

Ahsanullah University of Science and Technology  
Department of Computer Science & Enineering

DATABASE LAB  
CSE - 3104

Final Project Report

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Project Title

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Submitted by

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October 16, 2019

## Contents

1	Introduction	1
2	Objective	1
3	Entity-Relationship Diagram	2
3.1	Entity and its attributes	2
3.1.1	Entity-01: Medicine	2
3.1.2	Entity-02: Company	2
3.1.3	Entity-03: System User	2
3.1.4	Entity-04: Purchase	2
3.1.5	Entity-05: Selling Details	2
3.1.6	Entity-06: Generic	2
3.1.7	Entity-07: Inventory	2
3.1.8	Entity-08: Buying Details	3
3.2	Relationship	3
3.2.1	Relationship-01: Belongs	3
3.2.2	Relationship-02: Has	3
3.2.3	Relationship-02: Shows	3
3.2.4	Relationship-02: Varies	3
3.2.5	Relationship-02: Contains	3
3.2.6	Relationship-02: Updates	3
3.2.7	Relationship-02: Access	3
3.2.8	Relationship-02: Controlled by	4
3.2.9	Relationship-02: Can	4
3.2.10	Relationship-02: Records	4
4	Project Snapshot	6
4.1	Snapshot of Cart Panel	7
4.2	Snapshot of Dashboard Panel	8
4.3	Snapshot of medicine Details Panel	9
4.4	Snapshot of Purchase Panel	10
4.5	Snapshot of Inventory Panel	11
4.6	Snapshot of Selling Details Panel	12
4.7	Snapshot of User Details Panel	13
4.8	Snapshot of Company Panel	14
4.9	Snapshot of Generic Panel	15
5	Conclusion	15

# 1 Introduction

Nowadays, Pharmacy management system is one of the most essential tools that are mostly used in medical store in Bangladesh, it is mostly used to manage pharmacy related activities such as medical inventory, record keeping, sales management as well as managing the drug stock and information of the expired medicines. But many pharmacies in Bangladesh are still operating manually, they don't have adequate software to manage their daily activities. It needs the pharmacist assistant to check the expired date of the medicine twice a week, and it can take a lot of time to find out whether certain medicine are out of stock. In this project we tried to develop a computerised and web based Pharmacy management system. Our main intention is to allow this application to be used in most retailing pharmacies in Bangladesh, where a small point of customization will be required to each pharmacy in the implementation period. This system is designed to overcome all challenges related to the management of medicine that were used to be handled locally and manually. Pharmacy management system has its own significance to the retail pharmacy shops. Using this system, it will help us to records all transaction made at the daily sales, recognize all debtors, customers, employees, balance stock, etc. It will manage all activities around the shop that increases productivity and maximize profit, it will also minimizing the risk of getting loss because all transactions are recorded to the system. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

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# 2 Objective

Our objective of this pharmacy management system is to improve the accuracy, enhance safety and efficiency in the pharmaceutical store. It is a computer based system which helps the pharmacist to improve inventory management, cost, medical safety etc. Pharmacy management was developed to ensure the security of information and reliability of Pharmacy record when accessing and providing services to the customers. This Project is insight into the design and implementation of a Pharmacy management system. The primary aim of is to improve accuracy and enhance safety and efficiency in the pharmaceutical store. Today management is one of the most essential features of all form. Management provides sophistication to perform any kind of task in a particular form. This pharmacy manage, it is used to manage most pharmacy related activities in pharmacy. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

### 3 Entity-Relationship Diagram

#### 3.1 Entity and its attributes

##### 3.1.1 Entity-01: Medicine

- I. M.Id - Primary Key
- II. Name
- III. Type
- IV. Weight
- V. C.Id -Foreign key
- VI. G.Id -Foreign key

##### 3.1.2 Entity-02: Company

- I. C.Id - Primary Key
- II. Name
- III. Contact Number
- IV. Address

##### 3.1.3 Entity-03: System User

- I. U.Id - Primary Key
- II. User Name
- III. User Password
- IV. User Role
- V. Address
- VI. Phone

##### 3.1.4 Entity-04: Purchase

- I. P.Id - Primary Key
- II. M.Id - Foreign Key
- III. Selling Price
- IV. Cost Price
- VI. Quantity

##### 3.1.5 Entity-05: Selling Details

- I. S.Id - Primary Key
- II. U.Id - Foreign Key
- III.Customer Name
- IV. Selling Date
- V.Total Price

##### 3.1.6 Entity-06: Generic

- I.G.Id
- II.Category
- III.Uses

##### 3.1.7 Entity-07: Inventory

- I. I.Id - Primary Key
- II. M.Id - Foreign Key

- III. Stock
- IV. Expire Date

#### 3.1.8 Entity-08: Buying Details

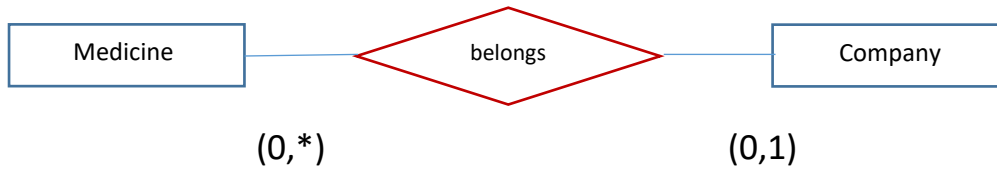
- I. B.Id - Primary Key
- II. U.Id - Foreign Key
- III.P.Id - Foreign Key
- IV. Status
- V. Purchase Date

.....

