

MFW (Medicine For World)



Abstract

This applied project is a web based application using Laravel and MySQL that defines **Medicine E-Commerce**. Here foreign customers can communicate, ask for medicine prices and buy life saving medicines from bangladesh. Customers first have to register, confirm by email validation, search any product, price inquiry, then admin panels assign prices for customer, customer add that product to cart and place the order. Users will be notified both in websites and through email.

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Introduction

Every e-commerce company needs a web based applications to run the operation smoothly. Like that Medicine for world needed a web based platform and developed a fully customized e-commerce web application. To communicate with foreign customers and take orders in online and inform the customers all the updates of the orders. Such as- providing information where the parcel is located right now and when will be delivered. Giving customers all the auto generated online invoices. So that customers can have all the documents of the order.

Motivation

Medicine for world organization was doing this business and was making reports in excel, word. Actually it was a manual process and it took a lot of time to organize and find appropriate information at a glance. At that point, comany felt to develop a automated process where they can do it automatically without any hassle.

Project Scope

Using this project customers and organization can process all the work automatically in online. It saves a lot of time both parties. Both parties can have online legal documents of their activities. It has notifications systems for both in website and mail. It has multilingual feature. User can view in english, russuan, chinese language. It has multiple currency feature. User can order with their own currency. This project has that much flexibility.

Purpose

Purpose of this project is to make it easier communication between customers and organization and reduce time waste. Making an automated system instead of an outdated manual system which no longer applicable for any parties.

Development Methodology

Process Model

Unified Process

For developing a complex, long and ongoing project like this it needs a lower risk and certainty and good process model too. So, by understanding the consequences of the reasons, Unified Process model is being selected for this project. The purposes of selecting this model are it's Use Case driven to capture the user requirements. This model is incremental and iterative and it resolves the project risks related with the requirements.

Diagrams

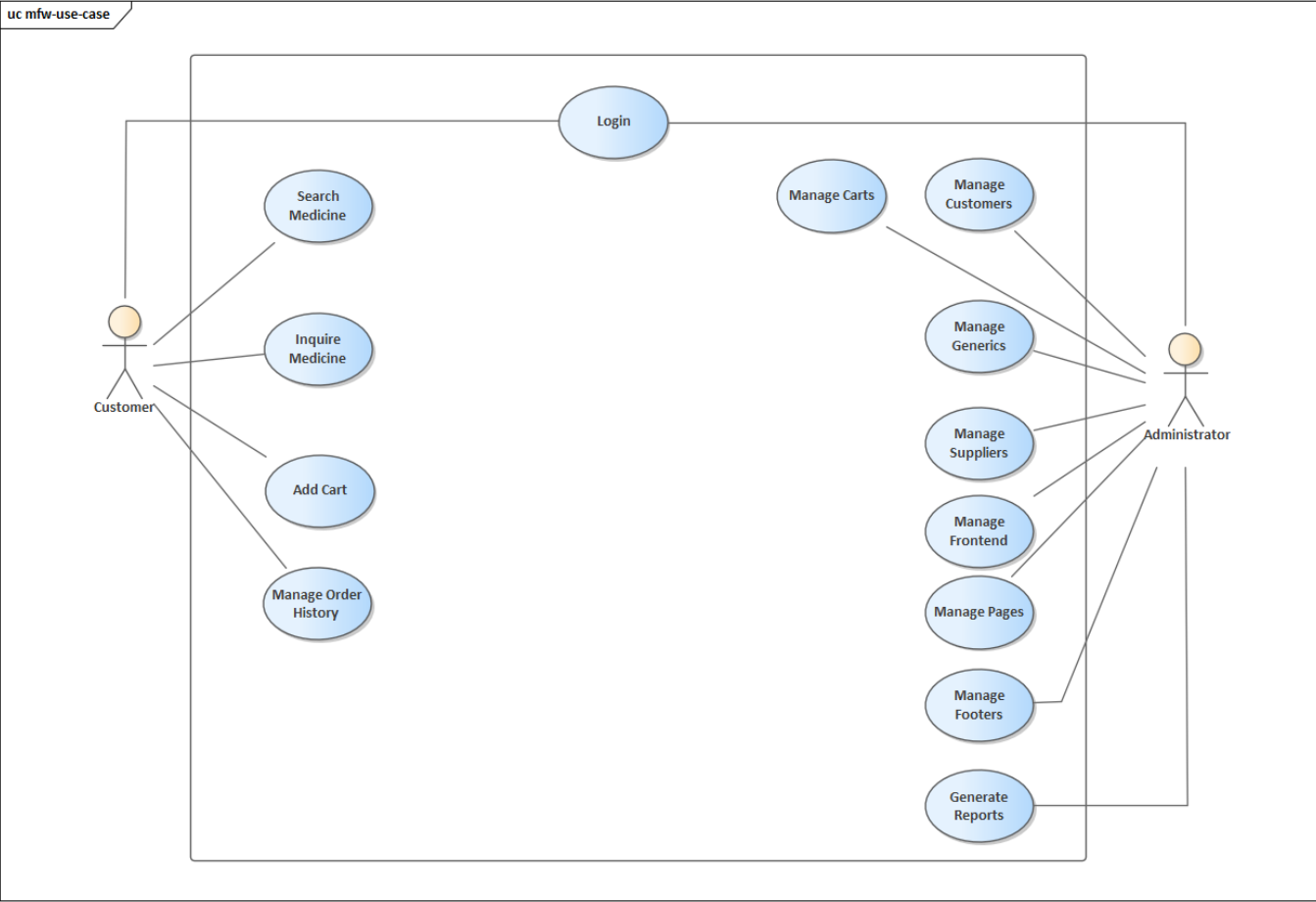
Diagrams give the overview of the project and help develop efficient, effective and correct designs, particularly Object Oriented designs. Diagrams also give an environment to communicate clearly with project stakeholders (concerned parties: developers, customer, etc). UML diagrams are organized into two distinct groups: structural diagrams and behavioral or interaction diagrams.

