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Narcotic Drug Management System

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ABSTRACT

Opioids are powerful painkillers that are highly addictive. According to the CDC, more than 100,000 people died of drug overdoses in the United States during the 12-month period May 2020 to April 2021. A narcotic drug management system is a centralized cloud based database that tracks controlled substance prescriptions. It can provide health authorities timely information about prescribing and patient behaviors that contribute to the epidemic and facilitate a nimble and targeted response.

It continue to be among the most promising interventions to improve opioid prescribing, inform clinical practice, and protect patients at risk. This is an android application with simple interface. That simply keeps the sell and purchase record of narcotic or opioid medicine from manufacturer to the patient. Also helps in identifying prescription abusers and stop such activities. All purchase and sell records of manufacturer, depo, wholesalers and retailers are visible to drug commissioner that help to keep an eye the overall transactions of narcotics and take legal actions based on this.

***Keywords**: Addictive, Android application, Cloud-based database, Drug commissioner,Drug overdoses, Health authorities,Narcotic drug management system, Opioid epidemic, Opioids, Painkillers, Policy decisions*

1. INTRODUCTION

The opioid epidemic in the United States has reached critical levels, with tens of thousands of fatalities annually due to drug overdoses. Traditional approaches to combatting this crisis have fallen short, lacking robust mechanisms for tracking opioid distribution and consumption. In response, the Narcotic Drug Management System has emerged as a promising solution. This cloud-based database offers comprehensive monitoring and regulation of controlled substances, from production to patient dispensation. By enabling real-time tracking of prescription transactions and detecting misuse patterns, the system empowers health authorities to intervene swiftly. Moreover, it enhances transparency and accountability across the pharmaceutical supply chain. This paper explores the opioid epidemic's nature, reviews previous mitigation efforts, and introduces the Narcotic Drug Management System's purpose.

It delineates how the system contributes to combating the crisis effectively. By leveraging technology, this system represents a significant advancement in safeguarding patient well-being and curbing opioid misuse.

2. OBJECTIVES:

The objectives of this project are given below:

- The objectives of the Narcotic Drug Management System include real-time monitoring of controlled substance transactions, data analysis for identifying misuse patterns, transparency across the supply chain, prevention of prescription abuse, regulatory compliance, efficient reporting, interoperability, user education, and ultimately mitigating the impact of the opioid epidemic on public health.

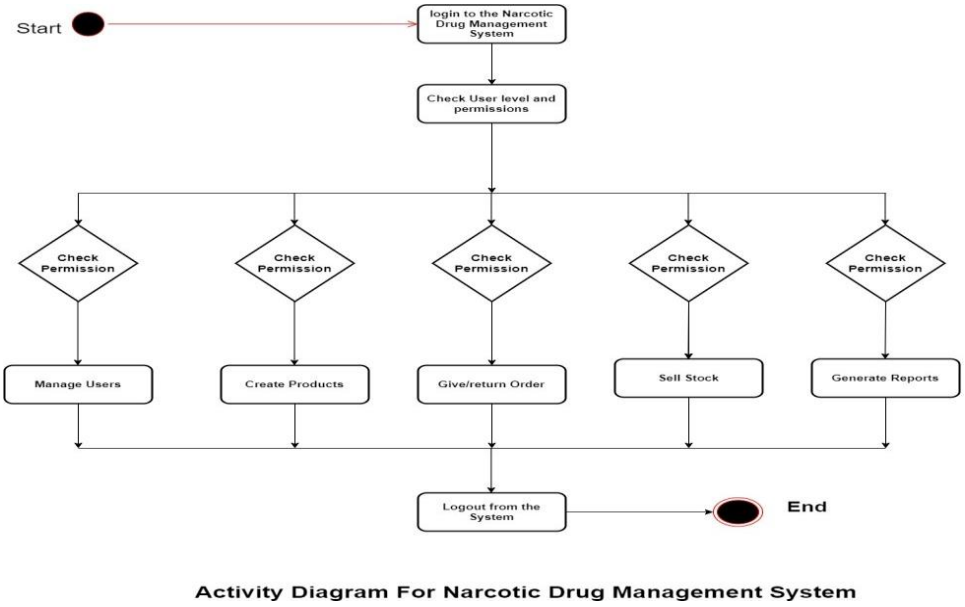
3. PROPOSED DESIGN:

