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MED-BOX

By

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A project report submitted to

Prof.

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PHY1901

INNOVATION IN PHYSICS

in

B. Tech. COMPUTER SCIENCE AND ENGINEERING

INTRODUCTION

What is a MED-BOX?

The MED-BOX is an automatic medicine vending machine, that has the capability to receive input from the user and then dispense the required dose and quantity of medicine. The input, here means, the prescription by the physician to the user. The system features a machine that is capable of handling a complete range of prescriptions.

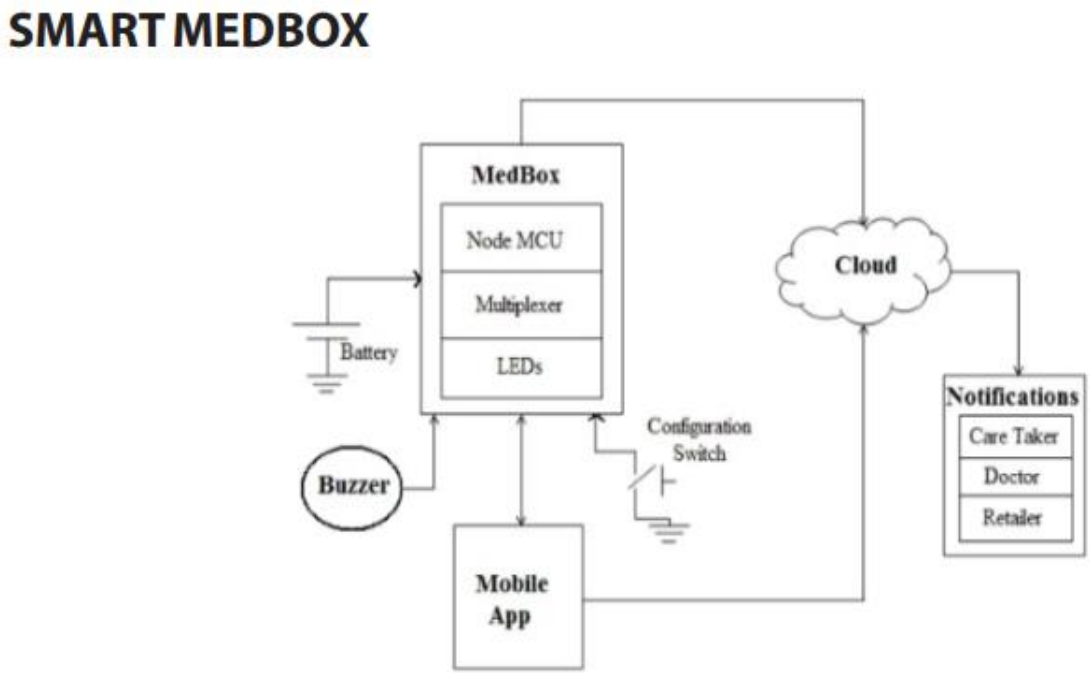
It gives the availability of medicines all the time, also in rural areas. It is very helpful; it gives ease of access also. It is a sales person-less service that is based on a smart card. MED-BOX can be viewed as an automated pharmacy placed on a commercial scale so that an infinite number of users will be able to access it anytime.

MED-BOX will cater to the needs of the customers with no further human intervention required. The machine is user-friendly and is very simple to operate. With this, labor costs will be minimized and it will also give entrepreneurs the opportunity to attract more customers with this innovation.

The design is based on simplicity and the utilization of low-cost materials and components that can be easily available.

MEDBOX aimed at closing this gap by collating quality, open-access, practical documents such as clinical guidelines, assessment checklists or textbooks on one homepage. The MEDBOX team started to better apply what we know already by allowing easy access to what is available. In addition, MEDBOX started developing innovative generic checklists and survey tools for humanitarian practitioners for all aspects of work. These tools can be adjusted to any given setting and tailored for specific needs.

WORKING PRINCIPLE OF SMART MED BOX:



MOTIVE BEHIND THE PROJECT:

Most impoverished people in most nations are caught in a vicious cycle in which poverty fosters illness, and illness breeds poverty.

Medicine vending machines may be beneficial and hence significant in poor nations such as India, where healthcare is nearly non-existent.

People in remote areas are unable to obtain medicines that the government provides them for free.

The goal of this initiative is to provide individuals with access to medications through patient kiosks in public places such as drug shops, malls, bus/rail stations, motorways, and other regions where medical stores are scarce, ensuring medicine availability 24 x 7

Estimated benefit - Effect measure: this is the clinical outcome that was reported in the clinical trial such as BP, FEV, CD, VL etc. Risk benefit of this should be reported in the clinical trial and, in most cases, includes the 95% confidence level (95% CI).

Absolute risk reduction, also termed risk difference, is the difference between the absolute risk of an event in the intervention group and the absolute risk in the control group.

Number Need to Treat (NNT): gives the number of patients who need to be treated for a certain period of time to prevent one event. It is the reciprocal of the absolute risk.

HOW THIS IDEA CAME TO YOUR MIND:

It all started during a Health Cluster Meeting in college. During a discussion concerning the sharing of information many participants observed that they were struggling to access WHO guidelines and other practical guidelines, although internet access was not a problem.

That was the moment when the Medical Mission Institute in Wuerzburg had the idea of creating an open-access website where all the relevant health documents are collected and readily available for everyone and everywhere.

Health information is vital. Healthcare workers worldwide can only work efficiently and effectively if they have access to the right information at the right time. But finding the right information quickly is a challenge. Especially for busy healthcare workers who have limited time to search for the information needed.

The excessive number of materials, documents and data available online. Created an overflow of information. Adding to that, this information can draw reliable information and compete for attention. This phenomenon is also called epidemic. With the online library MEDBOX, we want to make your life easier.

HOW IT IS HELPFUL:

MEDBOX provides high quality health information on a single website. The systematic structure allows a quick overview of the most important topics and easy access to the required information. That way you can have time. Access to high quality and trusted information and all free of charge at their cost.

The interdisciplinary team behind the MEDBOX sources thousands of documents from different trusted sources. Content experts provided a quality check before the document is added to the library. MEDBOX collects those documents and sorts them into different categories such as key resources, Clinical guidelines or pharmacy and technologies.

The content is aimed at healthcare workers, public health professionals, patients, policymakers and much more. For selected issues, our Med box experts even packaged the most relevant documents and information into tool boxes ready to access when you need them and where you need them.

This is how we support healthcare workers worldwide to fulfil their work.

Confronted with disasters or crises, local or national organizations, or authorities in charge, do not often have necessary information or tools readily available to facilitate rapid, quality actions. Currently, many practitioners rely on piecemeal information and guidelines that are available to them through their own searching, recommendations or hearsay.

Although most of the standardized tools and guidelines in humanitarian practice are available online it is not always easy to locate them. Finding relevant documents for medical humanitarian work on the WHO online library, for example, is often challenging. During some of the more recent, large-scale emergencies in Pakistan or Haiti, UN OCHA offered only selected documents on their country specific internet sites.

Yet, both websites contained any medical documents! Commonly, not even the Health Cluster leads are aware of the existence or quality of hands-on guidelines available online. The consequence can be a variable quality of medical responses. Importantly, this situation is not necessarily the fault of healthcare providers or managers in humanitarian assistance. Healthcare providers can function effectively if their basic professional needs are met. It has been proven that lack of access to information for health professionals is a major contributing factor for child and maternal mortality.

