

**A. Design and implement a complete software system that track the stock information of any shop/ medicine store or any others.**

**Students must submit a report with complete running code and snapshot of the application that they implement with following information.**

### **1. Introduction of the system**

**Ans.** Pharmacy Management System keep the records of customer, supplier, medicine and purchase list. The system run on python terminal which track customer detail, purchase medicine detail, gives notification on when medicine stock is nearly empty and generated discount on the basic of category (silver customer, gold customer, bronze customer, normal customer), finally system generated the report on the basic of purchased medicine.

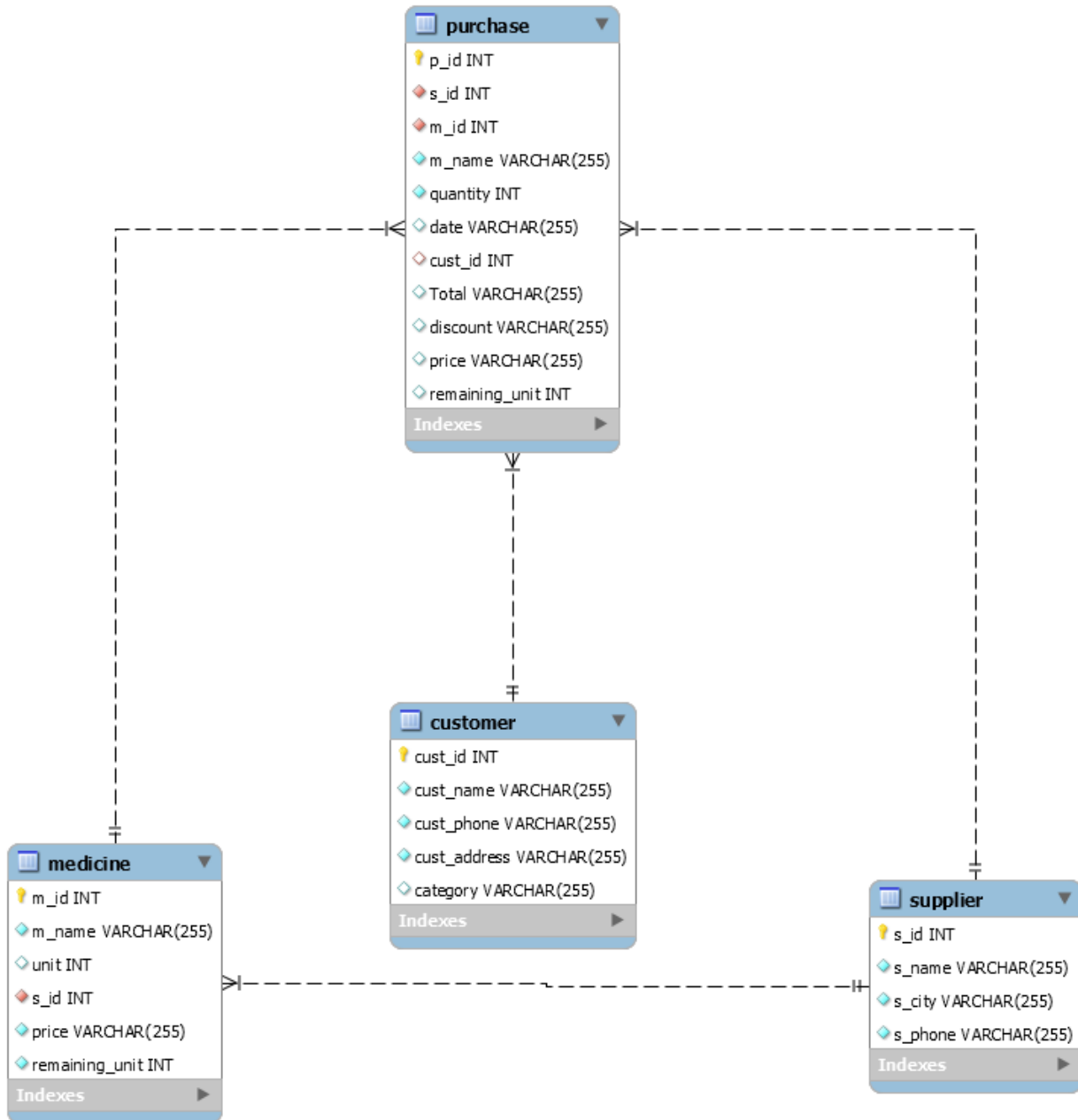
### **2. Objective of the system.**

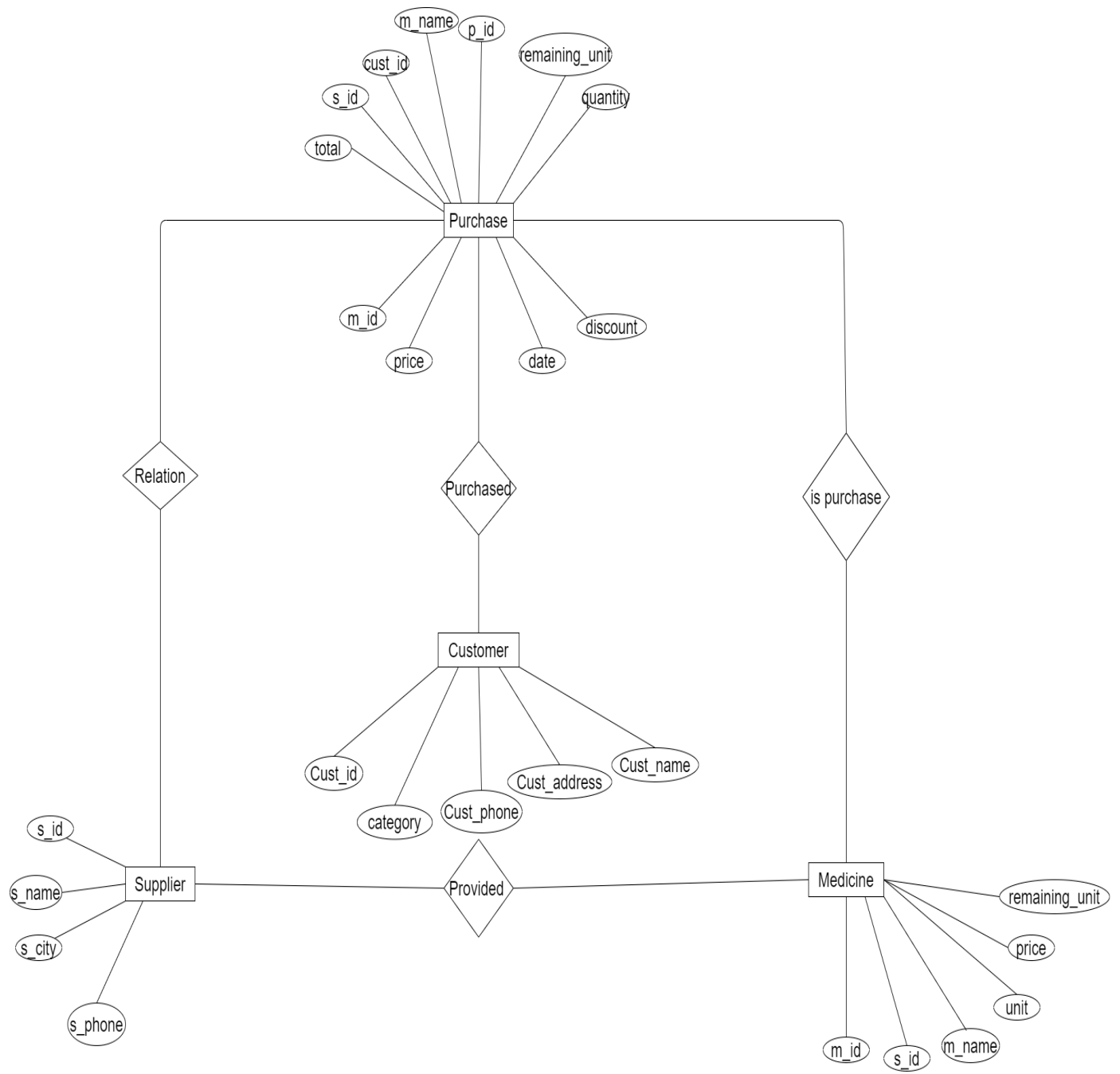
**Ans.** The objective of the system of Pharmacy Management System are as below:

