

# FINAL PROJECT DOCUMENTATION

## POCKETPILLS

Group no 24

Domain - Healthcare

**POCKETPILLS** is an online medical facility where our registered users will get the pleasure and ease of e-consultancy by highly specialised and rated doctors. In case of a need for a physical diagnostic, doctors can also schedule an appointment. Users get the facility to purchase the prescribed medicines easily with door to door delivery service available at affordable rates.

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### STAKEHOLDERS

1. User demanding prescription and purchasing medicines
  2. Company accessing database to check and maintain the stock of medicines and available specialised doctors.
  3. Doctors dealing with their patients and scheduling their appointments.
  4. Small Pharmacy Retailers who will have the facility to purchase medicines at wholesale rate from the website.
  5. Delivery Agencies who will need the delivery details of the recipient.
  6. Diagnostic Labs needing access to a patient's medical details and the required lab facility needed.
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### SCOPE OF PROJECT:

Pocketpills is an online medical facility which can be used in various ways. Besides online ordering of pills, we have a platform for the patient and rated doctors to communicate and seek medical help at the ease and comfort of their homes.

Additionally in pandemic situations like the current one, non covid patients are also avoiding hospital visits, because of fear of infection. With our platform, they are safe at their homes, and still can afford online prescriptions by their own doctors.

By visualising data, stakeholders like Company, Delivery Agencies, Labs will be able to analyse their market share. With the user review system, the company, Delivery Agency etc will be able to improve their performance according to the rating system.

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## QUESTIONS OF STAKEHOLDERS

### USER

1. Who are the best doctors near me for my illness?
2. Can I trust the authenticity of medicines (including due considerations given to the expiry date) delivered from this online store?
3. Are there better and more economic alternatives available for the prescribed drug?
4. Is the required medicine sufficiently available at this online store?
5. Am I saving money by buying from this store?

### COMPANY

1. Are we gaining more profits on this store than a pharmacy?
2. Are we getting enough exposure on this store and how a particular drug is performing in this store?
3. Are all available medicines listed on the online store and are they available in sufficient quantity?
4. Are we providing medicines at a competitive price?
5. Are customers satisfied with the quality of medicines and facility of prescription?
6. Analysing user ratings for different doctors, delivery agencies, drugs.
7. How to attract more specialised doctors to suit every patient's need.

### DOCTOR

1. What are my upcoming appointments?

2. Giving a detailed prescription for some narcotic drug to a patient.
3. Updating and scheduling the open slots.
4. Are the drugs being prescribed have satisfactory results?
5. How satisfied patients are after the appointment?

**SMALL PHARMACY RETAILERS**

1. Are we getting better prices for medicines from the online store?
2. Count the orders placed by that retailer.
3. Which drugs are in high demand?
4. Is there a better alternative to a drug they are selling at their store?
5. Do the drugs they are selling have satisfactory results?

**DELIVERY AGENCY**

1. What are the upcoming deliveries in their area and details of each delivery?
2. Updating the delivery status of the product at every stage.
3. How is their work performance relative to other delivery agencies?
4. Expanding their services to which areas will be most awarding?
5. How satisfied customers are with their delivery service?

**DIAGNOSTIC LABS**

1. Which all tests to be conducted.
  2. What are the patient details(eg age/gender etc)?
  3. Is the performance of the lab better than other competitive labs?
  4. Which diagnostic reports have we made upto now?
  5. How satisfied customers are patients with the lab service?
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## **QUERIES**

### **DELIVERY AGENCY**

- 1.What are the upcoming deliveries in their area and details of each delivery?
- 2.Updating the delivery status of the product at every stage.

