Pharmacy Management System

Implementation in NoSQL

Group 23

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Percentage of Effort Contributed by Student 1: 100

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Code in Python (Google Colab) for charts:

Bar chart:

```
import sqlite3
import matplotlib.pyplot as plt

conn = sqlite3.connect('pharmacy.db')
cursor = conn.cursor()

cursor.execute("SELECT medicine_name, opening_hours FROM medicine")
rows = cursor.fetchall()

medicine_names = []
opening_hours = []
for row in rows:
    medicine_names.append(row[0])
    opening_hours.append(row[1])

conn.close()

plt.figure(figsize=(10, 6))
plt.bar(medicine_names, opening_hours)
plt.title('Medicines Available According to Opening Hours')
plt.xlabel('Medicine Name')
plt.ylabel('Opening Hours')
plt.xticks(rotation=45, ha='right')
plt.tight_layout()
plt.show()
```

Pie chart:

```
import mysql.connector
import matplotlib.pyplot as plt

mydb = mysql.connector.connect(
    host="sql5.freesqldatabase.com",
    user="sql5699639",
    password="WWH1DEC1RJ",
    database="sql5699639"
)

mycursor = mydb.cursor()

mycursor.execute("""
    SELECT location, COUNT(*) AS pharmacy_count
    FROM pharmacy
    GROUP BY location
""")

result = mycursor.fetchall()

locations = [row[0] for row in result]
pharmacy_counts = [row[1] for row in result]

plt.figure(figsize=(8, 8))
plt.pie(pharmacy_counts, labels=locations, autopct='%1.1f%%',
startangle=140)
plt.title('Distribution of Pharmacies by Location')
plt.axis('equal')  # Equal aspect ratio ensures that pie is drawn as a
circle.
plt.show()

mycursor.close()
mydb.close()
```

```
import sqlite3
import matplotlib.pyplot as plt


conn = sqlite3.connect('pharmacy.db')
cursor = conn.cursor()


cursor.execute("SELECT medicine_name, COUNT(*) FROM medicine GROUP BY
medicine_name")
medicine_data = cursor.fetchall()
medicine_names = [row[0] for row in medicine_data]
medicine_counts = [row[1] for row in medicine_data]

cursor.close()

plt.figure(figsize=(8, 8))
plt.pie(medicine_counts, labels=medicine_names, autopct='%1.1f%%',
startangle=140)
plt.title('Distribution of Medicines')
plt.axis('equal')
plt.show()
```

MongoDB code :

```
import pymongo


client = pymongo.MongoClient("mongodb://localhost:27017/")

db = client["pharmacy_db"]

pharmacy_collection = db["pharmacy"]

medicine_collection = db["medicine"]

pharmacy_data = [

  {"pharmacy_id": 1, "pharmacy_name": "ABC Pharmacy", "location": "123 Main St,
Boston", "phone_number": "555-123-4567", "opening_hours": "Mon-Fri: 9am-7pm, Sat:
10am-5pm"},

  {"pharmacy_id": 2, "pharmacy_name": "XYZ Pharmacy", "location": "456 Elm St,
Philadelphia", "phone_number": "123-456-7890", "opening_hours": "Mon-Sat: 8am-
8pm, Sun: 10am-4pm"},
```

{"pharmacy_id": 3, "pharmacy_name": "QuickCare Pharmacy", "location": "789 Oak St, MA", "phone_number": "555-789-0123", "opening_hours": "Mon-Sun: 24 Hours"},

{"pharmacy_id": 4, "pharmacy_name": "Sunset Pharmacy", "location": "567 Sunset Blvd, Boston", "phone_number": "555-345-6789", "opening_hours": "Mon-Fri: 9am-6pm"},

{"pharmacy_id": 5, "pharmacy_name": "Greenwood Pharmacy", "location": "890 Maple Ave, Seattle", "phone_number": "234-567-8901", "opening_hours": "Mon-Sat: 10am-8pm, Sun: 12pm-6pm"},

{"pharmacy_id": 6, "pharmacy_name": "Cityview Pharmacy", "location": "111 City Ave, New York", "phone_number": "555-678-9012", "opening_hours": "Mon-Sun: 9am-10pm"},

{"pharmacy_id": 7, "pharmacy_name": "Northside Pharmacy", "location": "321 North St, Seattle", "phone_number": "555-222-3333", "opening_hours": "Mon-Fri: 8am-6pm, Sat: 9am-5pm"},

{"pharmacy_id": 8, "pharmacy_name": "Central Pharmacy", "location": "456 Central Ave, Seattle", "phone_number": "789-012-3456", "opening_hours": "Mon-Sat: 10am-7pm"},

{"pharmacy_id": 9, "pharmacy_name": "Westend Pharmacy", "location": "789 West Blvd, San Francisco", "phone_number": "555-666-7777", "opening_hours": "Mon-Fri: 9am-8pm, Sat-Sun: 10am-6pm"}

]

pharmacy_collection.insert_many(pharmacy_data)

medicine_data = [

{"medicine_id": 1, "medicine_name": "Paracetamol", "location_found": "Pharmacy A", "phone_number": "123-456-7890", "opening_hours": "9:00 AM - 5:00 PM"},

{"medicine_id": 2, "medicine_name": "Aspirin", "location_found": "Pharmacy B", "phone_number": "456-789-0123", "opening_hours": "8:00 AM - 6:00 PM"},

{"medicine_id": 3, "medicine_name": "Ibuprofen", "location_found": "Pharmacy C", "phone_number": "789-012-3456", "opening_hours": "10:00 AM - 4:00 PM"},

{"medicine_id": 4, "medicine_name": "Omeprazole", "location_found": "Pharmacy D", "phone_number": "012-345-6789", "opening_hours": "9:00 AM - 7:00 PM"},

{"medicine_id": 5, "medicine_name": "Amoxicillin", "location_found": "Pharmacy E", "phone_number": "234-567-8901", "opening_hours": "8:30 AM - 6:30 PM"},

{"medicine_id": 6, "medicine_name": "Lisinopril", "location_found": "Pharmacy F", "phone_number": "345-678-9012", "opening_hours": "10:00 AM - 5:00 PM"}
]

```
medicine_collection.insert_many(medicine_data)

for pharmacy in pharmacy_collection.find():
    print(pharmacy)

for medicine in medicine_collection.find():
    print(medicine)
```