- To manage the detail of customer, medicine, supplier and medicine purchased.
- To manage all the information of Pharmacy including discount on basic of category (silver customer, gold customer, bronze customer, normal customer).
- Editing, adding and updating of records is improved which results in proper resource management of Pharmacy data.
- To deals with monitoring the records and transactions of sells.

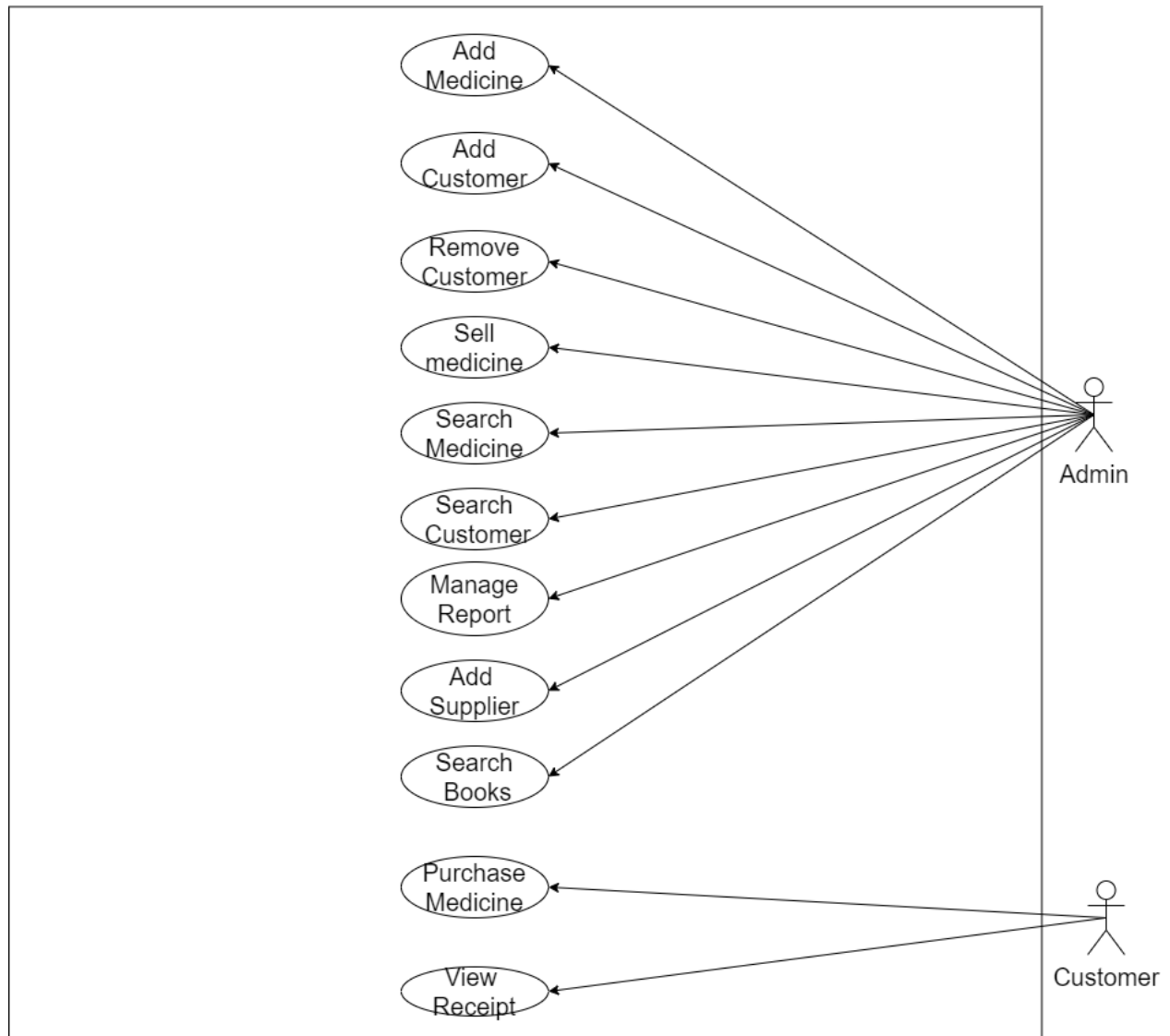
### 3. System design (use case, ER diagram and data dictionary)

