A project report on

I READER IMPLEMENTATION IN ONLINE MEDICINE APPLICATION

Submitted in partial fulfillment of the requirement
For the award of the degree

MASTER OF COMPUTER APPLICATIONS

Of

Visvesvaraya Technological University
Belgaum, Karnataka
By

ZUBBER PASHA

1CY18MCA71

CMR INSTITUTE OF TECHNOLOGY
132, IT Park Road, Kundalahalli, Bangalore-560037
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Under the guidance of

Internal Guide
Ms.Ashwini Patil
Assistant Professor, MCA Department,
CMR Institute of Technology,
Bangalore.

External Guide
Mrs. Preetish Mukundan
Sorbix LLC,
Bangalore.

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132, IT Park Road, Kundalahalli, Bangalore-560037
2019-2020

CMR INSTITUTE OF TECHNOLOGY

Department of Master of Computer Applications

Bangalore - 560037

CERTIFICATE

This is to certify that the project work entitled

I Reader Implementation In Online Medicine Application

Submitted in partial fulfilment of the requirementfor the award of the degree of Master of Computer Applications of the Visvesvaraya Technological University, Belgaum,Karnatakabonafide work carried out by

Zubber Pasha
1CY18MCA71

during the academic year 2019-2020.

Signature of the Guide	**Signature of the HOD**	**Signature of the Principal**
Ms. Ashwini Patil	**Ms.Gomathi.T**	**Dr. Sanjay Jain**
Assistant Professor, MCA	HOD, MCA	PRINCIPAL, CMRIT

External Viva

Name of the Examiners — Signature with date

1.

2.

Sorbix

15-06-2020

PROJECT COMPLETION CERTIFICATE

This is to certify that **Mr Zubber Pasha,** bearing **(USN NO: 1CY18MCA71)** a bonafide student of **CMRIT**,pursuing his **Master of Computer Application**, has worked on the project entitled "**I READER IMPLEMENTATION IN ONLINE MEDICINE APPLICATION**" from Feb 2020 to May 2020 at our organization SORBIX LLC-Bangalore, and has successfully completed the internship program.

During the tenure of the project, he was found punctual, hardworking and inquisitive. We wish all the best for his future endeavors.

For, Sorbix LLC

Kamal S
(Team Leader)

S 79, 2nd Floor, Ashwath Nagar, 7th Main, Thanisandra, Bengaluru - 560 077

DECLARATION

I, **Zubber Pasha,** student of 6th MCA, **CMR Institute of Technology**, bearing the USN **1CY18MCA71**, hereby declare that the project entitled **"I Reader Implementation In Online Medicine Application"** has been carried out by me under the supervision of External Guide **Mrs. Preetish Mukundan**, Project Manager**,** and Internal Guide **Ms. Ashwini Patil**, **Assistant Professor**, **Dept. of Master of Computer Applications** and submitted in the partial fulfillment of the requirements for the award of the Degree of Master of Computer Applications by the **Visvesvaraya Technological University** during the academic year 2019-2020.The reports has not been submitted to any other University or Institute for the award of any degree or certificate.

Place:Bangalore Zubber Pasha

Date: (1CY18MCA71)

ACKNOWLEDGEMENT

I would like to thank all those who are involved in this endeavor for their kind cooperation for its successful completion. At the outset, I wish to express my sincere gratitude to all those people who have helped me to complete this project in an efficient manner.

I offer my special thanks to my external project guide Mrs. Preetish Mukundan, Project Manager, Sorbix LLC Bangalore, and to my Internal Project guide Ms. Ashwini Patil, Department of MCA, CMRIT, Bangalore without whose help and support throughout this project would not have been this success.

I am thankful to Dr. SANJAY JAIN, Principal, CMRIT, Bangalore for his kind support in all respect during my study. I would like to thank guide Mrs. Preetish Mukundan, Project Manager, Sorbix LLC Bangalore, who gave opportunity to do this project at an extreme organization Most of all and more than ever, I would like to thanks my family members for their warmness, support, encouragement, kindness and patience. I am really thankful to all my friends who always advised and motivated me throughout the course.

Zubber Pasha
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CHAPTER 1

INTRODUCTION

1.1PROJECT DESCRIPTION

The image reader technology is the revised product of vector algebra used in the latter searching in the image. The technology of I reader is used in reading doctor E prescription loaded in the online sales of the medicines. When the prescription made compulsory by the government officials the E business faces problem to read the proscription uploaded by the patient for the medicine supply. The manual verification of each prescription updated by the users needed more time for confirmation and practically impossible to work in the big data integrations data bases. So the E prescription company is needed to assign more doctors to verify and process the prescription. So now with help of I reader technology the application will convert the printed part in the E proscription and converted to softcopy for the verifications.

One of the challenges faced during the conversion is converting Hand written prescription part in the doctor's prescription cannot be converted to the softcopy. But this format can be implemented in the printed prescription only (Fig 1), in the hand written e prescription then I reader technology can be used to verify the doctors and clinic details printed in the prescription and used for further verifications.

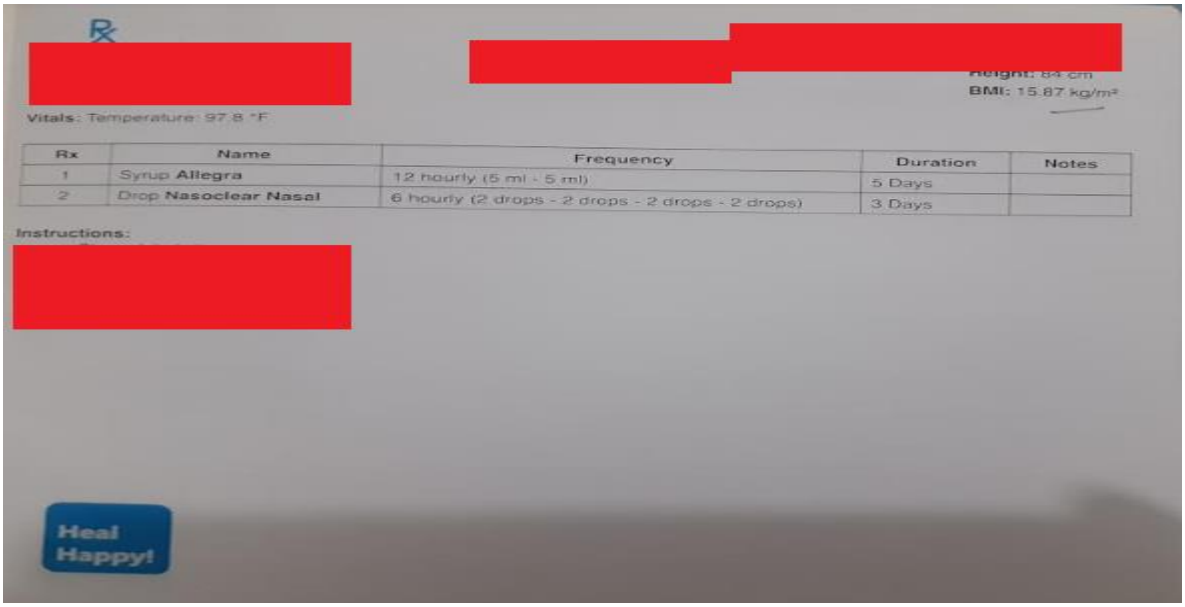


Fig 1: E prescription sample template. I reader technology can be implemented only with printed prescription

How the application I reader and the E prescription works.

The application will receive the uploaded prescription image to the stack where the details of doctor and the clinic saved in header of prescription will be converted an saved in panel. The detail of the medicine will be converted only if the part has printed as shown in the figure 1. After medicine list in the prescription is converted in the text format the application will compare the list of medicine entered by the patients. If the more than one medicine is added then application will use pool crossing techniques for the medicine comparison. The process of pool crossing technique in the reader is explained in the proposed system.

Module description

The module in the I reader application is developed for the organisation to check the authentication, sales stock management. List of modules used in the software application are

- Admin for I reader and stock management
- Layman activity control module
- Stock based management module
- Delivery tracking
- Payment tracking

Admin for I reader and stock management

The application based organisation and the top level employee for the processing is included in admin level. The doctors for the verifying the prescription and approving the request, reject the request if the medicine in application and medicine in the prescription do not matching are included in the admin level. Creating other users to control the E prescription and delivery activates are built-in with in module.

Layman activity control module

The customer who orders the medicine and further tracking of the order are included in layman bases modules. The registration for the users are made with mobile, the detail of medicine ordered, prescription uploaded the payment related works are included in the module. The technology of I reader is implemented in the module where the hard copy uploaded by the layman users are used for the converting to E prescription and verifications.

Stock based management module

This module has the detail of the medicine in stock for the order received from I reader technology, the application will auto check the stock and generate availability to the users over the medicine requested. If the medicine is not available send the latest updates like stock update medicine availability to the patient user who requested.

Delivery tracking

After the successful approval of E prescription in I reader technology the next processing will start with delivery tracking. The Delivery agent will be select by the zone where the medicine is needed to deliver.

Payment tracking

The module to manage the payment related progress and gateway communication used in the I reader technology . t report based in the medicine purchase and stock cost are included in this module.

1.2 COMPANY PROFILE

Sorbix is software solution for the E commerce based business to achieve their goals with software and services. Sorbix developers ASP.NET based projects and other Microsoft based technical support and big data server integrations. The SEO based business branding is other non technical profile where the Sorbix is working with. The data integration with E commerce and SEO based marketing technique is developed for the client user. This SEO integration can operate best audience searching techniques and find the sellers the targeted used for their product to sell. This step helps reader based application to analysis the user category and provide the medical support from the expert doctor.

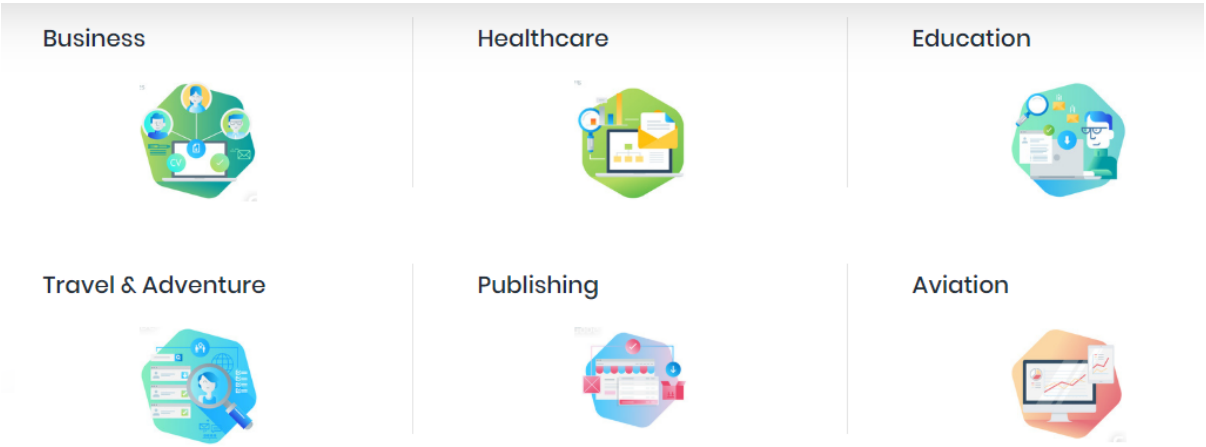


Fig 1.2.1: Domain of business development

CHAPTER 2

LITERATURE SURVEY

2.1 **EXISTING SYSTEM AND PROPOSED SYSTEM**

In the existing system application use comprehend bases module for the business progress. In this method the application flow depends on the understanding the requirement of the customer and update the stock of the medicine. The report of comprehend is created on the basis of history of the medicine ordered from the customer. This method has advantage and disadvantage. If the patient is regularly using the same medicine then his comprehend model help the stock management and make sure all the medicine will be in the stock before the user makes the next order. The disadvantage no other medicine which is not regularly used or with in the area of mass sale this concept cannot be successfully implemented. The existing system of technology is the idea of I reader is not implemented where the clerks are needed to analysis the prescription manually and process the sales. This format leads more time consuming and the chance of clerical mistake cannot be avoided too.

Limitation of Existing system

- Depends on the manual steps in the monitoring the prescription uploaded by patients.
- Not adaptable for the big scale business with manually processing the prescription added.
- Prescriptions are forwarded to the medical stores or warehouse where the doctors supervise is not included and is prohibited by government by rule.
- Comprehend based business model for the sales activities

Proposed system

The application is deviated from the comprehend techniques to the demand up product bases stock management. In this process instead of analyse each user purchase history the group of patients users are included and their purchase history are used for the stock purchase and management. Advantage is medical sales processing is dropped in the group of patients lives in the city or selected zone. To avoid the complexity in the processing the application uses *pool crossing* techniques to manage the sales.

Advantage of using pool crossing

- In the pool cross technology the application will load more than in E prescription and algorithm will find same medicine in more than one users and brought together
- Application allocate same building space for activities like I reader reading, stack conversion of image and storing the attribute measurements generated
- Less time needed for converting large number of hard copy data to soft copy
- The conversion is based on head part and the prescription part separately
- This method can compare Doctor prescribed medicine and the user selected medicines are same without any manual check.

2.2 **FEASIBLE STUDY**

The feasibility when application implement new improvement of pool cross method and I reader technology in the application developer need to find feasibility of these new innovation included in the application and how these changes can make more attractive in the E prescription

- Technical feasibility
- Operational feasibility
- Cost feasibility

Technical feasibility

The list of technical support needed for I reader software processing. This includes the hardware tools and the software tools used in the development. Depending on the machine used for scanning the feasibility will varies. The feasibility for the scanning machine or if the used pen size scanning machine the feasibility study needed will be different. So the developers will create the stream line for the various developing process the type of ASP based technical support to be given etc are given.

Operational feasibility

Find the more accurate operational steps in the I reader technology. For example when the application development model is changed from comprehend base model the developers has made master plan for the pool techniques and the improvement also made in other department of sales, I reader according to the new changes.

Cost feasibility

The final feasibility study in I reader application is made in the cost feasibility. Here instead of calculating the cost of total software implementation developers team will go with partitioned cost feasibility study. The partition is created on the basis of priority in the software development, If the cost feasibility of more priority is affordable then only the developers will go for next module cost calculation part. This process can help the developer's team to bring the total cost of software development under control

2.3 TOOLS AND TECHNOLOGY

The application uses advanced Microsoft Visual studio Ultimate edition for the software development. This IDE has the better designing tools and C# program supported middleware components for the software development. The other supporting tools used in the software unit are

- WPF designer tool
- Class designer model unit
- Data designer

Other tools

- Solution explorer
- Team explorer
- VM ware
- Agile software

WPF designer tool

The advances designing tools used for the ASP. The WPF or Window Presentation foundation has the in build features to retrieve data directly from the stack or SQL used in the application without Middleware code. WPF also has the tools for agile based software tool kits.

Class designer model unit

This is advance software tool used by developers to create the classes used in the software, In the traditional method the class and the objects are directly created in the C#.NET when users needed to call a function. But in the class designer the chain of class and the objects are designed first and the software will automatically create the class and object in the C#.NET

Data designer

This same format of class designer but this is used for the data base table. If the user creates join in the application with help of data designer tool the name of table, the foreign key and the table which is needed to connect are created in the software and further when developers needed to create SQL the user will select the table object for the data designer chain and create the table. This will automatically create the join format with the table and users there by change the join type to inner join, right join etc with a button click

Solution explorer

The plug in tool used in Visual studio to connect with IDE used in the I reader application, the units like ASP, the C#.NET, the object explorer the web or machine based software application will be connected in the solution explorer.

Team explorer

The software plug in for the supporting tools is connected with team explorer software. The software like team build which is used for the multiple system communication , the classes coverage software for identifying repeated class or the code which is not used in the software building are connected with team explorer. If the developers use class coverage without team explorer then software can find and call only the repeated class in the current system. But with help of team explorer the other system and the class used is also called for the integrations.

VM ware

The software used for the creating a virtual set up for E prescription and the I reader technology. The VM ware will create a setup file which is adaptable for the non Microsoft based tools usages and communications. The developers can give different configuration for system which is not directly used for the ASP based software development.

Agile software

The methodology used in the current E prescription based application is agile Here the developers can create sprits for the E prescription, sprints for the reader technology, the sprint for stock management etc. Each sprint have team of developers to manage the development, testing and hosting. After the successful development the next sprint in I reader will be constructed

2.4 **HARDWARE AND SOFTWARE REQUIREMENTS**.

2.4.1 Minimum hardware requirement

Processor (Image reader)	Pentium IV 3.0 GHz
RAM (Image reader)	512 MB
Hard disk (Image reader)	10.2 GB
Monitor (Image reader)	LCD
Keyboard (Image reader)	105 standard

Table 2.4.1.1: minimum hardware requirement

2.4.2 Minimum software requirement

OS (Image reader)	Vista , windows 7 and above
Back end (Image reader)	SQL 2008 R2
Front End (Image reader)	HTML
Language (Image reader)	C#, J Query,
IDE (Image reader)	Visual Studio 2017ultimate
Server (Image reader)	TFS ,IIS
Test (Image reader)	MTM

Table 2.4.2.1: minimum software requirement

CHAPTER 3

SOFTWARE REQUIREMENTS SPECIFICATION

3.1 **USERS TYPES**

The users of the application are listed on the basis of their department they are working. The medical term user like doctors, the medical officer the medical store will be grouped in clerk the employees for the item delivery and clerks of office administration under clerk 2 , the main clerk admin is third group and patients' users under customer category.

- Clerk 1
- Clerk 2
- Administration
- Customer

Clerk 1

Module name	**Clerk1 profile**
Admin for I reader and stock management	View request, process request , the approve or reject the request
Layman activity control module	View the report only. Update or remove fin the layman activity not allowed
Stock based management module	Access denied to clerk 1 in the stock management module
Delivery tracking	View report based tracking updates

Table 3.1.1: clerk 1: details

Clerk 2

Module name	**Clerk2 profile**
Admin for I reader and stock management	View the admin and Reader based auto generated instructions.
Layman activity control module	View the request and address based activity
Stock based management module	View the collection point details and item tracking details
Delivery tracking	Complete access to this module.

Table 3.1.2: clerk 2: details

Administration

Module name	**Admin profile**
Admin for I reader and stock management	Verify the non auto generated prescription details and creating the order tracking updates.
Layman activity control module	View request, update in case for cancel request or medical supply not responded on time,
Stock based management module	Complete access in the stock based management
Delivery tracking	View tracking in delivery related progress.

Table 3.1.3:Admin: details

Customer

Module name	**Customer profile**
Admin for I reader and stock management	NA
Layman activity control module	Upload prescription. Request order delivery, item return
Stock based management module	View stock availability of medicine ordered
Delivery tracking	View the status.

Table 3.1.4: customer: details

3.2 **FUNCTIONAL REQUIREMENTS**

The functional requirement for delivery

#	Text box	Input	Process	Output
1	TXT_STD_DLV	Date of standard delivery	If the location of medicine seller is Bangalore put standard date as 3 days. Else one week	Auto generated standard date
2	TXT SELLER PARTY	Name of seller	Auto fetch the name of seller and the medicine to supply	Display the seller name
3	TXT_QTY	Manual enter the medicine Quantity	If the entered medicine qty is above stock available , pop up medicine not available	Display the qty
4	LBL_PO_#	Label with purchase order. Readable format not editable	Process the PO order and generate updated PO number	Label loaded with purchase number
5	TXT_SALES_AREA	Address of the item to be delivered	Save the address in the SQL	Display address in the text box
6	CK_SUB_PO	NA	If the medicine in single location is collected from different two or more location	Generate the sub PO

Table 3.2.1: table for functional requirement in deliver

List of buttons in the page

Button name	Operations
INSERT	Check all the validation and requirement field validation. If the validation success the connection string and check data base access. Insert value in the database table after the server access success
UPDATE	Save the primary key in the data set and call the connection string. If the connection string failed pop server not accessible message.
DELETE	Save the primary key with the selected order ID. Call the method for the delete with primary key. If the data not found alert message regarding the error. Else remove the data from the SQL
REPORT	Pass the primary key to SQL and fetch the data in the read format (use data reader). Call the grid view for saving the data in the report format. Call label ID for displaying the data in the new web page.

Table 3.2.2: table for actions

3.3 **NON FUNCTIONAL REQUIREMENTS**

The non functional requirement is study gathered to improve the I reader and new technology used in the application, the new business model of pool crossing is used for controlling the large data (e prescription) generated in the application end. So developer need to find what is next step needed to improve the pooling techniques also the improvement in the areas of

- Security
- Reliability
- Durability
- Flexibility

Security

To keep the medical records of the patients and the payment gateway records are security concerns in the software. The software application used two tier data base for the data storage each has security , the connection string and the separate data base storage for E prescription related data and banking data.