- 3.How is their work performance relative to other delivery agencies in some city?
  - 4.Expanding their services to which areas will be most awarding?
  - 5.How satisfied customers are with their delivery service?
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1. SELECT DeID,Destatus,ETA FROM Delivery WHERE DAID=123 and ETA>=<date>;
  2. UPDATE Delivery set Destatus=<status> where DEID=123;
  3. SELECT Delivery.daid,DName,avg(DeliveryReviews.rating) FROM orderr,Delivery,DeliveryAgency,DeliveryReviews WHERE orderr.OID=Delivery.OID and Delivery.DaID=DeliveryAgency.DaID AND Delivery.DeID=DeliveryReviews.DeID and Orderr.city=<xyz> group by delivery.DAID;;
  4. SELECT Orderr.postalcode,SUM(Orderr.price/Drug.price) FROM Drug,Delivery,Orderr WHERE Drug.drid=orderr.drid and Orderr.OID=Delivery.OID GROUP BY orderr.postalcode order by SUM(Orderr.price/Drug.price) desc;
  5. SELECT Delivery.deid,rating FROM Delivery,DeliveryReviews WHERE DeliveryReviews.DeID=Delivery.DeID AND Delivery.DaID=123;

## RETAILERS

1. Are we getting better prices for medicines from the online store?
- 2.Count the orders placed by that retailer.
- 3.Which drugs are in high demand?
- 4.Is there a better alternative to a drug they are selling at their store?
- 5.Do the drugs they are selling have satisfactory results?

1. SELECT drname,price from Drug WHERE drname=<xyz>;
2. SELECT COUNT(\*) FROM Orderr WHERE UID=14;

3. SELECT Orderr.DrID,count(\*) FROM Drug,Orderr where Drug.DrID=Orderr.DrID group by orderr.drld order by count(\*) desc ;
4. SELECT Drug.drID,Drug.drname,avg(Drugreviews.rating),Drug.price from Drug,Orderr,DrugReviews where DrugReviews.OID = Orderr.OID AND Drug.DrID=Orderr.DrID AND ( Drug.symptoms LIKE '%abc%' OR Drug.sickness LIKE '%xyz%' ) group by Drug.drid;
5. SELECT Drug.DrID,Drug.Drname, AVG(DrugReviews.rating) FROM Drug,DrugReviews,Orderr WHERE DrugReviews.OID=Orderr.OID AND Orderr.DrID=Drug.DrID AND Drug.Drname=<xyz> group by drug.drid;

## DOCTOR

- 1.What are my upcoming appointments?
- 2.Giving a detailed prescription for some narcotic drug to a patient.
- 3.Upgrading and scheduling the open slots.
- 4.Are the drugs being prescribed have satisfactory results?
- 5.How satisfied patients are after the appointment?

1. SELECT AID,UID,STIME,SDATE FROM Appointment,OpenSlots WHERE Appointment.SID=OpenSlots.SID AND OpenSlots.DID=123 AND OpenSlots.SDate >= <date>;
2. INSERT INTO Prescription values(<PrID>,<DrID>,<UID>,<DID>);
3. UPDATE OpenSlots set <column1>=123,<column2>=321,... where SID=123;
4. SELECT Drug.DrID,Drname,Avg(DrugReviews.rating) FROM Drug,Prescription,Orderr,DrugReviews WHERE Drug.drID=Prescription.drid and Prescription.DrID=Orderr.DrID AND Orderr.OID = DrugReviews.OID AND Prescription.DID=123 group by Drug.drid;
5. SELECT Appointment.AID,DoctorReviews.rating FROM Appointment,DoctorReviews,OpenSlots WHERE Appointment.SID=OpenSlots.SID AND DoctorReviews.AID=Appointment.AID AND OpenSlots.DID=123;

## USER

1. Who are the best doctors near me for my illness?
2. Can I trust the authenticity of medicines delivered from this online store?
3. Are there better and more economic alternatives available for the prescribed drug?
4. Is the required medicine sufficiently available at this online store?
5. Am I saving money by buying from this store?