## ER Diagram





## Use Case Diagram



**Pharmacy Management System**

# Data Dictionary

## Supplier

Field	Type	Null	Key	DESCRIPTION
s_id	int	NO	PRI	Supplier ID Number
s_name	varchar(255)	NO		Supplier Name
s_city	varchar(255)	NO		Supplier City
s_phone	varchar(255)	NO		Supplier Phone No.

## Medicine

Field	Type	Null	Key	DESCRIPTION
m_id	int	NO	PRI	Medicine ID Number
m_name	varchar(255)	NO		Medicine Name
unit	int	YES		Unit of Medicine
s_id	int	NO	MUL	Supplier ID
price	varchar(255)	NO		Price of Medicine
remaining_unit	int unsigned	NO		Remaining Medicine Unit

## Purchase

Field	Type	Null	Key	DESCRIPTION
p_id	int	NO	PRI	Purchase ID Number
s_id	int	NO	MUL	Supplier ID Number
m_id	int	NO	MUL	Medicine ID Number
m_name	varchar(255)	NO		Medicine ID Number
quantity	int	NO		Purchased by Customer
date	varchar(255)	YES		Purchase Date
cust_id	int	YES	MUL	Customer ID Number
Total	varchar(255)	YES		Total after discount
discount	varchar(255)	YES		Discount on Medicine
price	varchar(255)	YES		Price of Medicine
remaining_unit	int	YES		Remaining Medicine Unit

## Customer

Field	Type	Null	Key	DESCRIPTION
cust_id	int	NO	PRI	Customer ID Number
cust_name	varchar(255)	NO		Customer Name
cust_phone	varchar(255)	NO		Customer Phone No.
cust_address	varchar(255)	NO		Customer Address
category	varchar(255)	YES		Customer type

### 4. Implementation of the system.

#### a) System must track the customer and their information.

**Ans.** In Customer Menu, we can add customer, remove customer, view customer detail and search customer to view records

This **Add Customer** Function add customer in the database

```
-----
1.Add Customer
2.Remove Customer
3.View Customer
4.Search Customer with Receipt
5.Back To Menu
-----
Enter the number of your choice : 1
-----
-----Add Customer-----
Enter the Customer Name:Amar Subedi
Enter the Customer phone No.9852634152
Enter the Customer Address:Kathmandu
Enter the Customer category(gold,silver, bronze, normal):gold
Customer added Successfully
-----
```