Reliability

The reliability of the software depends on the I - reader technology and the words converted with help of software. How effectively the data are converted and the match with the medicine stock report comes in the reliability part. This reliability also works on steps to improve the reliability with other technology like vector algebra 2.0 version algorithm which can convert the medicine name to other languages.

Durability

Ability of the software to update and change according to the changed demands in the software will increase the software durability. Besides working on medicine delivery the application can also be used the reader technology for the lab test prescription given by the doctor. So including more featured in the existing software the application can extend to other areas of software development and increase the durability.

Flexibility

This application has included module where the doctors can directly create the E prescription and details are passed to the application units directly from the doctors. This method can reduce the module of I reader and the third party verification and the medicine can be delivered to the patient as fast as they can. The flexibility of the software shows the applications ability to run in different systems like remote click server , to run in the architecture where the machines or biometric devices are implemented without any failure.

CHAPTER 4

SYSTEM DESIGN

4.1 SYSTEM PERSPECTIVE

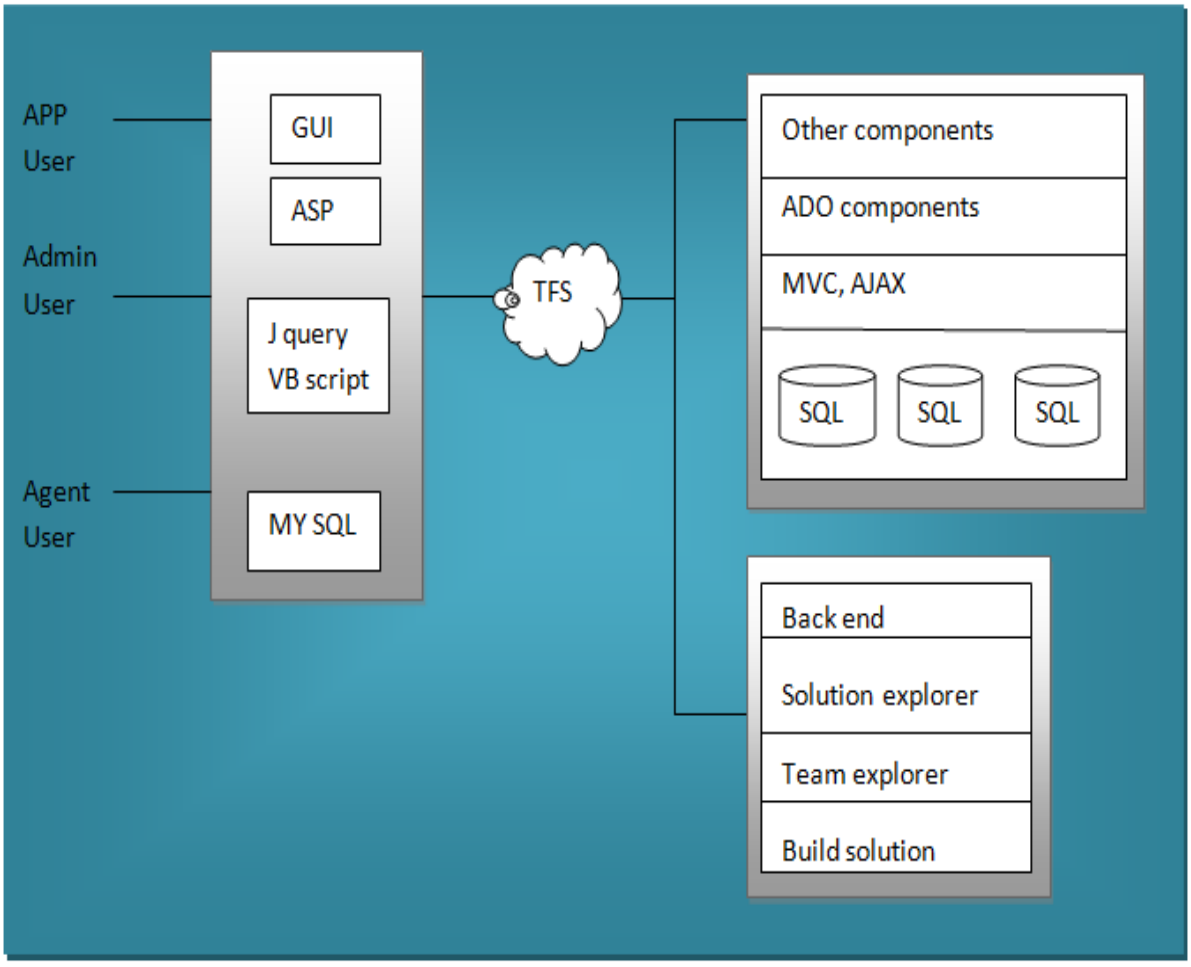


Fig 4.1: architecture diagram of E prescription

The application of I reader is developed in the three tier architecture with TFS (team foundation server). The application users, the admin of I reader application and the agent machine are connected with the ASP based front end machine IDE. The component to support the I reader feature like converting and processing the payment etc will be managed in the C#.NET and the SQL as back end.

4.2 CONTEXT DIAGRAM

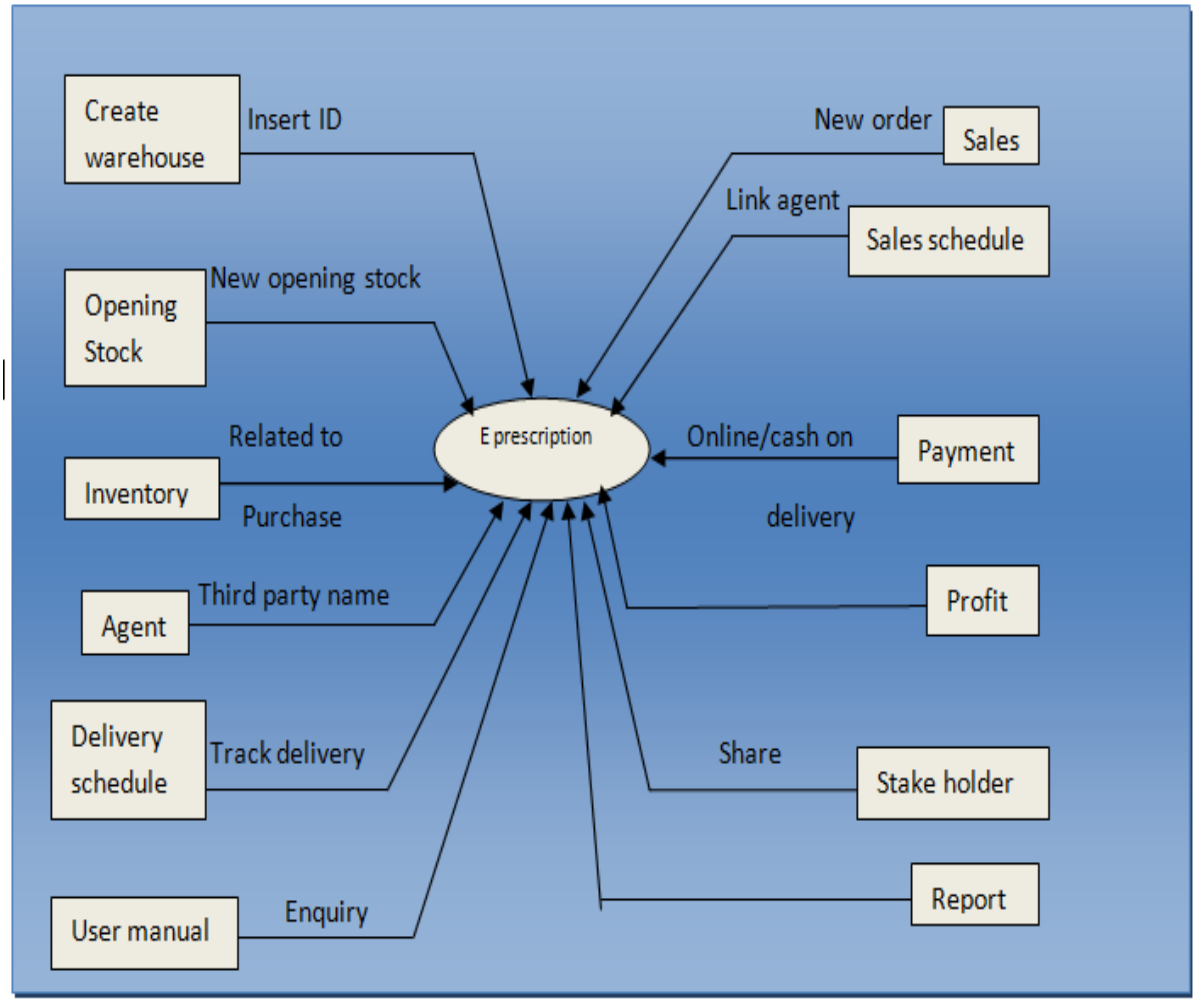


Fig 4.2: context diagram for I reader

After converting and verify the prescription to softcopy the further process steps in the application is explained in the context diagram. The operation over the medicine delivery the warehouse details, bill inventory , the time schedule, the payment the profit generates also the data needed for the share promotion is also included in the application of I reader

CHAPTER 5

DETAILED DESIGN

5.1 USE CASE DIAGRAM

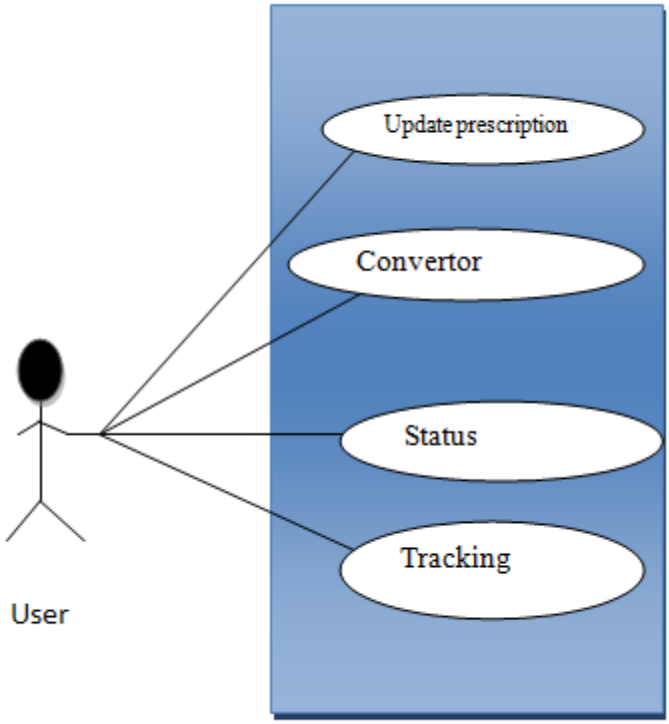


Fig 5.1.1: use case diagram for the user

The user will create upload the prescription given by the doctor or this user can be a doctor who directly uploaded the data. the prescription convertor and the progress of the medicine delivery and the tracking stage will be visible for the user patient and the doctor.

.

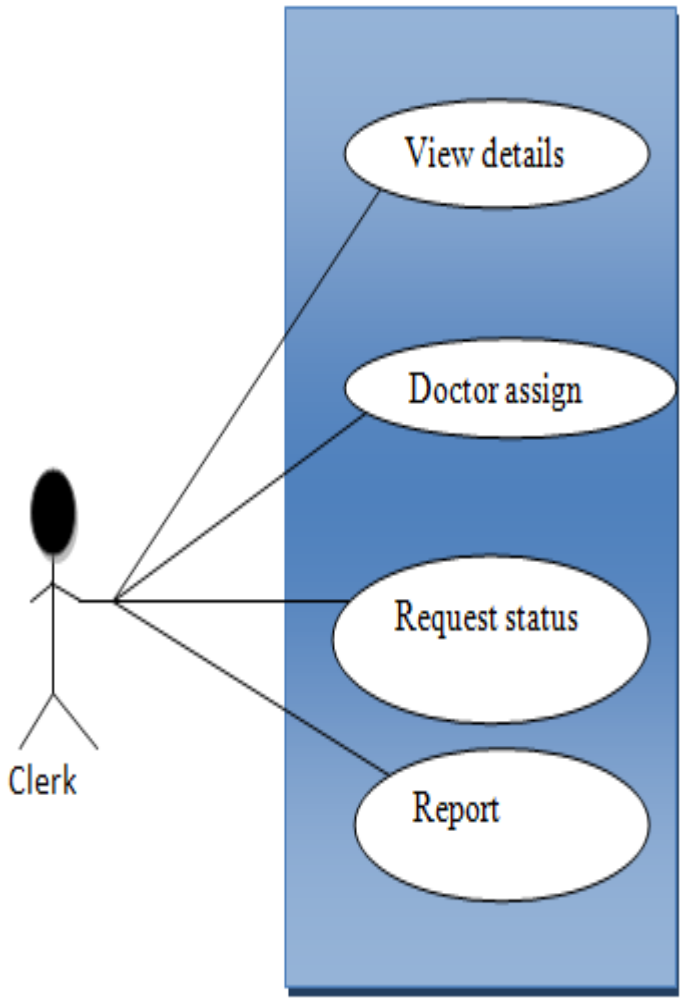


Fig 5.1.2: use case diagram for the I reader company clerk.

This user can view the request made from the patient / doctor. The application converted part of doctor assign and application progress in the item delivery and involve the non technical issues for the item delivery and data report management.

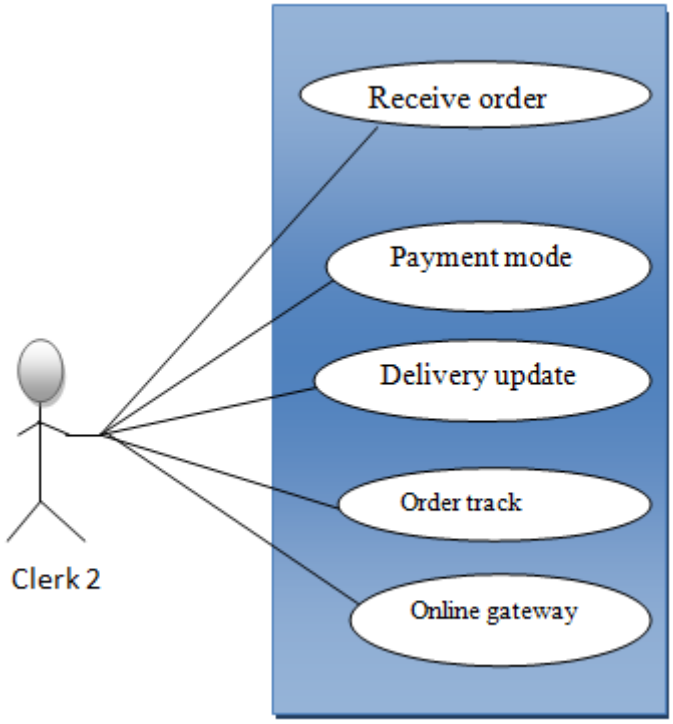


Fig 5.1.3: use case diagram for the clerk user for non reader based operations

After the prescription is converted to softcopy and the approved the clerk 2 will work in the processing like list of order receive, the type of payment mode made by doctor or the users, the progress in the delivery updates like name of seller to the location. The work based on online gateway with user transferred data with reader application and also to the list of sellers and logistic user involved in the business

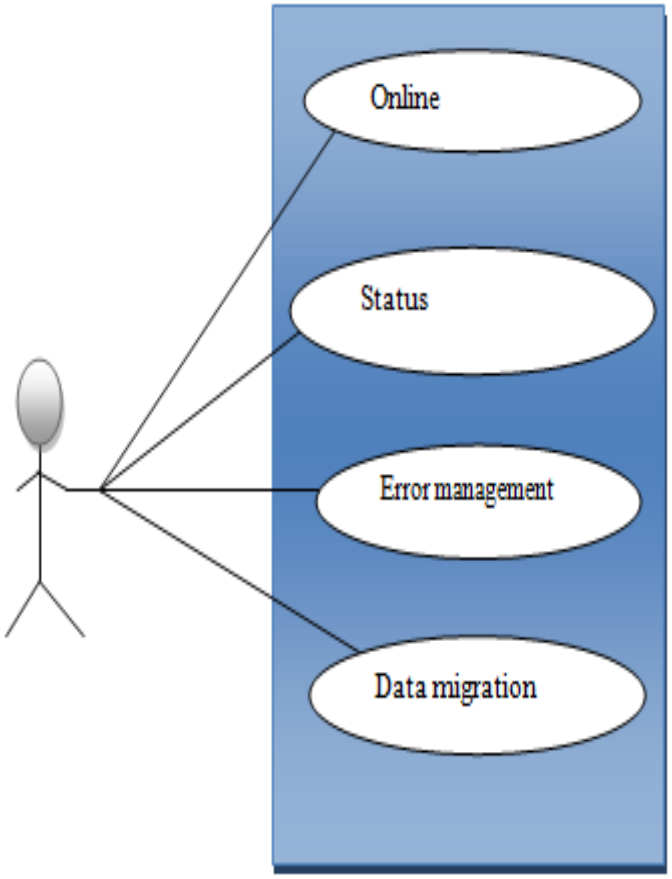


Fig 5.1.4: use case diagram technical error raise in the I reader operation and the data migrations

If the prescription loaded by the user has scratch or other marks by pen then I reader application cannot convert the data in the prescription. So the data migration will be made by proceeding keeping the scanned image of the original prescription as reference.

5.2: SEQUENCE DIAGRAM

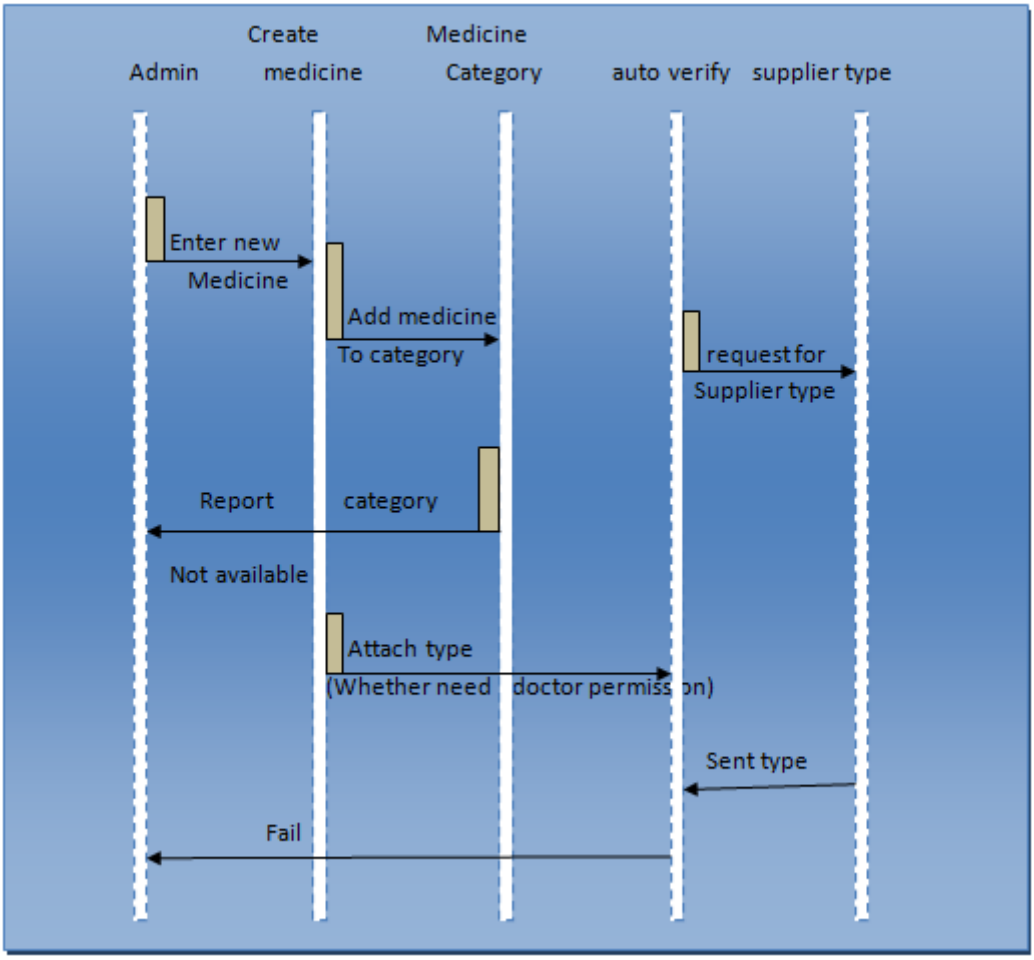


Fig 5.2.1: sequence diagram for added medicine for the supply and fetching the details for from the I reader technology.

