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Online Pharmacy Web application DOCUMENT

Project Laboratory I

Prepared by: Sadig Rzazada

Submitted to: Istvan Albert

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Background

The purpose of the web application is to provide software solution for the any Online pharmacy or community pharmacy which also receive customer orders via Internet. The popularity of selling medicine online increases day by day due to increased numbers of internet users. The main target here to satisfy customer satisfaction which includes following advantages:

Save Time and budget

Customers can order required medicines during several minutes and save their time .The active promo codes can be used to get discounts if the cost of purchased items exceeds the required minimum amount of coupon.

No queues

The most obvious benefit to purchase medicine online is the fact that it allows people to avoid queues. The website designed with unique individual ordering features to buy the items and it is easy to determine whether the products are available or out of stock.

Shopping convenience.

Online shopping pharmacy is open round the clock of 24/7, 7 days a week and 365 days. When consumers are able to shop online, they don't have to worry about working hours.

Detailed product pages

This includes information about ingredients, side-effects, the country where the medicine produced and so on.

Comparison of medicine Prices

Going from one physical pharmacy to the next can be a tiring and time-consuming process. It is very straightforward to conduct price comparisons with another medicine shopping website. This gives customer the freedom to determine the most affordable product he or she is going to buy

Additionally, it has also advantages for online pharmacy owners .

Lower running cost

The will be able to save on wages , staff and other business expense such as electricity, heating costs and rent .

Scale-ability

The web application is very effective in allowing the owners to determine which medicines are selling successfully, to ensure the stock levels of these items are increased.

Objective of the project

General objective

The general objective of this project is to develop a web application (Online Pharmacy) which will provide an easy way for customers to search, request medicine and while product sellers can store information about available medicines, prepare and deliver orders.

Specific objective

There are specific goals that need to be accomplished in order to meet the general objective. Those are:

- Implement the design with front end technologies
- Design relational database for the system
- Design appropriate user interface
- Design the system architecture that provides solutions for the required business functionalities.

User roles and functionalities

There are four types of roles: manager, pharmacist, postman and customer.

The Web application allows manager user to:

- login to the system
- add a new medicine category
- edit medicine category information
- remove medicine category
- add a new medicine subcategory
- edit medicine subcategory information
- remove medicine subcategory
- add a new medicine
- edit medicine information
- remove medicine category
- add a new user with pharmacist, postman and manager roles
- lock or unlock registered users' account
- can see all submitted orders

The Web application allows Pharmacist user to:

- login to the system
- View the submitted orders and prepare the medicine for the next phase.

The Web application allows Postman user to:

- login to the system
- View the orders which are ready for delivery

Relation Model

This section generally refers to data storage on database server. A relational database stores data in the form of relations or tables. While designing Relational Model, some conditions were defined which must hold for data present in database are called constraints. These constraints are checked before performing operations in database.

Domain Constraints:

These constraints were applied to attributes which can only take values which lie inside the domain range.

Key Integrity

Every table in the database have a column with primary key constraint which defines a tuple uniquely.

Referential Integrity

Foreign key constraint was applied to certain column which has reference to another table. For example, each medicine can have only one category and one subcategory. That is why in Medicine table for MedicineTypeId and MedicineSubTypeId the relevant restriction was applied.

Database diagram

The database diagram visualize one-to-one or one-to-many relation among database tables where application related data is stored.