**View Customer** Function show the record of all customer in database. In the Top show the total number of customer which is 4.

```
-----  
-----  
1.Add Customer  
2.Remove Customer  
3.View Customer  
4.Search Customer with Receipt  
5.Back To Menu  
-----
```

```
Enter the number of your choice : 3  
-----
```

```
-----Customer-----
```

```
Total number of Customer: 4
```

```
Customer Id: 1  
Customer Name: kunja  
Customer Phone No. 9813073065  
Customer Address: Kathmandu  
Customer Category: bronze
```

```
Customer Id: 3  
Customer Name: Prashant  
Customer Phone No. 985263414  
Customer Address: Kathmandu  
Customer Category: gold
```

```
Customer Id: 4  
Customer Name: Sangit  
Customer Phone No. 9841526356  
Customer Address: Kathmandu  
Customer Category: normal
```

```
Customer Id: 5  
Customer Name: Amar Subedi  
Customer Phone No. 9852634152  
Customer Address: Kathmandu  
Customer Category: gold
```

In **Remove Customer** Function which delete the customer record from database.

```
-----  
-----  
1.Add Customer  
2.Remove Customer  
3.View Customer  
4.Search Customer with Receipt  
5.Back To Menu  
-----  
Enter the number of your choice : 2  
-----  
-----Remove Customer-----  
Enter Customer Name to remove:3  
Customer Removed Successfully
```

b) System must track the customer's buying products with details of information.

**Ans.** In **Search Customer** Function show the record of customer with the record of purchase. In below image, Customer Name Sangit have purchase only **one time** from Pharmacy.

```
-----  
1.Add Customer  
2.Remove Customer  
3.View Customer  
4.Search Customer with Receipt  
5.Back To Menu  
-----  
Enter the number of your choice : 4  
-----  
-----Customer-----  
Enter the Customer ID:4  
-----  
Customer Have Purchased: 1 times.  
-----  
Customer Name: Sangit  
Customer Phone No. 9841526356  
Customer Address: Kathmandu  
Customer Category: normal  
Customer Purchase Medicine: warf  
Customer Purchase Medicine Quantity: 2  
-----  
Purchase Date: 2020-09-25 13:14:31  
-----RECEIPT-----  
Price: 400  
Discount: 10  
Total Price: 390  
-----END-----
```



In below image, Customer Name kunja have purchase **two time** from Pharmacy.

```
-----Customer-----
Enter the Customer ID: 1
-----
Customer Have Purchased: 2 times.
-----
Customer Name: kunja
Customer Phone No. 9813073065
Customer Address: Kathmandu
Customer Category: bronze
Customer Purchase Medicine: sitamol
Customer Purchase Medicine Quantity: 1
-----
Purchase Date: 2020-09-24 22:22:22
-----RECEIPT-----
Price: 25
Discount: 1.25
Total Price: 23.75
-----END-----

Customer Purchase Medicine: sitmol
Customer Purchase Medicine Quantity: 2
-----
Purchase Date: 2020-09-24 22:50:42
-----RECEIPT-----
Price: 50
Discount: 2.5
Total Price: 47.5
```

In the Next image, Purchase Menu we can see list of purchase by the customer

```
-----Welcome to the Pharmacy-----
1.Medicine
2.Purchase
3.Customer
4.Supplier
5.Help
6.Exit

-----
Enter the number of your choice : 2
-----

1.Purchase Medicine
2.View purchase Report
3.Back To Menu

-----
Enter the number of your choice : 2
-----

-----Purchase-----
+-----+
|Total Purchased Till Now: 3 |
+-----+
```

```
-----Report-----
Purchase Id: 3
Customer Id: 1
Medicine Name: sitamol
Total Price after Discount: 23.75
Date: 2020-09-24 22:22:22
-----

-----Report-----
Purchase Id: 5
Customer Id: 1
Medicine Name: sitmol
Total Price after Discount: 47.5
Date: 2020-09-24 22:50:42
-----

-----Report-----
Purchase Id: 16
Customer Id: 4
Medicine Name: warf
Total Price after Discount: 390
Date: 2020-09-25 13:14:31
-----

-----*****-----
-----
```

c) System must track stock information by notification with the message when stock is near to empty.