PROBLEM STATEMENT:

This dispensing machine might be efficient in many ways but it does not eliminate all possible errors. It's still possible for the pharmacy to stock the wrong medication. Physicians can pick a similar-looking drug from another drawer.

Since this machine is an electronic device, it can malfunction at any critical time. Healthcare facilities must be prepared for emergencies. They should have separate kits containing resuscitation and critical care drugs.

Currently, worldwide aging and regularity of persistent diseases are flattering a broad concern. Numerous countries are undergoing hospital restructuring by reducing the number of hospital beds and escalating home healthcare, which is envisioned to perk up health care quality, has fascinated wide-ranging attention.

In order to track the physical status of the elderly and, in the meanwhile, to keep them healthy, the proposed idea will be helpful. IoT expands the Internet into our everyday lives by wirelessly connecting various smart objects, and will bring significant hangs in the way we live and interact with smart devices. The new wave in the era of computing will be outside the sphere of the conventional.

Internet of Things (IoT) is a network where many of the objects that surround us will be networked in one form or another. By using this technology, the health statistics of medication are observed. In this process of encryption, the schedule data or doctor's prescription are sent to MED BOX through mobile app. The LEDs are placed for indication and buzzer for alarm alerts and reset button is used to count for medicine in cloud platform.

The existing techniques to the market for the reminder include a MED BOX. But this does not help in checking the medicine. This proposed idea is a valuable solution to the medical non-compliance problem. The innovation scheme to help patients keep trail of their medicine consumption through a series LED alarm indicator signal and audio alarm indicator signals.

PROCESS SUMMARY:

STEP 1: We made a timeline ready, which briefs our work for the project in parts.

STEP 2: We did requirement analysis and had our design ready as per our timeline.

STEP 3: Then we circulated google forms and had their reviews about what medicine do they prefer and according to them and some personal recommendation, then data collecting was done.

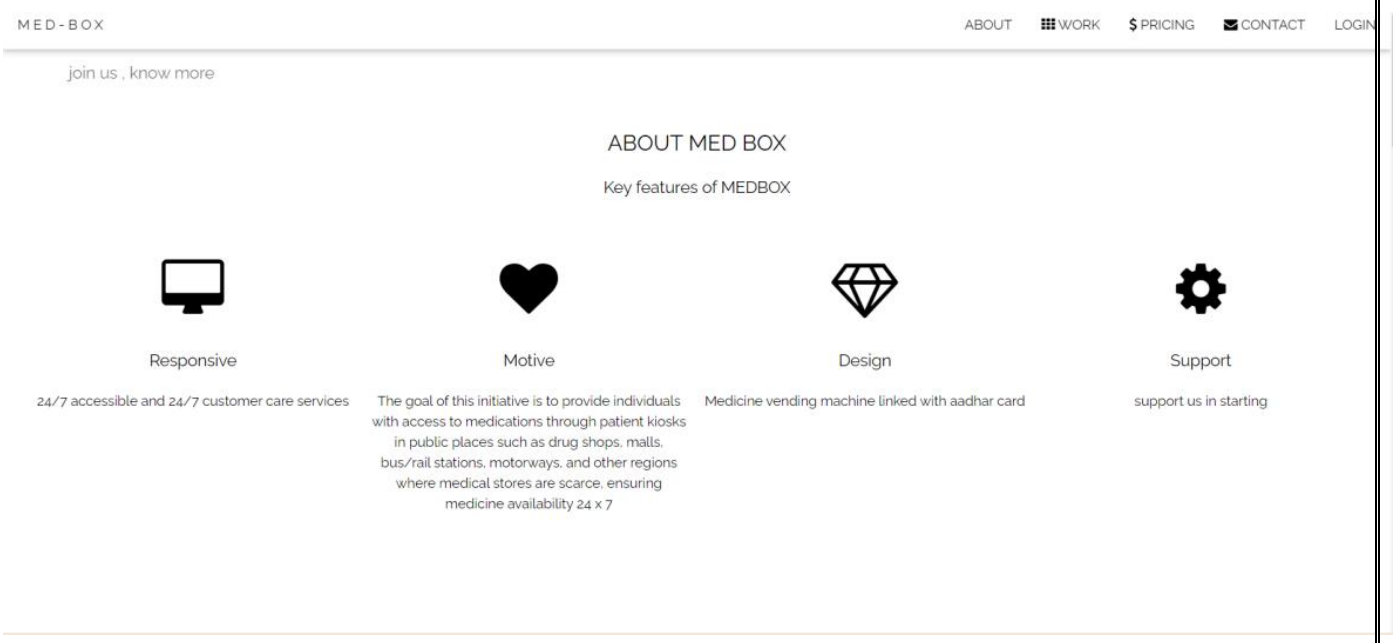
STEP 4: About the digital part, we decided on doing website and App.

STEP 5: Our website was completely coded using HTML and CSS while our software' s backend and frontend was done using python as per our timeline.

STEP 6: App was done using Proto.io.

STEP 7: Integration and Testing was done once all the digital part was done.

WEBSITE:



POST PRODUCTION:

Regarding Implementation and development, we ' re unable to do a working vending machine due to poor resources in the pandemic. For maintenance and operations, we are supposed to refill medicines in vending machines thrice in a month and incase of the websites and software there should be a proper service done once in three months to prevent malpractices in the system which would reduce fake accounts and improve the interface of our website and software.

The final goal of our project is to provide efficient medication not only in urban areas but also in rural areas. To achieve this, there should be a same number of refill sessions in urban and rural areas.

Surveys will be conducted every three months, to be in touch with the customers and to know the medicinal requirements. customer care offices will be set up in every district, with call services/ chat bots.

FOCUS OF THE PROJECT:

MEDBOX aims at closing this gap by collating quality, open-access, practical documents such as clinical guidelines, assessment checklists or textbooks on one homepage, thereby allowing real-time access for humanitarian practitioners. The challenge is to better apply what we know already by allowing easy access to what is available. In addition, MEDBOX will generate innovative generic checklists for humanitarian practitioners for all aspects of work.

In the run of this process, we came to understand that the invention can best take shape if we had a functioning internet platform to work with rather than theory alone. The design of the webpage was a challenge as it had to follow the claim that a library homepage can be colorful and pleasant for the user to be browsing through and at the same time be practical and easy to navigate. After satisfactory accomplishment we decided to launch MEDBOX.

The website is functional and had at that time 800 key humanitarian documents uploaded. The archive system underwent several tests before more documents were uploaded. This included the editorial side (backend), the search engine and the capacity of users to find MEDBOX documents through commercial search engines (such as google).

In order to stock the online archive with relevant documents we initially started with a collection of fairly undisputed key guidelines such as the Sphere Handbook, many WHO guidelines and those from international NGOs such as MSF, Oxfam, Save the Children, Action against Hunger, and the Red Cross and Red Crescent Movements (IFRC and ICRC). We reached out to all major organizations also because we needed to receive legal permission from the authors to re-publish PDF documents according to international 4 copyright laws.

The biggest innovation of MEDBOX is the vision of producing an easy-to-use survey tool that can be applied for assessments, monitoring and evaluation purposes. The invention stage was characterized by a lively cooperation with Doctors without Borders y, who were keen on piloting a checklist for hospital evaluation through MEDBOX. Registered users have the option to set up their "own MEDBOX", saving documents of interest in a closed area of the webpage. The registration is a three-step free of charge process that allows users to administer documents of their interest in a way well known from the windows explorer.