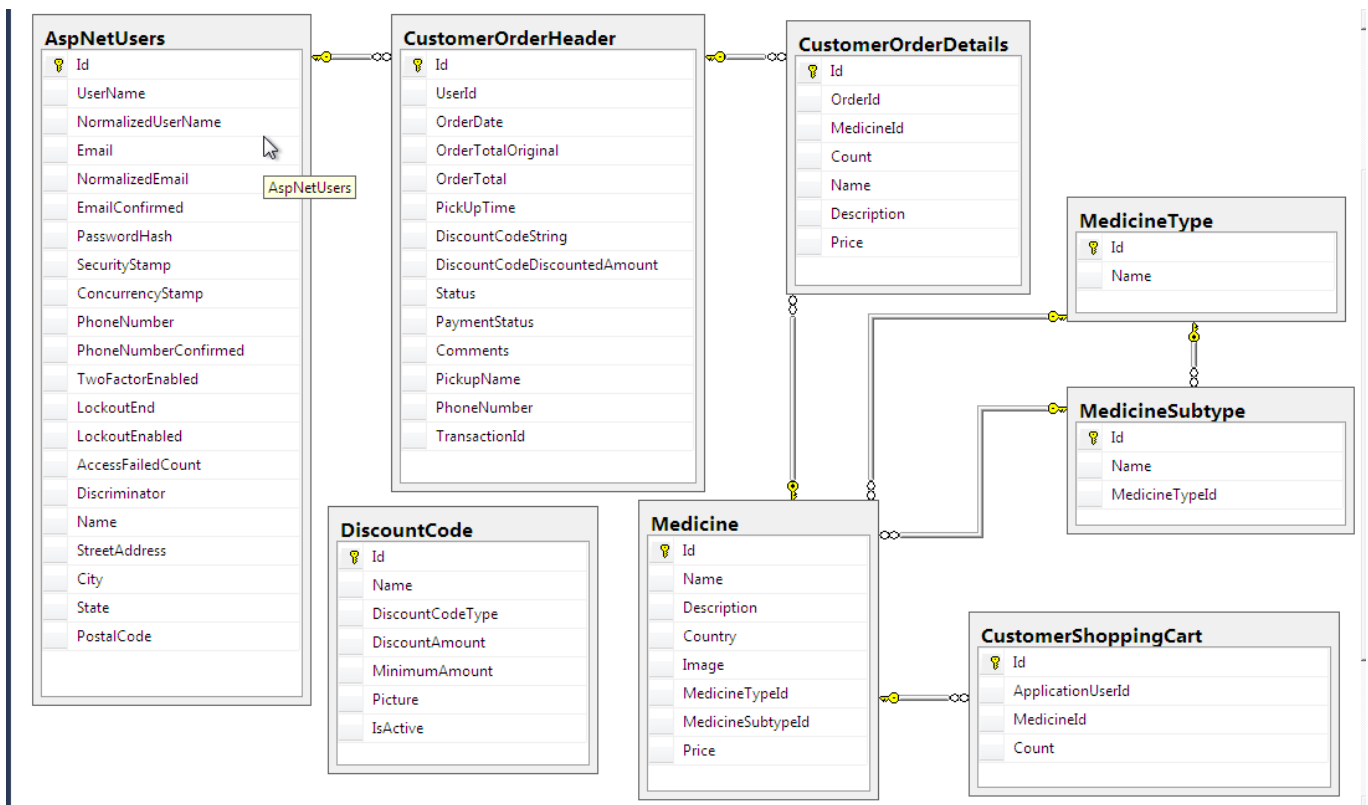


Figure 1.

Database tables

Customer Order Header Table

	COLUMN_NAME	DATA_TYPE	IS_NULLABLE	CHARACTER_MAXIMUM_LENGTH
1	Id	int	NO	NULL
2	UserId	nvarchar	NO	450
3	OrderDate	datetime2	NO	NULL
4	OrderTotalOriginal	float	NO	NULL
5	OrderTotal	float	NO	NULL
6	PickUpTime	datetime2	NO	NULL
7	DiscountCodeString	nvarchar	YES	-1
8	DiscountCodeDiscountedAmount	float	NO	NULL
9	Status	nvarchar	YES	-1
10	PaymentStatus	nvarchar	YES	-1
11	Comments	nvarchar	YES	-1
12	PickupName	nvarchar	YES	-1
13	PhoneNumber	nvarchar	YES	-1
14	TransactionId	nvarchar	YES	-1

Figure 2.

Customer Shopping Cart Table

	COLUMN_NAME	DATA_TYPE	IS_NULLABLE	CHARACTER_MAXIMUM_LENGTH
1	Id	int	NO	NULL
2	ApplicationUserId	nvarchar	YES	-1
3	MedicineId	int	NO	NULL
4	Count	int	NO	NULL

Figure 3.

Customer Order Details Table

	COLUMN_NAME	DATA_TYPE	IS_NULLABLE	CHARACTER_MAXIMUM_LENGTH
1	Id	int	NO	NULL
2	OrderId	int	NO	NULL
3	MedicineId	int	NO	NULL
4	Count	int	NO	NULL
5	Name	nvarchar	YES	-1
6	Description	nvarchar	YES	-1
7	Price	float	NO	NULL

Figure 4.

