

a) Найти всех производителей, чьи лекарства имеются на данный момент в аптеке

```
SELECT DISTINCT
    m.[name] as manufacturer_name
FROM
    Manufacturer m
    JOIN MedicationType mt ON m.id = mt.manufacturer_id
    JOIN MedicineBatch mb ON mt.id = mb.medication_type_id
WHERE
    mt.[status] = 'В наличии' AND mb.quantity > 0
```

| | manufacturer_name |
|---|-------------------|
| 1 | AstraZeneca |
| 2 | Bayer |
| 3 | GlaxoSmithKline |
| 4 | Merck |
| 5 | Novartis |
| 6 | Roche |
| 7 | Фармстандарт |

```
SELECT DISTINCT
    MN.[name] AS manufacturer_name,
FROM
    ManufacturerNode MN, Produces P, MedicationTypeNode MTN,
    BelongsToBatch BB, MedicineBatchNode MBN
WHERE MATCH(MN-(P)->MTN-(BB)->MBN)
    AND MBN.quantity > 0
GROUP BY
    MN.[name],
    MN.email
ORDER BY
    manufacturer_name
```

| | manufacturer_name |
|---|-------------------|
| 1 | AstraZeneca |
| 2 | Bayer |
| 3 | GlaxoSmithKline |
| 4 | Merck |
| 5 | Novartis |
| 6 | Roche |
| 7 | Фармстандарт |

b) Вывести заболевания, для которых в аптеке нет лекарств

```
SELECT
    d.[name] as disease_name
FROM
    Disease d
WHERE
    d.id NOT IN (SELECT DISTINCT
        mtd.disease_id
        FROM
            MedicationType_Disease mtd
            JOIN MedicationType mt ON mtd.medication_type_id = mt.id
            JOIN MedicineBatch mb ON mt.id = mb.medication_type_id
        WHERE
            mt.[status] = 'В наличии' AND mb.quantity > 0)
```

| | disease_name |
|---|--------------|
| 1 | Астма |
| 2 | Гастрит |
| 3 | Остеопороз |

```
SELECT
    DN.[name] AS disease_name
FROM
    DiseaseNode DN
WHERE NOT EXISTS (
    SELECT 1
    FROM TreatsDisease TD, MedicationTypeNode MTN,
        BelongsToBatch BB, MedicineBatchNode MBN
    WHERE MATCH(DN<-(TD)-MTN-(BB)->MBN)
        AND MBN.quantity > 0
)
ORDER BY disease_name
```

| | disease_name |
|---|--------------|
| 1 | Астма |
| 2 | Гастрит |
| 3 | Остеопороз |

c) Найти самые дешевые лекарства с основным действующим веществом «дротаверин»

```

SELECT
    mt.[name] AS medication_name,
    mb.price
FROM
    MedicationType mt
JOIN MedicineBatch mb ON mt.id = mb.medication_type_id
WHERE
    mt.active_substance = 'дротаверин' AND mb.quantity > 0
    AND mb.price = (SELECT
        MIN(price)
    FROM
        MedicineBatch mb2
    JOIN MedicationType mt2 ON mb2.medication_type_id = mt2.id
    WHERE
        mt2.active_substance = 'дротаверин' AND mb2.quantity > 0)

```

| | medication_name | price |
|---|-----------------|--------|
| 1 | Но-шпа | 150,00 |

```

SELECT
    MTN.[name] AS medication_name,
    MBN.price AS price
FROM
    MedicationTypeNode MTN,
    BelongsToBatch BB,
    MedicineBatchNode MBN
WHERE MATCH(MTN-(BB)->MBN)
    AND MTN.active_substance LIKE '%дротаверин%'
    AND MBN.quantity > 0
    AND MBN.price = (
        SELECT MIN(MBN2.price)
        FROM MedicationTypeNode MTN2,
            BelongsToBatch BB2,
            MedicineBatchNode MBN2
        WHERE MATCH(MTN2-(BB2)->MBN2)
            AND MTN2.active_substance LIKE '%дротаверин%'
            AND MBN2.quantity > 0
    )
)

```

| | medication_name | price |
|---|-----------------|--------|
| 1 | Но-шпа | 150,00 |

d) Найти все лекарства от ангины и насморка

```

SELECT DISTINCT
    mt.[name] AS medication_name,
    d.[name] AS disease_name
FROM
    MedicationType mt
JOIN MedicationType_Disease mtd ON mt.id = mtd.medication_type_id
JOIN Disease d ON mtd.disease_id = d.id
WHERE
    d.[name] IN ('Ангина', 'Насморк') AND mt.[status] = 'В наличии'