1. Behavioral UML diagrams
 1. Use case diagram
 2. Activity diagram
2. Structural UML diagrams
 1. Class diagram
 2. Deployment diagram
3. Data Flow diagram

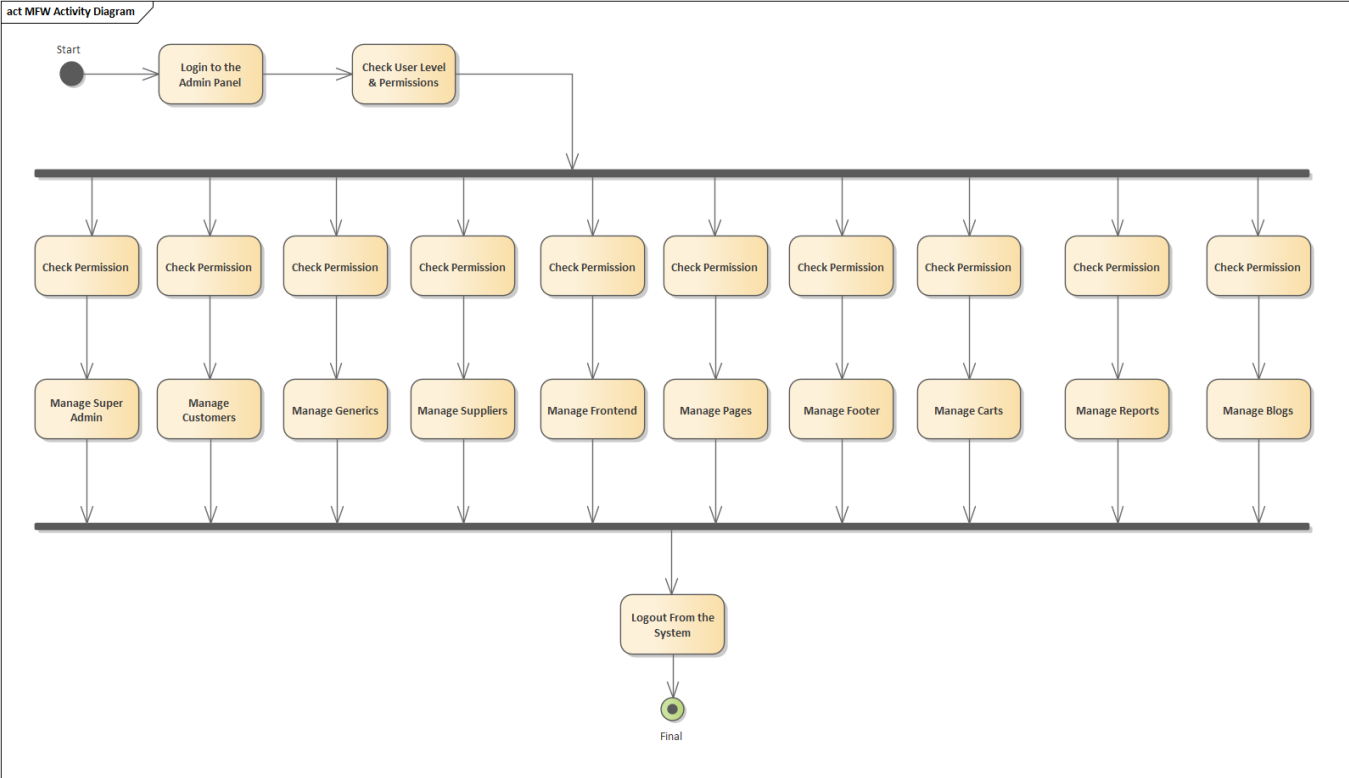
Use Case Diagram

Use Case Diagram referred to as behavior diagrams used to describe a set of actions or event steps defining the interactions between a role (actor) and a system to achieve a goal. The main purpose of a use case diagram is to exhibit who interacts with the system, and the main goals they can achieve with it. In this project users are divided into several categories-

