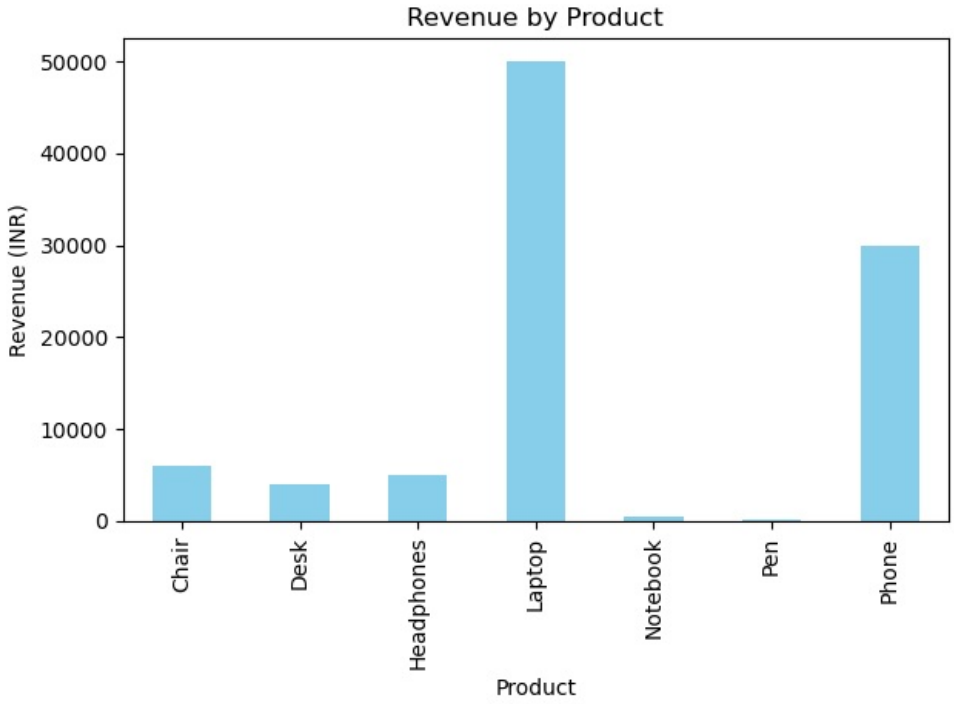
In [1]:
```python
import sqlite3

# 1. Connect to SQLite database (this will create it if it doesn't exist)
conn = sqlite3.connect('sales_data.db')
cursor = conn.cursor()

# 2. Create sales table
cursor.execute('''
CREATE TABLE IF NOT EXISTS sales (
    sale_id INTEGER PRIMARY KEY AUTOINCREMENT,
    order_date TEXT,
    product TEXT,
    category TEXT,
    price REAL,
    quantity INTEGER,
    total_sales REAL
)
''')

# 3. Insert sample data
sample_data = [
    ('2025-06-01', 'Laptop', 'Electronics', 50000, 1, 50000),
    ('2025-06-01', 'Phone', 'Electronics', 15000, 2, 30000),
    ('2025-06-02', 'Chair', 'Furniture', 2000, 3, 6000),
    ('2025-06-03', 'Desk', 'Furniture', 4000, 1, 4000),
    ('2025-06-03', 'Headphones', 'Electronics', 2500, 2, 5000),
    ('2025-06-04', 'Notebook', 'Stationery', 50, 10, 500),
    ('2025-06-04', 'Pen', 'Stationery', 10, 20, 200)
]

cursor.executemany('''
INSERT INTO sales (order_date, product, category, price, quantity, total_sales)
VALUES (?, ?, ?, ?, ?, ?)
''', sample_data)

# 4. Commit and close
conn.commit()
conn.close()

print("✅ Database 'sales_data.db' with table 'sales' created successfully.")
```

```
✅ Database 'sales_data.db' with table 'sales' created successfully.
```

In [2]:
```python
import sqlite3
import pandas as pd
import matplotlib.pyplot as plt

# Connect to existing database
conn = sqlite3.connect("sales_data.db")

# SQL Query: Total quantity and revenue by product
query = """
SELECT product,
       SUM(quantity) AS total_qty,
       SUM(quantity * price) AS revenue
FROM sales
GROUP BY product
"""

# Run query and load into pandas DataFrame
df = pd.read_sql_query(query, conn)

# Print the summary
print(" Sales Summary:")
print(df)

# Plot bar chart for revenue by product
df.plot(kind='bar', x='product', y='revenue', legend=False, color='skyblue')
plt.title("Revenue by Product")
plt.xlabel("Product")
plt.ylabel("Revenue (INR)")
plt.tight_layout()
plt.savefig("sales_chart.png")  # Saves the chart as PNG
plt.show()

# Close database connection
conn.close()
```

```
 Sales Summary:
      product  total_qty  revenue
0       Chair          3   6000.0
1        Desk          1   4000.0
2  Headphones          2   5000.0
3      Laptop          1  50000.0
4    Notebook         10    500.0
5         Pen         20    200.0
6       Phone          2  30000.0
```



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