Discount Code Table

	COLUMN_NAME	DATA_TYPE	IS_NULLABLE	CHARACTER_MAXIMUM_LENGTH
1	Id	int	NO	NULL
2	Name	nvarchar	NO	-1
3	DiscountCodeType	nvarchar	NO	-1
4	DiscountAmount	float	NO	NULL
5	MinimumAmount	float	NO	NULL
6	Picture	varbinary	YES	-1
7	IsActive	bit	NO	NULL

Figure 5.

Medicine Table

	COLUMN_NAME	DATA_TYPE	IS_NULLABLE	CHARACTER_MAXIMUM_LENGTH
1	Id	int	NO	NULL
2	Name	nvarchar	YES	-1
3	Description	nvarchar	YES	-1
4	Country	nvarchar	YES	-1
5	Image	nvarchar	YES	-1
6	MedicineTypeId	int	NO	NULL
7	MedicineSubTypeId	int	NO	NULL
8	Price	float	NO	NULL

Figure 6.

Medicine Type Table

	COLUMN_NAME	DATA_TYPE	IS_NULLABLE	CHARACTER_MAXIMUM_LENGTH
1	Id	int	NO	NULL
2	Name	nvarchar	NO	-1
3	MedicineTypeId	int	NO	NULL

Figure 7.

Medicine Sub-type Table

	COLUMN_NAME	DATA_TYPE	IS_NULLABLE	CHARACTER_MAXIMUM_LENGTH
1	Id	int	NO	NULL
2	Name	nvarchar	NO	-1

Figure 8.

Graphical User Interfaces

This part introduces the screenshot of some of the web pages in the application. The web pages are designed and implemented to be user-friendly which makes easy the interaction for the user with the application.

Homepage

OnlinePharmacy (0) Administrator Priviledges Hello sadigrzazada20@gmail.com! Logout


%10 OFF for any Purchase over \$350
PROMO CODE PROJLAB


DISPLAY ALL


ALLERGENICS


ALLERGENICS
ANTI-INFECTIVES
ANTIFUNGALS
ANTIMALARIAL AGENTS
ANTITUBERCULOSIS AGENTS
ANTIVIRAL AGENTS
CARBAPENEMS
CEPHALOSPORINS
MACROLIDE DERIVATIVES
PENICILLINS
ANTINEOPLASTICS
BIOLOGICALS


ALLERGENICS

Grastek \$60 

 Grastek is used to help your body develop an immunity to certain pollens that can cause allergy symptoms such as sneezing, itching, and watery eyes.

Oralair \$120 

 Oralair is used to help your body develop an immunity to certain pollens that can cause allergy symptoms such as sneezing, itching, and water eyes. Oralair is for use in adults up to age 65, and children who are at least 10 years old.

Ragwitek \$85 



 Ragwitek is used to help your body develop an

Figure 9.

Medicine Details page. Customers can see detailed information about medicine and can add to shopping cart with any amount.

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Medicine Details [Back to List](#)



Name: Grastek

Description: Grastek is used to help your body develop an immunity to certain pollens that can cause allergy symptoms such as sneezing, itching, and watery eyes.

Price: 60

MedicineType: allergenics

MedicineSubtype: allergenics

Country: NA

Count: 1

[Add to Shopping Cart](#)

Figure 10.

Shopping Cart page. The customer can apply active promo codes and manipulate the items in the shopping cart.