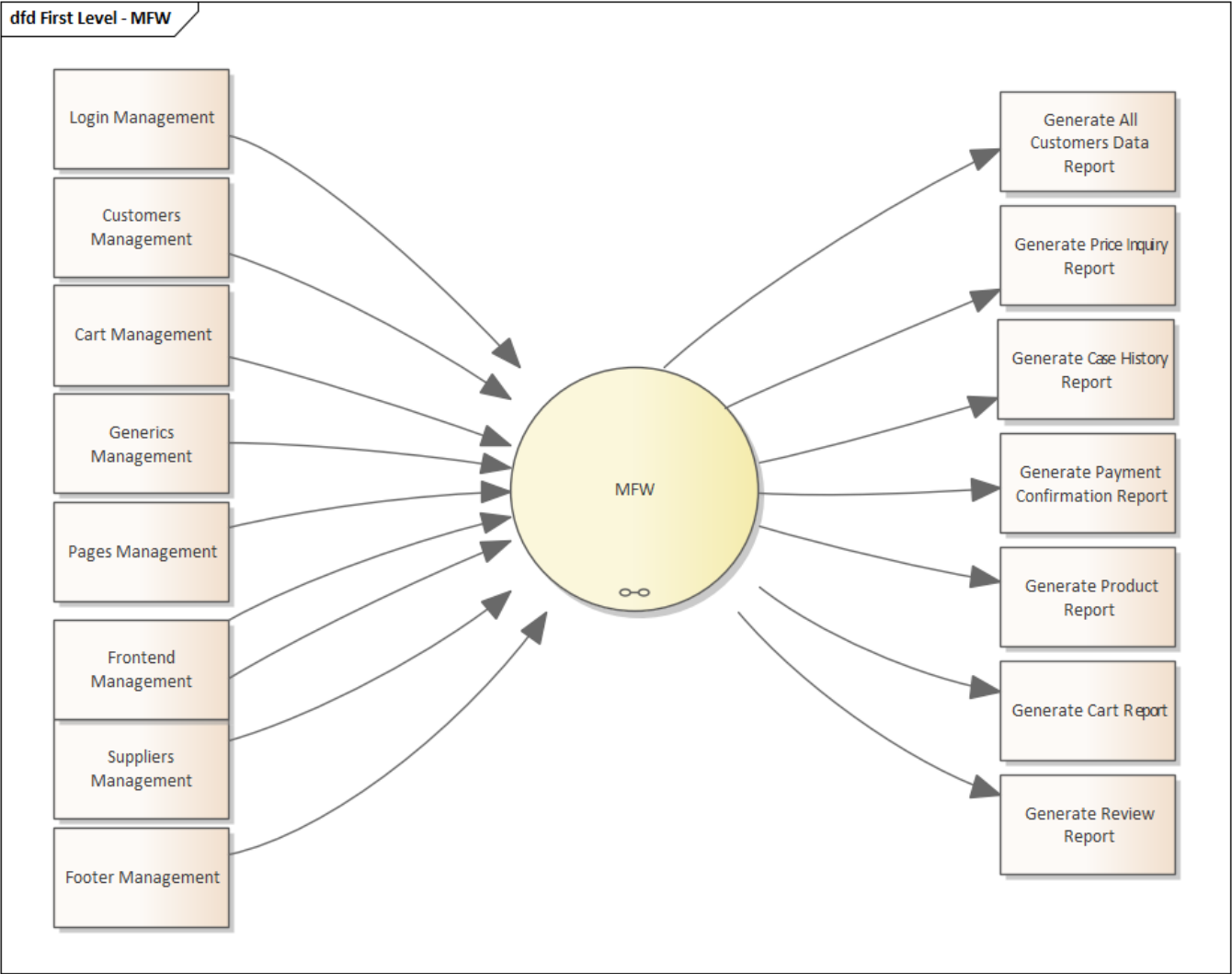