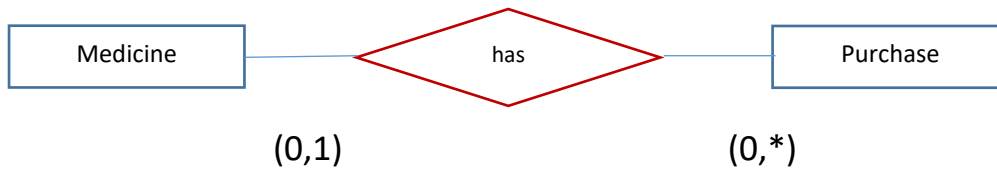
## 3.2 Relationship

The following relations will be shown in our entity-relation diagram.

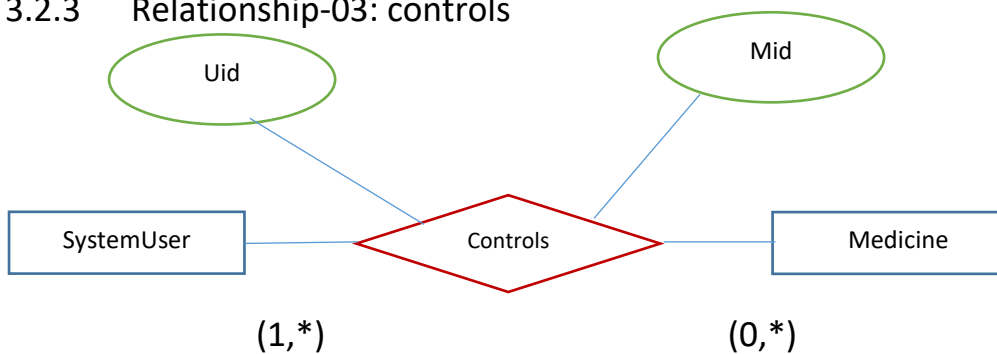
### 3.2.1 Relationship-01: belongs



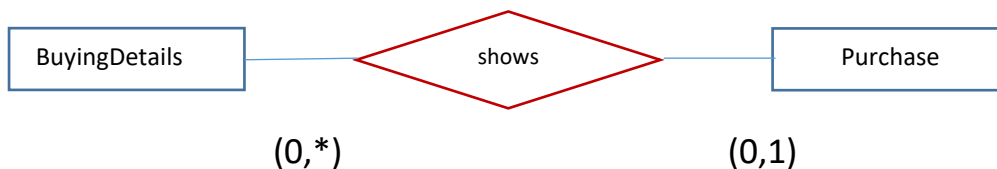