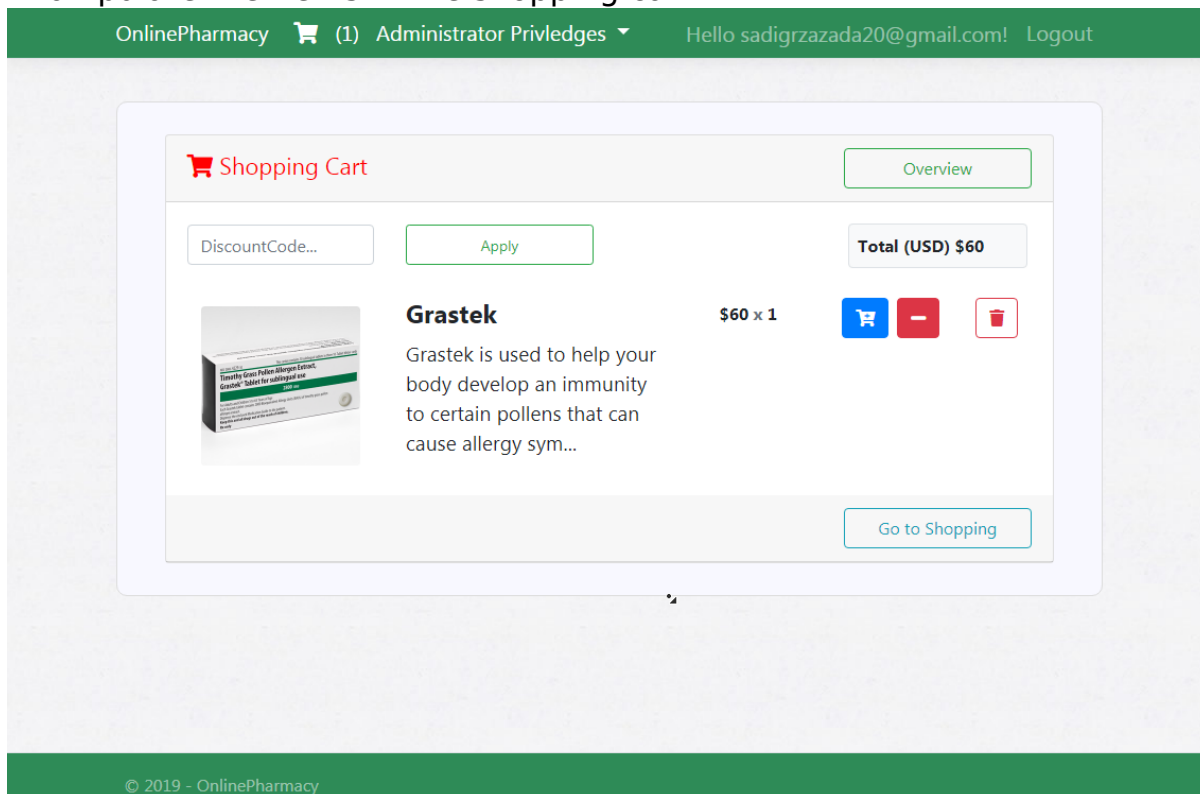


Figure 11.

Order confirmation page.