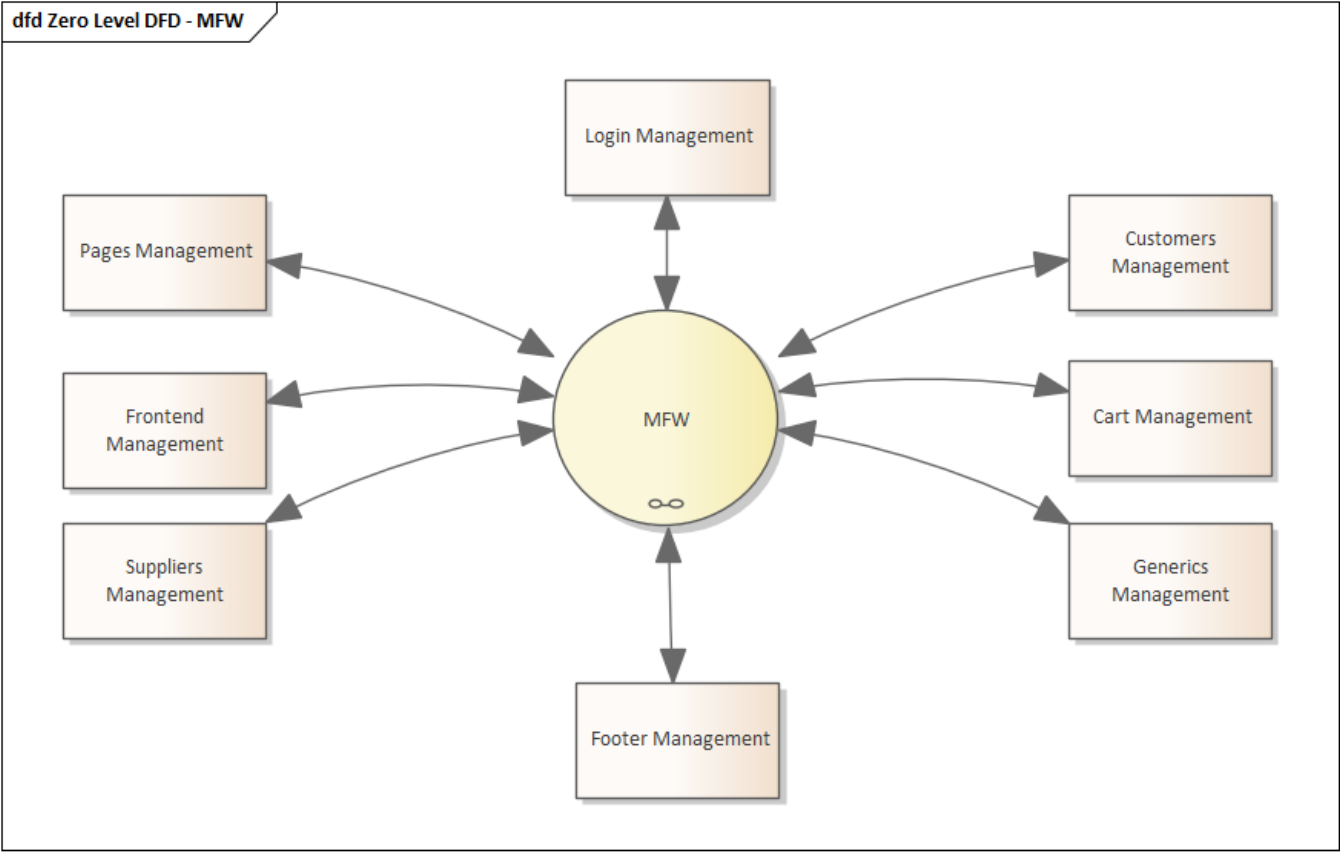
1. Administrator
2. Customer