### 3.2.2 Relationship-02: has



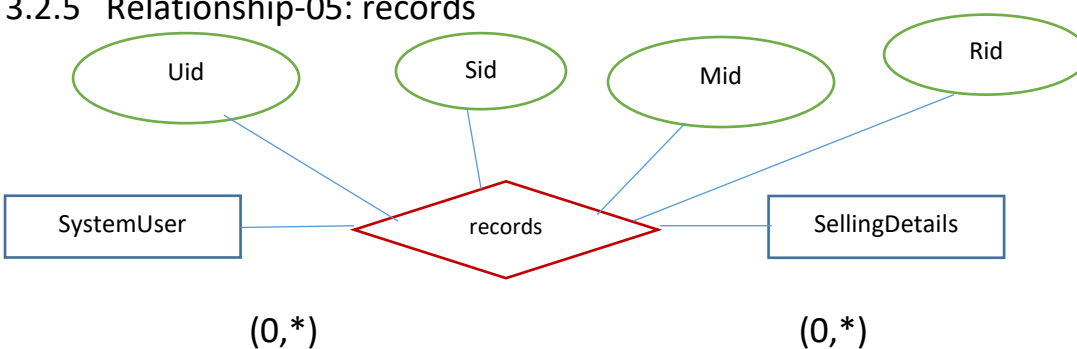
### 3.2.3 Relationship-03: controls



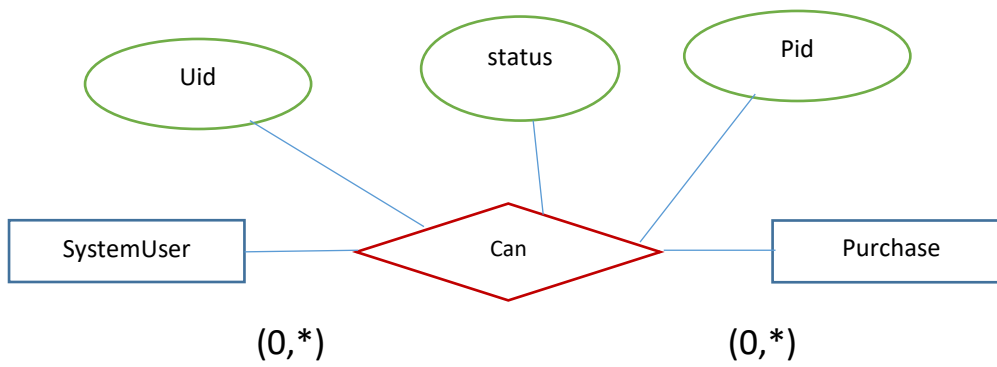
### 3.2.4 Relationship-04: shows



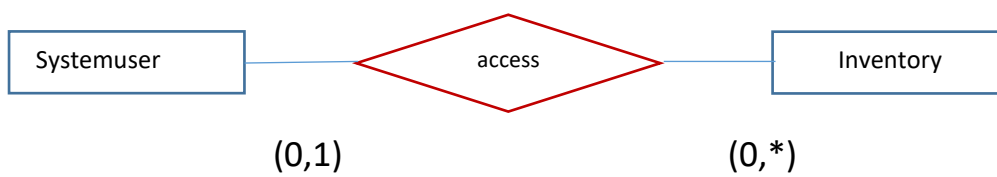
### 3.2.5 Relationship-05: records



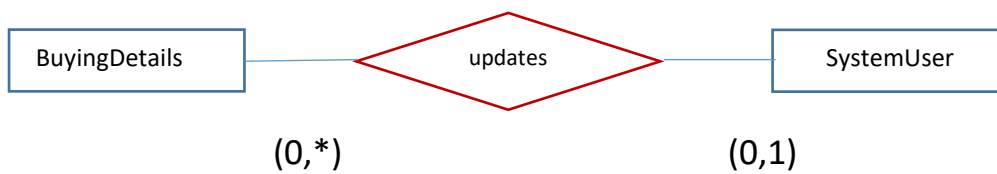