The admin will update the list of medicine in the application server , he has the right to remove the medicine which is restricted by medical associations. When the I reader technology is processed these details will be auto fetched and used for the further delivery protocol.

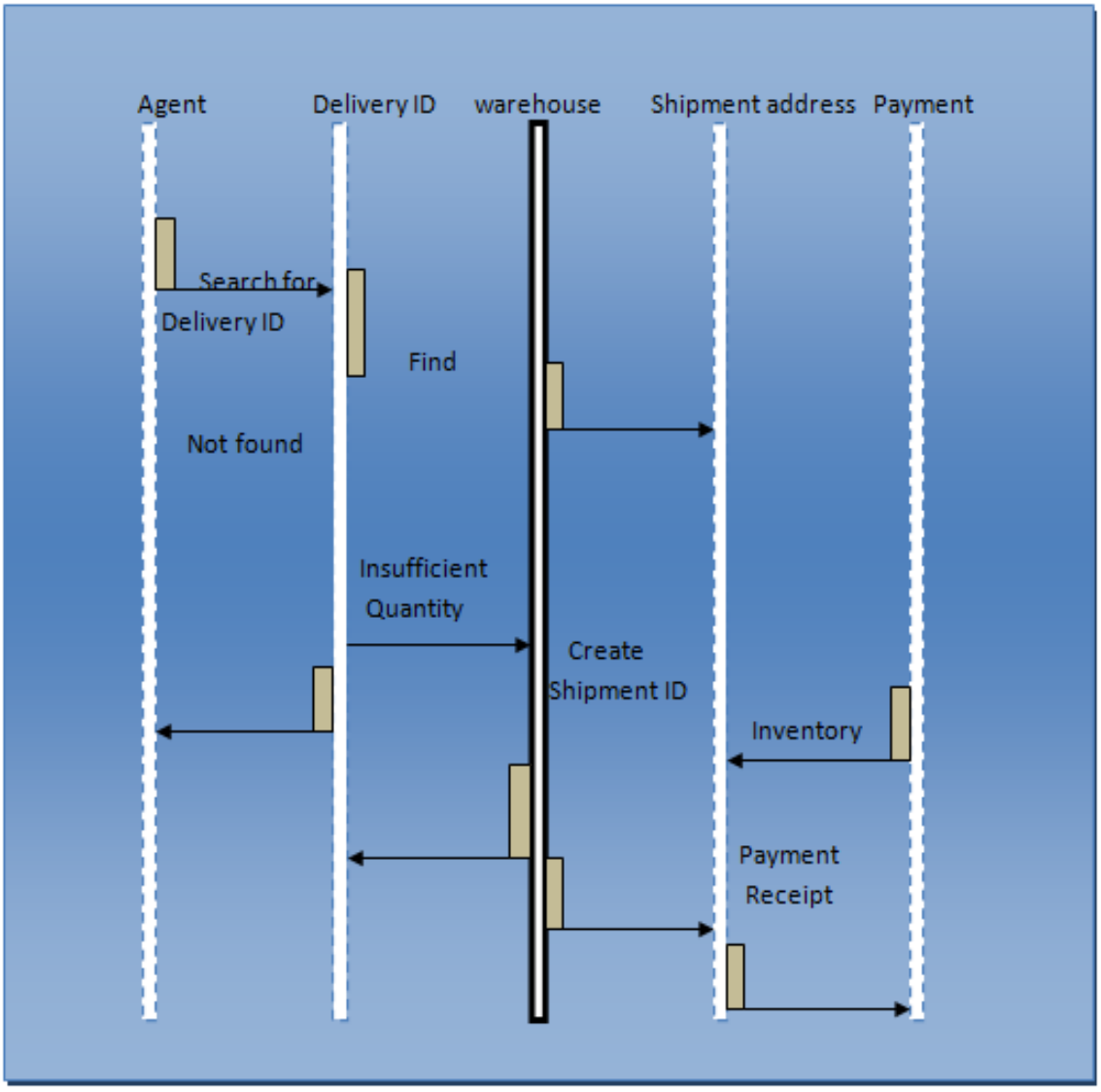


Fig 5.2.2: sequence diagram shipment activities.

Agent will enter the delivery ID and the application will search for the item stock in the warehouse and updates regarding the shipment will be processes. If the stock is insufficient in quantity to make migrations then call the agent regarding the latest updates, the payment over the medicine to be delivered is also included in the sequence of agent activity.

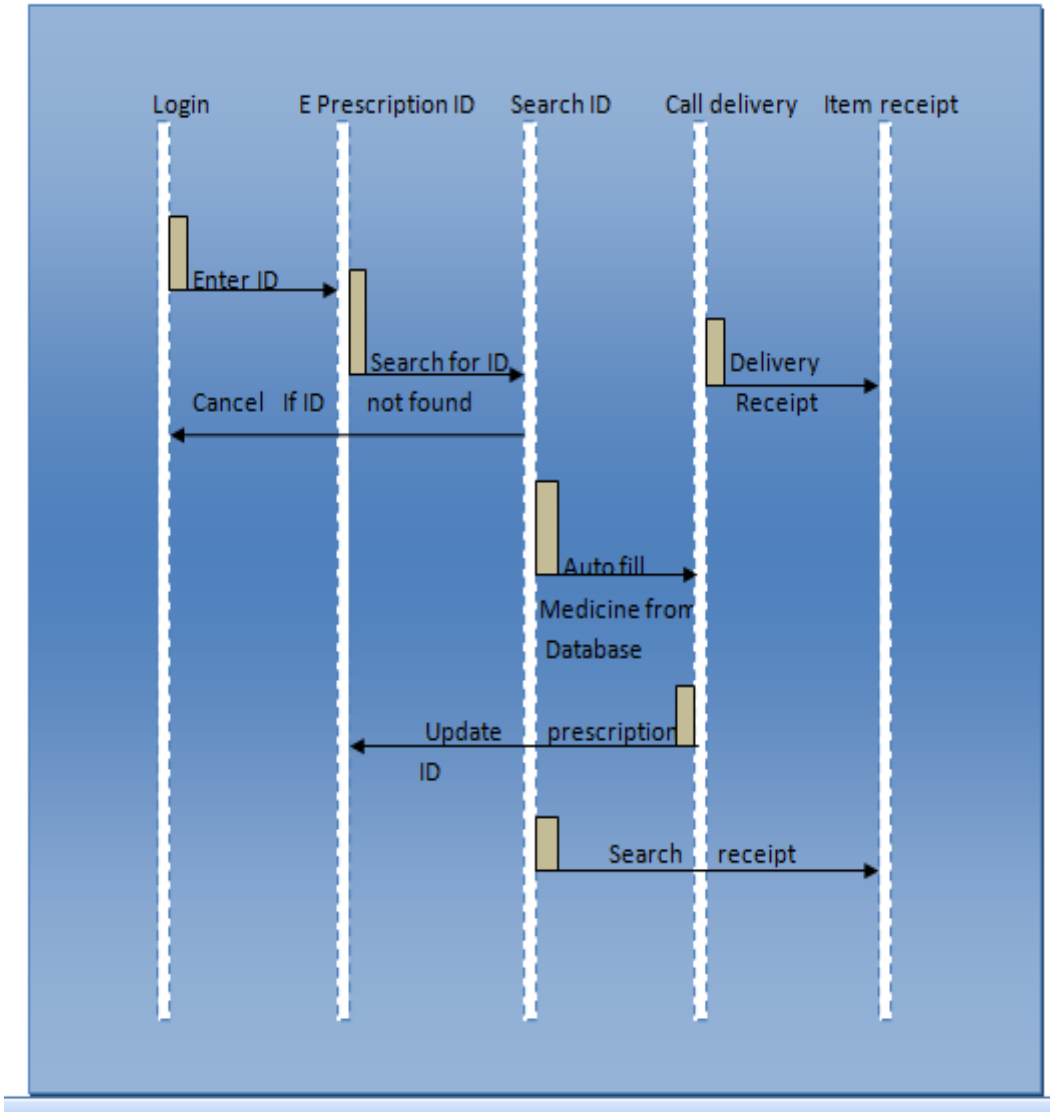


Fig 5.2.3: sequence diagram for E prescription operations

The medicine name in the E prescription will be stored in I reader based stack and passed in the search medicine. The ID of each medicine will be fetched from the server and the further process will be made with the ID of the medicine not with the name. This steps is added to increase the reliability of the item delivery.

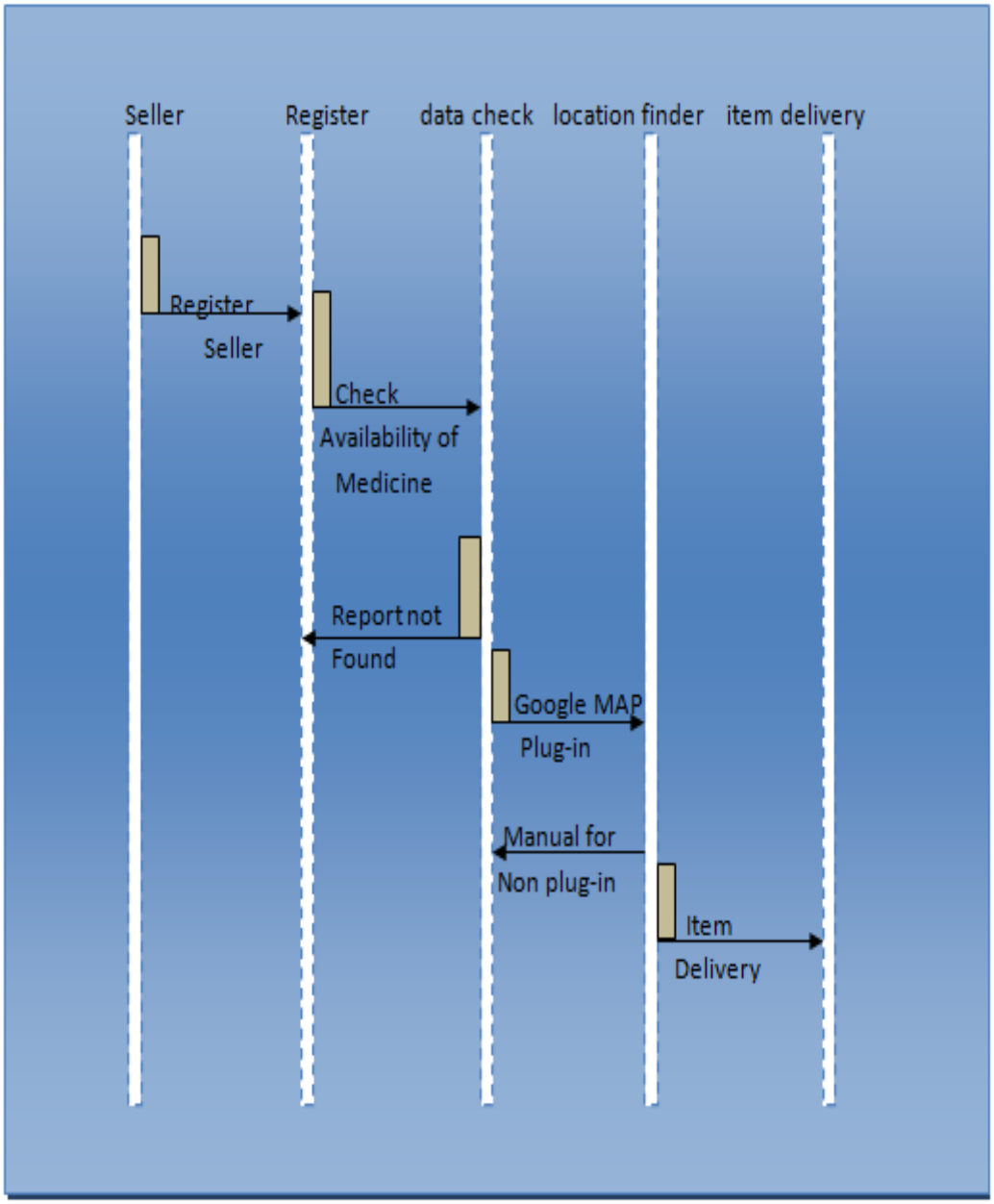


Fig 5.2.4: sequence diagram in location finding and delivering

The seller of the application will receive the I- reader converted data. The seller user will verify the stock and location to be delivered will be added. The Google map plug in is used in the I-reader application to get the destination user location in the portable units

5.3 COLLABORATION DIAGRAM

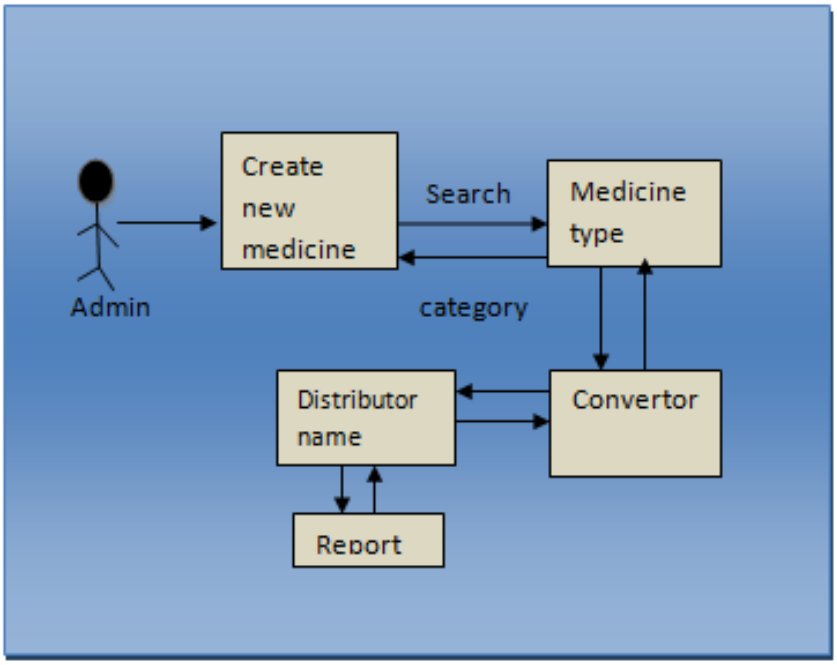


Fig 5.3.1: collaboration diagram for I reader convector activity.

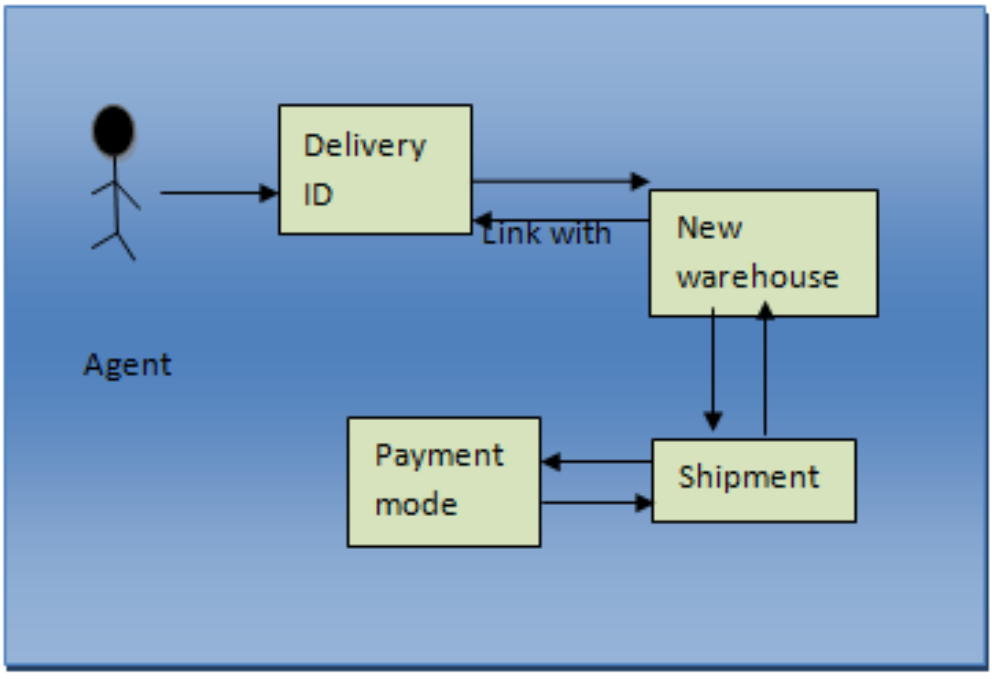


Fig 5.3.2: collaboration diagram for delivery from warehouse to shipment operations.

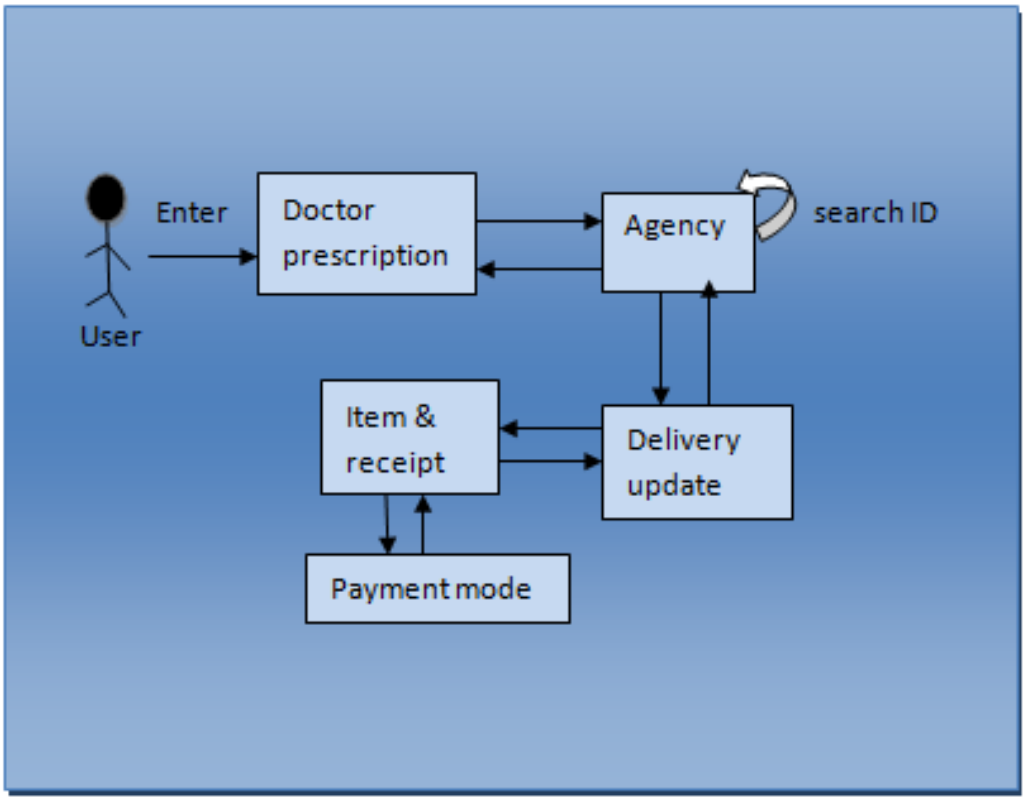


Fig 5.3.3: collaboration diagram for doctor prescribed object to delivery update.