SCOPE OF PROJECT:

- The aim of this prototype is that temporary relief is to be given out that can give rural people a better chance for resisting the health from withdrawing before they are able to reach doctor.
  Major advantage is that people would be able to access the drugs via patient kiosks in public places such as drug stores, malls, bus, railway stations, on highways, areas where medical stores are limited.
- Medicine vending machines will become increasingly popular as a convenient way to purchase prescribed medications.
  They are used to dispense products to customers without the involvement of staff or human assistance on a 24-hour basis, and in this Covid-19 scenario, thus giving a great alternative for pharmacies.
- This will only need a short amount of time to keep them serviced and stocked with products.
- MEDBOX will improve the quality of health-related humanitarian action, especially at local/national levels and ultimately contribute to improving the

quality of patient care and standardization of health action by providing access to relevant tools, anytime, anywhere, in a handy, easy to use format!

- Furthermore, innovative user-friendly checklists will be made available for individual use, adding value to timely humanitarian quality interventions. With increasing internet access largely utilized through mobile phones (as was seen in Haiti), the internet will be the major source of health care information in humanitarian aid, in the future.
- Users of MEDBOX include those in charge of the medical relief efforts of the Provincial Disaster Committee in Baluchistan tasked with managing flood relief; the MoH staff in Myanmar facing challenges after yet another cyclone; or the medical team of a CBO in Zimbabwe dealing with cholera or typhoid outbreaks.
- We envision for the future that MEDBOX and its innovative tools will be the instrument to use in acute humanitarian emergencies.

The main objectives of the project are:
I. Dispense of medicines from MED BOX at scheduled time.

II. Medical alerts to care taker and retailer
III. Online report generation of medicine
IV. Real-time health statistics monitoring of medicines
V. Configuration data is sent through mobile app.

TARGETED AUDIENCE:

For anyone working in humanitarian settings, the necessity of immediate, up-to-date information is paramount, especially with regards to operationally relevant information such as guidelines and checklists for various health related issues. At the same time, a major limitation in providing quality humanitarian assistance is the knowledge gaps at field level. This was observed during various acute interventions in the past few years in Myanmar, India, Pakistan, Haiti and Turkey, to name but a few, recent examples.

Quality assurance and accountability are important values in humanitarian action and receive growing attention by actors, donors and the public alike.10 Real-time access to operationally relevant documents and innovative checklists online will facilitate application of medical standards and hence raise the quality of interventions and, consecutively, improved humanitarian outcomes and impact.

Despite many calls for developments in this direction in recent years (see various footnotes), so far nothing has been developed for practical use in the field of humanitarian action. This project will be the first of its kind. Innovative, user-friendly, generic checklists will be generated to allow humanitarian actors to quickly get an overview over a given situation and tailor interventions according to the needs. One could pick from a wide range of questions and specifications and select relevant aspects for one's own purpose.

MEDBOX will develop a programme that allows individual selection of criteria and hence be applicable to any setting.

The idea of the project originated from communication and observations at field level in acute emergencies, over a few years. It was field workers (national and international) who voiced frustration at the challenge of accessing and sharing information, as well as a lack of hands-on tools within the field workers' set.

National and international humanitarian workers from our professional networks have been involved in the development of the concept and sitemap. They have made significant contributions to MEDBOX since its founding.

MEDBOX was created to meet gaps identified by these stakeholders themselves to allow its users to gain maximum benefit from this innovative project. Our partners do not only engage financially, but also contribute to the development of the project with expertise.

As innovation is still in the´invention and development phase´ consultation and partnership building is still actively occurring. Currently, consultations are being held with humanitarian professionals and organizations around the globe to allow maximum input on the structure of the site map and content.

HOW WILL THE IDEA GET IMPLEMENTED?

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The final goal of our project is to provide efficient medication not only in urban areas but also in rural areas. To achieve this, there should be a same number of refill sessions in urban and rural areas. Surveys will be conducted every three months, to be in touch with the customers and to know the medicinal requirements. customer care offices will be set up in every district, with call services/ chat bots

Within the reporting timeframe we were not able to complete all of the planned tasks of innovation. Inventing a homepage of this complexity was new to our team and placed some unexpected challenges for the team. For one the programming of tools such as the favorites and the responsive design took longer than anticipated. Also, we had to 6 balance sometimes conflicting priorities in view of available resources and capacities.

Furthermore, discussions and consultations on the new tools took more time than we anticipated, sometimes causing delays in the implementation process. Having

said this, MEDBOX is filling a sensitive gap of health care information in humanitarian assistance, as is proven with the current COVID-19 outbreak. However, the risk of underfunding in the future remains a realistic threat. We do have a strategy to prevent this from happening and so far, we have been successful in arranging co-funding from NGO partners.

The MEDBOX team will revise available tools and checklists together with an expert panel, which will lead to the development of innovative generic checklists. Operationally relevant documents will be revised by the same panel for each of the sub-sections. Users will then rank the usefulness with stars and comments. Furthermore, statistics on use (views and downloads) will be transparent for each document. The order of appearance of documents on the respective sub-sites will be defined by the users through the ranking option in combination with the above-mentioned statistics.