3.1 METHOLOGY USED:

1. **Needs Assessment:** Conducting a thorough assessment to identify the requirements and objectives of the system. This involves gathering input from stakeholders such as healthcare providers, pharmacists, regulatory agencies, and patients to understand their needs and priorities.
2. **System Design**: Designing the architecture, database structure, and user interface of the system based on the identified requirements. This may involve collaborating with software developers, user experience designers, and subject matter experts to ensure the system meets the needs of its users.
3. **Data Integration:** Integrating the system with existing databases, electronic health records, and pharmacy management systems to facilitate seamless data exchange and interoperability. This involves establishing data exchange protocols and ensuring data security and privacy.
4. **Regulatory Compliance:** Ensuring that the system complies with all relevant regulations and guidelines governing the handling and tracking of controlled substances. This includes measures to ensure data security, patient privacy, and compliance with DEA regulations.
5. **Pilot Testing:** Conducting pilot tests of the system in a controlled environment to identify any technical issues, usability concerns, or areas for improvement before full-scale implementation. This involves selecting a representative sample of users to test the system and collecting feedback to inform refinements.
6. **Training and Education:** Providing comprehensive training and education to users of the system to ensure they understand how to effectively use it and comply with regulatory requirements. This includes training sessions, user manuals, and ongoing support mechanisms.
7. **Implementation:** Rolling out the system across relevant stakeholders, including manufacturers, distributors, pharmacies, and regulatory agencies. This involves configuring the system, training users, and integrating it into existing workflows.

8. **Monitoring and Evaluation:** Monitoring the system's performance and evaluating its impact on opioid prescribing practices, patient outcomes, and regulatory compliance. This involves collecting data on system usage, tracking key metrics, and soliciting feedback from users.
9. **Continuous Improvement:** Iteratively improving the system based on feedback and lessons learned from monitoring and evaluation activities. This may involve making refinements to the system's functionality, usability, and effectiveness in addressing the opioid epidemic.

4. FIGURES AND TABLES



Activity Diagram For Narcotic Drug Management System

Fig. Activity Diagram for Narcotic Drug Management System Diagram.