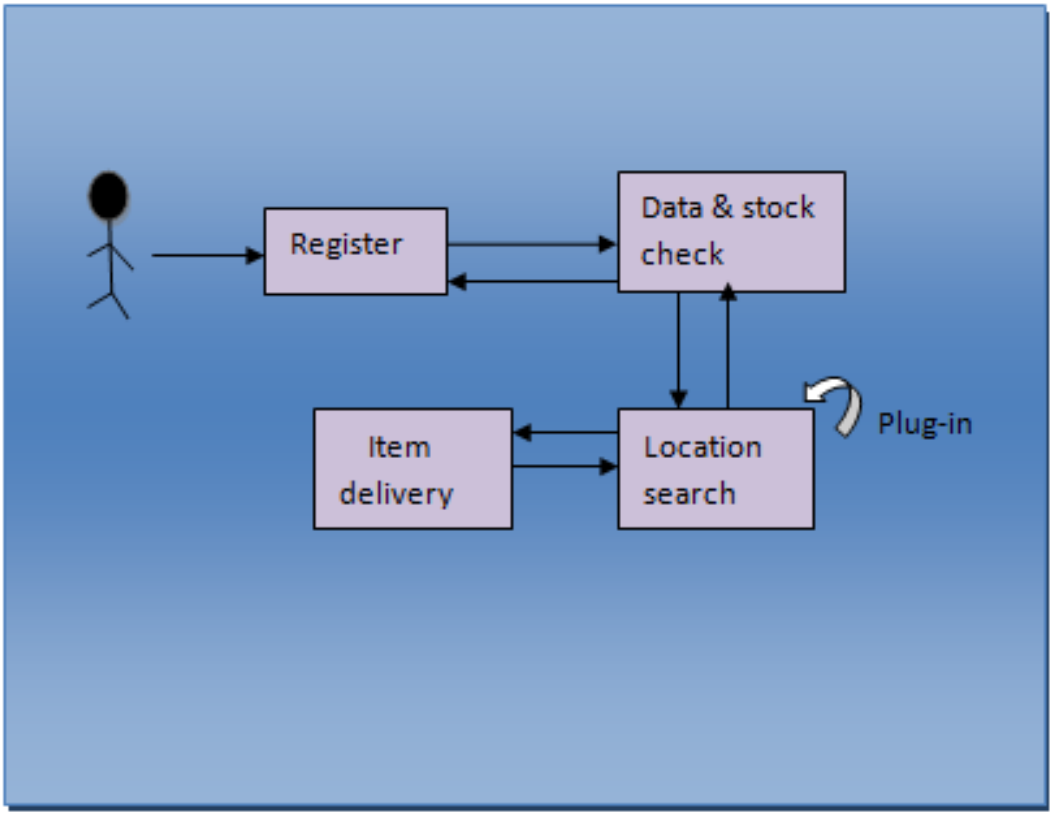


Fig 5.3.4: collaboration diagram for location search and item delivery.

5.4 ACTIVITY DIAGRAM

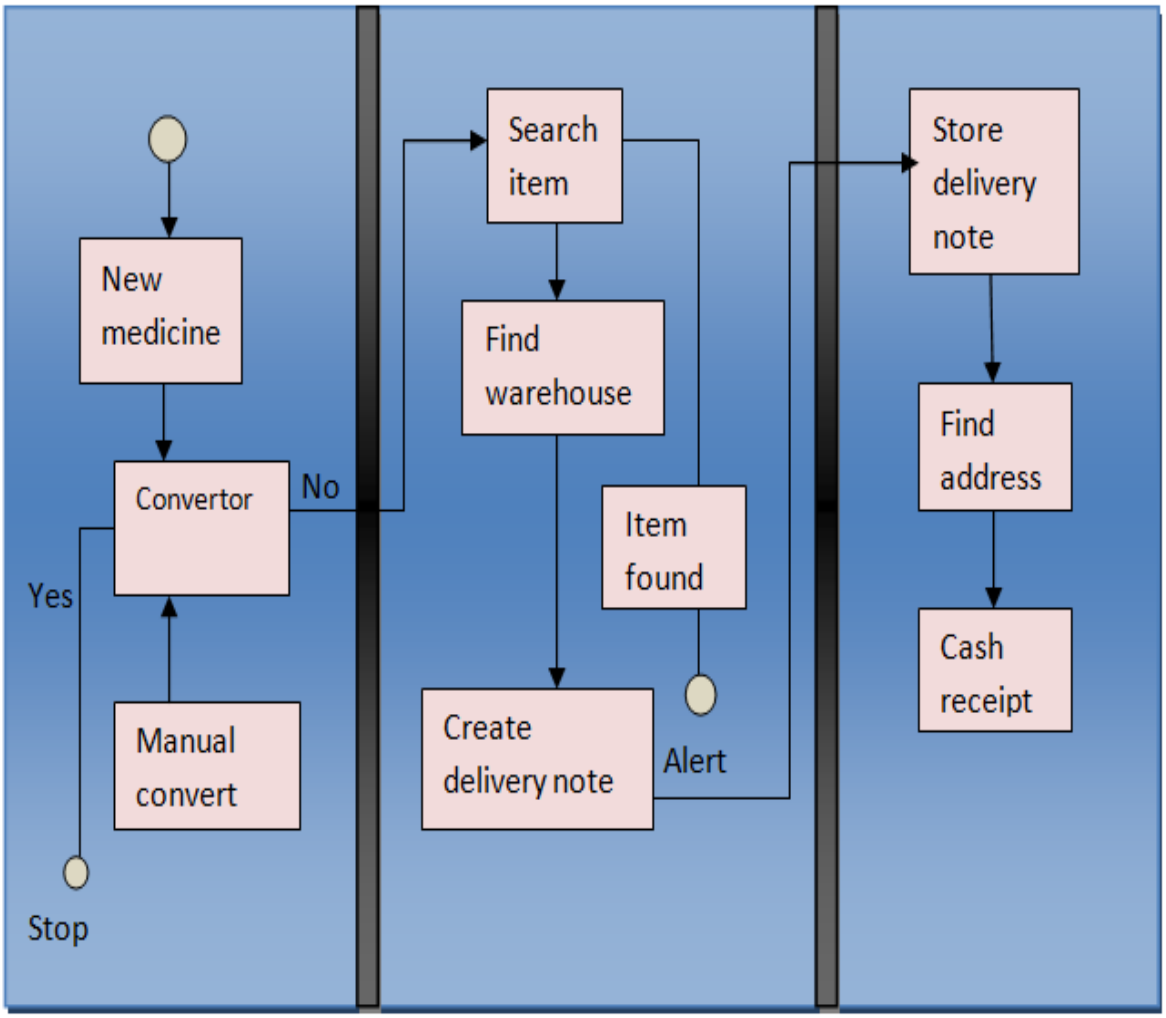


Fig 5.4.1: activity diagram in converted and non converted prescription data.

The application will call the convertor algorithm of I reader for the creating the E prescription , if the algorithm can convert the data the auto fetching details of find item, find the warehouse where the medicine is stored , the auto create of delivery note for the E prescription based medicine. If the algorithm cannot covert the manual converted data from the prescription will be send for the medicine delivery.

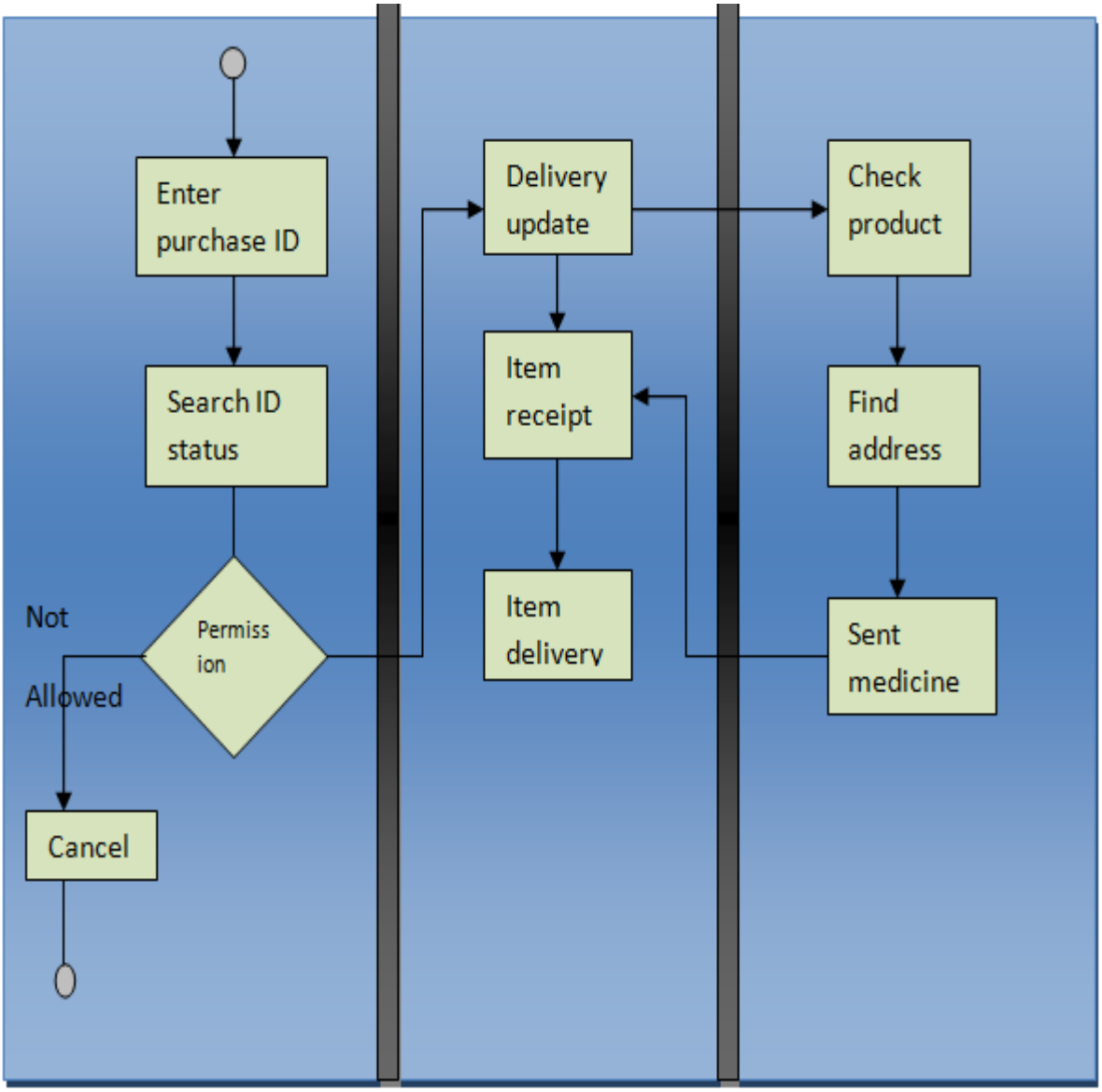


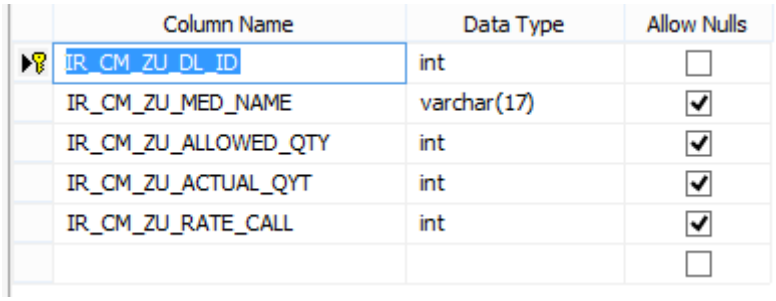
Fig 5.4.2: activity diagram for permission for the medicine.

If the auto fetched medicine list form the prescription is restricted or found fabricated by the user the admin of the I reader application can reject the proposal, if he item generated cannot be read due to marks on the prescription the admin can manually approve the progress and further updates like item receipt the delivery tracking will be called.

5.5 DATABASE DESIGN

Table name :DBO.IR_CM_ZU_DELIVERY

Attribute	Data type	Constraint
IR_CM_ZU_DL_ID	INT	PRIMARYKEY,
IR_CM_ZU_MED_NAME	VARCHAR(17),	**NA**
IR_CM_ZU_ALLOWED_QTY	INT,	**NA**
IR_CM_ZU_ACTUAL_QYT	INT,	**NA**
IR_CM_ZU_RATE_CALL	INT	**NA**

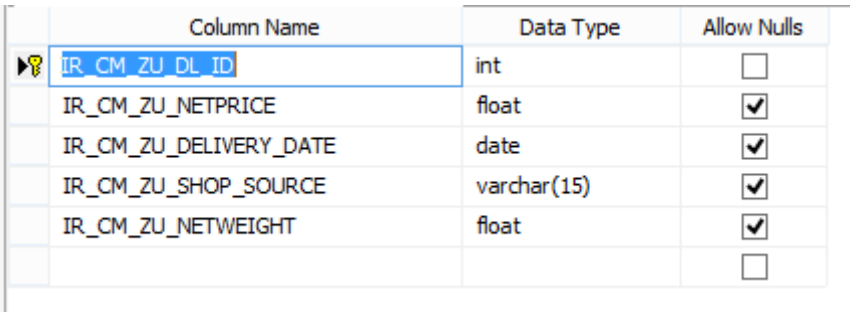


Column Name	Data Type	Allow Nulls
IR_CM_ZU_DL_ID	int	☐
IR_CM_ZU_MED_NAME	varchar(17)	☑
IR_CM_ZU_ALLOWED_QTY	int	☑
IR_CM_ZU_ACTUAL_QYT	int	☑
IR_CM_ZU_RATE_CALL	int	☑
		☐

Table 5.5.1: table for IR_CM_ZU_DELIVERY

Table name :DBO.IR_CM_ZU_ORDER_REPORT

Attribute	Data type	Constraint
IR_CM_ZU_DL_ID	INT	PRIMARYKEY,
IR_CM_ZU_NETPRICE	FLOAT,	**NA**
IR_CM_ZU_DELIVERY_DATE	DATE,	**NA**
IR_CM_ZU_SHOP_SOURCE	VARCHAR(15),	**NA**
IR_CM_ZU_NETWEIGHT	FLOAT	**NA**



Column Name	Data Type	Allow Nulls
IR_CM_ZU_DL_ID	int	☐
IR_CM_ZU_NETPRICE	float	☑
IR_CM_ZU_DELIVERY_DATE	date	☑
IR_CM_ZU_SHOP_SOURCE	varchar(15)	☑
IR_CM_ZU_NETWEIGHT	float	☑
		☐

Table 5.5.2: table for IR_CM_ZU_ORDER_REPORT

Table name :DBO.IR_CM_ZU_RATE_CALL

Attribute	Data type	Constraint
IR_CM_ZU_RATE_CALL	INT	PRIMARYKEY,
IR_CM_ZU_UNIT_PRICE	INT,	**NA**
IR_CM_ZU_MG_CON	FLOAT,	**NA**
IR_CM_ZU_PRICE_PER_TAB	FLOAT,	**NA**
IR_CM_ZU_PRICE_SLIP	FLOAT	**NA**

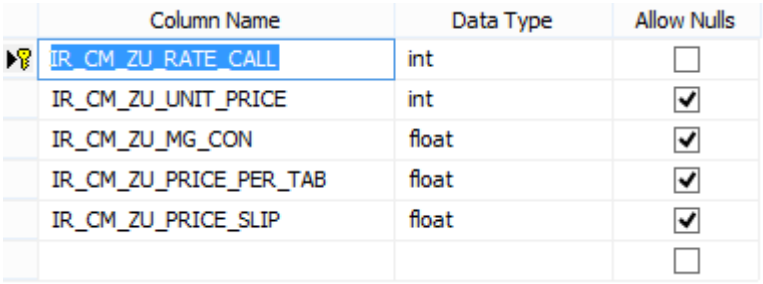


Table 5.5.3: table for DBO.IR_CM_ZU_RATE_CALL

Table name :DBO.IR_CM_ZU_READER_DATA

Attribute	Data type	Constraint
IR_CM_ZU_READER_ID	INT	PRIMARYKEY,
IR_CM_ZU_MED_NAME	VARCHAR(19),	**NA**
IR_CM_ZU_MED_FOUND_STATUS	CHAR(14),	**NA**
IR_CM_ZU_DL_ID	INT	**NA**

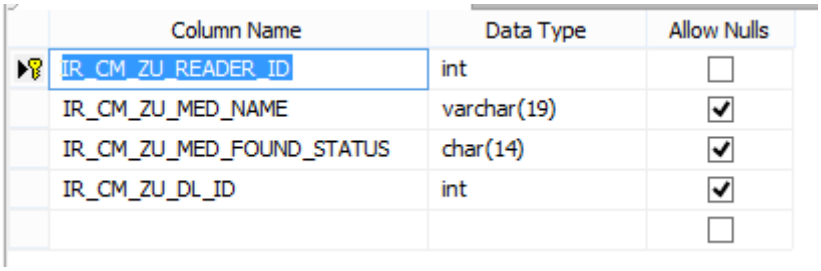


Table 5.5.4: table for DBO.IR_CM_ZU_READER_DATA

Table name : DBO.IR_CM_ZU_READER_DATA_2

Attribute	Data type	Constraint
IR_CM_ZU_READER_ID	INT	PRIMARYKEY,
IR_CM_ZU_SCAN_DATA	VARCHAR(100),	**NA**
IR_CM_ZU_DL_ID_COUNT_MEDI	INT,	**NA**
IR_CM_ZU_DL_ID_CONVERT_SIZE	FLOAT,	**NA**
IR_CM_ZU_DL_ID_CONVERT_STATUS	CHAR(3)	**NA**

Column Name	Data Type	Allow Nulls
IR_CM_ZU_READER_ID	int	☐
IR_CM_ZU_SCAN_DATA	varchar(100)	☑
IR_CM_ZU_DL_ID_COUNT_MEDI	int	☑
IR_CM_ZU_DL_ID_CONVERT_SIZE	float	☑
IR_CM_ZU_DL_ID_CONVERT_STATUS	char(3)	☑
		☐