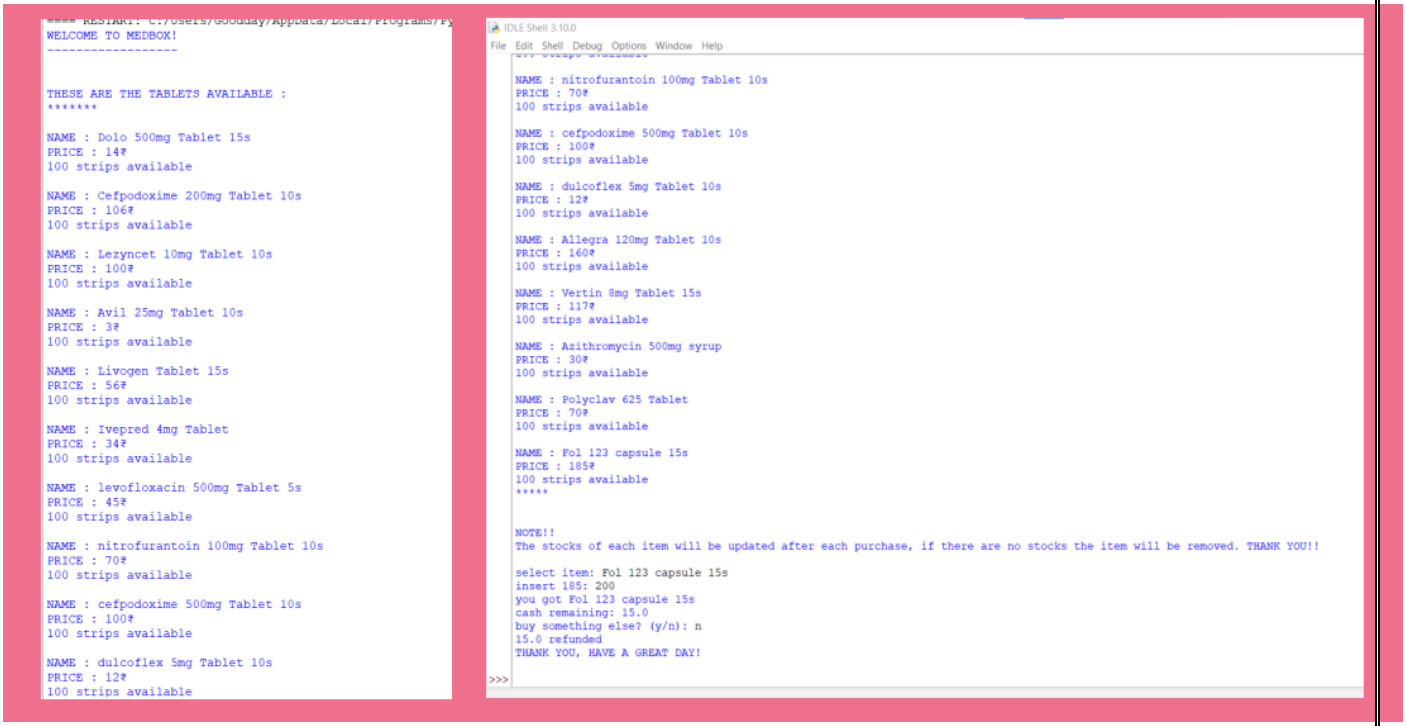
CODE:

```
def vend():


    a = {'item': 'Dolo 500mg Tablet 15s', 'price': 14, 'stock': 100}

    b = {'item': 'Cefpodoxime 200mg Tablet 10s', 'price': 106, 'stock': 100}

    c = {'item': 'Lezyncet 10mg Tablet 10s', 'price': 100, 'stock': 100}

    d = {'item': 'Avil 25mg Tablet 10s', 'price': 3, 'stock': 100}

    e = {'item': 'Livogen Tablet 15s', 'price': 56, 'stock': 100}

    f = {'item': 'Ivepred 4mg Tablet', 'price': 34, 'stock': 100}

    g = {'item': 'levofloxacin 500mg Tablet 5s', 'price': 45, 'stock': 100}

    h = {'item': 'nitrofurantoin 100mg Tablet 10s', 'price': 70, 'stock': 100}

    i = {'item': 'cefpodoxime 500mg Tablet 10s', 'price': 100, 'stock': 100}

    j = {'item': 'dulcoflex 5mg Tablet 10s', 'price': 12, 'stock': 100}

    k = {'item': 'Allegra 120mg Tablet 10s', 'price': 160, 'stock': 100}
```

```
l = {'item': 'Vertin 8mg Tablet 15s', 'price': 117, 'stock': 100}
m = {'item': 'Azithromycin 500mg syrup', 'price': 30, 'stock': 100}
n = {'item': 'Polyclav 625 Tablet', 'price': 70, 'stock': 100}
o = {'item': 'Fol 123 capsule 15s', 'price': 185, 'stock': 100}
items = [a, b, c, d, e, f, g, h, i, j, k, l, m, n, o]
cim = 0 # cash in machine

print('WELCOME TO MEDBOX!')
print("------------------\n")

# show items, prices
def show(items):
    print('\nTHESE ARE THE TABLETS AVAILABLE : \n*******')
    for item in items:
        if item.get('stock') == 0:
            items.remove(item)
    for item in items:
        print("\nNAME : "+ item.get('item') + "\nPRICE : " + str(item.get('price')) + "₹" + "\n" +
str(item.get('stock')) + " strips available")

    print('*****\n')
    print("""\nNOTE!!\nThe stocks of each item will be updated after each purchase, if there are no
stocks the item will be removed. THANK YOU!!\n""")

continueToBuy = True
# have user choose item
while continueToBuy == True:
    show(items)
    selected = input('select item: ')
```

```
    for item in items:
        if selected == item.get('item'):
            selected = item
            price = selected.get('price')
            while cim < price:
                cim = cim + float(input('insert ' + str(price - cim) + ': '))

            print('you got ' + selected.get('item'))
            selected['stock'] -= 1
            cim -= price
            print('cash remaining: ' + str(cim))
            a = input('buy something else? (y/n): ')
            if a == 'n':
                continueToBuy = False

                if cim != 0:
                    print(str(cim) + ' refunded')
                    cim = 0
                    print('THANK YOU, HAVE A GREAT DAY!\n')
                    break
                else:
                    print('THANK YOU, HAVE A GREAT DAY!\n')
                    break
            else:
                continue

vend()
```

CODE OUTPUT:



```
WELCOME TO MEDBOX!
------------------


THESE ARE THE TABLETS AVAILABLE :
*******

NAME : Dolo 500mg Tablet 15s
PRICE : 14₹
100 strips available

NAME : Cefpodoxime 200mg Tablet 10s
PRICE : 106₹
100 strips available

NAME : Lezyncet 10mg Tablet 10s
PRICE : 100₹
100 strips available

NAME : Avil 25mg Tablet 10s
PRICE : 3₹
100 strips available

NAME : Livogen Tablet 15s
PRICE : 56₹
100 strips available

NAME : Ivepred 4mg Tablet
PRICE : 34₹
100 strips available

NAME : levofloxacin 500mg Tablet 5s
PRICE : 45₹
100 strips available

NAME : nitrofurantoin 100mg Tablet 10s
PRICE : 70₹
100 strips available

NAME : cefpodoxime 500mg Tablet 10s
PRICE : 100₹
100 strips available

NAME : dulcoflex 5mg Tablet 10s
PRICE : 12₹
100 strips available
```

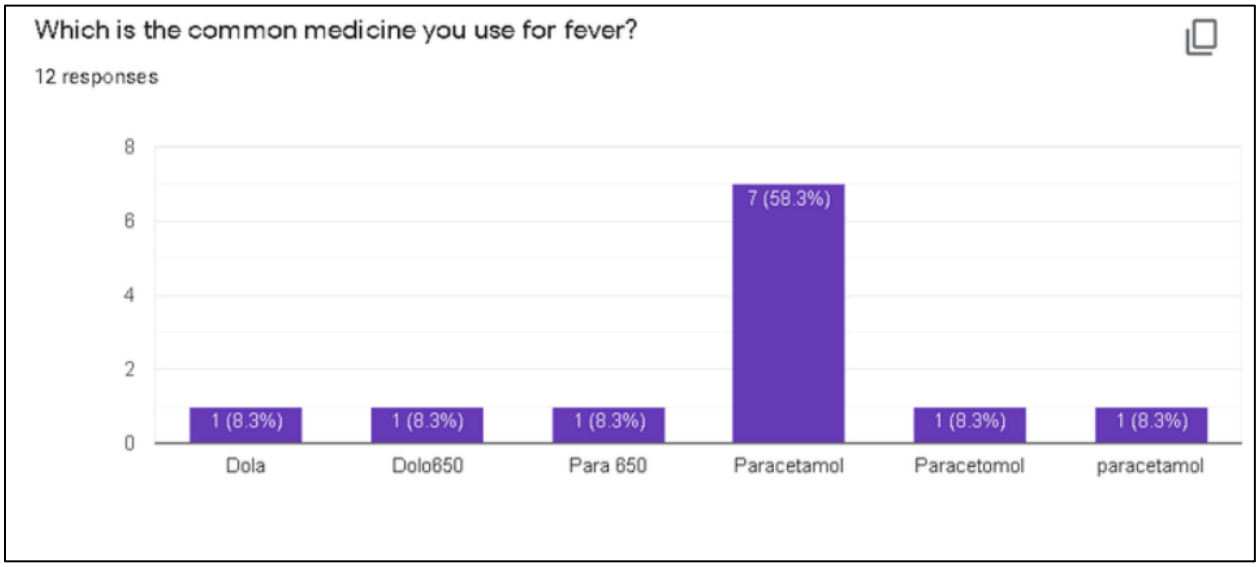
```
IDLE Shell 3.10.0
File  Edit  Shell  Debug  Options  Window  Help

NAME : nitrofurantoin 100mg Tablet 10s
PRICE : 70₹
100 strips available

NAME : cefpodoxime 500mg Tablet 10s
PRICE : 100₹
100 strips available

NAME : dulcoflex 5mg Tablet 10s
PRICE : 12₹
100 strips available

NAME : Allegra 120mg Tablet 10s
PRICE : 160₹
100 strips available

NAME : Vertin 8mg Tablet 15s
PRICE : 117₹
100 strips available

NAME : Azithromycin 500mg syrup
PRICE : 30₹
100 strips available

NAME : Polyclav 625 Tablet
PRICE : 70₹
100 strips available

NAME : Fol 123 capsule 15s
PRICE : 185₹
100 strips available
*****


NOTE!!
The stocks of each item will be updated after each purchase, if there are no stocks the item will be removed. THANK YOU!!

select item: Fol 123 capsule 15s
insert 185: 200
you got Fol 123 capsule 15s
cash remaining: 15.0
buy something else? (y/n): n
15.0 refunded
THANK YOU, HAVE A GREAT DAY!
>>>
```