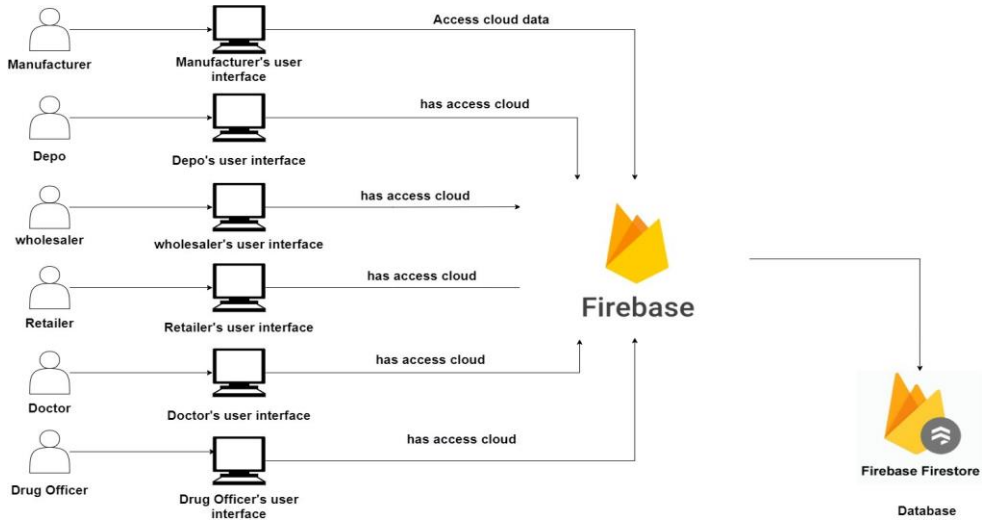


Fig. Implementation Architecture

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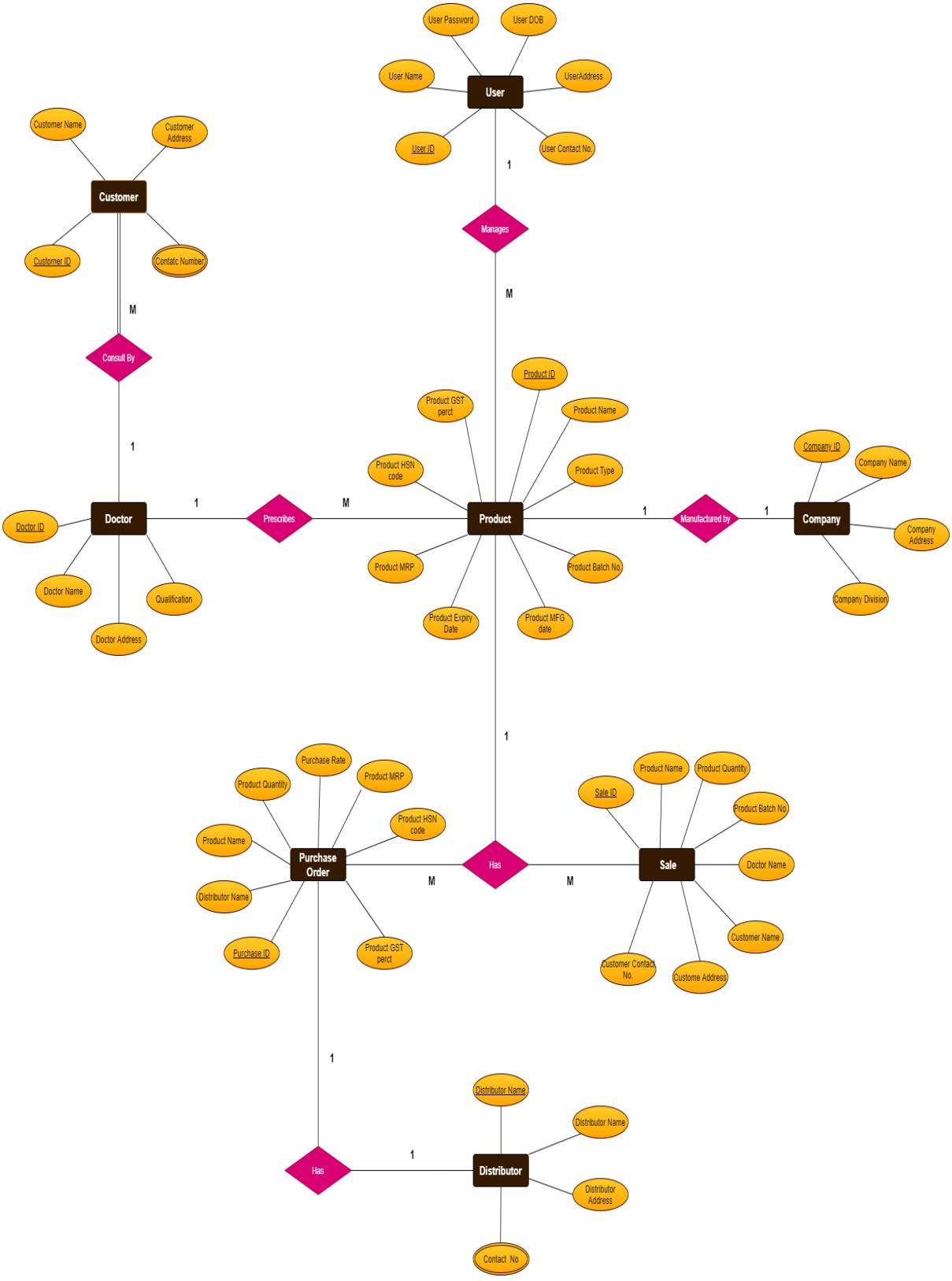

Fig. Entity Relationship (E-R) Diagram.