Table 5.5.4: table for DBO.IR_CM_ZUREADER_DATA_2

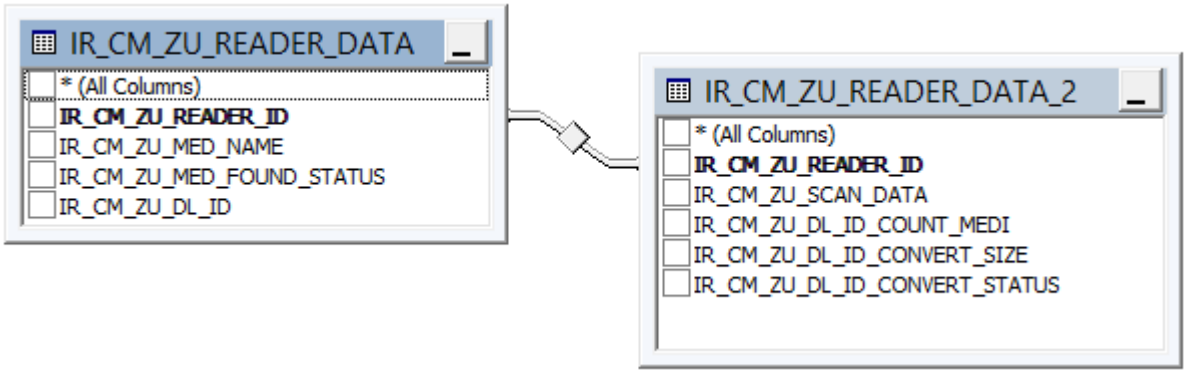


FIG 5.5.1: Schema for the data reader 1 and 2

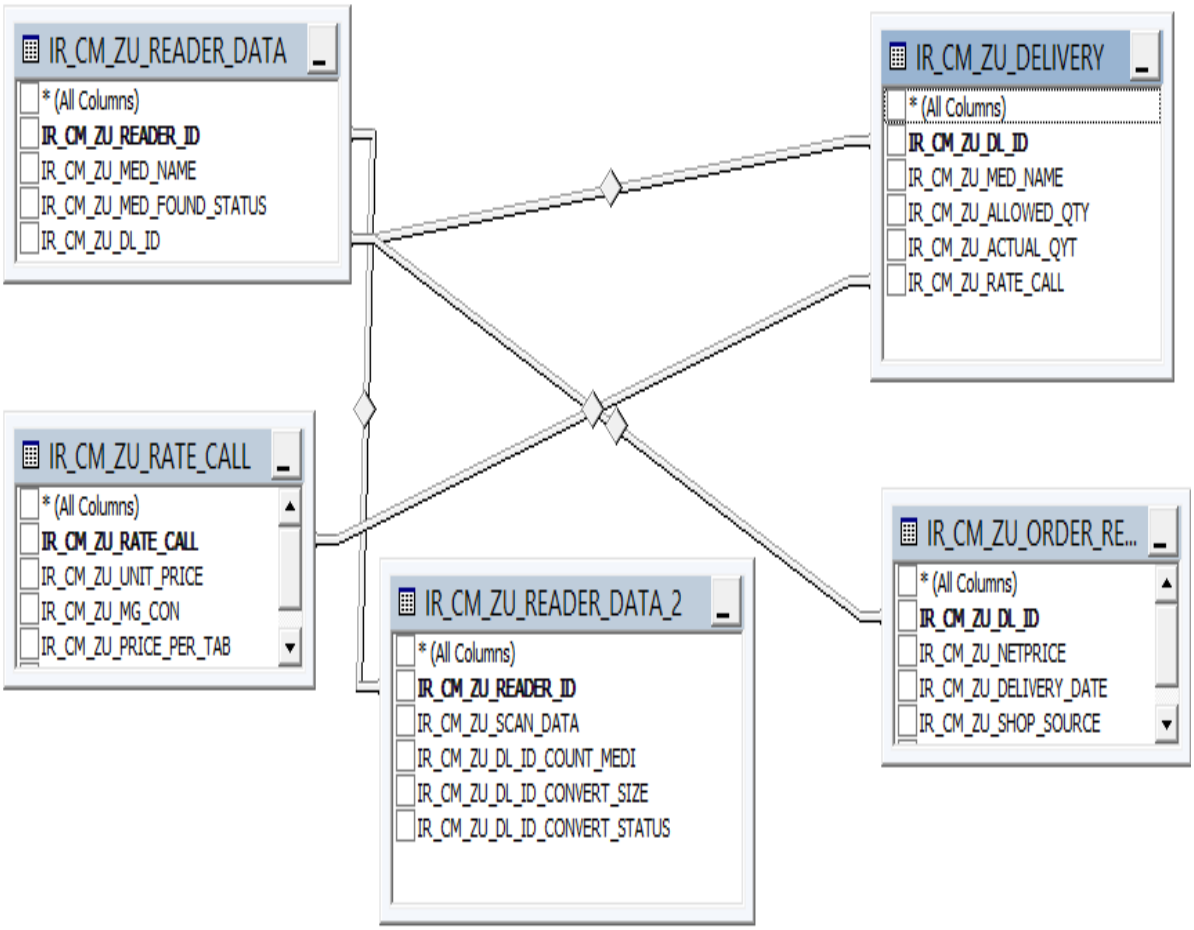
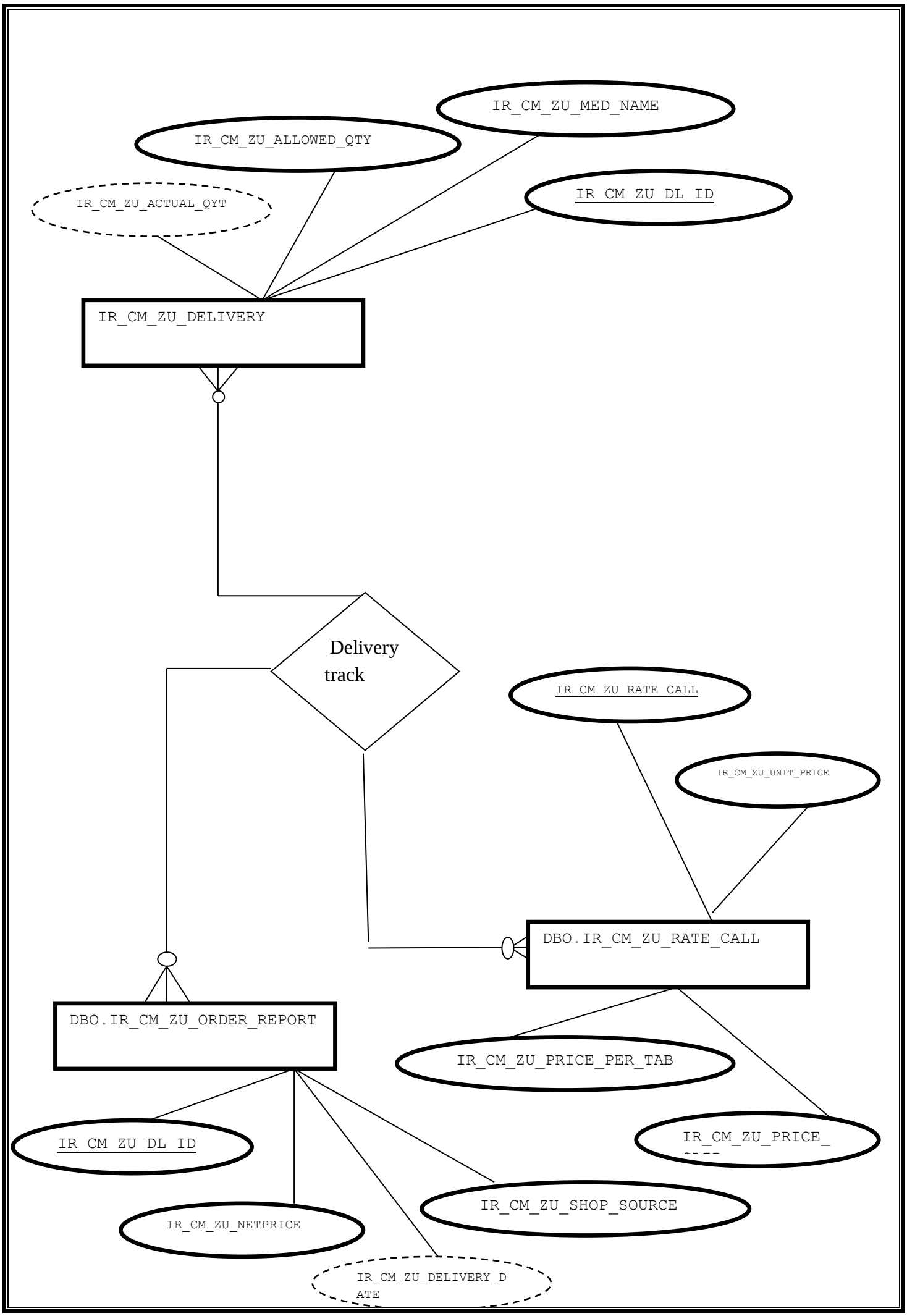
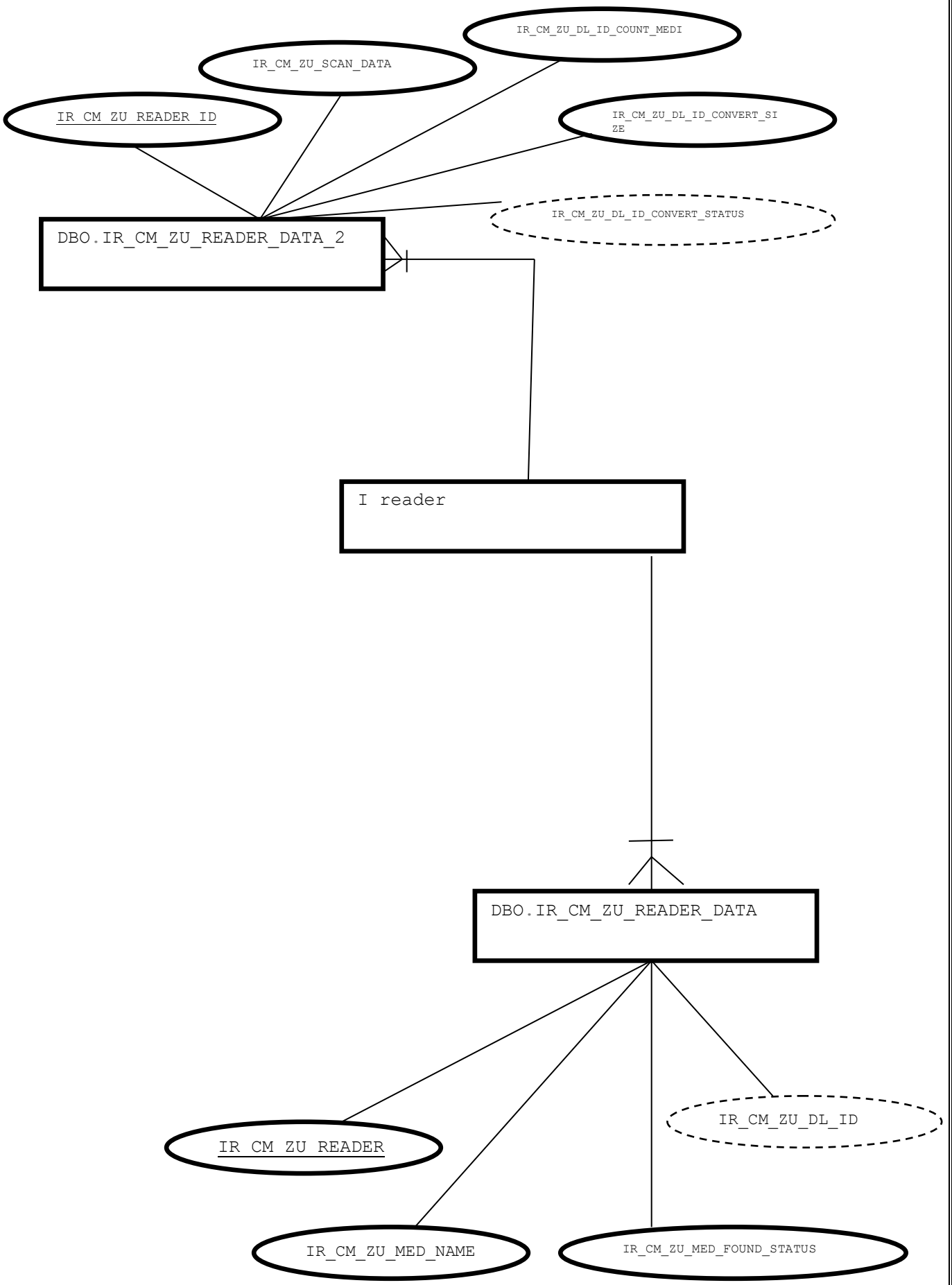


FIG 5.5.2: Schema for the over all table connection


IR_CM_ZU_MED_NAME
IR_CM_ZU_ALLOWED_QTY
IR_CM_ZU_ACTUAL_QYT
IR_CM_ZU_DL_ID
IR_CM_ZU_DELIVERY
Delivery track
IR_CM_ZU_RATE_CALL
IR_CM_ZU_UNIT_PRICE
DBO.IR_CM_ZU_RATE_CALL
DBO.IR_CM_ZU_ORDER_REPORT
IR_CM_ZU_PRICE_PER_TAB
IR_CM_ZU_DL_ID
IR_CM_ZU_PRICE_
IR_CM_ZU_SHOP_SOURCE
IR_CM_ZU_NETPRICE
IR_CM_ZU_DELIVERY_D
ATE


IR_CM_ZU_DL_ID_COUNT_MEDI
IR_CM_ZU_SCAN_DATA
IR_CM_ZU_READER_ID
IR_CM_ZU_DL_ID_CONVERT_SIZE
IR_CM_ZU_DL_ID_CONVERT_STATUS
DBO.IR_CM_ZU_READER_DATA_2
I reader
DBO.IR_CM_ZU_READER_DATA
IR_CM_ZU_READER
IR_CM_ZU_DL_ID
IR_CM_ZU_MED_NAME
IR_CM_ZU_MED_FOUND_STATUS

CHAPTER 6

IMPLEMENTATION

6.1 SCREENSHOT

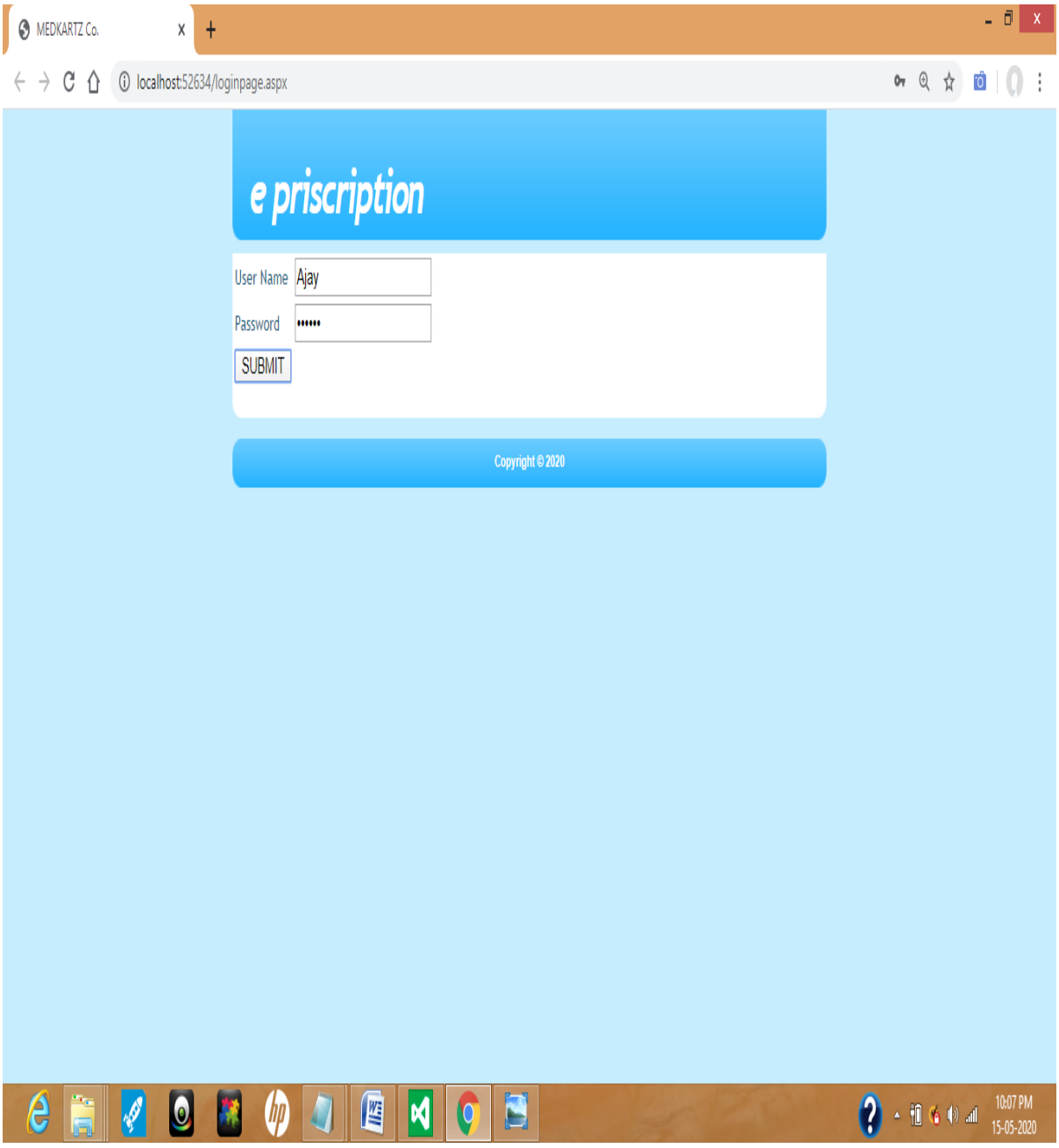


Fig 6.1.1: log in for the user to purchase the medicine

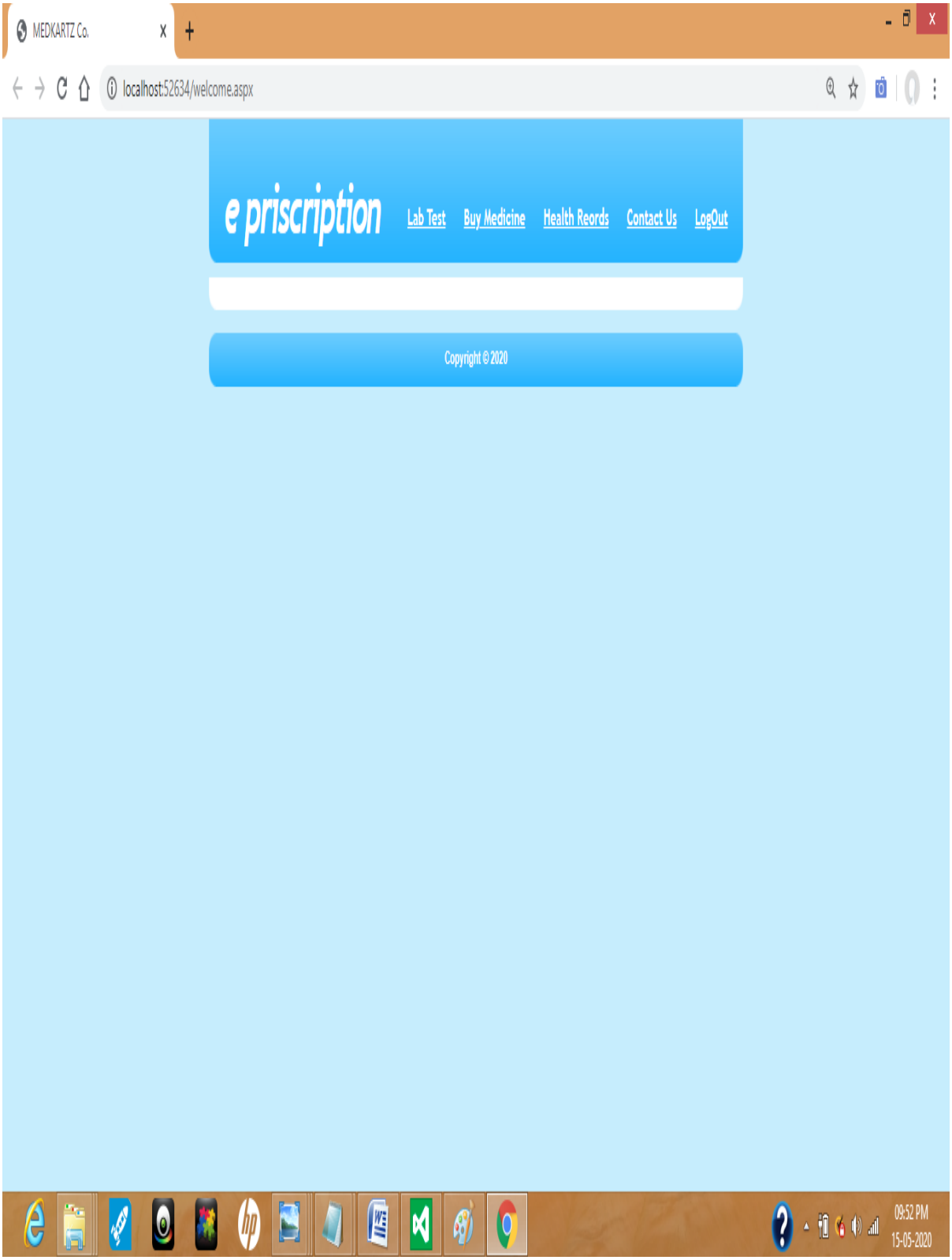


Fig 6.1.2: welcome page for the user. The portal will provide the support for the lab test, the medicine supply and health record for the user who has registered in the application. the list of test made by the users and the result of the test , the medicine supplied for the portal etc are include features of E prescription application

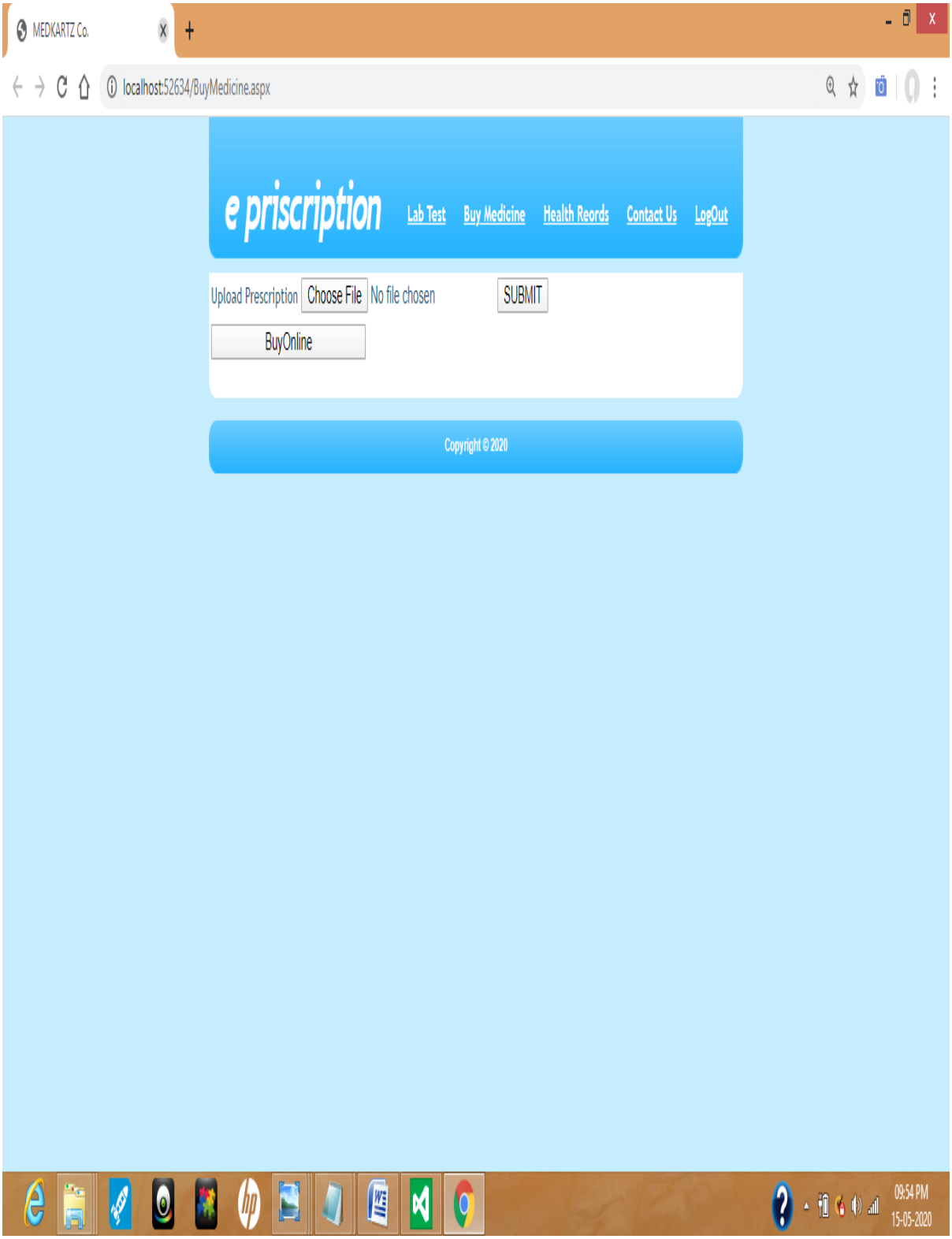


Fig 6.1.3: according the new government rule the medicine will be supplied only with doctors prescription and this page with file upload application will saved the scanned or camera pic of the prescription in the back end for the further data updates.