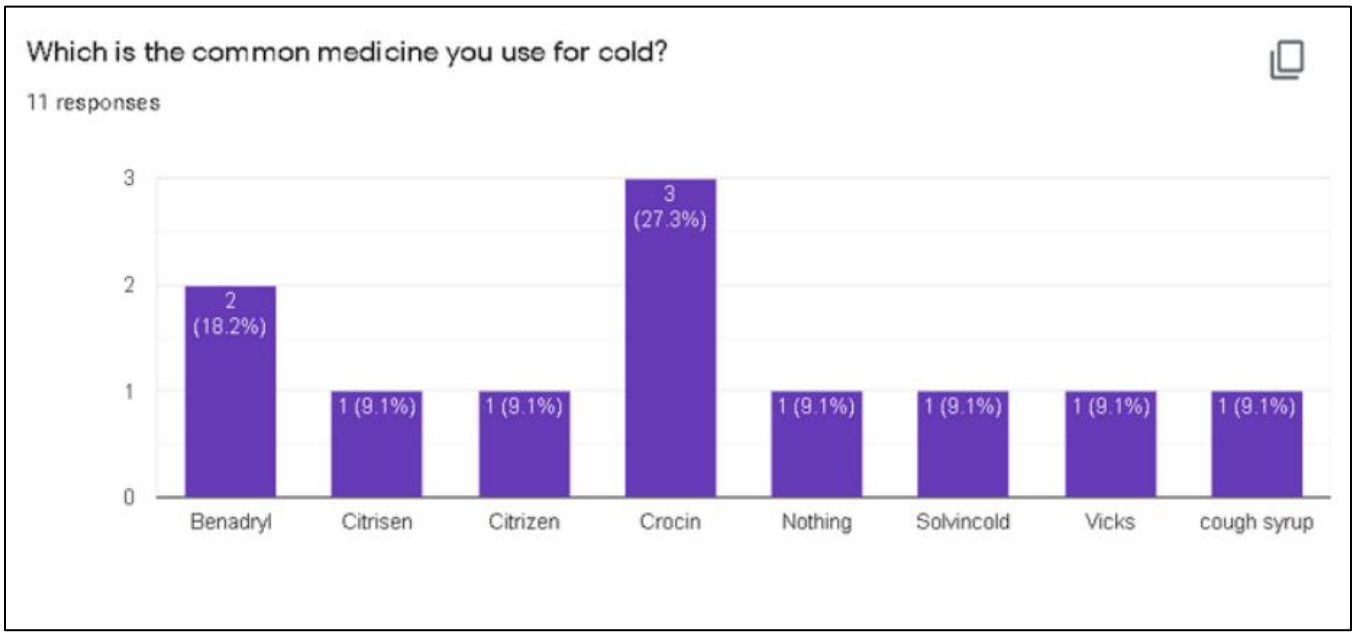
DIFFICULTIES:

1. Linking Aadhar card to the system to identify and authenticate tags is quite difficult.
2. Connecting the patient's database to the vending machine code.
3. Configuring GUI for the users to enter and check the medicines.
4. India ranks third worldwide for pharmaceutical production by volume and 14th by value.
5. Making people in rural India understand its use.
6. Creation of software that links med-box and adhar/card.
7. Capital for producing 4000+ med-box along with medicines.

SURVEY DATA:

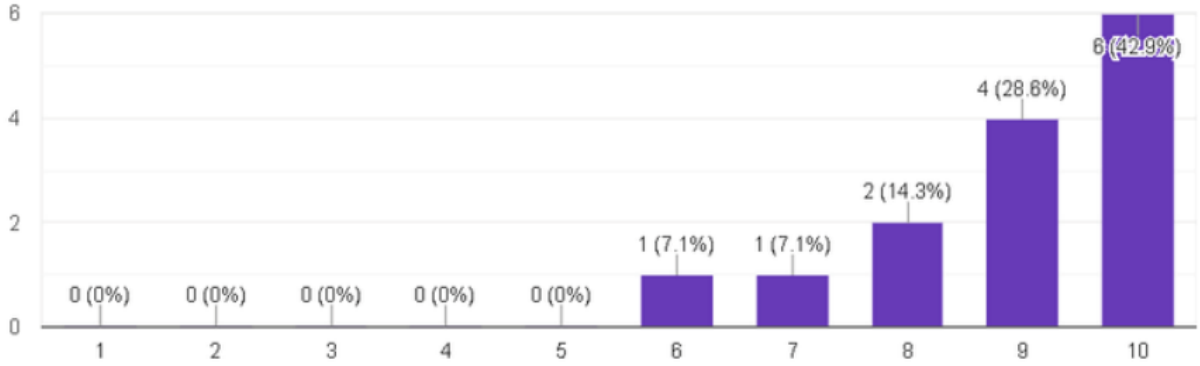
We are happy that people think the Med box is useful!





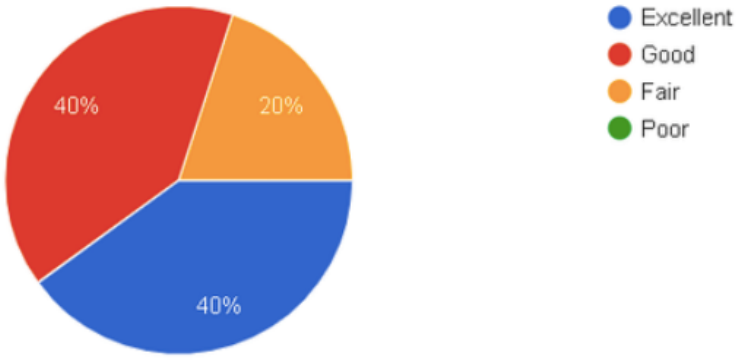
On a scale of 1 to 10, how healthy do you consider yourself?