**Ans.** In Purchase Menu, while purchasing the medicine name sitamol which gives the message “\*\*\*Stock is Nearly Empty\*\*\*”

```
1.Purchase Medicine
2.View purchase Report
3.Back To Menu
-----
Enter the number of your choice : 1
-----
-----Purchase-----
Enter the Medicine ID:2
Enter the Medicine Name:sitamol
Enter the Supplier ID:2
Enter the Customer ID:5
Enter the quantity:1
      ***Stock is Nearly empty***
-----INVOCIE-----
Customer Name: Amar Subedi
Customer Category: gold
-----
Purchase Medicine Name: sitamol
Purchase Quantity: 1
-----
-----INVOCIE-----
Purchase Date: 2020-09-25 18:27:38
-----RECEIPT-----
Price: 25
Discount: 2.5
Total Price: 23
-----END-----
```

In the database, medicine quantity remaining less than 2 units show the message “\*\*\*Stock is Nearly Empty\*\*\*”. For the purchase of sitamol will display the message because now remaining unit is only 1 after this purchase.

```
mysql> select * from medicine;
```

m_id	m_name	unit	s_id	price	remaining_unit
2	sitamol	5	2	25	1
3	warf	12	2	200	8

Inside Medicine Menu, there is Remaining Medicine List which show the remaining unit of the all medicine in the database

```
-----
1.Add Medicine
2.Remove Medicine
3.View Medicine
4.Remaining Medicine List
5.Back To Menu
-----
Enter the number of your choice : 4
-----
-----Medicine-----
Medicine Name: sitamol
Remaining Unit: 1
-----
Medicine Name: warf
Remaining Unit: 8
-----
```

d) System should track the customer is silver customer/gold customer, bronze customer, normal customer.

**Ans.** Customer category is added by the system user.

```
Enter the number of your choice : 1
-----
-----Add Customer-----
Enter the Customer Name:Amar Subedi
Enter the Customer phone No.9852634152
Enter the Customer Address:Kathmandu
Enter the Customer category(gold,silver, bronze, normal):gold
      Customer added Successfully
-----
```

```
mysql> select * from customer;
```

cust_id	cust_name	cust_phone	cust_address	category
1	kunja	9813073065	Kathmandu	bronze
3	Prashant	985263414	Kathmandu	gold
4	Sangit	9841526356	Kathmandu	normal
5	Amar Subedi	9852634152	Kathmandu	gold

e) On the basis of the customer category (gold, silver, bronze, normal) customer can get discount and discount amount should be track.

**Ans.** On the basic of Customer Category, customer get the discount of the purchase of the medicine.

### Discount of the basic of Customer Category

```
myCursor1 = conn.cursor()
myCursor1.execute("Select category from customer where cust_id= %s", [cid])
conn.commit()
myresult = myCursor1.fetchone()

if myresult[0] == "bronze":
    dis = int(p) * 0.05
elif myresult[0] == "silver":
    dis = int(p) * 0.07
elif myresult[0] == "gold":
    dis = int(p) * 0.10
else:
    dis = int(p) * 0.025
```

The System automatically calculated the discount on the basic of Customer Category

```
-----
-----
1.Purchase Medicine
2.View purchase Report
3.Back To Menu
-----
Enter the number of your choice : 1
-----
-----Purchase-----
Enter the Medicine ID:3
Enter the Medicine Name:warf
Enter the Supplier ID:2
Enter the Customer ID:5
Enter the quantity:2
***Purchased Successfully***
```

In the below image, cost of **warf medicine** (per piece is Rs.200) but the customer has purchase 2 pieces i.e. ( $2 \times 200 = 400$ ) before discount. Customer is from Gold Category which get 10% discount (i.e. 10% of  $400 = 40$ ). Now come the Total Price which is (total price=price –discount) i.e. Rs.360

```
Customer Name: Amar Subedi
Customer Category: gold
-----
Purchase Medicine Name: warf
Purchase Quantity: 2
-----
-----INVOCIE-----
Purchase Date: 2020-09-25 18:48:16
-----RECEIPT-----
Price: 400
Discount: 40
Total Price: 360
-----END-----
```

**f) System must track information regarding report of total product buy by each customer and product that must sell from this system.**

**Ans.** Inside Purchase Menu there is **View Purchase Report** Function show the record of sells or purchased medicine to the customer.

