM [Pharmlabs.Order] o
GROUP BY o.employeeID
ORDER BY COUNT(o.employeeID) DESC
```

Employee ID	Number of Sales made
9018247536	42
4391746539	19
1243544261	12
3581945242	12
1477859655	11
4565748541	8
7796584224	8
5478965213	7
4856998745	5

**10. What details of the employee who made the maximum amount of sales.**

**ANS:**

```
SELECT e.employeeID AS 'Employee ID', CONCAT (e.employeeFirstName, ' ',
e.employeeLastName) AS 'Employee Full Name', e.employeeDOB AS 'Employee Date of Birth',
e.employeeHours AS 'Employee Hours',
        e.employeeBankDetails AS 'Employee Bank Details', e.employeeSSN AS 'Employee SSN',
e.employeeAnnualSalary AS 'Employee Annual Salary'
FROM [Pharmlabs.Employee] e,
        (
        SELECT MAX(o.employeeID) AS 'Employee With Maximum Sales'
        FROM [Pharmlabs.Order] o
        ) AS m
WHERE e.employeeID = m.[Employee With Maximum Sales]
```

Employee ID	Employee Full Name	Employee Date of Birth	Employee Hours	Employee Bank Details	Employee SSN	Employee Annual Salary
9018247536	Andrew Chen	1989-02-13	20	726152435261	615278198	35000

**11. Promote the part time employee with the highest sales to become a full time employee (Only part time employees make sales). Increase the Hours worked by the employee with highest sales to 45 and give him/her a salary raise to \$85000.**

**ANS:**

```
UPDATE [Pharmlabs.Employee]
SET employeeHours = 45, employeeAnnualSalary = 85000
WHERE employeeID =
        (
        SELECT e.employeeID
        FROM [Pharmlabs.Employee] e,
                (
                SELECT MAX(o.employeeID) AS 'Employee With Maximum Sales'
                FROM [Pharmlabs.Order] o
                ) AS m
        WHERE e.employeeID = m.[Employee With Maximum Sales]
```

)

```
SELECT e.employeeID AS 'Employee ID', CONCAT (e.employeeFirstName,' ',
e.employeeLastName) AS 'Employee Full Name', e.employeeDOB AS 'Employee Date of Birth',
e.employeeHours AS 'Employee Hours',
e.employeeBankDetails AS 'Employee Bank Details', e.employeeSSN AS 'Employee SSN',
e.employeeAnnualSalary AS 'Employee Annual Salary'
FROM [Pharmlabs.Employee] e
```

Employee ID	Employee Full Name	Employee Date of Birth	Employee Hours	Employee Bank Details	Employee SSN	Employee Annual Salary
3581945242	Aria Cooper	1984-01-28	20	362815243627	371524866	32000
3754889655	Jacob Johnson	1986-06-19	40	774588963214	647859324	80000
4391746539	Kylie Holmes	1984-08-10	20	647241536472	721826382	30000
4565748541	Noah Conner	1991-10-25	20	458632147589	456985236	32000
4596574585	Zayn Evans	1987-05-07	45	225896547852	785596884	90000
4599745863	Linda White	1976-03-24	50	778954854489	445791360	150000
4856998745	Charles Miller	1992-10-20	20	448596336589	325596849	32000
5243619874	Noah Hemsworth	1987-04-04	45	627182736172	916243526	145000
5478965213	Ava Davies	1993-12-23	20	996582344785	651499328	32000
6923542193	Megan Fox	1974-03-20	50	916342618263	817243516	170000
7263541326	Ryan Reynolds	1982-01-26	50	362719352618	628192546	180000
7796584224	Margaret Wang	1991-01-25	20	226958321478	856423971	32000
7829376152	Jonas Holland	1979-05-30	45	271652415278	563819273	150000
8364213452	Phoebe Markle	1993-10-16	45	981425638716	715341625	85000
8526435326	Dante Russo	1995-12-18	70	635146781524	431568765	235000
9018247536	Andrew Chen	1989-02-13	45	726152435261	615278198	85000
9162534178	Tom Volkov	1985-06-11	40	471524361726	263415876	130000
9584752363	Sophia Walsh	1979-12-19	60	148896553255	159336582	165000
9658665822	Michael Wilson	1989-09-07	40	778965412589	748896582	80000

**12. What are the details of the client that makes maximum purchases.**

**ANS:**

```
SELECT c.clientID AS 'Client ID', CONCAT (c.clientFirstName,' ', c.clientLastName) AS 'Client
Full Name', c.clientPhoneNumber AS 'Client Phone Number', c.clientEmail AS 'Client email ID',
c.clientAddress AS 'Client Address'
FROM [Pharmlabs.Client] c
WHERE c.clientID =
```

```
(
SELECT MAX(o.clientID)
FROM [Pharmlabs.Order] o
)
```

Client ID	Client Full Name	Client Phone Number	Client email ID	Client Address
9657	Sarah Green	5469885475	sargreen95@gmail.com	187 Aspen Lane, Denver, CO, 80202

**13. What is the net pay received by full time employees after tax deduction, dental deduction, life insurance and medical deduction.**

**ANS:**

```
SELECT DISTINCT e.employeeID AS 'Employee ID', CONCAT (e.employeeFirstName, ' ',  
e.employeeLastName) AS 'Employee Full Name',  
          (ps.payStatementAmount - (ps.payStatementTaxDeduction * ps.payStatementAmount) -  
(ps.payStatementAmount * (f.dentalDeduction + f.medicalDeduction +  
f.lifeInsuranceDeduction))) * 24 AS 'Net Salary'  
FROM [Pharmlabs.PayStatement] ps, [Pharmlabs.FullTimePayStatement] f, [Pharmlabs.Employee] e  
WHERE ps.payStatementID = f.payStatementID AND ps.employeeID = e.employeeID  
ORDER BY e.employeeID
```

Employee ID	Employee Full Name	Net Salary
1210275566	John Wick	90000.0000
1478559657	Oscar Smith	99000.0000
1524163524	Kai Parker	96249.9120
2341523167	Sam Stokes	87999.9120
3217645321	Taylor Cox	62400.0000
3257745865	Harry Garcia	61749.9480
3359677845	Samantha Anderson	55249.8960
3452014783	George Murphy	55249.8960
3554896554	Kyle Martin	58500.0000
3754889655	Jacob Johnson	51999.9480

**14. What is the net pay received by part time employees after tax deduction.**

**ANS:**

```
SELECT DISTINCT e.employeeID AS 'Employee ID', CONCAT (e.employeeFirstName, ' ',  
e.employeeLastName) AS 'Employee Full Name',  
          (ps.payStatementAmount - (ps.payStatementTaxDeduction * ps.payStatementAmount)) * 24  
AS 'Net Salary'  
FROM [Pharmlabs.PayStatement] ps, [Pharmlabs.PartTimePayStatement] pt, [Pharmlabs.Employee]  
e  
WHERE ps.payStatementID = pt.payStatementID AND ps.employeeID = e.employeeID  
ORDER BY e.employeeID
```

Employee ID	Employee Full Name	Net Salary
1243544261	Lea Marco	23800.0680
1477859655	Emily Taylor	23799.8640
3581945242	Aria Cooper	27199.9320
4391746539	Kylie Holmes	25500.0000
4565748541	Noah Conner	27199.9320
4856998745	Charles Miller	27199.9320
5478965213	Ava Davies	27199.9320
7796584224	Margaret Wang	27199.9320
9018247536	Andrew Chen	29749.9320