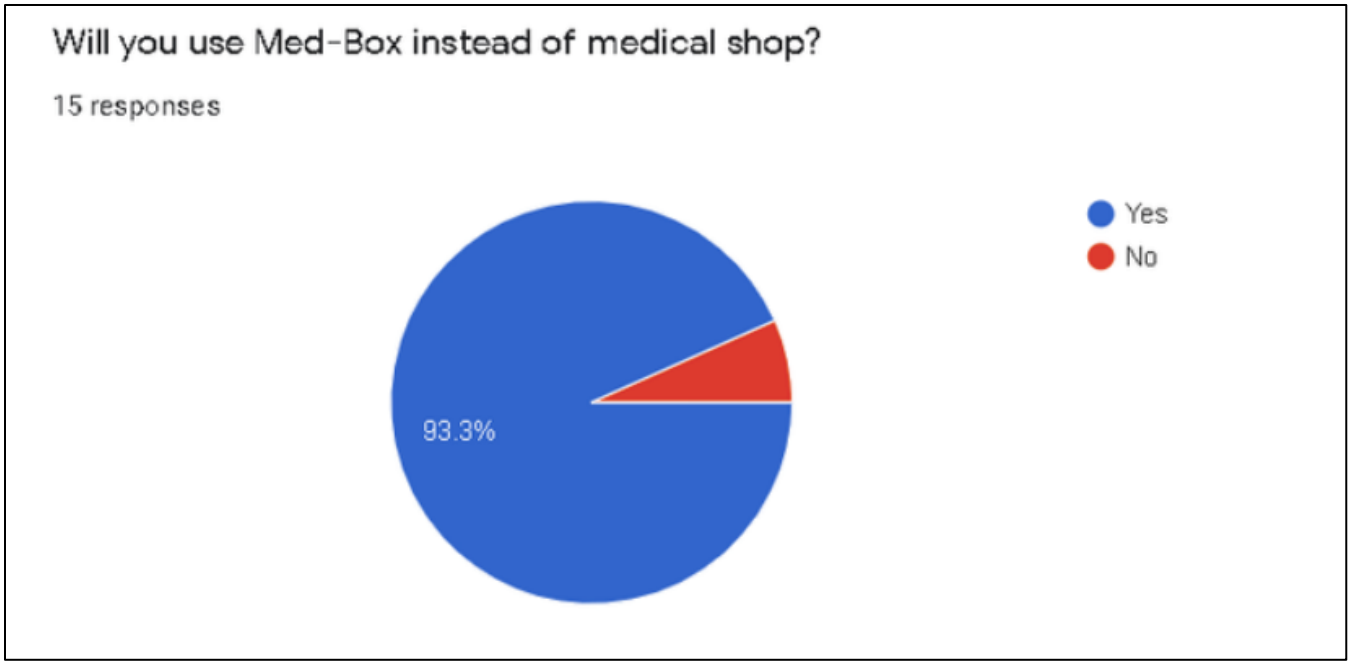
14 responses

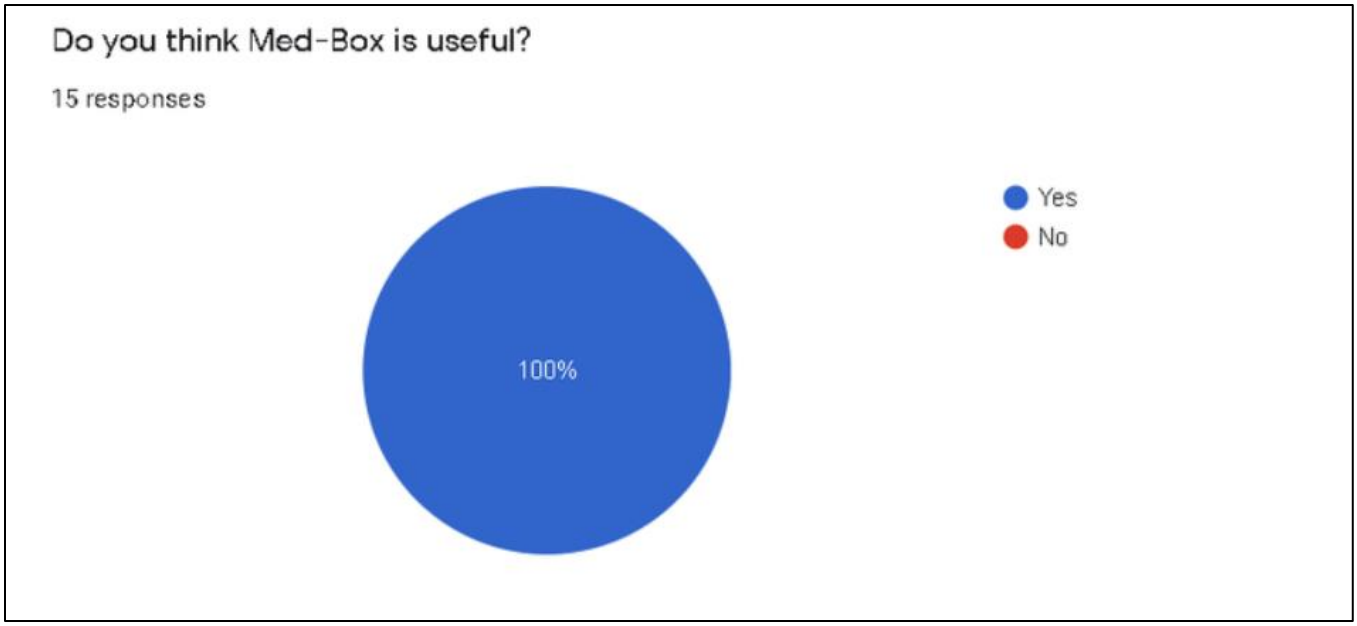


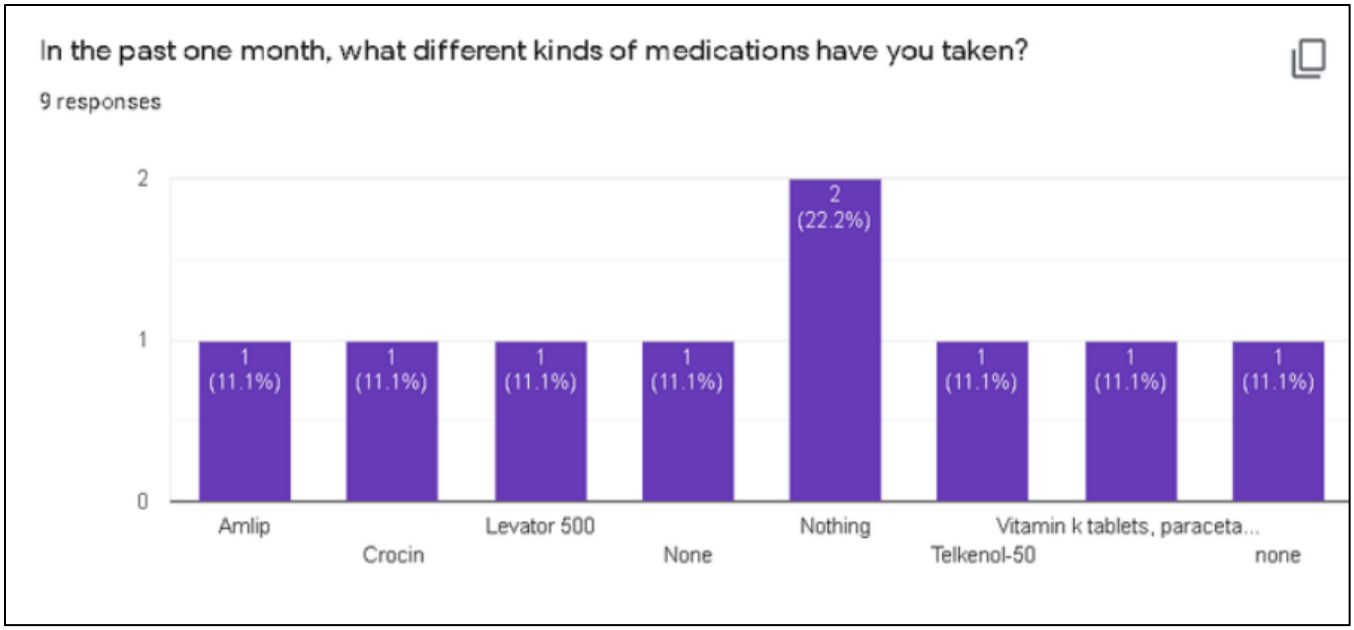
Overall, how do you rate the medication facility in your area?