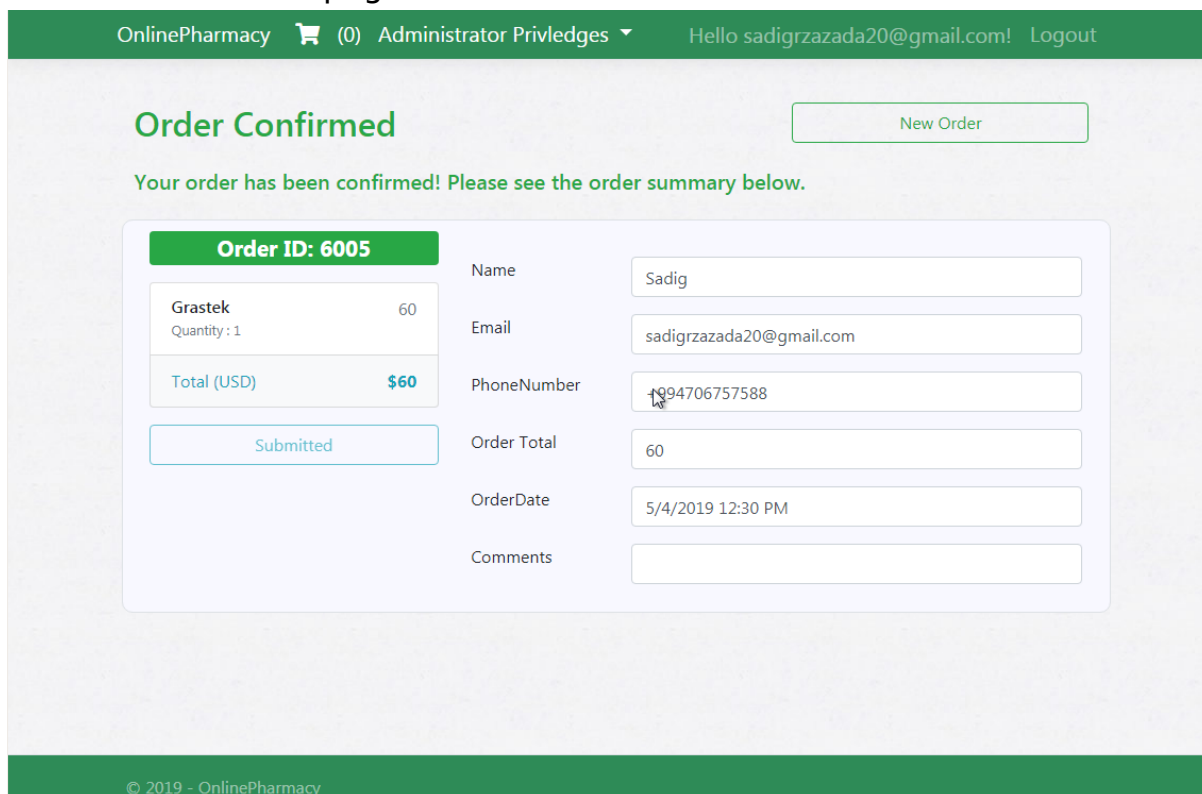


Figure 12.

Medicine List. Admin user can add , edit and remove medicine.

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Medicine List

Add New

Name	Price	MedicineType	MedicineSubtype		
Grastek	60	allergenics	allergenics		
Oralair	120	allergenics	allergenics		
Ragwitek	85	allergenics	allergenics		
Alinia	29	anti-infectives	amebicides		
Aralen	89	anti-infectives	amebicides		
Tobi	78	anti-infectives	aminoglycosides		
Stromectol	54	anti-infectives	anthelminitics		
Vfend	63	antifungals	azole antifungals		

Figure 13.

Submitted Orders page. A pharmacist user can prepare or cancel orders.

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Submitted Orders

Order Number : 6005

- Grastek x 1

PickUp Time5/4/2019 12:30:00 PM

AddressNagszben

No Comments

Order Ready

Cancel Order

Order Number : 7004

- Oralair x 1

PickUp Time5/11/2019 12:00:00 PM

AddressBME Q Building

No Comments

Start Preparing

Cancel Order

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Figure 14.

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Prepared Orders page. The postman user can see the orders which are ready for delivery.

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Orders Ready for Delivery

Name...

Id	Pickup Name	Pickup Time	Email	PickUpAddress	Total Items
7004	Sadig	5/11/2019 12:00:00 PM	sadigrzazada20@gmail.com	BME Q Building	1
6005	Sadig	5/4/2019 12:30:00 PM	sadigrzazada20@gmail.com	Nagszben	1

1

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Figure 15.

All Orders page. The admin user can see all orders with different status like submitted, canceled, completed or in progress.

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All Orders

Id	Pickup Name	Email	Pickup Time	Status	Order Total	Total Items
12005	Saad	saad@gmail.com	5/23/2019 12:30:00 PM	Submitted	\$85.00	1
11004	Sadig	sadigrzazada20@gmail.com	5/20/2019 11:30:00 AM	Completed	\$180.00	1
10004	Yassen	yassen@gmail.com	5/23/2019 12:00:00 PM	Submitted	\$60.00	1
9004	Sadig	sadigrzazada20@gmail.com	5/8/2019 11:30:00 AM	Completed	\$120.00	1
8004	Sadig	sadigrzazada20@gmail.com	5/7/2019 12:00:00 PM	Completed	\$60.00	1
7004	Sadig	sadigrzazada20@gmail.com	5/11/2019 12:00:00 PM	Completed	\$120.00	1

Figure 16

Tools Used

Some of the required software products include ASP.NET Core framework with bootstrap 4 technology and CSS , Microsoft Visual Studio 2017 with its own local database.

ASP.NET Core is the new web framework from Microsoft. It has been designed to be flexible, fast, modern, and work across different platforms. ASP.NET creates websites based on HTML, CSS and JavaScript that are simple, fast and can scale to millions of users.

Bootstrap 4 is the latest version, which is the one of the famous front end framework for developing responsive and user-friendly websites.

CSS (Cascading Style Sheets) is used to layout and style web pages which allows to modify the font, color, size and spacing of the web page content, add animations or other related decorative features and so on.

jQuery is a small,fast and feature-rich JavaScript library. It makes things like HTML document manipulation, animation and event handling

References

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