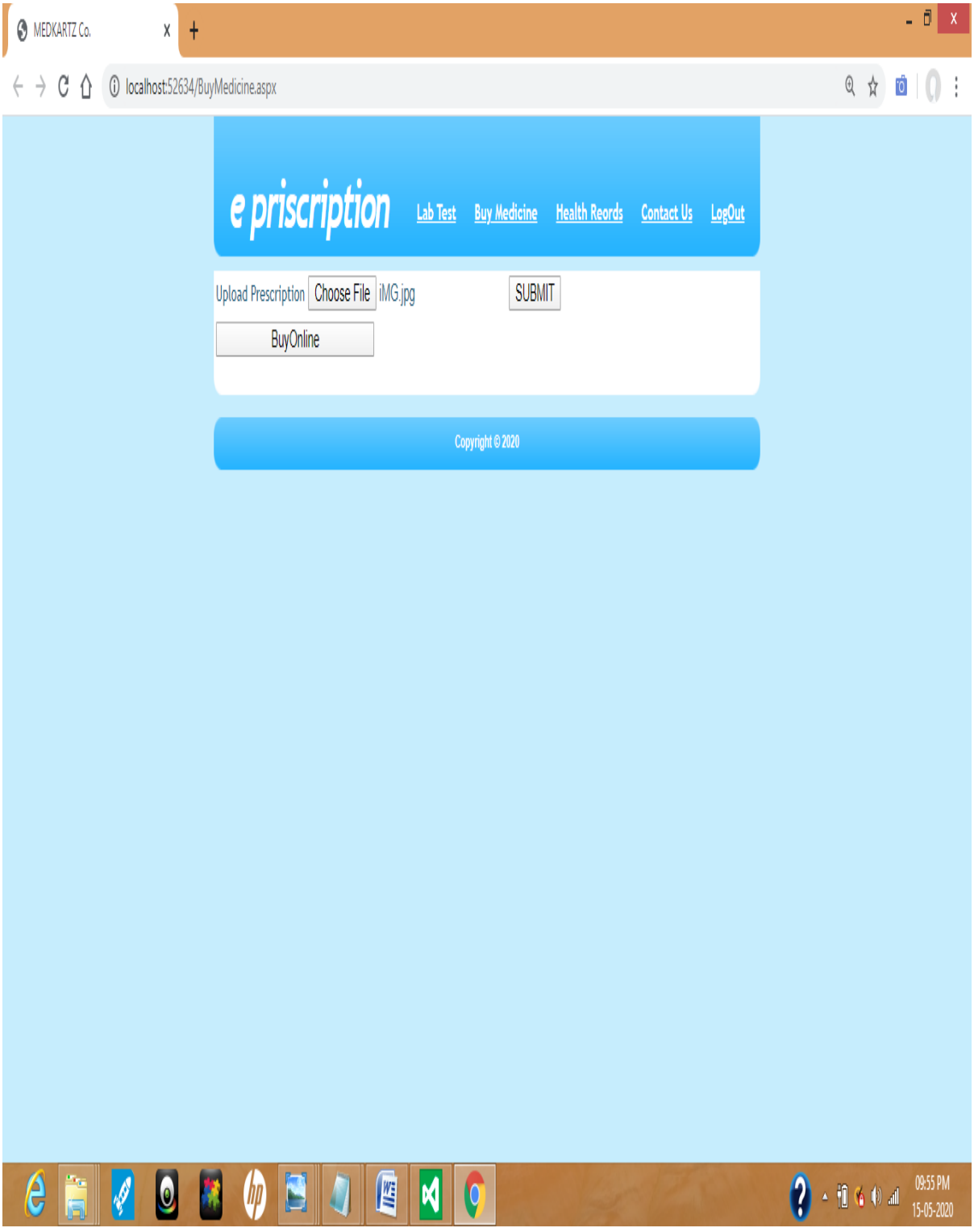


Fig 6.1.4: the prescription with name 1MG.JPEG is uploaded by the user,

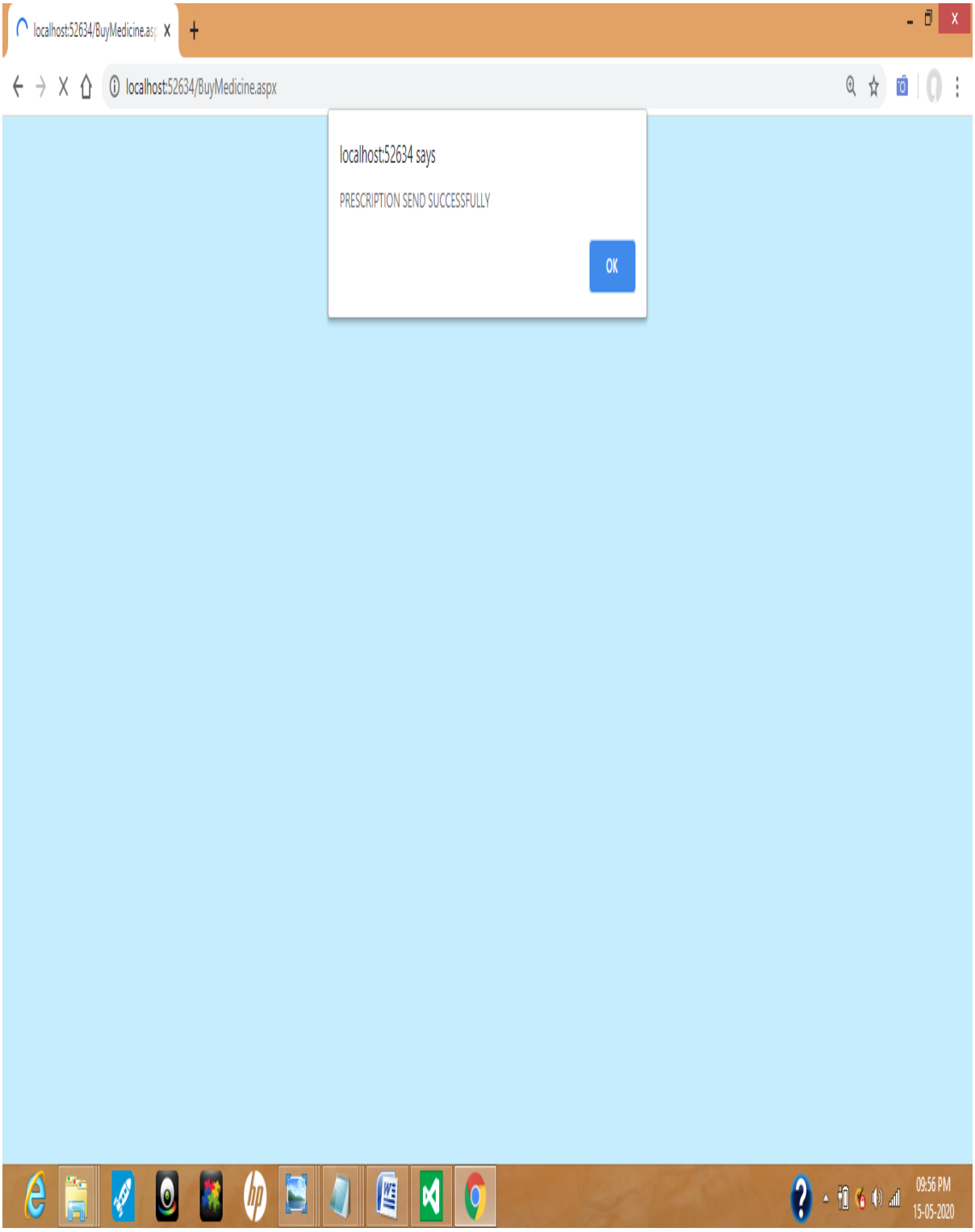


Fig 6.1.5: the uploaded file will be send to the organisation where application will auto scan and fetch list of medicine from the user updated prescription.

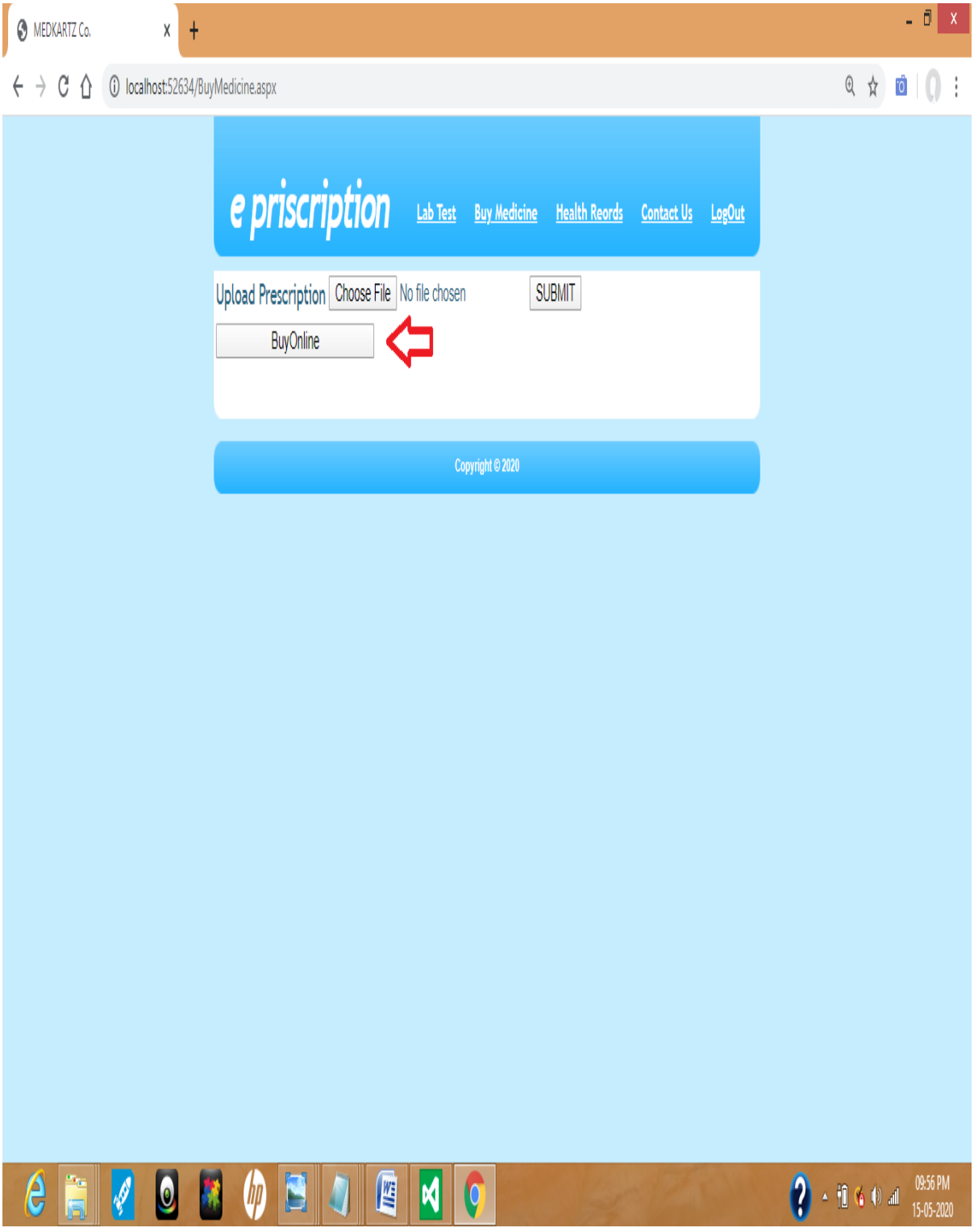


Fig 6.1.6: after uploading the prescription the user needed to select the set of medicine needed to purchase from the online portal.

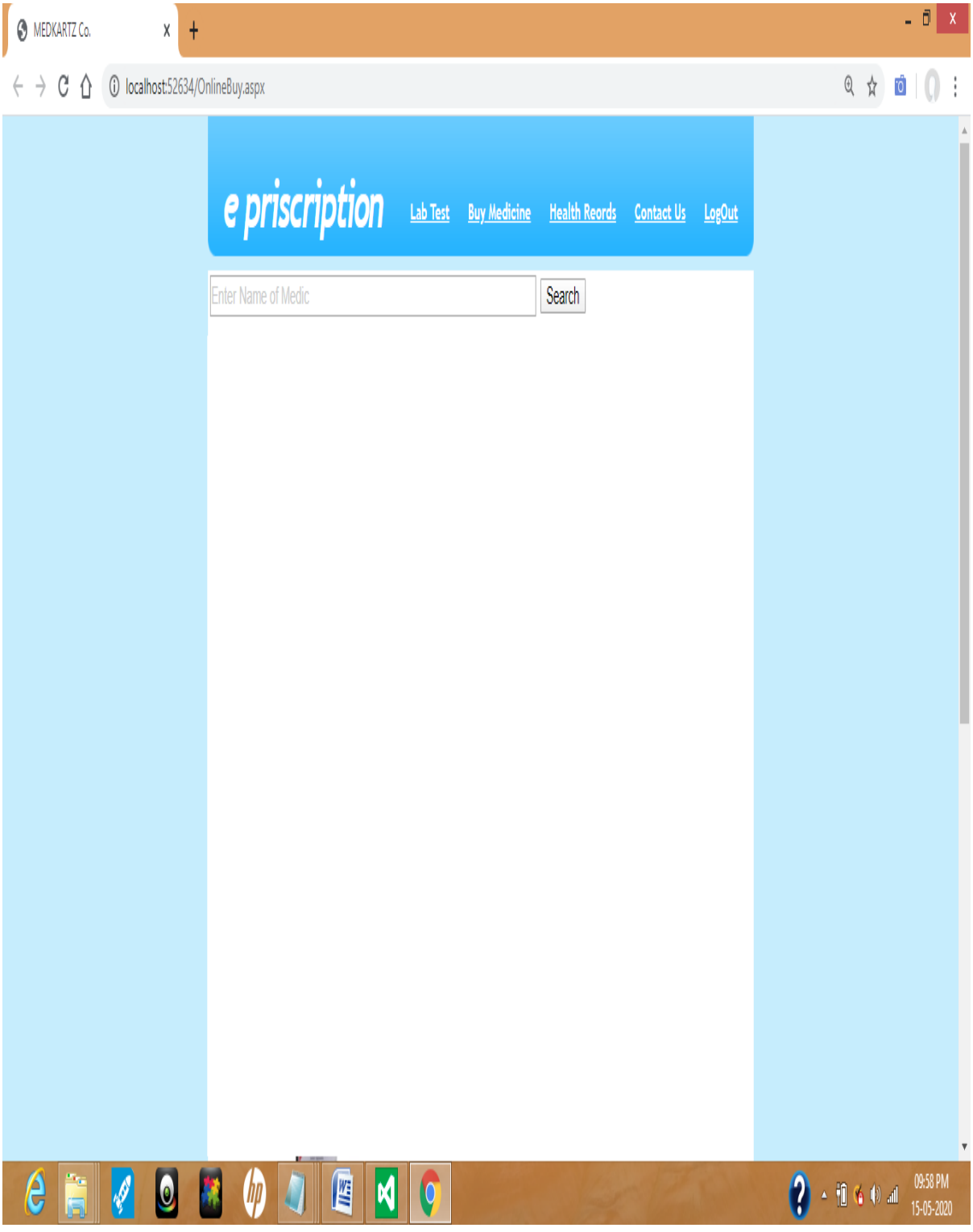


Fig 6.1.7: the page for search and shortlist the item.

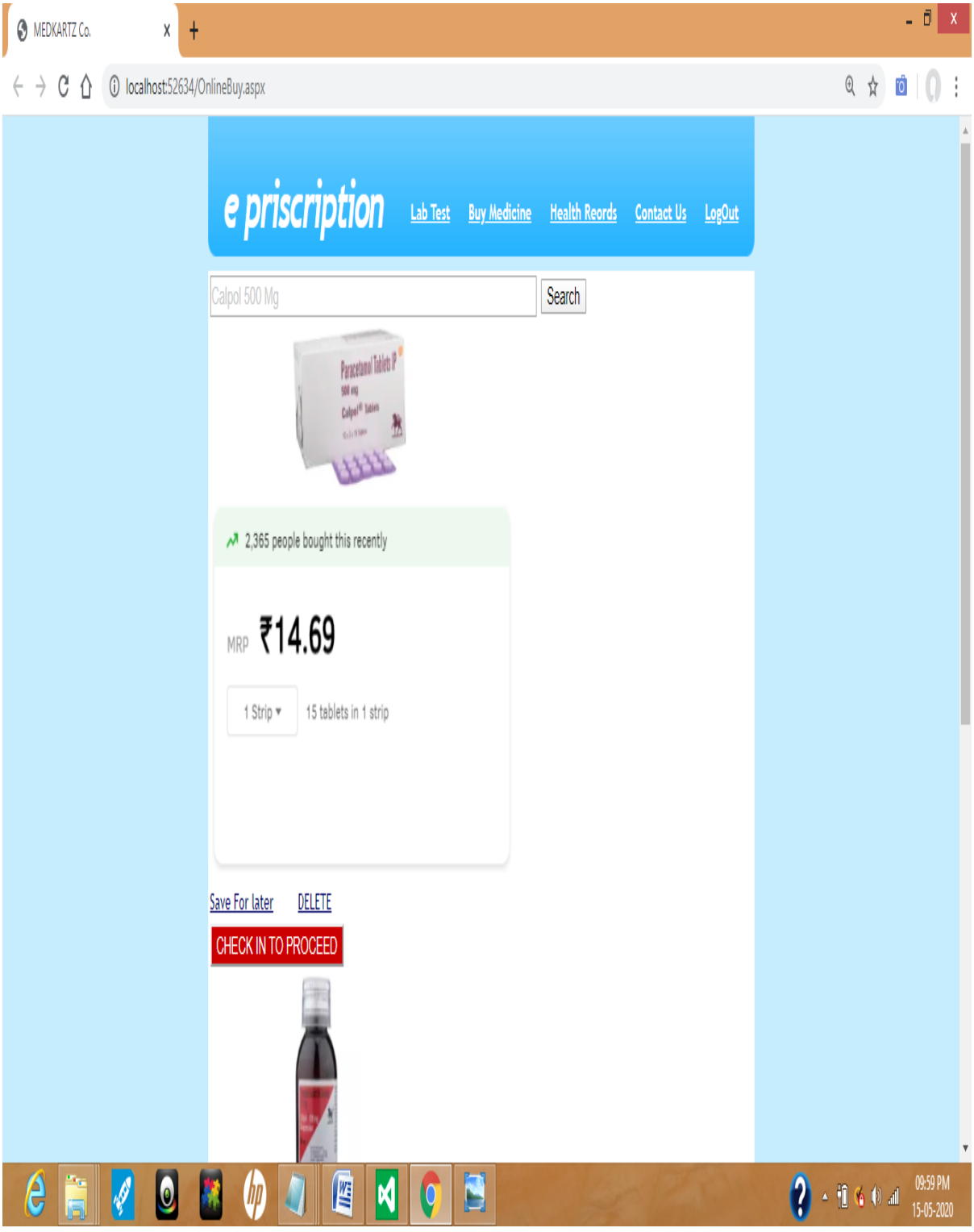


Fig 6.1.8: user enter CALPOL 500mg, and the application will load the CALPOL list in the web form. The user can save the medicine for later or remove the shortlisted medicine. The process of I reader based conversion will occur only when users click the proceed button. If the use upload the prescription and do not proceed the I reader module for conversion will not called.

