

Creating advanced, detailed, deep, complex, and comprehensive analytics and business intelligence (BI) queries based on the provided data involves a combination of advanced SQL operations and visualization techniques. Below are advanced examples of analytics and BI queries using the data from the healthcare dataset:

```
-- Advanced Analytics Query 1: Patient Demographics Analysis
-- Calculate the distribution of patients by age group and gender
SELECT
    CASE
        WHEN Age BETWEEN 0 AND 17 THEN '0-17'
        WHEN Age BETWEEN 18 AND 35 THEN '18-35'
        WHEN Age BETWEEN 36 AND 50 THEN '36-50'
        ELSE '51+'
    END AS AgeGroup,
    Gender,
    COUNT(*) AS PatientCount
FROM
    DimensionPatient
GROUP BY
    AgeGroup,
    Gender
ORDER BY
    AgeGroup,
    Gender;

-- Advanced Analytics Query 2: Doctor Performance Analysis
-- Identify doctors with the highest patient satisfaction ratings
SELECT
    DoctorName,
    AVG(PatientSatisfaction) AS AvgSatisfactionRating
FROM
    FactPatientFeedback
JOIN
    DimensionDoctor ON FactPatientFeedback.DoctorID = DimensionDoctor.DoctorID
GROUP BY
    DoctorName
HAVING
    COUNT(*) >= 10 -- Include only doctors with a minimum of 10 feedback responses
ORDER BY
    AvgSatisfactionRating DESC
LIMIT
    10;

-- Advanced BI Query 1: Monthly Revenue Trends
-- Create a line chart showing monthly revenue trends for the last two years
```

```

SELECT
    YEAR(OrderDate) AS Year,
    MONTH(OrderDate) AS Month,
    SUM(TotalAmount) AS MonthlyRevenue
FROM
    FactBilling
WHERE
    OrderDate >= DATE_SUB(CURRENT_DATE(), INTERVAL 2 YEAR)
GROUP BY
    Year,
    Month
ORDER BY
    Year,
    Month;

```

-- Advanced BI Query 2: Insurance Coverage Analysis

-- Generate a pie chart to visualize the distribution of insurance coverage types

```

SELECT
    InsuranceType,
    COUNT(*) AS CoverageCount
FROM
    DimensionInsurance
GROUP BY
    InsuranceType;

```

-- Advanced BI Query 3: Patient Visits by Department

-- Create a stacked bar chart showing patient visits by department and gender

```

SELECT
    Department,
    Gender,
    COUNT(*) AS VisitCount
FROM
    FactPatientVisits
JOIN
    DimensionDoctor ON FactPatientVisits.DoctorID = DimensionDoctor.DoctorID
GROUP BY
    Department,
    Gender;

```

-- Advanced BI Query 4: Medication Usage Analysis

-- Calculate the most prescribed medications

```

SELECT
    MedicationName,
    COUNT(*) AS PrescriptionCount
FROM
    FactPrescription

```

```

JOIN
    DimensionMedication ON FactPrescription.MedicationID = DimensionMedication.MedicationID
GROUP BY
    MedicationName
ORDER BY
    PrescriptionCount DESC
LIMIT
    10;

```

In these advanced queries:

- Analytics Query 1 analyzes patient demographics by categorizing them into age groups and gender.
- Analytics Query 2 identifies doctors with the highest patient satisfaction ratings, filtering out doctors with insufficient feedback data.
- BI Query 1 creates a line chart to visualize revenue trends over the last two years.
- BI Query 2 generates a pie chart to display the distribution of insurance coverage types.
- BI Query 3 creates a stacked bar chart showing patient visits by department and gender.
- BI Query 4 calculates the most prescribed medications and displays the top 10.

These advanced queries incorporate grouping, filtering, and visualization techniques to provide deep insights into the healthcare data. You can further customize and extend these queries to meet your specific analytics and BI needs.