15 responses




Will you use Med-Box instead of medical shop?
15 responses
Yes
No
93.3%


Do you think Med-Box is useful?
15 responses
Yes
No
100%


In the past one month, what different kinds of medications have you taken?
9 responses
2
1
0
1 (11.1%)
1 (11.1%)
1 (11.1%)
1 (11.1%)
2 (22.2%)
1 (11.1%)
1 (11.1%)
1 (11.1%)
Amlip
Crocin
Levator 500
None
Nothing
Telkenol-50
Vitamin k tablets, paraceta...
none

WORK:

App:

Our Med-Box app contains:

1. Patient's Health records
2. Pharmacy orders
3. Doctor Consultation booking
4. Diet plans
5. Online medicine orders
6. Payment option

Website:

OUR WEBSITE LINK: **MED- BOX**

Our website contains:

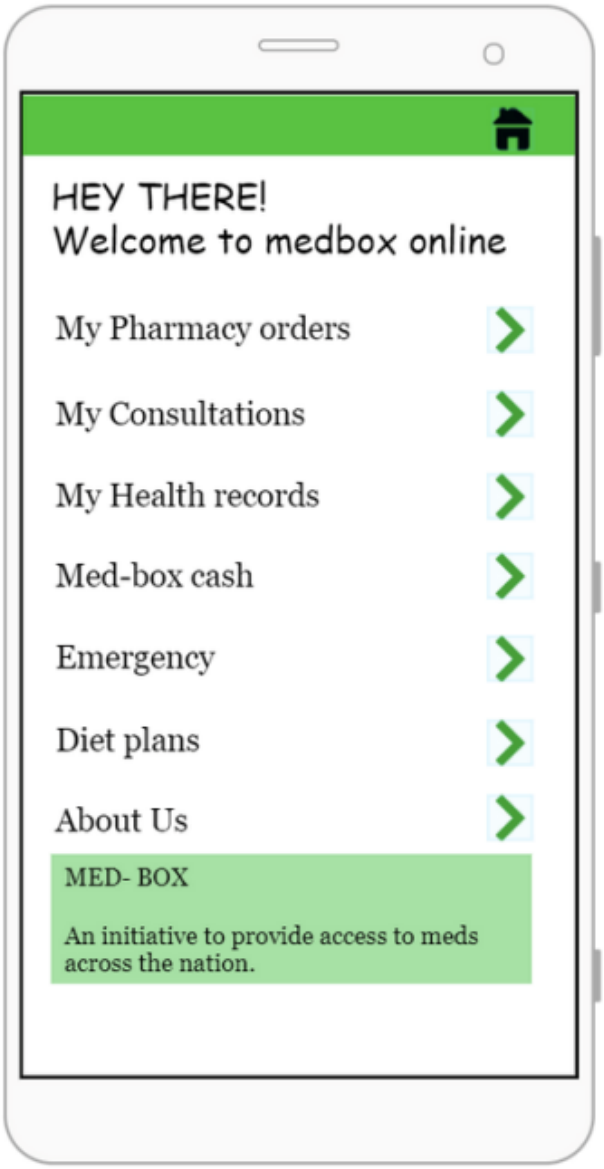
1. Login credentials linked with database.
2. Subscription plans
3. About us and the website
4. Our Motive
5. Our Contact details

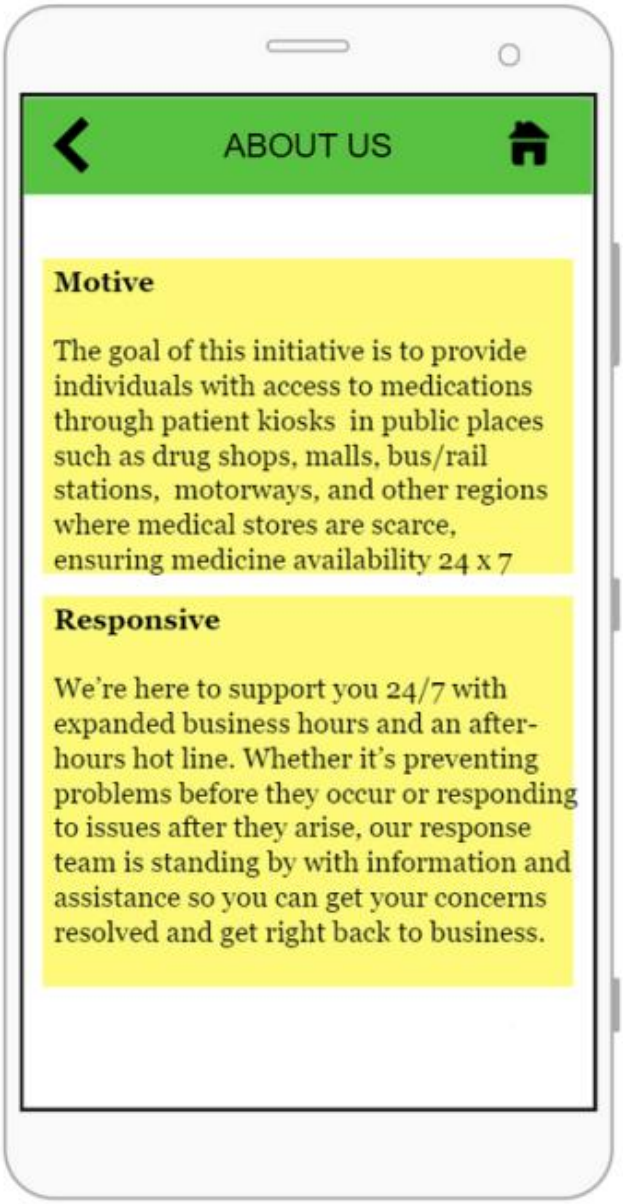
Software:

Our software shows:

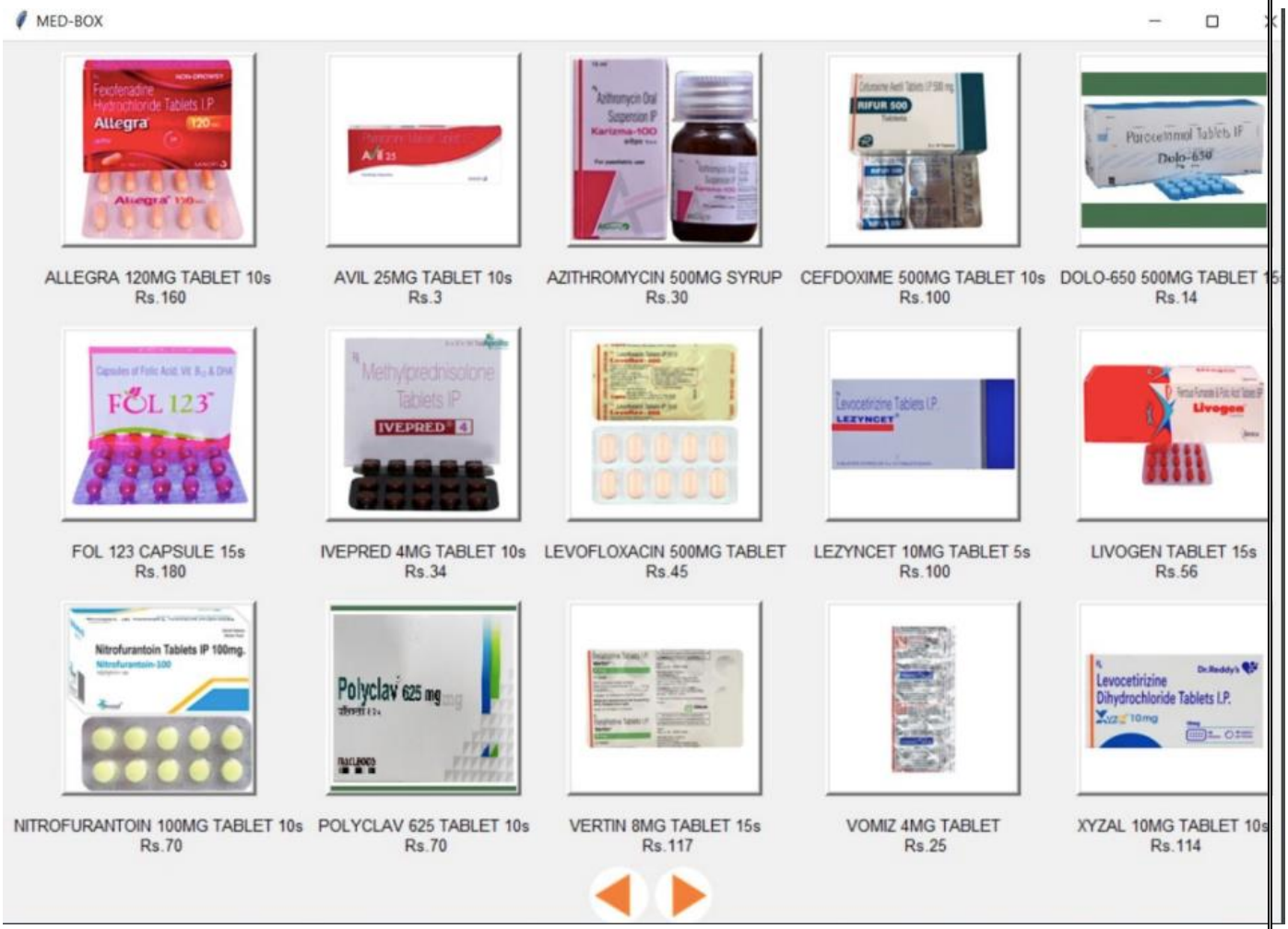
1. Availability of Medicines with their images
2. Price of the medicine
3. Payment option and Bill


Erode
Medica
Record
HEALTH RECORDS
Order Medicine now
HEALTH PRODUCTS
LOCATE MED-BOX
COVID SUPPORT
Book consultation


HEY THERE!
Welcome to medbox online
My Pharmacy orders
My Consultations
My Health records
Med-box cash
Emergency
Diet plans
About Us
MED- BOX
An initiative to provide access to meds across the nation.


ABOUT US
Motive
The goal of this initiative is to provide individuals with access to medications through patient kiosks in public places such as drug shops, malls, bus/rail stations, motorways, and other regions where medical stores are scarce, ensuring medicine availability 24 x 7
Responsive
We're here to support you 24/7 with expanded business hours and an after-hours hot line. Whether it's preventing problems before they occur or responding to issues after they arise, our response team is standing by with information and assistance so you can get your concerns resolved and get right back to business.


MED-BOX
62, N Usman Rd,
Parthasarathi Puram,
T. Nagar, Chennai -
17
Queries: 63826 71464
November 22, 2021
TIME: 14:21:51
S.No
Name
Rate
1
Levofloxacin 500mg Tablet 5s
₹45
2
Lezyncet 10mg Tablet 10s
₹100
3
Vertin 4mg Tablet
₹25
4
Vertin 8mg Tablet 15s
₹117
5
Ivepred 4mg Tablet
₹34
GRAND TOTAL **********
₹321
Enter Amount Here
Click To Continue


MED-BOX
ALLEGRA 120MG TABLET 10s
Rs.160
AVIL 25MG TABLET 10s
Rs.3
AZITHROMYCIN 500MG SYRUP
Rs.30
CEFDOXIME 500MG TABLET 10s
Rs.100
DOLO-650 500MG TABLET 15
Rs.14
FOL 123 CAPSULE 15s
Rs.180
IVEPRED 4MG TABLET 10s
Rs.34
LEVOFLOXACIN 500MG TABLET
Rs.45
LEZYNCET 10MG TABLET 5s
Rs.100
LIVOGEN TABLET 15s
Rs.56
NITROFURANTOIN 100MG TABLET 10s
Rs.70
POLYCLAV 625 TABLET 10s
Rs.70
VERTIN 8MG TABLET 15s
Rs.117
VOMIZ 4MG TABLET
Rs.25
XYZAL 10MG TABLET 10s
Rs.114

ADVANTAGES:

- The aim of this prototype is that temporary relief is to be given out that can give rural people a better chance for resisting the health from withdrawing before they are able to reach doctor.
- Major advantage is that people would be able to access the drugs via patient kiosks in public places such as drug stores, malls, bus, railway stations, on highways, areas where medical stores are limited.
- Medicine vending machines will become increasingly popular as a convenient way to purchase prescribed medications.
- They are used to dispense products to customers without the involvement of staff or human assistance on a 24-hour basis, and in this Covid-19 scenario, thus giving a great alternative for pharmacies.
- This will only need a short amount of time to keep them serviced and stocked with products.

DISADVANTAGES:

- This dispensing machine might be efficient in many ways but it does not eliminate all possible errors.
- It's still possible for the pharmacy to stock the wrong medication Physicians can pick a similar-looking drug from another drawer.
- Since this machine is an electronic device, it can malfunction at any critical time.
- Healthcare facilities must be prepared for emergencies.
- They should have separate kits containing resuscitation and critical care drugs.

END PRODUCT:

- The Aadhar card reader is incorporated into the system.
- It is a tracking technology used to identify and authenticate tags that are applied to any product.
- Medicines form an integral part of this project as they are the main product, which is dispensed as per the prescription that is linked through our Aadhar card.
- Delivery of OTC medicine and first aid along with prescribed medication.
- Cash accepting module is implemented to accept money using an ATM pin.
- A software is implemented that consists of an online interface for doctors to provide prescriptions electronically and a database to store patient information and prescriptions.
- To get the medicines one must authenticate himself by providing his user credentials.
- There are two interfaces for the portal, an android application and a website, users can access either and check all their details after yielding their user credentials

CONCLUSION:

- As Result of this project the people would be able to access the Medbox 24*7.
- It provides OTC medicine for general symptoms like fever, High B.P, headache and sprain and first aid along with prescribed medication.
- This machine can be installed at bus stations, railway stations and streets of the city.
- Drugs can be made available in affordable rates.
- Each person accessing the machine can use their Aadhar ID by which the user can be identified.

FUTURE PROSPECTS:

- Prospective customer survey / study should be planned in order to understand Indian users for such a machine.
- Block diagram would be detailed out for each block and module development would be started. Legal, medical and administrative aspects would be studied for feasibility study and further changes in design.
- Further hurdles would be funds, timely resource availability & formation of think-tank team.
- The Aadhar card module implementation should be confirmed by the government.

REFERENCES:

1. https://www.sec.gov/Archives/edgar/data/1547996/000118518514003136/medbox-s1a111314.htm
2. https://www.medbox.org/categories/5*29R541OP/digital-health
3. https://medbox.com/how-it-works/
4. https://www.bloomberg.com/news/articles/2013-05-09/medbox-dawn-of-the-marijuana-vending-machine