### 3.2.6 Relationship-06: can



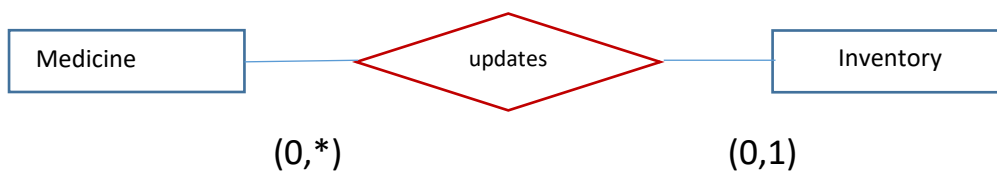
### 3.2.7 Relationship-07: access



### 3.2.8 Relationship-08: updates



### 3.2.9 Relationship-09: contains



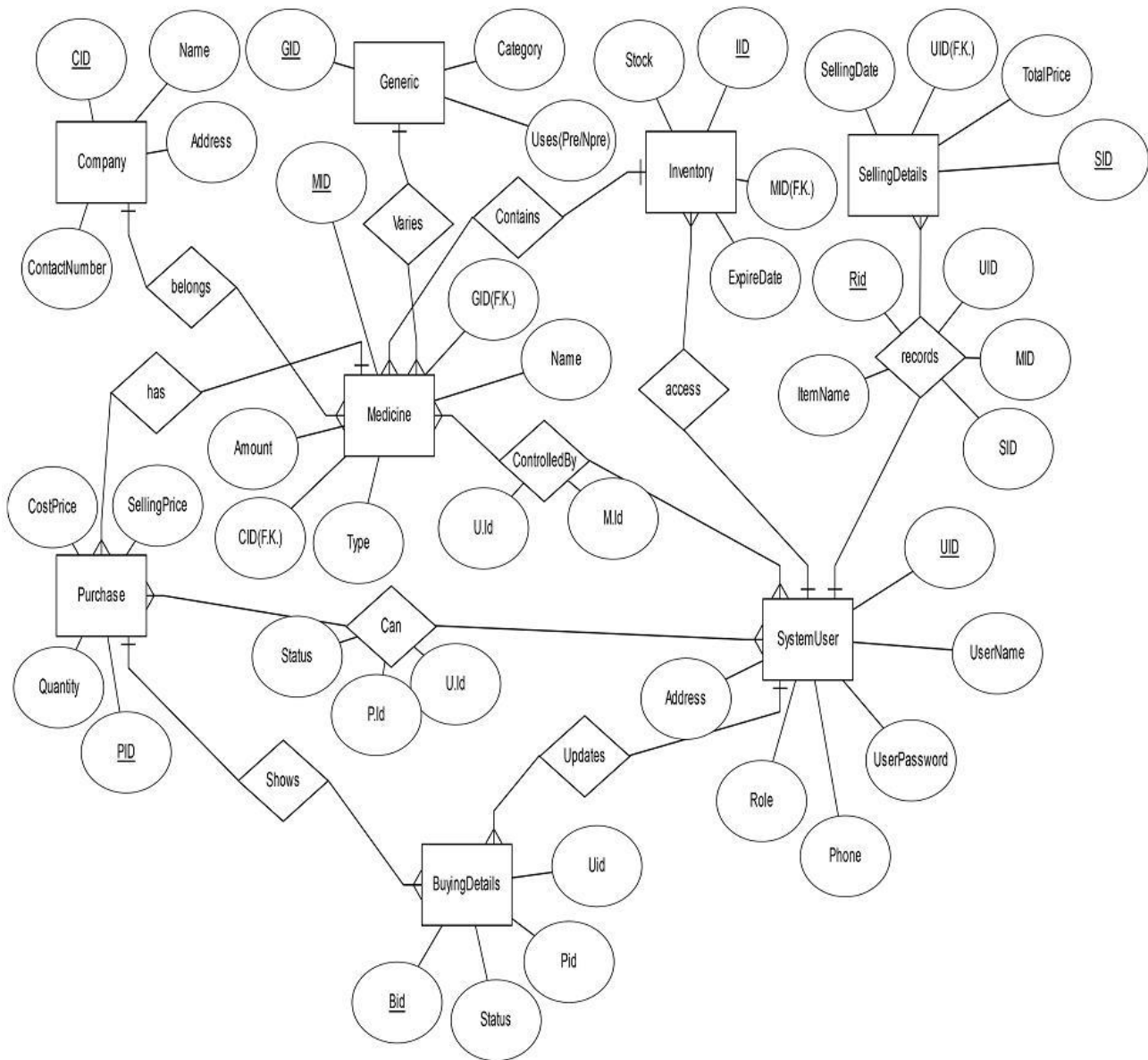
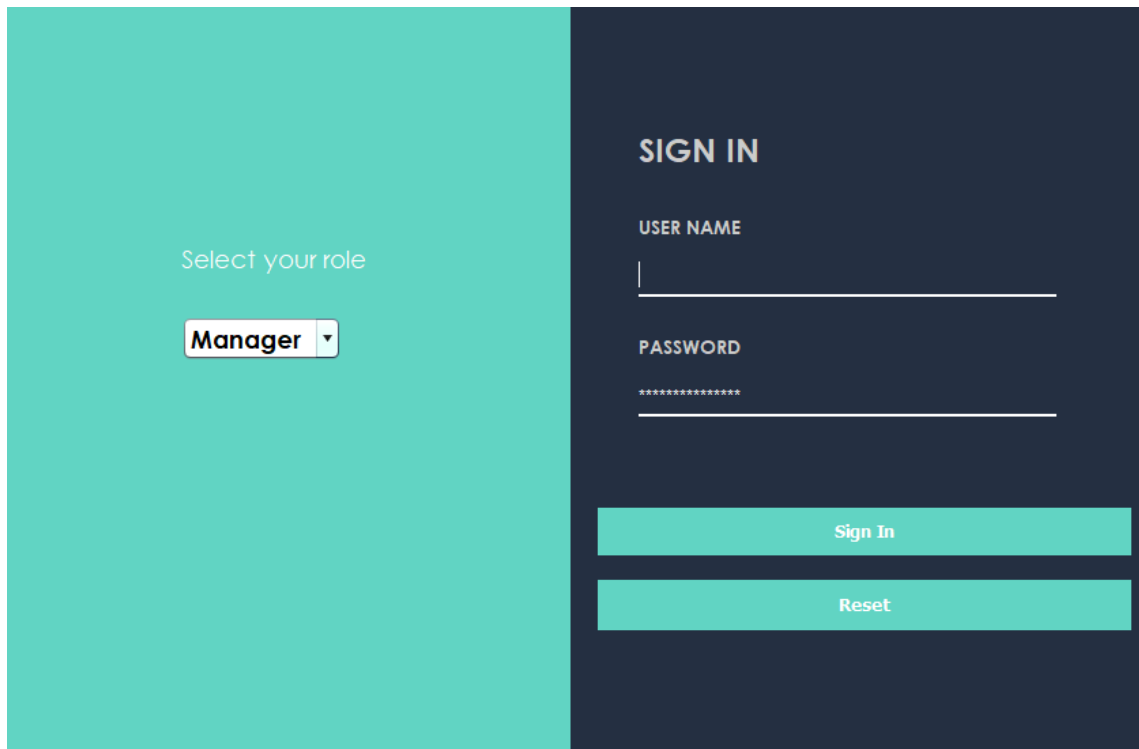