Activity Diagram



DFD Diagram (Data Flow)



Schema Design

Deployment Diagram

Tools

Hardware Requirements

1. Any device like andriod, iOS, Laptop, Desktop with internet connection.

Software Requirements

Prerequisites

1. For server deployment

1. Putty
 1. SSH key
2. Filezilla
3. Redis
4. git
5. LAMP (Linux, Apache2, MySQL>=5.7, PHP>=7.3)

2. For local Development

1. Visual Studio Code
2. MySQL Workbench
3. Firefox
 1. Firefox vue-dev-tool
 2. inspector
 3. console
4. Postman
5. Git
6. Redis
7. Xamp

3. For Client

1. Any device with any web browser

Built With	Version	Description
PHP	7.3 (minimum)	
MySQL	5.7 (minimum)	Database
Laravel	5.7	
Redis		To improve performance and reducing db query loading time
Vue.js	2.6.12	

Built With	Version	Description
Jquery		
Ajax		api call
Axios	0.21.1	api call
Bootstrap	3.3.7	advance pre stylings framework
Font Awesome	4.7.0	icons
Simple Line icon		icons
Owl Carousel		slider
Tooltipster	4.2.6	Mouse hover note
Magnific Popup		Image zoom
DataTables bootstrap4		Yajra datatable
Select2	4.0.6-rc.0	select searching
Laravel Plugins		
Intervention Image		Image processing
DomPDF		PDF Generation
Debugbar		Laravel debugging
stevebauman/location		get user location
ntwindia/ntwindia		Number to word conversion

Implementation

This projects has been divided into several modules to make the development of the projectis much more easier. Such are -

Modules

Modules
● Frontend Panel ●
Home
Product List
Product Details
Order History
Contact
Sitemap

Modules

Login

Register

Profile

Prescriptions

Notifications

How to order

  **Admin Panel**  

Login

Notifications

 **Super Admin**

Users

Roles

Dashboard

System Environment

DB Automated backups management

Block list management

 **Customers**

Customers

Product Prices For Users

Offer Management

 **Generics**

Generic Settings

Generics

Generic Brands

Generic Brand Prices

Add Files

 **Suppliers**

Positions

Suppliers

 **Frontend**

Modules

New Product Sliders

Best Selling Product Sliders

Main SLider

Main Navbar Categories

Testimonial Setup

Testimonial Client Contact Requests

Currency Setup

Top Brands Setup

Banner

SEO Default

Social Medias

Approve Reviews

Contact with product reviewer requests

Customer to admin contacts

Pages

Pages

Footer

Top of footer(3rd+4th portion)