1. SELECT Doctor.DID, Doctor.dname, doctor.Phone, AVG(DoctorReviews.Rating), Doctor.StreetAddress FROM Doctor, DoctorReviews, Appointment, OpenSlots WHERE Doctor.DID=OpenSlots.DID and OpenSlots.SID=Appointment.SID and Appointment.AID=DoctorReviews.AID AND Doctor.city=<xyz> group by Doctor.did;
2. SELECT Drug.DrID, Drug.Drname, AVG(DrugReviews.rating) FROM Drug, DrugReviews, Orderr WHERE DrugReviews.OID=Orderr.OID AND Orderr.DrID=Drug.DrID AND Drug.Drname=<xyz> group by drug.drid;
3. SELECT Drug.drid, Drug.drname, avg(Drugreviews.rating), Drug.price from Drug, Orderr, DrugReviews where DrugReviews.OID = Orderr.OID AND Drug.DrID=Orderr.DrID AND ( Drug.symptoms LIKE '%abc%' OR Drug.sickness LIKE '%xyz%' ) group by Drug.drid;
4. SELECT DrID, DrName, Quantity FROM Drug WHERE DRName=<xyz>;
5. SELECT DrID, DrName, Price FROM Drug WHERE DRName=<xyz>;

## COMPANY

1. Are we gaining more profits on this store than a pharmacy?
2. Are we getting enough exposure on this store and how a particular drug is performing in this store?
3. Are all available medicines listed on the online store and are they available in sufficient quantity?
4. Are we providing medicines at a competitive price?

5.Are customers satisfied with the quality of medicines and facility of prescription?

1. SELECT Name,Price FROM Drug WHERE CID=123;
2. SELECT OID,Drug.drID,Orderr.price/Drug.price,Orderr.Price FROM Orderr,Drug WHERE Drug.DrID=Orderr.DrID AND CID=123;
3. SELECT Name,Quantity FROM Drug WHERE CID=123;
4. SELECT Drug.drID,Drug.drname,avg(Drugreviews.rating),CID,Drug.price from Drug,Orderr,DrugReviews where DrugReviews.OID = Orderr.OID AND Drug.DrID=Orderr.DrID AND ( Drug.symptoms LIKE '%abc%' OR Drug.sickness LIKE '%xyz%' ) group by Drug.drid;
5. SELECT Drug.DrID,DrName,Avg(DrugReviews.rating) FROM Drug,Orderr,DrugReviews WHERE Drug.DrID=Orderr.DrID AND Orderr.OID = DrugReviews.OID AND Drug.CID=123 group by Drug.drid;

## LABS

- 1.Which all tests to be conducted.
- 2.What are the patient details(eg age/gender etc)?
- 3.Is the performance of the lab better than other competitive labs?
- 4.Which diagnostic reports have we made upto now?
- 5.How satisfied customers are patients with the lab service?

1. SELECT TID,UID,TTIME, TDATE FROM Test WHERE LabID=3;
2. SELECT distinct(Userr.UID),UName,Age,Gender,Phone FROM Test,Userr WHERE Test.UID=123 AND Userr.UID=Test.UID;
3. SELECT lab.LabID, lab.Iname, lab.tests, AVG(LabReviews.rating) FROM Test,Lab,LabReviews WHERE Lab.LabID=Test.LabID AND Test.Tid=LabReviews.Tid and city=<xyz> group by lab.labid;