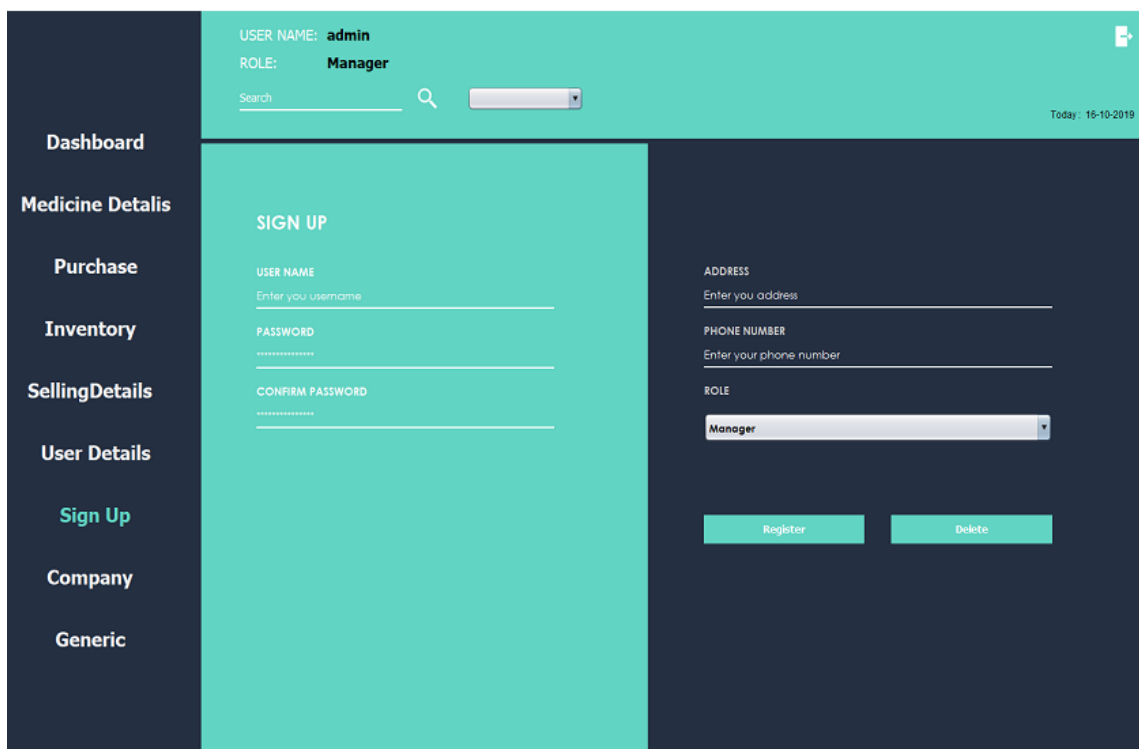
Figure 1: E-R diagram of a Pharmacy Management System



## 4 Project Snapshot



The image shows a user interface for signing in and selecting a role. On the left, a teal background contains the text "Select your role" and a dropdown menu with "Manager" selected. On the right, a dark blue background contains the "SIGN IN" header, followed by input fields for "USER NAME" and "PASSWORD" (masked with asterisks). Below these are two buttons: "Sign In" and "Reset".



The image shows a dashboard interface. On the left is a dark blue sidebar with a list of menu items: "Dashboard", "Medicine Details", "Purchase", "Inventory", "SellingDetails", "User Details", "Sign Up" (highlighted in teal), "Company", and "Generic". The main area has a teal header with user information: "USER NAME: admin", "ROLE: Manager", a search bar, and a dropdown menu. The date "Today: 16-10-2019" is in the top right. The main content area is split into two columns. The left column has a teal background with the "SIGN UP" header and input fields for "USER NAME" (with placeholder "Enter your username"), "PASSWORD", and "CONFIRM PASSWORD". The right column has a dark blue background with input fields for "ADDRESS" (placeholder "Enter your address"), "PHONE NUMBER" (placeholder "Enter your phone number"), and a "ROLE" dropdown menu with "Manager" selected. At the bottom of the right column are two buttons: "Register" and "Delete".