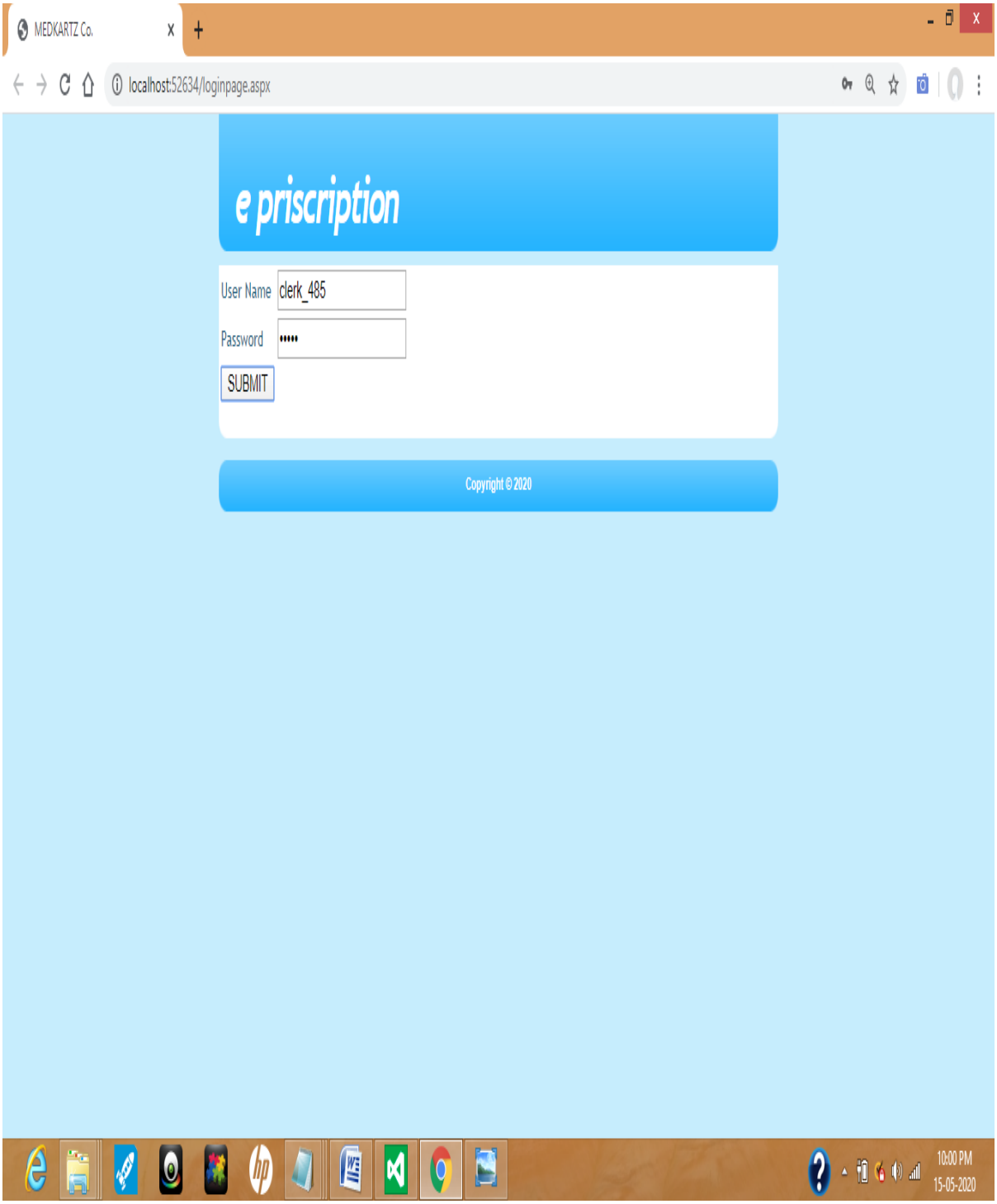


Fig 6.1.9: the clerk or employee of E prescription company login .

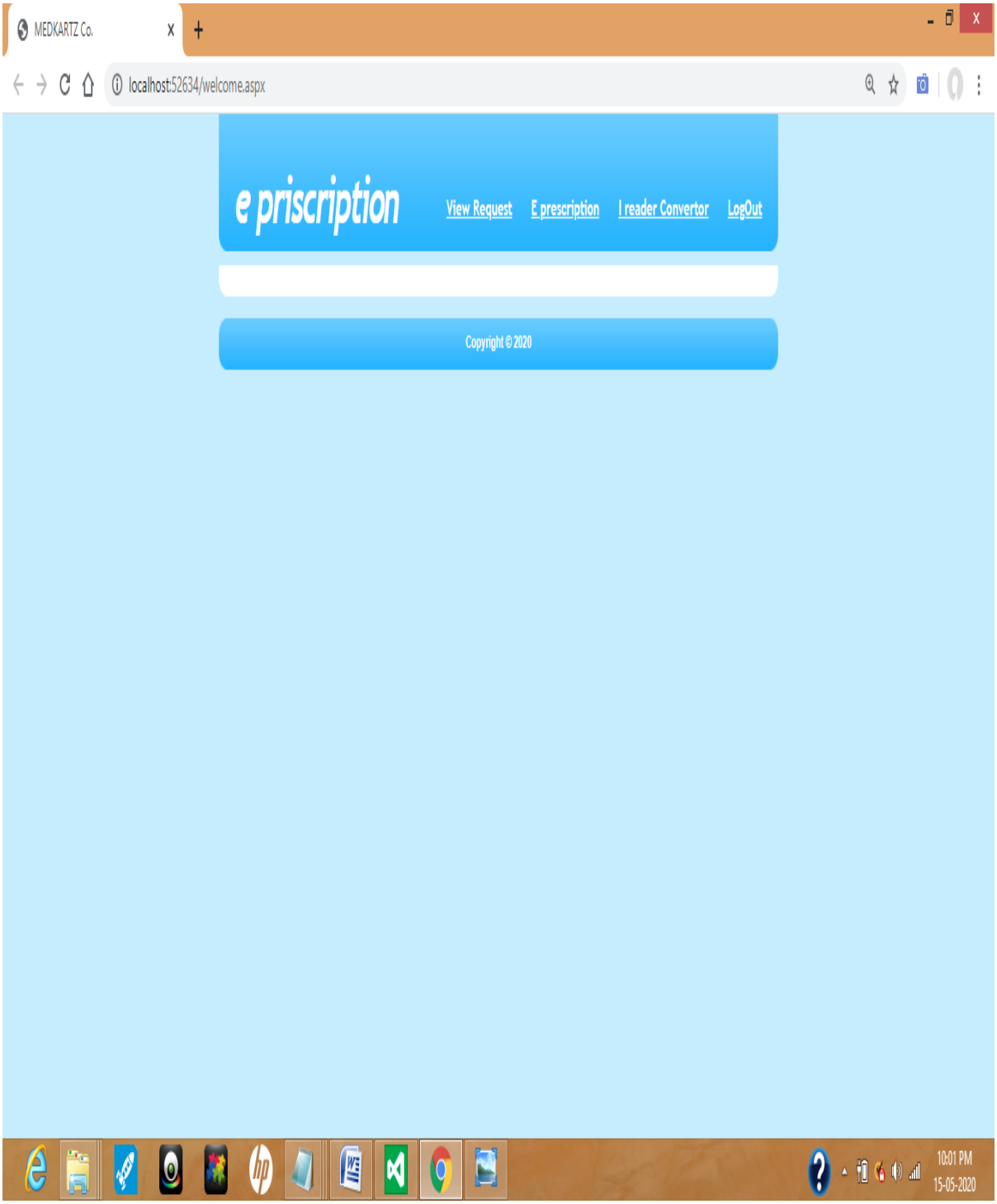


Fig 6.1.10: the welcome page for the clerk. Here the navigation tools has the control for the view request and process the item sales.

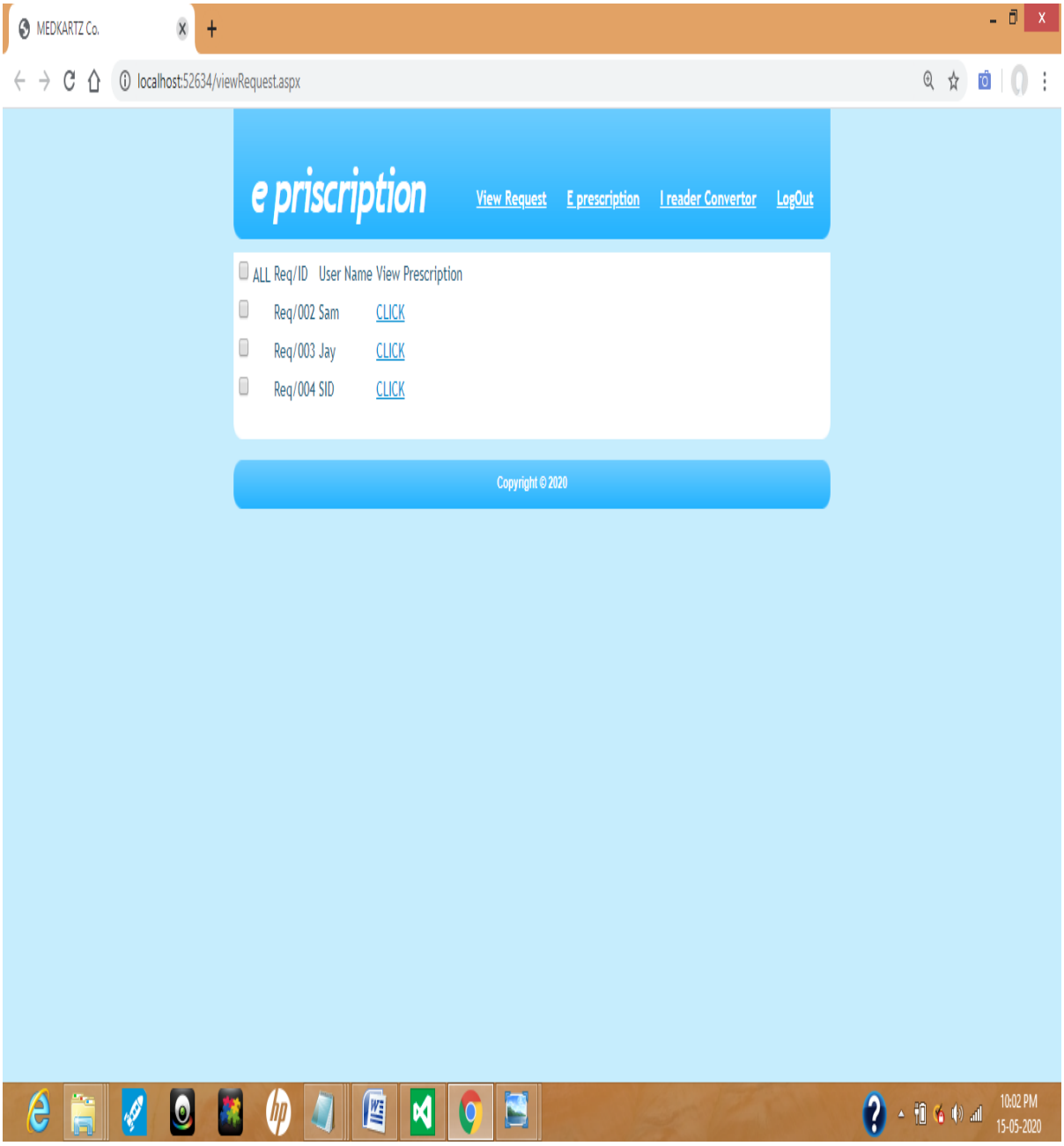


Fig 6.1.11: when the user click the view request page following page will be loaded. This page has the list of request made from different users for the medicine sales. The clerk user click the one or two or all and click the link button so the all the image based prescription will be automatically converted to softcopy. Here the user click Re/002 and click the link button.

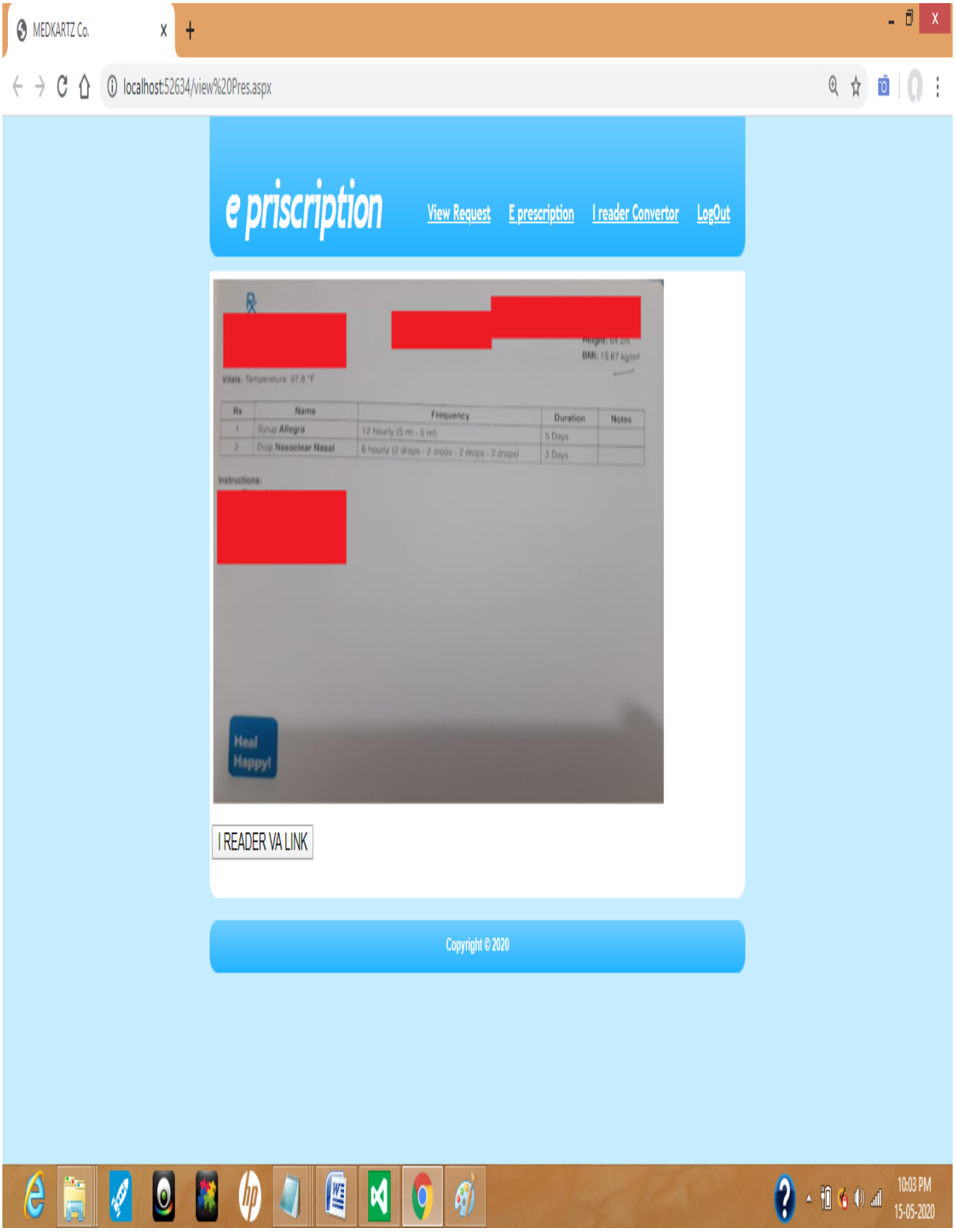


Fig 6.1.12: the prescription in the image format will be loaded. The user click the I reader link button the selected image will be scanner with VA algorithm based I reader and the letter in the prescription will be saved stack. This letter will be displayed for further online sales of medicine.

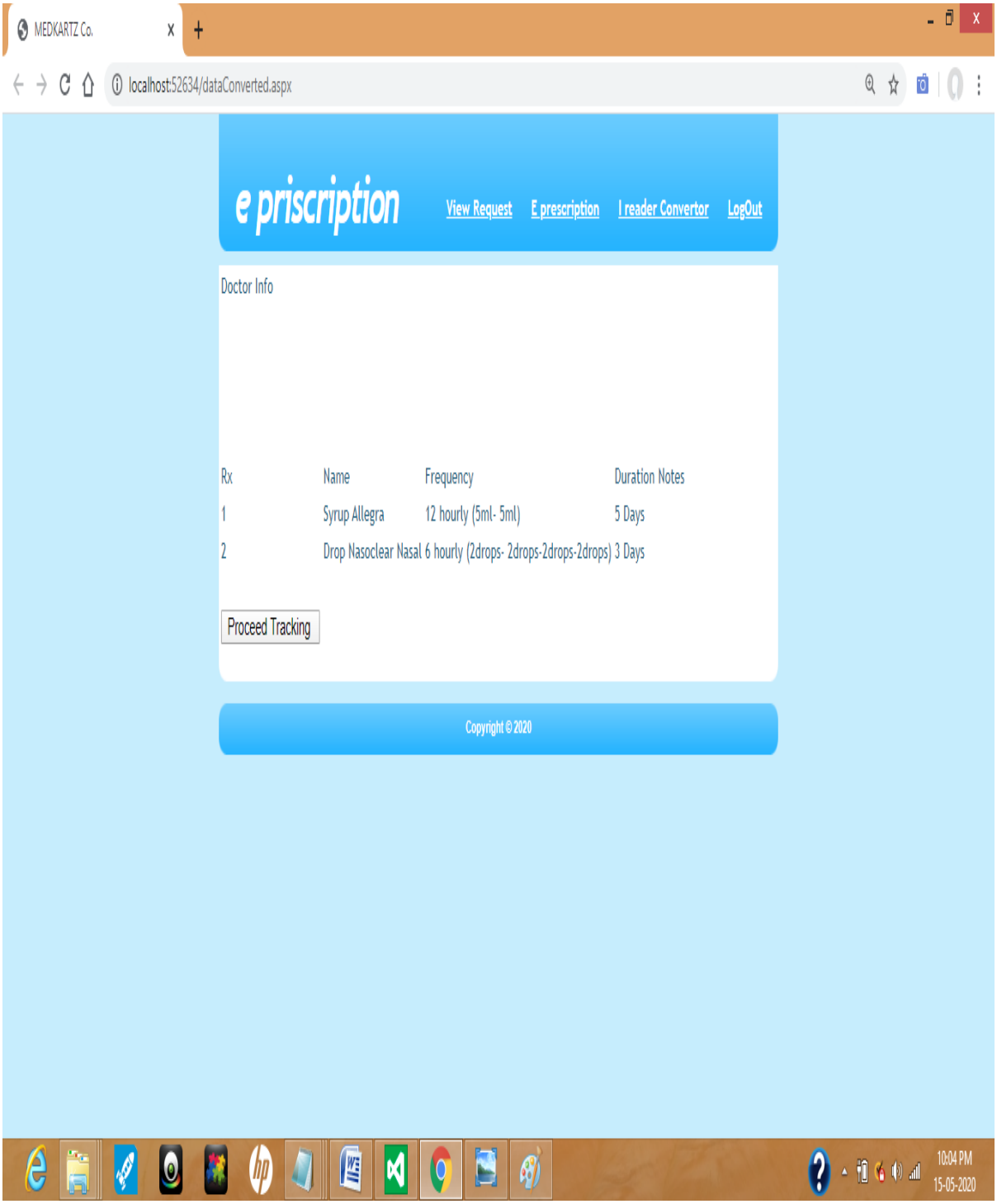


Fig 6.1.13: the application web form with converted file details. Buy clicking the proceed tracking software the steps for matching and item delivery will be called.