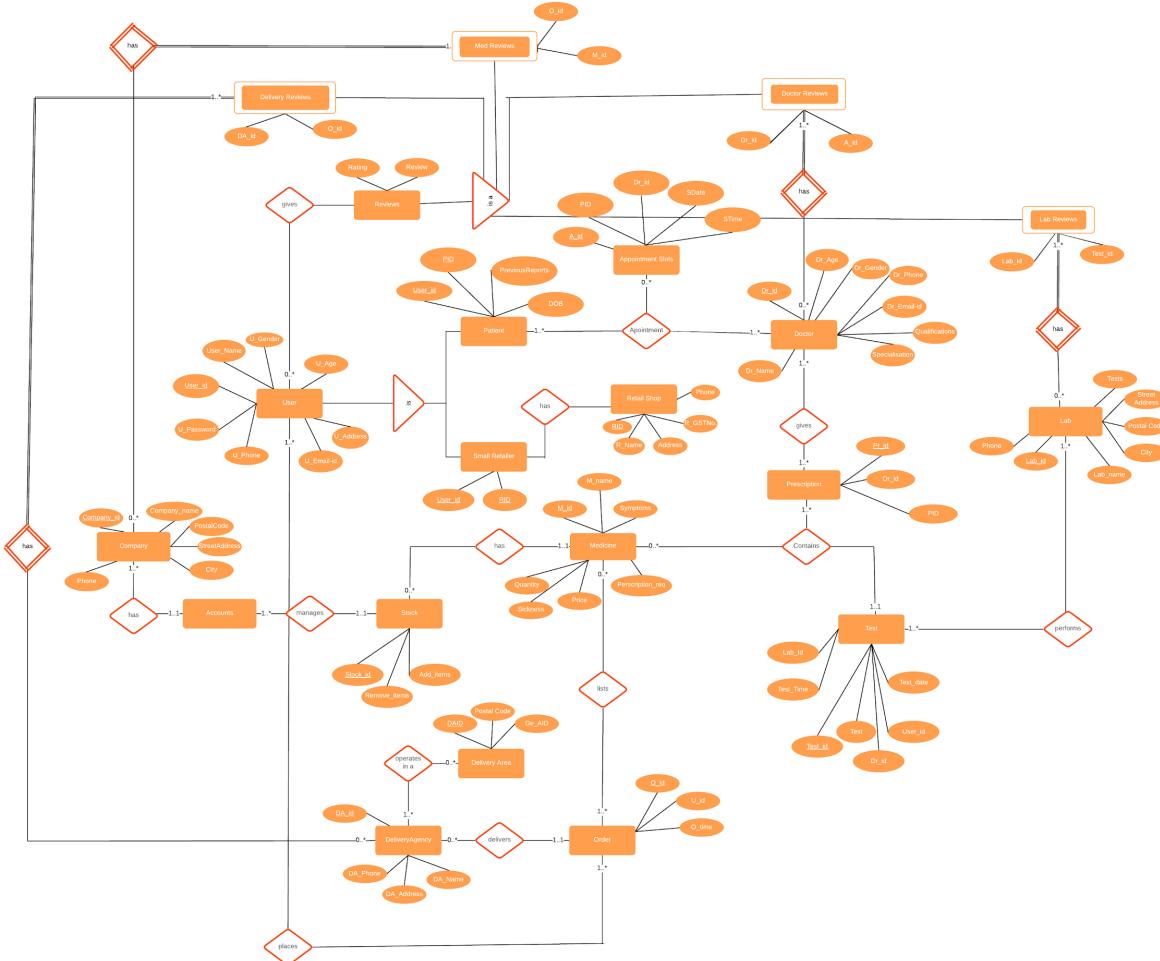
4. SELECT DirID, Test.TID, UID, DiRDate, Remarks FROM Test, DiagnosticReports WHERE Test.TID=DiagnosticReports.TID AND Test.LabID=123;