## 4.1 Snapshot of Cart Panel

USER NAME: **salesman**  
 ROLE: **Salesman**

Today: 16-10-2018

**Cart**

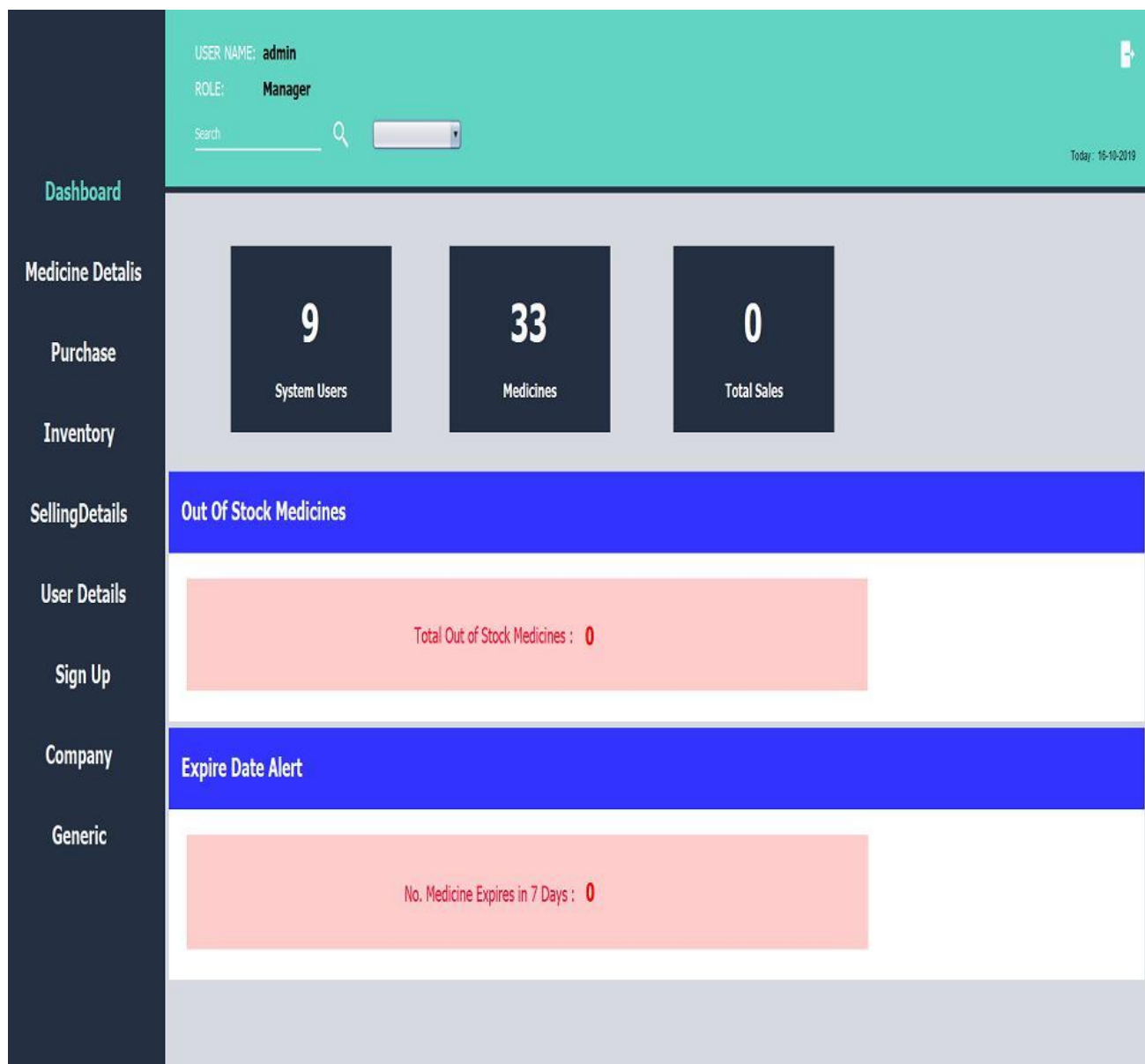
SAVE DELETE EDIT CLEAR CART

Id	MedicineName	MedicineType	Amount	Quantity	Retail Price	Total Price
602	Renova	Tablet	500mg	10	99.0	990.0
601	RALOZINE	Injection	10amps	22	65.0	1430.0

Total Price : 2420.0

This project has search options with multiple categories and cart option to confirm the order.

## 4.2 Snapshot of Dashboard Panel



This panel will show summary of data of connected database. Number of users, number of medicine, number of sales. This panel will also show the number of stock out medicine and will alert user before 7 days of expire date. This panel is same for both manager and salesman.