Portion 1

Portion 1 social

Portion 2 pages

Portion 3 categories

Portion 4

Portion 4 socials

Bottom Footer

Carts

Carts

Create Manual Cart

Default Reasons and solutions

Modules

Mail Settings

Payment Settings

Delivery Settings

Invoice Settings

Proforma Invoice Settings

Reports

Case History

Price Inquiry Report

Payment Confirmation Report

All Customers Data Report

Product Report

Uploading Third Party Data

Blogs

Blog Management

Admin Panel

Dashboard

- Total customers
- Total orders
- Total sale
- Total genericbrands
- Total blog posts
- Total product reviews
- **Further implementations**
 - Recent orders
 - Avg. order frequency time
 - Sales by category
 - Sales by sub-category
 - Today's revenue chart
 - Best selling products
 - Lowest selling products
 - Page views

Super Admin

Users

Here add admin users and give role wise permission to individual user.

Roles

Here add admin roles and assign fixed modules to it.

Dashboard

- **Backups**
 - **storage backup delete:** delete existing storage backup to reduce server weight.
 - **Download storage backup:** generate storage backup. then download options showed up. then download it.
 - db backup delete
 - db backup download
- **Notifications**
 - notifications settings
- **language Settings**
 - language settings

Environment variables

Here most protected password must be applied to access this page. This is most sensitive page in admin panel. Please don't mess with it.

DB Automated backups

In database a cronjob applied. Every fixed duration like- 1 hour or 30 minutes the cronjob will run automatically in the server end. Everyday 1 file will be generated. In month 30 file will be generated.

```
crontab -l
crontab -e

add this line to this file
**for every 30 minutes**

*/30 * * * * cd /var/www/html && php artisan schedule:run
```

Block list management

All the blocks are separate. Individually/separately any blocks can be unblocked and with one click all blocks can be removed.

Blocks Area	blockTypeId
Customer to admin contact messages request form submit (F -> A)	1

Blocks Area	blockTypeeld
Contact with product reviewer requests form submit (F -> A)	2
Testimonial Client Contact Requests form submit (F -> A)	3

Note:

- **blockTypeeld**
 - this is fixed and hardcoded
- **F -> A**
 - this is Frontend to admin form submit

Customers**Customers**

Here customer list will be shown. Customers can be managed here.

Product prices for users

Here customers list will be shown and products prices can be assigned here for individual customers.

Offer management

Offers can be edited here.

Generics**Generic Settings****Generics****Generic Brands****Generic Brand Prices****Add files****Suppliers****Positions**

Manage positions here.

Suppliers

manage suppliers here

Frontend

New product slider

select products to show in product slider

Best selling products slider

select products to show in best selling product slider

main slider

Add main sliders

Main navbar categories

Manage main navbar categories

Testimonial setups

Manage testimonials

Testimonial client contact request

here testimonial client contact requests will be shown. Requester, testimonial client, testimonial information will be shown here. Send mail to requester options also added here.

Currency setup

Currency rates can be managed here. USD to any currency rate will be shown here.

Top brand setup

Top brands management

banner

Banner management

SEO default

SEO default information will be added here.

Social medias

Social medias information added here

Approve reviews

All the reviews will be shown here. If the reviewer gives a review it will be shown here first. Then administrator approve or modify or delete the review. If approve then this review will be shown in frontend.

Contact with product reviews**Customer to admin contact messages**

If in frontend a registered customer/guest sends a message to admin. Then the message will show up here. If registered customers send a message then admin can get a notification in admin panel. Here admin can send mail against that request.

Pages**Pages**

Manage pages here. In frontend these dynamic pages Page title, meta keywords, meta description information can be managed here.

Footer**Top of footer (3rd + 4th portion)****Portion 1****Portion 1 socials****Portion 2 pages****Portion 3 categories****Portion 4****Portion 4 socials****Bottom footer****Carts****Carts**

These are the approval steps in entire cart processes.