5. SELECT Test.TID, rating FROM Test, LabReviews WHERE Test.TID=LabReviews.TID AND Test.LabID=123;

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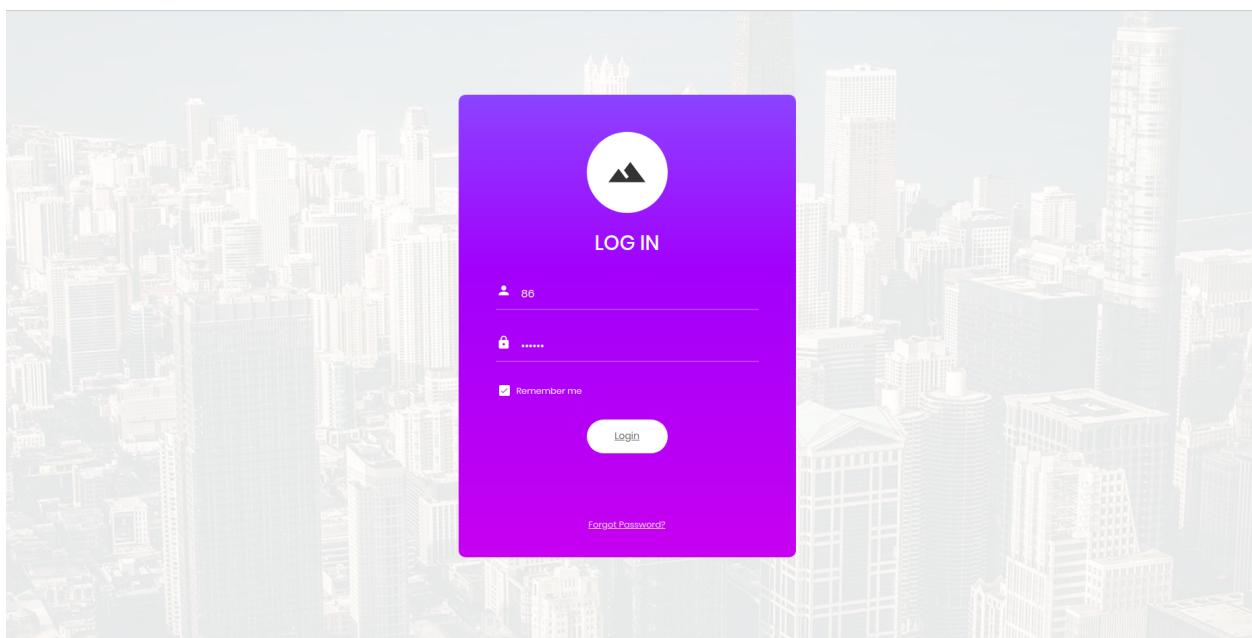
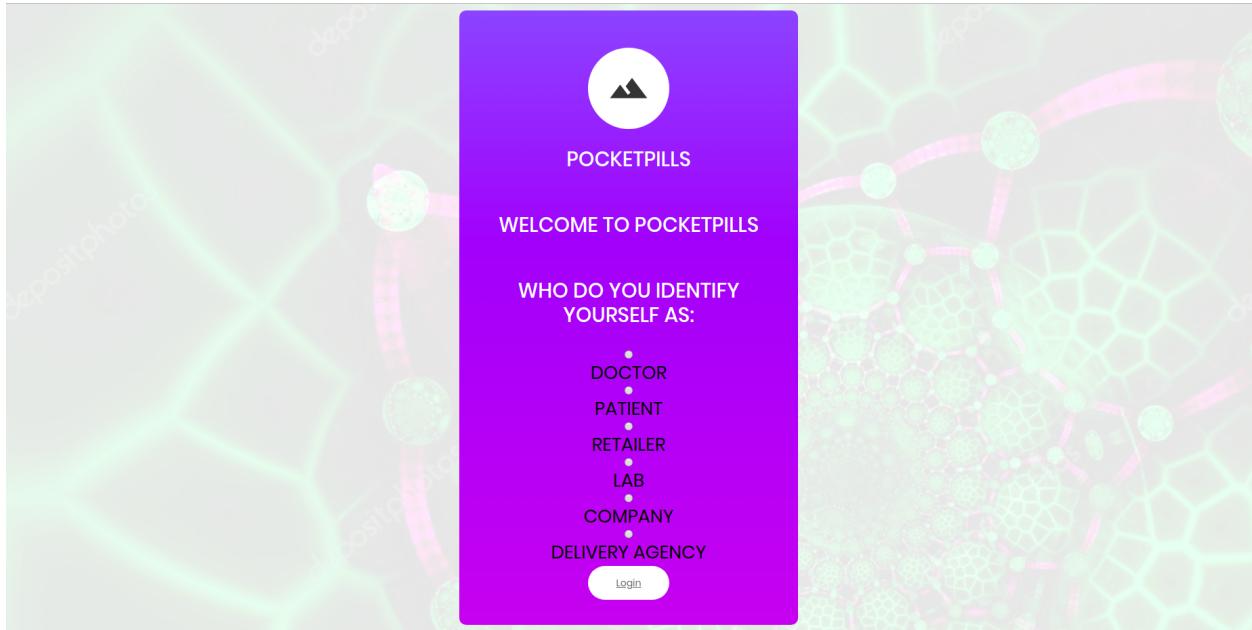
## ER MODEL:

# PocketPills ER Diagram



(Drive [link](#))

UI



← → ⌛ ⓘ 127.0.0.1:8000/queries/

A-HYDROCORT

SEND

[ID:1 Name:A-HYDROCORT  
Rating: 1.15]

NEXT QUERY

BEST DOCTORS NEAR ME

SEND

[ID:39 Name:Orli Phone:720-  
1715  
Qualifications:MBBS,MS/MD  
Speciality:Pediatrician  
Rating: 3.72, Address:1746 Est  
Rd. Torrevieja]

BACK

## Bonus features:

1. **Users can now chat with their Doctor** (avoids unnecessary appointments and quicker process of cure).
2. **Personalised experience** to patients by providing similar alternative drugs (based on order history).
3. Doctors have an option to prescribe **alternatives of drugs** they are already prescribing.
4. Providing a list of most frequent sickness and their symptoms to the drug company, to increase the medical stocks accordingly.
5. Providing a list of most frequent lab tests done across the city to improve lab performance.
6. Providing most popular delivery areas to the delivery Agency to allow them to increase their coverage efficiently.
7. We have a **review and rating system** for Doctors, Delivery Agency, Company so that a new user can have an overall look at the history of services.
8. **Visualised data** such as Company's, Lab's, Delivery Agency's market share with the help of pie-charts.
9. **Visualised data** such as no. of orders, tests, deliveries on some particular day with the help bar-charts.
10. We have enabled **encryption of passwords**.