## 4.3 Snapshot of medicine Details Panel

Dashboard

Medicine Details

Purchase

Inventory

SellingDetails

User Details

Sign Up

Company

Generic

USER NAME: admin

ROLE: Manager

Search

Q

MedicineName

Today: 16-10-2019

Mid	MedicineName	Amount	Category	MedicineType	Company/Name
1001	Napa	500mg	Paracetamol	Tablet	Beximco Pharmaceuticals Limited
1002	Rabeca	20mg	Rabeprazol	Tablet	Square Pharmaceuticals Ltd
1003	Algicid	500mg	Sodium alginate chewable	Tablet	Incepta Pharmaceuticals Ltd.
1004	Ribacid	250mg	Magnesium hydroxide	Tablet	APEX PHARMA LIMITED
1005	Renova	500mg	Paracetamol	Tablet	Opsonin Pharma Limited
2010	APEDROX	200ml	GASTRO-INTESTINAL	Suspension	APCPharma
2011	AVLOCID Plus	400mg	GASTRO-INTESTINAL	Suspension	ACI
2012	ANCIDPLUS	200ml	GASTRO-INTESTINAL	Suspension	Renata
2013	ANOLOL	50mg	Anti-rheumatic	Tablet	Euro Pharma
2014	APICARD	50mg	Anti-rheumatic	Tablet	APCPharma
2015	ATIN	50mg	Rabeprazol	Tablet	Jayson
2016	BISOCOR	10mg	Anti-rheumatic	Tablet	Jayson
2017	BISOLOC	5mg	Rabeprazol	Tablet	Square Pharmaceuticals Ltd
2018	ETNOL	50mg	Endocrine	Tablet	Square Pharmaceuticals Ltd
2019	LONET	100mg	Endocrine	Tablet	Beximco Pharmaceuticals Limited
2020	HYPEN	1.5mg	Sodium alginate chewable	Tablet	Beximco Pharmaceuticals Limited
2021	TRILIX	20mg	Endocrine	Tablet	Renata
2022	REPRESS	10 amps	Vaccine	Injection	Incepta Pharmaceuticals Ltd.
2023	CALPRESS	10mg	Anesthetics	Tablet	Opsonin Pharma Limited
2024	CALPIN	5MG	Magnesium hydroxide	Tablet	Orion Pharma Limited
2025	AMLOPIN	10mg	Sodium alginate chewable	Tablet	Orion Pharma Limited
2026	CAB	5mg	Allergic disorders	Tablet	Incepta Pharmaceuticals Ltd.
2027	DIPLOR	5mg	Endocrine	Tablet	Opsonin Pharma Limited
2028	EMILON	10mg	Magnesium hydroxide	Tablet	ACI
2029	HIPRE	10mg	Anesthetics	Tablet	Jayson
2030	MONATE	50mg	GASTRO-INTESTINAL	Tablet	APEX PHARMA LIMITED
2031	MONOTRATE	40mg	Magnesium hydroxide	Suspension	Beximco Pharmaceuticals Limited
2032	RALOZINE	10amps	Endocrine	Injection	ACI
2033	DOPAMINE-ROTEX	50mg	Endocrine	Tablet	Incepta Pharmaceuticals Ltd.
2034	OPAGREL	15mg	Sodium alginate chewable	Tablet	Orion Pharma Limited
2035	LIPIRED	200mg	Magnesium hydroxide	Capsule	APCPharma
2036	CODD	15mg	Magnesium hydroxide	Injection	APEX PHARMA LIMITED

ADD MEDICINE

UPDATE MEDICINE

DELETE MEDICINE

This panel will show the data of Medicine, Generic, Company table. Manager can insert, update, delete and salesman can only see the details.

## 4.4 Snapshot of Purchase Panel

USER NAME: admin

ROLE: Manager

Search

Today: 16-10-2019

Pid	MedicineName	Category	CompanyName	MedicineType	Quantity	SellingPrice	CostPrice
1430	RALOZINE	Endocrine	ACI	Injection	100	65.0	50.0
1431	Renova	Paracetamol	Opsonin Pharma Limited	Tablet	50	99.0	60.0

Purchase Medicine

This panel will show the date of Inventory, Medicine, Purchase table. Manager user can purchase or order medicine from this panel.

## 4.5 Snapshot of Inventory Panel

USER NAME: admin  
ROLE: Manager

Search

Today: 16-10-2019

Id	MedicineName	MedicineType	Amount	Stock	SellingPrice	ExpireDate
601	RALOZINE	Injection	10amps	100	65.0	2022-01-05
602	Renova	Tablet	500mg	50	99.0	2022-05-09

DELETE EDIT PRICE

This panel will show the data of Purchase, Medicine, Company, Generic table. Manger user can delete data and edit price in this panel and salesman add item.

## 4.6 Snapshot of Selling Details Panel

USER NAME: admin

ROLE: Manager

Search

Today: 16-10-2019

Pid	MedicineName	Category	CompanyName	MedicineType	Quantity	SellingPrice	CostPrice
1430	RALOZINE	Endocrine	ACI	Injection	100	65.0	50.0
1431	Renova	Paracetamol	Opsonin Pharma Limited	Tablet	50	99.0	60.0

Purchase Medicine

This panel will show the data of Selling Details, System User table.

## 4.7 Snapshot of User Details Panel

USER NAME: admin

ROLE: Manager

Search

Today: 18-10-2019

Lid	UserName	userPassword	Role	Phone	Address	LastOnlineStatus
101	admin	admin	Manager	123456789	AUST,Tejgaon,Dhaka	2019-10-16 00:57:43.0
102	hridoy	123	Manager	01521436593	Dhanmondi	2019-10-13 22:36:10.0
105	salesman	123	Salesman	01521436593	AUST	2019-10-16 00:37:21.0
107	hridoy123	123456	Salesman	123456	Panthapath,Dhaka	2019-10-13 22:52:35.0
108	Tashfik	123456	Salesman	01775500003	Arong Lalmatia,Dhaka	2019-10-13 22:53:07.0
109	Shadhin	12345	Salesman	01768454606	TejkuniPara,Dhaka	2019-10-13 22:54:00.0
110	Rejone	123456	Salesman	01676358231	Dhanmondi 32,Dhaka	2019-10-13 22:54:19.0
111	Samin	123456	Salesman	01551059291	Asad Gate,Dhaka	2019-10-13 22:54:52.0
112	Fardin	123456	Salesman	01682994410	TejkuniPara,Dhaka	2019-10-13 22:55:10.0

UPDATE DELETE

This panel will show data of System User. Only like manager can update or delete user from this table.