Stage	Conditions
created and pending	<code>\$cart->isCartApproved==1</code>

Stage	Conditions
updated and pending	<code>\$cart->updateCount>0</code>
	<code>&& \$cart->isCartApproved==1</code>
Payment Receipt Uploaded	<code>\$cart->isCartApproved==2</code>
	<code>&& \$cart->isPaymentReceiptUploaded==1</code>
Approved	<code>\$cart->isCartApproved == 2</code>
Rejected	<code>\$cart->isCartApproved == 3</code>
Payment confirm	<code>\$cart->isPaymentConfirm == 1</code>
tracking number added	<code>\$cart->isCartApproved==2</code>
	<code>&& \$cart->isPaymentConfirm==1</code>
	<code>&& \$cart->isTrackingAdded==1</code>
order complete	<code>\$cart->isCartApproved==2</code>
	<code>&& \$cart->isPaymentConfirm==1</code>
	<code>&& \$cart->isTrackingAdded==1</code>
	<code>&& cart->isDeliveryConfirmed==1</code>
Delivery info added	<code>\$cart->isCartApproved==2</code>
	<code>&& \$cart->isPaymentConfirm==1</code>
	<code>&& \$cart->isTrackingAdded==1</code>
	<code>&& \$cart->isDeliveryInfoAdded==1</code>

Tags: carts, cart approvals, order complete, order delivery info, cart info, cart approval info, cart rejected, cart reject info, cart tracking numbers, order tracking number adding, cart payment confirm.

Create manual cart

Here an admin can create manual cart for a customer.

Default reasons & solutions

Mail settings

This is main mail settings from where mail will go. Please be noted this is not main host mail. Only the sender. If you want to change host sender then you have to change in .env settings.

Payment settings

Delivery settings

Invoice settings**Proforma invoice settings****Reports****Case History**

This is final report of carts.

Price inquiry report**Payment confirmation report****All customers data report****Products report****Uploading third party data report****Blogs****Blog Mangement**

here blog post crud.

Features

- Multi-Lingual
- Multiple Currency
- Admin Panel
- 1 click DB backup download
- 1 click Storage backup download
- Notifications
- SMTP Mail Sending
- Localization (get user registration country)
- Reports
- PDF Reports
- Users' role wise access control

Deployment**Public domains**

- www.medicineforworld.com.bd
- www.medicinefor.world
- www.medicineforworld.cn
- www.medicineforworld.org

Running locally

```
php artisan serve
localhost:8000

php artisan serve --port=8001
localhost:8001
```

Directory structure

Directory	Description
/documents	to track all the notes and requirements of the project
/resources/views/layouts	backend layouts view files
/resources/views/layouts_f	frontend layouts view files
/public/uploads	all the files will be uploaded dynamically
/app/Http/Controllers	all controllers
/app/Http/Middlewares	all middlewares
/app/Http/kernel.php	registering all middlewares
/app/Libraries	all custom library files/helpers(helper functions)
/routes/web.php	all web routes
/routes/api.php	all api routes
/bootstrap/cache/*	all cache file contains here. Remove this if you get any error
/config/	all the config files here

Server

- export mfw.sql from local environment
- import mfw.sql in server
- install **LAMP Stack** in server environment
- **Git clone** from repository
- **.env** file change
- **delete** /bootstrap/cache/*
- Use **Filezilla**
- Run below commands using putty -