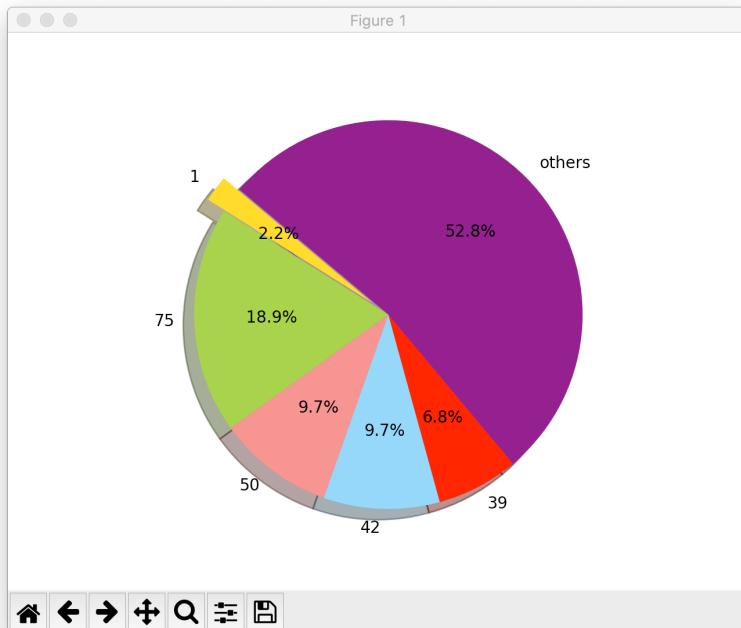
# Chat-System:

```
Tushars-MacBook-Air:CLI tusshhrrr$ python3 CLI.py
Login as:
1.User
2.Doctor
3.Company
4.Retailer
5.Delivery Agency
6.Retailer
0.Exit
2
Login as Doctor:
ID:
1
Password
098765
Select Query:
1:Upcoming appointments:
2:Upcoming open slots:
3:Drug for some sickness or symptoms:
4:Reviews of drugs prescribed:
5:Order history(BONUS):
6:Chat with a patient(BONUS)
7:Alternative drugs to prescribe based on history(BONUS)
8:Open-Slots vs Date BAR-CHART (BONUS)
9:Appointments vs Date BAR-CHART (BONUS)
0:MainScreen
6
Input your <Doctor ID> as user no.
Start every message with <user ID + 1000> to send a message to the Doctor
Enter user no.1
1001 hey
Received from user 1001:hello
1001 How're you feeling now?
Received from user 1001:Much better, doctor.

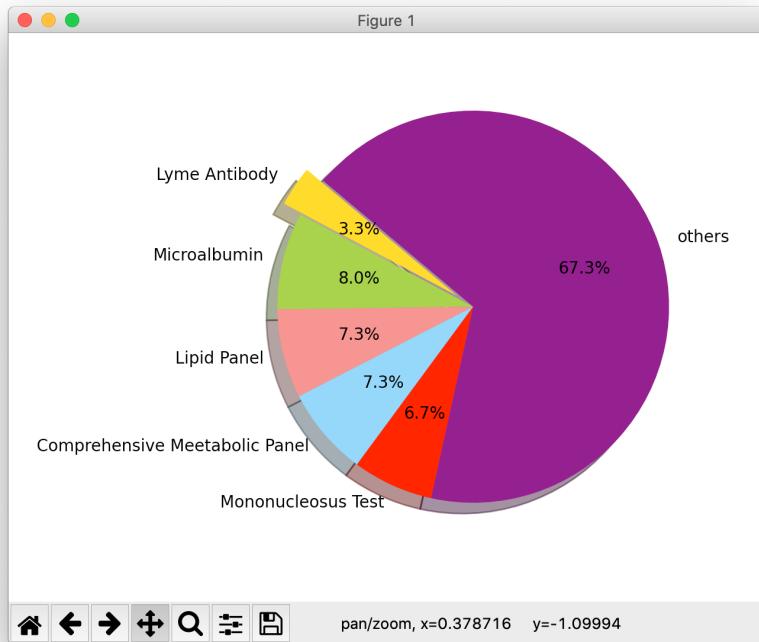
Tushars-MacBook-Air:CLI tusshhrrr$ python3 CLI.py
Login as:
1.User
2.Doctor
3.Company
4.Retailer
5.Delivery Agency
6.Retailer
0.Exit
1
Login as user:
ID:
1
Password
ye4A3v
Select Query:
1:Best doctors near me:
2:Authenticity of a Medicine:
3:Better alternative to a drug:
4:Quantity of a Drug:
5:Price of a Drug:
6:Chat with a Doctor(BONUS):
7:Alternative drugs based on order history (BONUS)
8:Orders vs Date BAR-CHART(BONUS)
0:MainScreen
6
Input your <user ID + 1000> as user no.
Start every message with <Doctor ID> to send a message to the Doctor
Enter user no.1001
Received from user 1:hey
1 hello
Received from user 1:How're you feeling now?
1 Much better, doctor.
```

# Pie-Charts:

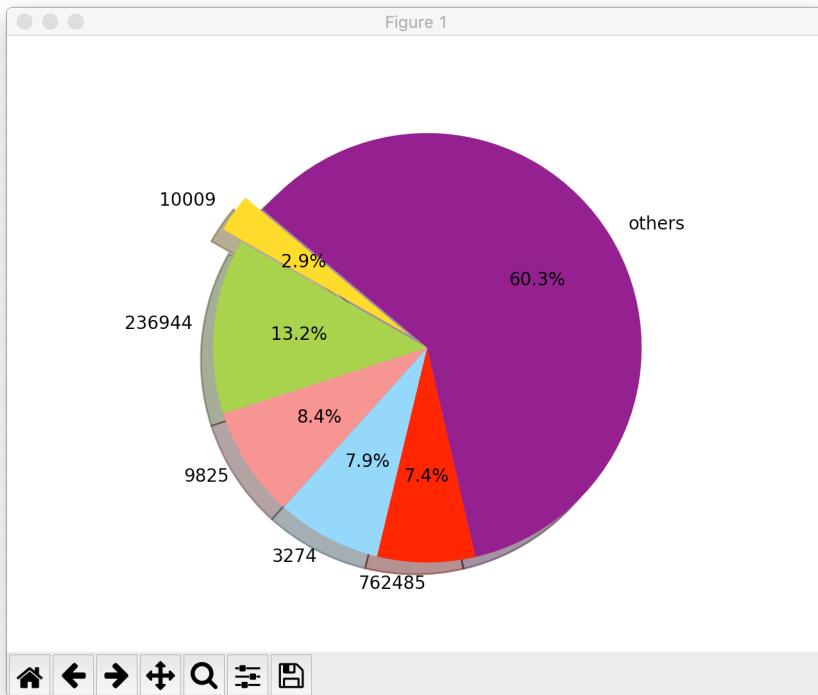
Company and their Market-Share:



## Tests and their Market-Share:

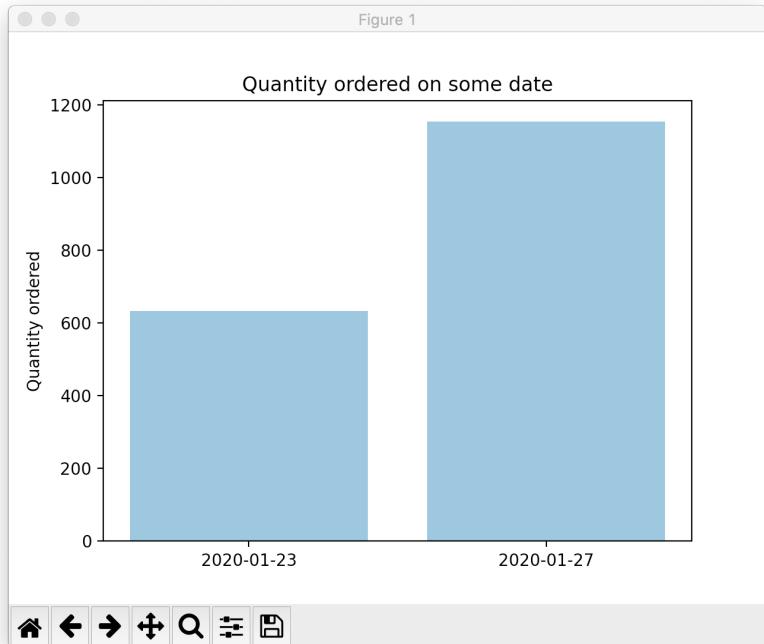


## DeliveryAreas and their Market-Share:



## Bar-Charts:

For Drug ID=16



For Delivery Agency ID=25:

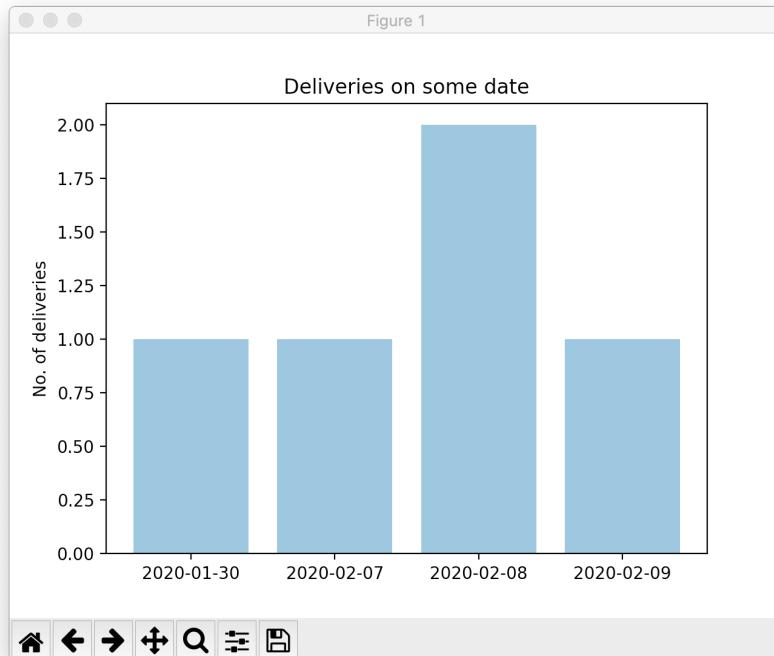


Figure 1