## 4.8 Snapshot of Company Panel

Dashboard

Medicine Details

Purchase

Inventory

SellingDetails

User Details

Sign Up

Company

Generic

USER NAME: admin

ROLE: Manager

Search

Q

Company Name

Today: 16-10-2019

Id	Company Name	Address	Contact Number
204	Square Pharmaceuticals Ltd	48, Mohakhali C/A Dhaka 1212, Bangladesh	008802883304756
206	Beximco Pharmaceuticals Limited	H.No 19, R/A, Rd No. 7, Dhaka 120	00880258611001
207	Incepta Pharmaceuticals Ltd.	40 Shaheed Tajuddin Ahmed Ave, Dhaka 1208	0088028891688
208	Orion Pharma Limited	194 Bir Uttam Mir Shawkat Sarak, Dhaka 1208	0088028870133
209	Opsonin Pharma Limited	30, Opsonin Building, New Eskaton Road, Dhaka...	00880255142000
210	APEX PHARMA LIMITED	House 6, Block SE (D), Road 137, Gulshan-1, Dh...	0088028856717
223	APCPharma	Orion House, 153-154 Tejgaon I/A, Dhaka-1208	1265489642
224	ACI	8, Circular Road, West Malibagh, Dhaka-1000, B...	321649489
225	Renata	C-24, BSCIC Industrial Area, Comilla-3500, Ban...	896531249984
226	Euro Pharma	7116, Block-B, Lalmatia, Dhaka- 1207	264898496
227	Jayson	Borak Tower, 71-72 Old Elephant Road (Wage E...	651694989819
228	Orion Pharma	House-157, Lane-3, Eastern Road, New DOHS, ...	651941894151665
229	INCEPTA PHARMACEUTICALS LTD.	40, Shahid Tajuddin Ahmed Sarani, Tejgaon I/ ...	8891688-703
230	JANATA HEALTH CARE	TCB Bhaban (7th Floor), I, Kawran Bazar, Dhak...	02-8189111
231	MEDINAM	35, Bijoy Nagar (1st Floor), Dhaka-1000	53164894
232	PEOPLES PHARMA LTD.	20/21 Garden Road West Karwan Bazar, Dhaka	32149865
233	RANGS PHARMACEUTICALS LTD.	Rangs Bhaban (Level-5), 117/A Old Airport Roa...	62894511551
234	REMAN DRUG LABORATORIES LTD.	392, New Eskaton Road, Dhaka-1000	899891562

Company Name

Address

Contact Number

ADD COMPANY

UPDATE

DELETE

CLEAR

This panel will the data of Company table. Admin user can add company detail, delete, update or clear exiting company details.

#### 4.9 Snapshot of Generic Panel

USER NAME: admin  
ROLE: Manager

Search

Today: 16-10-2019

Gid	Category	Uses
312	Rabeprazol	Prescribed
313	Paracetamol	Non prescribed
314	Sodium alginate chewable	Prescribed
315	Magnesium hydroxide	Prescribed
320	GASTRO-INTESTINAL	Non prescribed
321	Allergic disorders	Prescribed
322	Endocrine	Prescribed
324	CNS	Prescribed
325	Respiratory	Prescribed
326	Antimicrobial	Prescribed
327	Vitamin	Prescribed
328	Mineral	Prescribed
329	Nutritional deficiency	Prescribed
330	Bone formation	Prescribed
331	Bone disorders	Prescribed
332	Vaccine	Prescribed
333	Anesthetics	Prescribed
334	Anti-rheumatic	Prescribed

Category of Medicine

Uses

This panel will show the data of generic table. Admin user can add generic of a medicine or update, delete, clear exiting data.

## 5 Conclusion

Our objective of this pharmacy management system is to improve the accuracy, enhance safety and efficiency in the pharmaceutical store. It is a computer based system which helps the pharmacist to improve inventory management, cost, medical safety etc. Pharmacy management was developed to ensure the security of information and reliability of Pharmacy record when accessing and providing services to the customers. This Project is insight into the design and implementation of a Pharmacy management system. The primary aim of is to improve accuracy and enhance safety and efficiency in the pharmaceutical store. Today management is one of the most essential features of all form. Management provides sophistication to perform any kind of task in a particular form. This pharmacy manage, it is used to manage most pharmacy related activities in pharmacy. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et

malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.