► Click to **Expand/Collapse commands**

```
sudo apt update
sudo apt -y install apache2
```

```
sudo apt install php7.4-common php7.4-mysql php7.4-xml php7.4-xmlrpc php7.4-curl
php7.4-gd php7.4-imagick php7.4-cli php7.4-dev php7.4-imap php7.4-mbstring php7.4-
opcache php7.4-soap php7.4-zip php7.4-intl php7.4-fpm php7.4-tidy libapache2-mod-
php7.4 -y
php --version
```

```
sudo apt-cache policy redis-server
sudo apt-get install redis-server
sudo apt-get update
sudo apt-get install build-essential tcl
redis-server
```

```
sudo service apache2 restart
sudo systemctl restart apache2
sudo systemctl restart redis.service
sudo apt install mysql-server
```

```
=====replace to 000-default.conf=====
path: /etc/apache2/sites-available/000-default.conf
DocumentRoot /var/www/html/public
```

```
<Directory /var/www/html/public>
    Options Indexes FollowSymLinks
    AllowOverride All
    Require all granted
</Directory>
```

```
=====replace to 000-default.conf=====
```

```
=====ufw=====
ufw allow "Apache Full"
ufw allow "Apache Secure"
ufw allow "Apache Secure"
ufw allow Apache
ufw allow 80
ufw allow 22
ufw allow 3306
ufw allow "Apache Full"
=====ufw=====
```

```
=====git=====
git clone <clone url>
git add .
git commit -m <message>
=====git=====
```

```
===== move directory one step back =====
mv * ../
===== move directory one step back =====
```

```
===== remove cache =====
/bootstrap/cache/*
===== remove cache =====
```

```
=====FILL Zilla=====
settings: Protocol: SFTP
Host: <host> port <22>
Logon Type: Key File
user: root <ubuntu user>
Browse: ppk private file
Connect
=====FILL Zilla=====
```

```
=====permissions=====
```

```
sudo chmod a+rx app
sudo chmod a+rx bootstrap
sudo chmod a+rx config
sudo chmod a+rx public
sudo chmod a+rx resources
sudo chmod a+rx routes
sudo chmod a+rx storage
sudo chmod a+rx vendor
```

```
sudo chown -R www-data app
sudo chown -R www-data bootstrap
sudo chown -R www-data config
sudo chown -R www-data public
sudo chown -R www-data resources
sudo chown -R www-data routes
sudo chown -R www-data storage
sudo chown -R www-data vendor
sudo chown -R www-data vendor
```

```
sudo chgrp -R www-data storage bootstrap/cache
sudo chmod -R ug+rx storage bootstrap/cache
```

```
sudo a2enmod rewrite
service apache2 restart
```

```
sudo chmod -R ug+rx public
sudo chown -R www-data public
sudo chmod a+rx public
sudo chown -R 777 public
```

```
sudo chown -R www-data:www-data public
sudo chgrp -R www-data storage public
sudo chmod -R ug+rx storage public
chown -R www-data:www-data html/
chgrp -R www-data public
sudo chown root public
sudo chgrp root public
sudo chown -R www-data:root public
```

```

sudo a2enmod rewrite
sudo a2enmod headers
service apache2 restart
sudo systemctl restart redis.service

sudo a2enmod headers

service apache2 restart


=====php.ini=====
/etc/php/7.3/apache2/php.ini
post_max_size = 8192M
upload_max_filesize = 2000M
memory_limit = 4000M

or
upload_max_filesize = 50M
memory_limit = 512M
max_input_time = -1
max_execution_time = 0
post_max_size = 100M

service apache2 restart
systemctl restart apache2
sudo systemctl restart redis.service
=====php.ini=====


=====permissions=====

```

► Click to **Expand/Collapse commands: Cronjob**

```

crontab -l
crontab -e

add this line to this file
**for every 30 minutes**

*/30 * * * * cd /var/www/html && php artisan schedule:run
*/15 * * * * service apache2 restart
*/15 * * * * service redis restart

```

Limitations and Conclusion

Challanges

- SEO
- Making dynamic for everything
- Mail spamming
- Digital Ocean Server Deployment
- Preventing hacker
 - registering submit without frontend form using
 - contact to admin send message submit without frontend form using
- Responsiveness (Safari, iPhone)
- Notification issue
- Theme configuring
- Medicine Searching

Recommendations on Future Improvement

There is always room for improvements. In this software there are so many other functionalities to add and improve.

- Applying JavaScripts frameworks like - Vue.js or React.js
- Using Nuxt.js
- Applying NoSQL like - MongoDB
- Chat System
- Applying automatic testing like- Unit testing

Authors

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(<https://www.linkedin.com/in/saifurjob/>)
- **Masud Al-Imran** - *Partial project* - (<https://github.com/masudalimran>)

License

This project is licensed under the **Medicine For World License**