First Function show the **Total Purchased Till Now**, after that show the purchase record of customer one by one.

In the below image, total purchase till now is 5, and then show the record one by one.

```
-----
1.Purchase Medicine
2.View purchase Report
3.Back To Menu
-----
```

```
Enter the number of your choice : 2
-----
```

```
-----Purchase-----
+-----+
|Total Purchased Till Now: 5 |
+-----+
-----
```

```
-----Report-----
Purchase Id: 3
Customer Id: 1
Medicine Name: sitamol
Total Price after Discount: 23.75
Date: 2020-09-24 22:22:22
-----
```

```
-----Report-----
Purchase Id: 5
Customer Id: 1
Medicine Name: sitmol
Total Price after Discount: 47.5
Date: 2020-09-24 22:50:42
-----
```



-----Report-----

Purchase Id: 16  
Customer Id: 4  
Medicine Name: warf  
Total Price after Discount: 390  
Date: 2020-09-25 13:14:31

-----Report-----

Purchase Id: 17  
Customer Id: 5  
Medicine Name: sitamol  
Total Price after Discount: 23  
Date: 2020-09-25 18:27:38

-----Report-----

Purchase Id: 18  
Customer Id: 5  
Medicine Name: warf  
Total Price after Discount: 360  
Date: 2020-09-25 18:48:16

-----\*\*\*\*\*-----

## Details on Menu

### Home page

```
C:\Users\user\AppData\Local\Programs\Python\Python38\python.exe C:/Users/user/Documents/Stock/main.py
-----Welcome to the Pharmacy-----
1.Medicine
2.Purchase
3.Customer
4.Supplier
5.Help
6.Exit
-----
Enter the number of your choice : |
```

### Help Menu

```
-----Help Menu-----
Press 1: To Add Medicine      To Remove Medicine      To View Medicine      Remaining Medicine List
-----
Press 2: Purchase Medicine    View Purchased Medicine
-----
Press 3: To Add Customer      To Remove Customer      To View Customer      To Search Customer with Receipt
-----
Press 4: To Add Supplier      To Remove Supplier      To View Supplier
-----
```

### Medicine Menu

```
-----Welcome to the Pharmacy-----
1.Medicine
2.Purchase
3.Customer
4.Supplier
5.Help
6.Exit
-----
Enter the number of your choice : 1
-----
1.Add Medicine
2.Remove Medicine
3.View Medicine
4.Remaining Medicine List
5.Back To Menu
-----
Enter the number of your choice :
```

## Purchase Menu

```
-----Welcome to the Pharmacy-----
1.Medicine
2.Purchase
3.Customer
4.Supplier
5.Help
6.Exit

-----
Enter the number of your choice : 2
-----
-----
1.Purchase Medicine
2.View purchase Report
3.Back To Menu
-----
Enter the number of your choice : |
```

## Customer Menu

```
-----Welcome to the Pharmacy-----
1.Medicine
2.Purchase
3.Customer
4.Supplier
5.Help
6.Exit

-----
Enter the number of your choice : 3
-----
-----
1.Add Customer
2.Remove Customer
3.View Customer
4.Search Customer with Receipt
5.Back To Menu
-----
Enter the number of your choice :
```

## Supplier Menu

-----Welcome to the Pharmacy-----

- 1.Medicine
- 2.Purchase
- 3.Customer
- 4.Supplier
- 5.Help
- 6.Exit

-----

Enter the number of your choice : 4

-----

- 
- 1.Add Supplier
  - 2.Remove Supplier
  - 3.View Supplier
  - 4.Back To Menu
- 

Enter the number of your choice :