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5. RESULT

Fig.HomePageUI

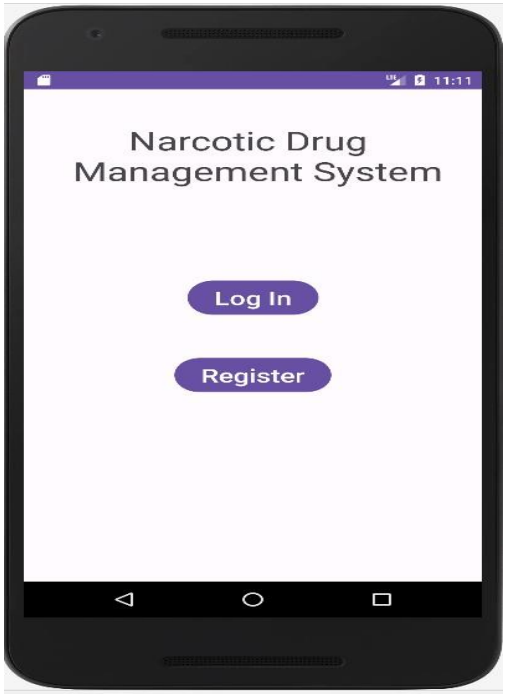
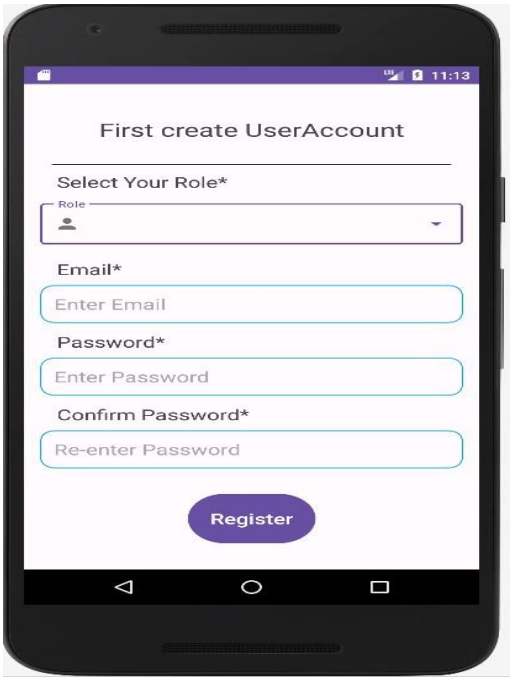