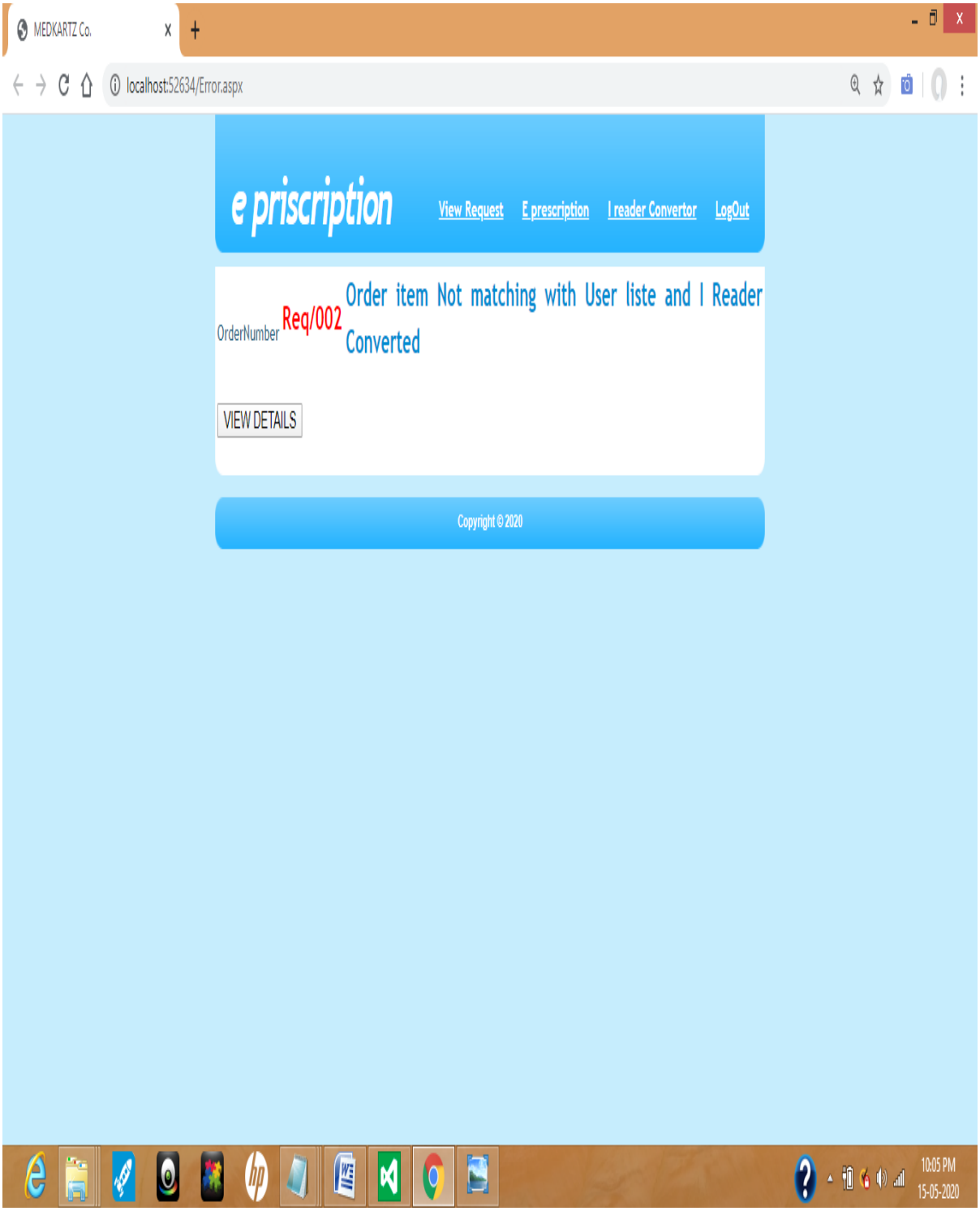


Fig 6.1.14: since the user created medicine list (Fig 6.1.8) and I reader generated value are not matching the application has suspended the further medicine supply. Application highlights that order reference number Req/002 has included medicine item which is not matching the I reader generated value and user input value. Click the view details button to track the order details.

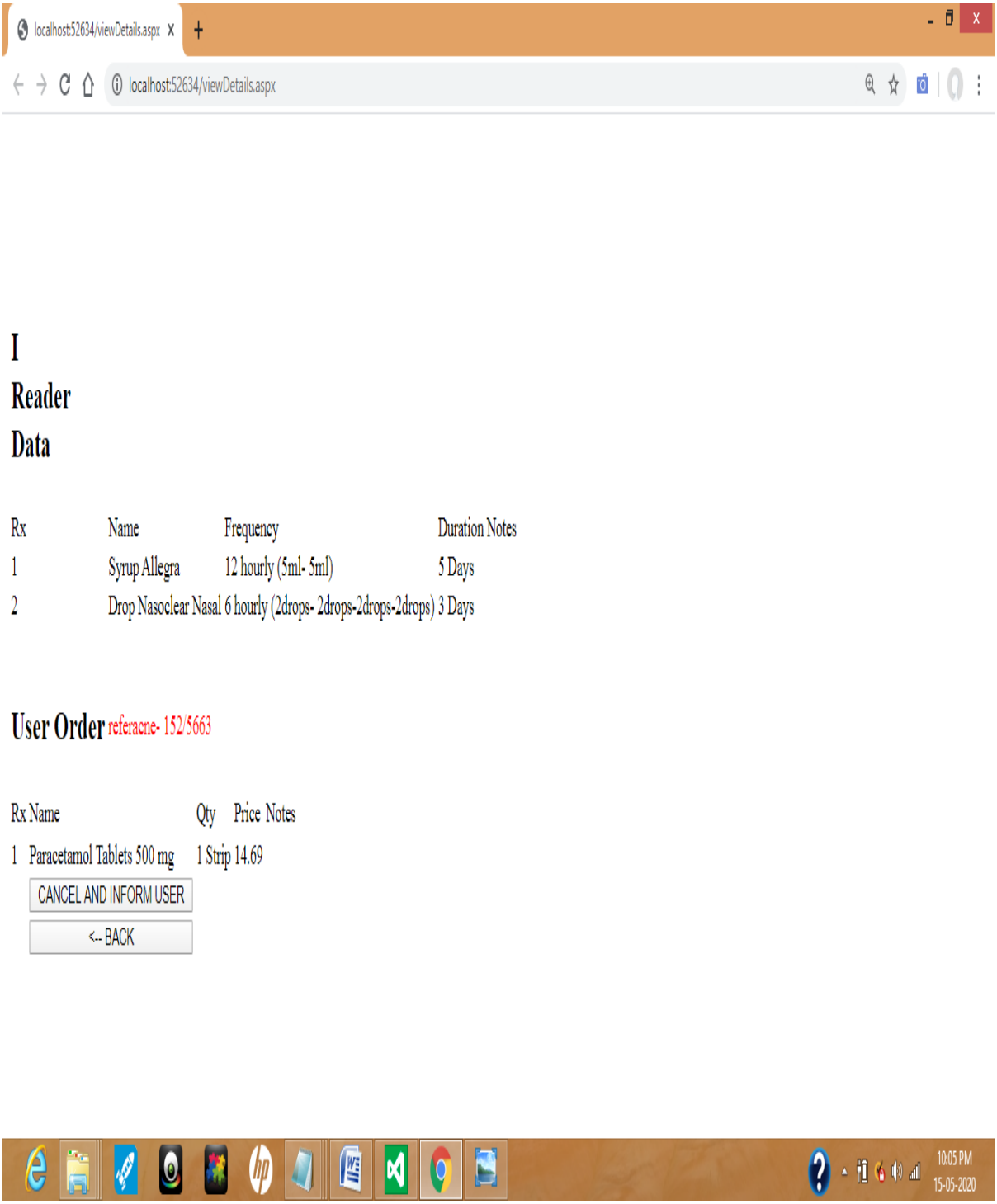


Fig 6.1.15: this detail of I reader generated value and the user entered value are displayed in the application form. The user can compare the details in both panel and click the cancel button and inform the user regarding reason for cancelation and make user to update new original prescription .

6.2 Code

```
publicpartialclassCreateItem : System.Web.UI.Page
    {
string strcon =
ConfigurationManager.ConnectionStrings["dbconnection"].ConnectionString;

protectedvoid Page_Load(object sender, EventArgs e)
        {
if (!IsPostBack)
            {
                bind_ddl_item_code();

            }
        }

publicvoid bind_ddl_item_code()
        {

            SqlConnection conn = new SqlConnection(strcon);
            SqlCommand cmd = new SqlCommand("select DISTINCT  Item_code
from dbo.item_info", conn);
            conn.Open();
            SqlDataReader read1 = cmd.ExecuteReader();

            ddl_item_code.DataSource = read1;
            ddl_item_code.DataTextField = "Item_code";
            ddl_item_code.DataValueField = "Item_code";
            ddl_item_code.DataBind();
            conn.Close();

        }


 protectedvoid Button1_Click(object sender, EventArgs e)
        {
 if (ddl_item_code.SelectedValue == "")
            {

                lbl_cum.Text = "Please Select Product Code";
            }
 else
            {
                lbl_cum.Text = null;

                SqlConnection conn = new SqlConnection(strcon);
                SqlCommand cmd = new SqlCommand("select
 Item_code,Item_name,Category,Description_ from dbo.item_info where
 Item_code='"+ddl_item_code.SelectedValue+"'", conn);
                conn.Open();
 //SqlDataReader read2 = cmd.ExecuteReader();
                SqlDataAdapter da = new SqlDataAdapter(cmd);
                conn.Close();
                DataSet ds = new DataSet();
                da.Fill(ds);

                lbl_item_name.Text = ds.Tables[0].Rows[0][1].ToString();
                lbl_category.Text = ds.Tables[0].Rows[0][2].ToString();
                lbl_Description.Text = ds.Tables[0].Rows[0][3].ToString();
 // lbl_Description.Text = ds.Tables[0].Rows[0][3].ToString();
                gvbind();
```

CHAPTER 7

SOFTWARE TESTING

7.1 Testing

Test case name	**QTY_CK 1**
Page called to test	**Create medicine**
Version #	**1.0**
Filed to test	**5**

Text box name	Parameter name	Test step	Test status
TXT_IR_CM_ZU_DL_ID	@IR_CM_ZU_DL_ID	**110**	**Pending for testing**
TXT_IR_CM_ZU_MED_NAME	@IR_CM_ZU_MED_NAME	**IZOF**	**Pending for testing**
TXT_IR_CM_ZU_ALLOWED_QTY	@IR_CM_ZU_ALLOWED_QTY	**5**	**Pending for testing**
TXT_IR_CM_ZU_ACTUAL_QYT	@IR_CM_ZU_ACTUAL_QYT	**1**	**Pending for testing**
TXT_IR_CM_ZU_RATE_CALL	@IR_CM_ZU_RATE_CALL	**34.00**	**Pending for testing**

Table 7.1.1: test case for QTY_CK

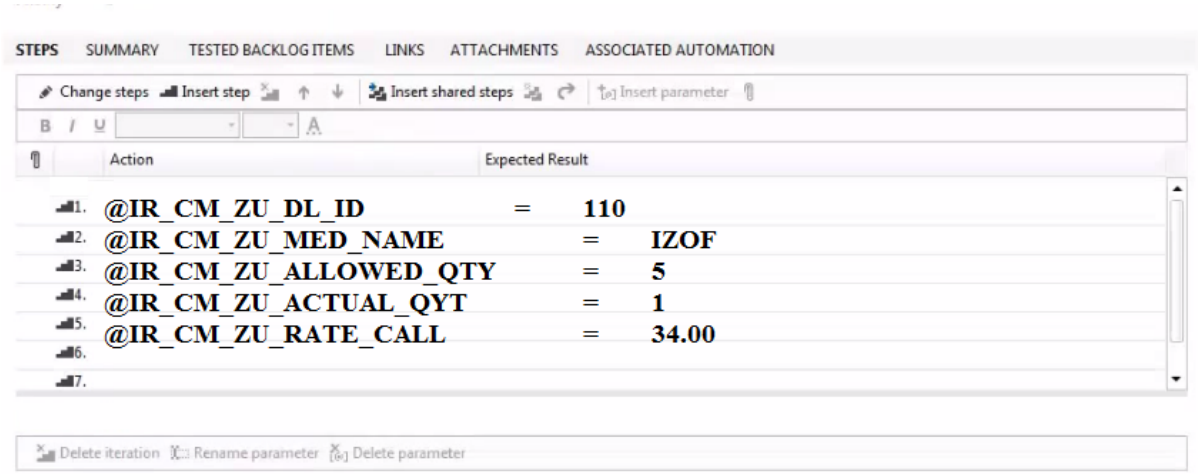


Fig 7.1: MTM test case loaded with QTY_CK parameter.

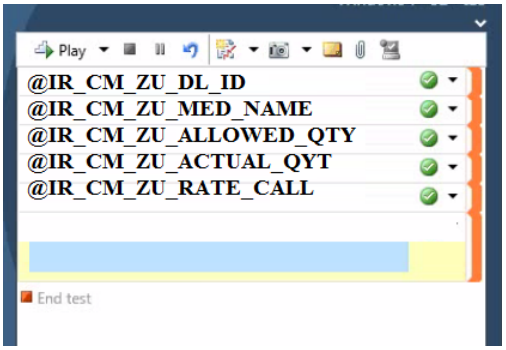


Fig 7.2: MTM test case result shows test has completed successfully.

Parameter name	Test step	Test status
@IR_CM_ZU_DL_ID	TXT_IR_CM_ZU_DL_ID shows the value **110**	**PASSED**
@IR_CM_ZU_MED_NAME	TXT_IR_CM_ZU_MED_NAME shows the value **IZOF**	**PASSED**
@IR_CM_ZU_ALLOWED_QTY	TXT_IR_CM_ZU_ALLOWED_QTY shows the value **5**	**PASSED**
@IR_CM_ZU_ACTUAL_QYT	TXT_IR_CM_ZU_ACTUAL_QYT shows the value **1**	**PASSED**
@IR_CM_ZU_RATE_CALL	TXT_IR_CM_ZU_RATE_CALL shows the value **34.00**	**PASSED**

Table 7.1.2: test case result for qty check 1

Test case name	**QTY_CK 2**
Page called to test	**Create medicine with NULL**
Version #	**2.0**
Filed to test	**5**

Text box name	Parameter name	Test step	Test status
TXT_IR_CM_ZU_DL_ID	@IR_CM_ZU_DL_ID	**NULL**	**Pending for testing**
TXT_IR_CM_ZU_MED_NAME	@IR_CM_ZU_MED_NAME	**NULL**	**Pending for testing**
TXT_IR_CM_ZU_ALLOWED_QTY	@IR_CM_ZU_ALLOWED_QTY	**NULL**	**Pending for testing**
TXT_IR_CM_ZU_ACTUAL_QYT	@IR_CM_ZU_ACTUAL_QYT	**NULL**	**Pending for testing**
TXT_IR_CM_ZU_RATE_CALL	@IR_CM_ZU_RATE_CALL	**NULL**	**Pending for testing**

Table 7.1.3: test case for qty ck 2

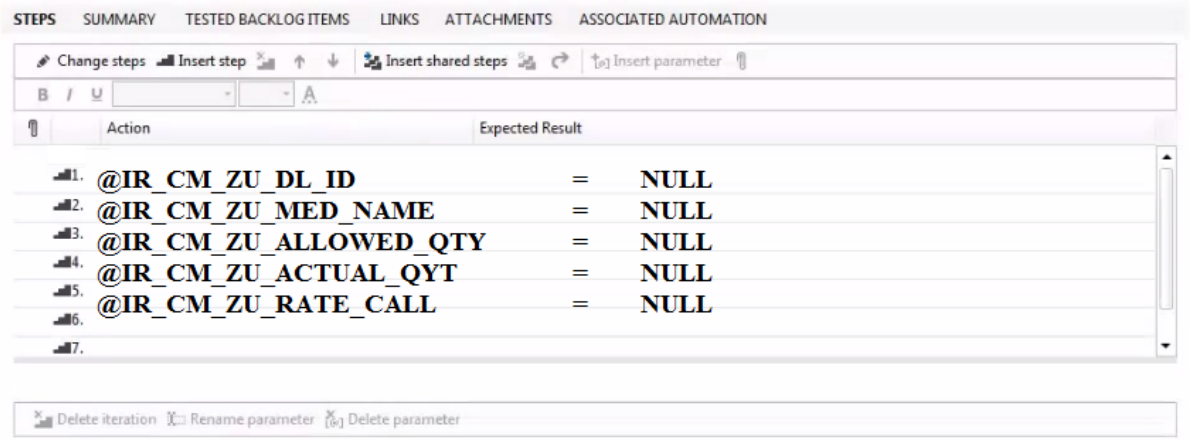


Fig 7.3: MTM parameter for the test case wit NULL value

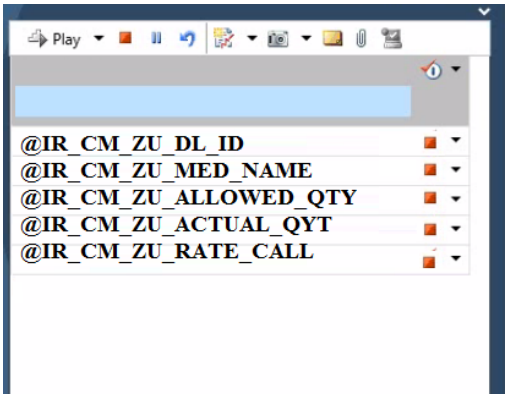


Fig 7.4: testing for each parameter failed since NULL value not supported.

Parameter name	Test step	Test status
@IR_CM_ZU_DL_ID	**NULL** value nt suported for TXT_IR_CM_ZU_DL_ID	**PASSED**
@IR_CM_ZU_MED_NAME	**NULL** value nt suported for TXT_IR_CM_ZU_MED_NAME	**PASSED**
@IR_CM_ZU_ALLOWED_QTY	**NULL** value nt suported for TXT_IR_CM_ZU_ALLOWED_	**PASSED**
@IR_CM_ZU_ACTUAL_QYT	**NULL** value nt suported for TXT_IR_CM_ZU_ACTUAL_QYT	**PASSED**
@IR_CM_ZU_RATE_CALL	**NULL** value nt suported for TXT_IR_CM_ZU_RATE_CALL	**PASSED**

Table 7.1.4: test case result

CHAPTER 8

CONCLUSION

The technology of I reader is custom made innovation of vector algebra technology used o read the letters in the image. The software of Google lance, the Pen scanner are using the vector algebra technology for reading the image based objects and letters. The Google lance is focusing on the objects and convert the image into prototype image and used to search the n Google image and display the links. And the Pen scanner is used for printed letters conversion. But there is no technology over converting the manually written letter s conversion. So the domain of E prescription remains not initiated in the domain of Vector algebra conversion plans. The limitation in identify the manually type letters remains block to the application development. So the developers has came with idea of using one printed prescription to be converted with I reader technology. Also the header part of prescription which is in the typed format can be changed with I reader technology.

CHAPTER 9

FUTURE ENHANCEMENT

As we discussed in the conclusion part the converting the hand written part remains challenge in the E prescription application. The new technology of vector to vector is advanced software to convert the hand written part to soft copy. SCAN2CAD is the developers of vector to vector algorithm which is used for converting the hand written part. So in the new enhancement the I reader technology will be using the SCAN2CAD based software for reading the manually written prescription to convert to the stack based letter which can be implemented to SQL storage and processing.

One of the big challenge is medical prescription is the area where high reliability of data conversion is needed. The developers must be highly concern about the risk of converting the medicine name written to stack value. If the conversion has changed and prescribed wrong medicine this can lead to serious issue in the domain. So in the future enhancement along with the SCAN2CAD developers needed to concern over the data reliability of software converted.

APPENDIX A

BIBLOGRAPHY

MFC

- *Programming Windows 95 with MFC* - Jeff Pros
- *MFC Internals* - George Shepherd and Scot Wing
- *Professional MFC with Visual C++* - Mike Blas

ASP

- *Professional ASP Techniques for Webmasters* - Alex Homer

Database

- An Introduction to Database Systems (8th Edition)
- Fundamentals of Database Systems (6th Edition)
- Database: Principles, Programming, and Performance, Second Edition (The Morgan Kaufmann Series in Data Management Systems)

APPENDIX B
USER MANUAL

Install the software

Install one by one all the software which is necessary to run the software.

- Project kit includes following software:
- .Net frame work-4.5
- SQL Serve 2008 R2
- Internet information Service
- Visual Studio

Path Setting

Set the following path after the installation of .NET frame software:

MyComputer>Properties>Advanced

SystemSettings>EnvironmentVariables>SystemVariables>

Database Connection

First create a user in the Mysql database

1.SQLserverEdition>GotodatabaseHomePage>Login>Administration>DatabaseUser

Now create a new user

Username:Log001

Password:Pass001

CheckAll>Create

Next go to the SQL server 2008 R2 developer and provide the connection

Connection>Right Click>New DatabaseConnection

Username:Log001

Password:Pass001

Hostname: localhost

SID: XE

Now press Test>If Success>Connect

Execution

The user should follow the steps below to run the project in the VS IDE:

1. Set the IIS path in VS IDE in window>preferences>IIS>Version 6.0>Home: Give the complete path and click enter
2. Start IIS Server
3. Type the web address as http://localhost:8080/Obs/login.aspx in any web browser.