

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

с) 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	Амоксиклав	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	Амоксиклав	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.medicament_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