Fig. Sign up Page UI



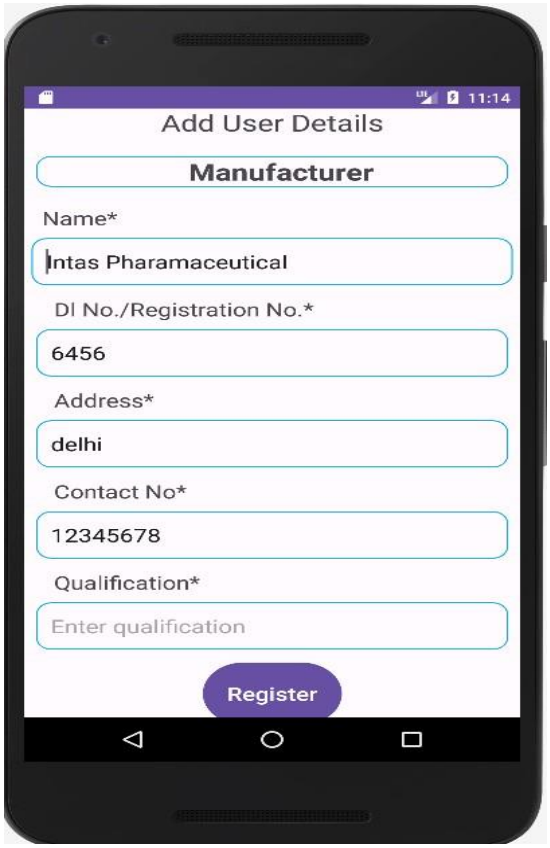


Fig.Registration PageUI

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Fig.Home Page

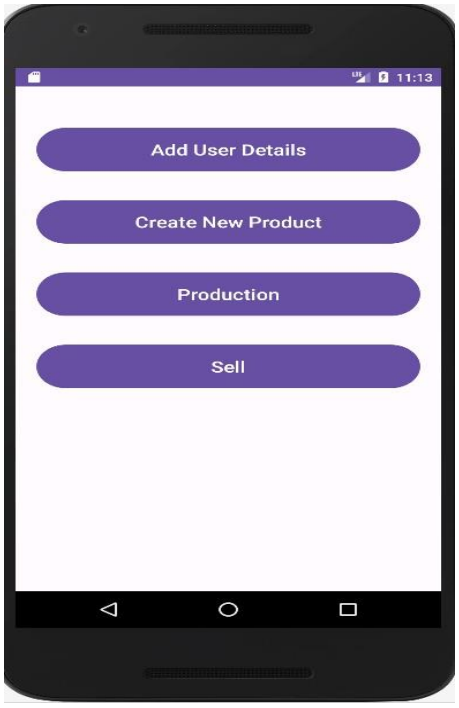
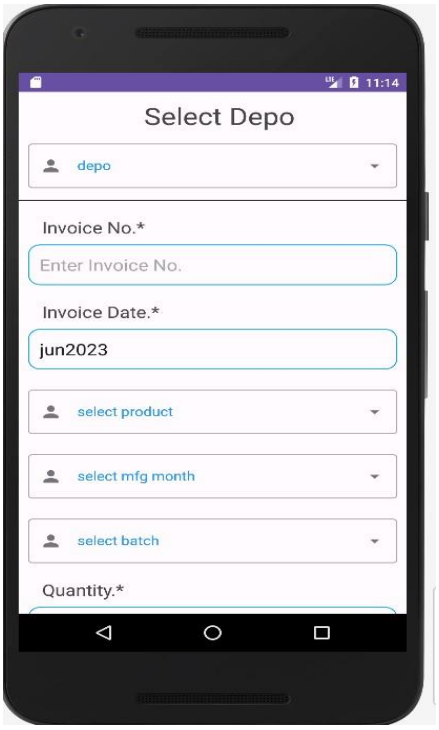