```

| | medication_name | disease_name |
|---|-----------------|--------------|
| 1 | Називин | Насморк |
| 2 | Отривин | Насморк |
| 3 | Стрепсилс | Ангина |

```

SELECT
    DN.[name] AS disease_name,
    MTN.[name] AS medication_name
FROM DiseaseNode DN, TreatsDisease TD, MedicationTypeNode MTN,
    BelongsToBatch BB, MedicineBatchNode MBN
WHERE MATCH(DN<-(TD)-MTN-(BB)->MBN)
    AND DN.[name] IN ('Ангина', 'Насморк')
    AND MBN.quantity > 0
ORDER BY
    disease_name, medication_name

```

| | disease_name | medication_name |
|---|--------------|-----------------|
| 1 | Ангина | Стрепсилс |
| 2 | Насморк | Називин |
| 3 | Насморк | Отривин |

е) Для каждого лекарства вывести количество проданных с начала года упаковок с упорядочением кол-ва упаковок по убыванию

```

SELECT
    mt.[name] AS medication_name,
    SUM(mbs.quantity) AS total_sold_packages
FROM
    MedicationType mt
    JOIN MedicineBatch mb ON mt.id = mb.medication_type_id
    JOIN MedicineBatch_Sales mbs ON mb.id = mbs.medicine_batch_id
    JOIN Sales s ON mbs.sales_id = s.id
WHERE
    YEAR(s.[date]) = 2024
GROUP BY
    mt.[name]
ORDER BY
    total_sold_packages DESC

```

| | medication_name | total_sold_packages |
|----|-----------------|---------------------|
| 1 | Аспирин | 8 |
| 2 | Валерьянка | 8 |
| 3 | Кларитин | 4 |
| 4 | Нурофен | 4 |
| 5 | Панкреатин | 3 |
| 6 | Эналаприл | 3 |
| 7 | Метформин | 3 |
| 8 | Йодомарин | 3 |
| 9 | Лазолван | 2 |
| 10 | Но-шпа | 1 |
| 11 | Амоксикилав | 1 |

```

SELECT
    MTN.[name] AS medication_name,
    SUM(IIS.quantity) AS total_sold_packages
FROM
    MedicationTypeNode MTN,
    BelongsToBatch BB,
    MedicineBatchNode MBN,
    IncludesInSale IIS,
    SalesNode SN
WHERE MATCH(MTN-(BB)-->MBN<-(IIS)-SN)
    AND YEAR(SN.[date]) = 2024
GROUP BY
    MTN.[name]
ORDER BY
    total_sold_packages DESC

```

| | medication_name | total_sold_packages |
|----|-----------------|---------------------|
| 1 | Аспирин | 8 |
| 2 | Валерьянка | 8 |
| 3 | Кларитин | 4 |
| 4 | Нурофен | 4 |
| 5 | Панкреатин | 3 |
| 6 | Эналаприл | 3 |
| 7 | Метформин | 3 |
| 8 | Йодомарин | 3 |
| 9 | Лазолван | 2 |
| 10 | Но-шпа | 1 |
| 11 | Амоксикилав | 1 |

f) Выдать выручку аптеки за вчерашний день по каждому разделу лекарств

```
SELECT
    mt.[name] AS medication_type,
    s.[date] AS date_of_sale,
    SUM(mbs.quantity * mb.price) AS daily_revenue
FROM
    Sales s
    JOIN MedicineBatch_Sales mbs ON s.id = mbs.sales_id
    JOIN MedicineBatch mb ON mbs.medicine_batch_id = mb.id
    JOIN MedicationType mt ON mb.medication_type_id = mt.id
WHERE
    s.[date] = CAST(GETDATE() - 1 AS DATE)
GROUP BY
    mt.[name], s.[date]
ORDER BY
    daily_revenue DESC
```

| | medication_type | daily_revenue |
|---|-----------------|---------------|
| 1 | Метформин | 1080,00 |
| 2 | Кларитин | 1052,25 |
| 3 | Нурофен | 900,00 |
| 4 | Эналаприл | 680,50 |
| 5 | Валерьянка | 601,00 |
| 6 | Аспирин | 285,00 |
| 7 | Но-шпа | 150,00 |

```
SELECT
    MTN.[name] AS medication_type,
    SUM(IIS.quantity * MBN.price) AS daily_revenue
FROM
    SalesNode SN,
    IncludesInSale IIS,
    MedicineBatchNode MBN,
    BelongsToBatch BB,
    MedicationTypeNode MTN
WHERE MATCH(MTN-(BB)-->MBN<-(IIS)-SN)
    AND SN.[date] = '2025-10-16'
GROUP BY
    MTN.[name], SN.[date]
ORDER BY
    daily_revenue DESC
```

| | medication_type | daily_revenue |
|---|-----------------|---------------|
| 1 | Метформин | 1080,00 |
| 2 | Кларитин | 1052,25 |
| 3 | Нурофен | 900,00 |
| 4 | Эналаприл | 680,50 |
| 5 | Валерьянка | 601,00 |
| 6 | Аспирин | 285,00 |
| 7 | Но-шпа | 150,00 |