Fig.Sell Page



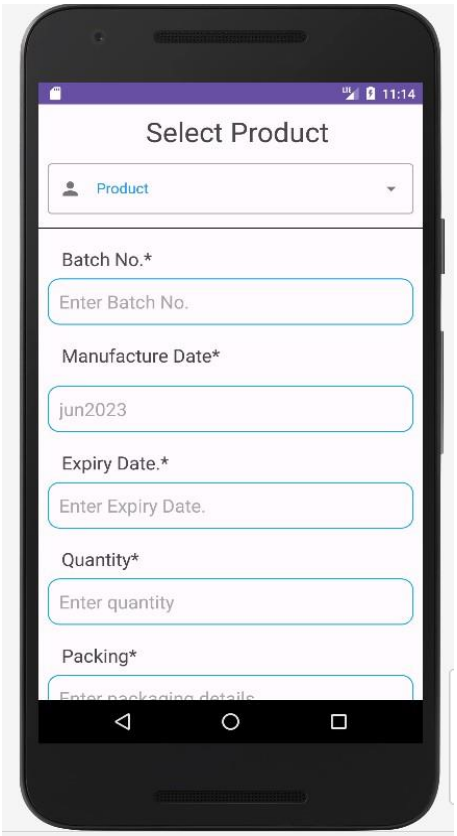


Fig. New Product Creatio

2.1 Drug Officer Page UI

Fig.Home Page

Fig.Per User Page

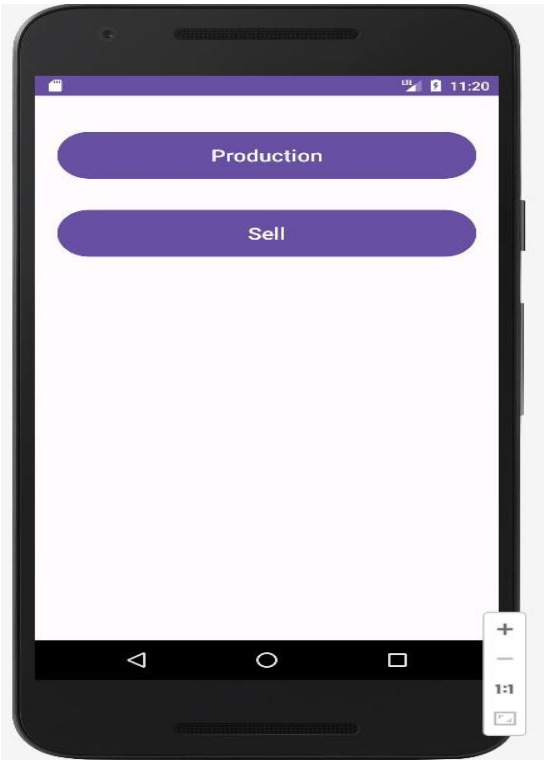
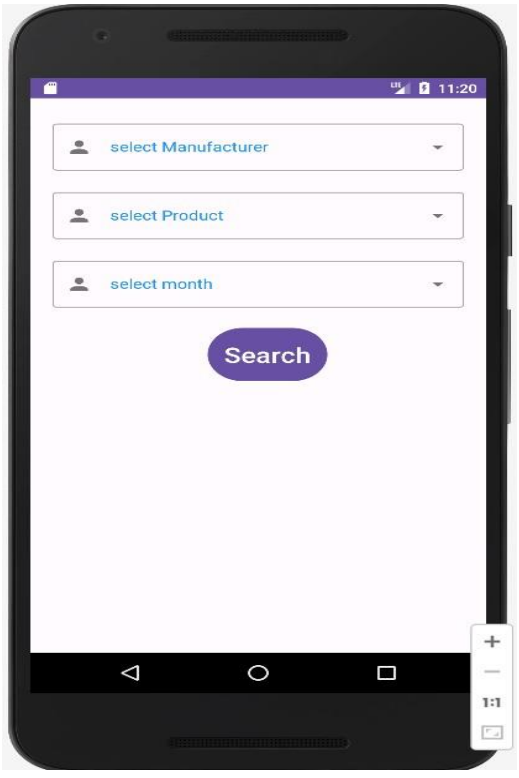


Fig. Data Retrieval Page



6. CONCLUSION

So, finally I conclude by saying that, this Narcotic Drug Management System isvery useful for managing Narcotic drug and substances record in medical field. Be- cause all users have to daily insert the data into the application about their purchase and sell. So tracking the medicines from manufacturing to the retailer becomes possi-ble.

Our app simply keeps the sell and purchase record of narcotic or opioid medi- cine from manufacturer to the patient. Also helps in identifying prescription abusers and stop such activities. All purchase and sell records of manufacturer, depo, whole- salers and retailers are visible to drug commissioner that help to keep an eye the overalltransactions of narcotics and take legal actions based on this.

If the health industry adopt this project, then the work of the doctors, chemist and drug officers can be reduced and they can view the information about medicines sell and purchase of individual shop, , depos,etc.

7. ACKNOWLEDGEMENT

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We are also thankful to Prof. C. G. Kokane-Pawar (HOD CSE Dept.) and all staff members of our department for giving us guidance for making this project successfully.

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2. So, finally I conclude by saying that, this Narcotic Drug Management System isvery useful for Narcotic Drugs & Psychotropic Substances https://dor.gov.in/narcotic-drugs-psychotropic.
3. Getting started with firestore https://firebase.google.com/docs/firestore/quickstart
4. Android documentation for designing layout/User interface https://developer.android.com/docs