A Project **Report** (including **Synopsis**) on

DeliveryByte: Order Delivery

Submitted to Manipal University, Jaipur

Towards the partial fulfillment for the Award of the Degree of

**BACHELORS OF TECHNOLOGY**

In Computers Science and Engineering

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By

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# INTRODUCTION

**DeliveryByte** is an E-Commerce application which manages the process of planning and executing [last-mile delivery](https://optimoroute.com/last-mile-delivery/) for goods. marketers can sell products/services and the customer can purchase on that website electronically by using the internet on the mobile and computer. The web app will usually be available 24 hours a day, and consumers from no matter where can log in to internet and order anthing and get it delivered. In recent times E-commerce has become a daily essential as people now prefer to buy good online rather than going out. Using it, both producers and buyers can save time, energy and money.

# MOTIVATION

The motivation behind DeliveryByte is based on the everyday need of consumer to have a product delivered to their hands, and a producer to be able to provide its service to the consumers, and the inspiration by big e-commerce companies. DeliveryByte will help producers to streamline their business, and help small as well as large businsses to grow. It will help reduce . There is a prominent need for e-commerce website And especially now, post-pandemic, they are expected to play a much bigger part in common peoples’ lives, not just because the physical shops are closed, but also because people have become more comfortable and somewhat reliant as well, on online shopping.

# PROJECT OBJECTIVE

The primary objective of **DeliveryByte** is to Deliver products to customers, Reduce management costs, developing business relations, Boosting the efficiency of services, Increasing sales, and Ensure that customers have a great buying experience, so they come back for more, while taking care of safety, planned maintenance and quality standards .

The statistics will help teachers and students to realise their weak points and strong points and will give them smart recommendations.

|  |  |
| --- | --- |
| **PROS** | **CONS** |
| More and more offline shopkeepers will be able to sell products online. | Unable to examine product personally |
| Faster Buying/Selling. | The website is not completely hacker/malware attack proof. There are some potential backdoors, especially in the payment gateway. |
| No need for physical company set-up | Unable to examine product personally |

# METHODOLOGY AND PLANNING

A Web Application would be created using the front end using **HTML**, **CSS**, **JS** and **Bootstrap** and backend using **PHP** connecting to the database server.

The Database would be written **MySQL** and would be queried by the application as per requirement.

Timeline

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# SOFTWARE AND HARDWARE REQUIREMENTS

* Bootstrap
* PHP
  + SQL
  + Xampp
* MySQL WorkBench

# BIBLIOGRAPHY/REFERENCES

* SQL for Data Science (coursera)
* W3schools
* ERDPlus
* Building a Dynamic Web App using PHP & MySQL (Udemy)

**ENTITY RELATIONSHIP DIAGRAM**

Diagram

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**RELATIONAL MODEL DIAGRAM**

Diagram

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**PROJECT REPORT**

**DATABASE**

**Tables in the database:**

A picture containing application

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**Brief description of the tables:**

* **Address**

It stores the address, city, state etc. where the order has to be delivered to.

Table

Description automatically generated

* **Address\_ID( primary key ):** Primary keys of the table
* **Cusomer\_ID( foreign key ):** Foreign key from ***customer*** table to I dentify the customer who’s order is to be delivered.
* **Pincode:** Pincode of the address.
* **Street:** Name of the street of address.
* **Landmark:** Nearest landmark to the address**.**
* **City**: Name of city
* **State:** Name of state
* **Type:** Work, or home address
* **Customer**

It stores the details of customers who adds orders to cart.

Table

Description automatically generated

* **Customer\_ID( Primary key ):** Primary key to the table
* **First\_name:** First name of customer.
* **Last\_name:** Last name of customer.
* **Email:** Email address of customer.
* **Password:** Password to the DeliceryByte account.
* **Phone :** Phone numbers of customer
* **Orders**

It stores the orders details of the orders to be deliverd to a customer .

Graphical user interface, text, application

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* **Order\_ID (Primary Key)** : The unique ID to identify the orders.
* **Customer\_ID, Address ID (Foreign Key):** foreign keys from the ***Address*** table.
* **Total\_Price**: Summation of prices of products ordered.
* **Payment\_Method**: How the customer is going to pay, COD, Netbanking, or Card.
* **Status** : Status of the order, Delivered or not delivered
* **Order\_Date**: Date when order is placed.
* **PRODUCTS**

Stores the details of products.

Table

Description automatically generated

* **Product\_id (Primary Key)** : It is used to identify each product uniquely.
* **Name** : Name of the item.
* **Category:** It describes the category in which the product.
* **Price** : The cost per item is available in this attribute.
* **Rating**: Customer rating of the product.
* **Seller**: Name of the seller of the product.
* **Quanity**: Quanity of product available
* **Cart**

Stores the information of the products inside the cart of a customer.Currently max number of products that can be placed in the cart is 5.

Table

Description automatically generated

* **Customer\_ID (Foreign Key):** Foreign key from ***Customer*** table
* **Prod\_ID 1**: ID of product
* **Prod\_ID 2**: ID of product
* **Prod\_ID 3**: ID of product
* **Prod\_ID 4**: ID of product
* **Prod\_ID 5**: ID of product
* **Delivery**

It stores the order ID and details of delivery of an order.

Graphical user interface, application

Description automatically generated

* **ID ( foreign key):** ID of delivery executive, foreign key from ***deliveryexecutive*** table.
* **Order\_ID(Foreign Key):** Foreign key from ***Orders*** table.
* **DeliveryExecutive**

It stores the details of delivey executives.

Table

Description automatically generated

* **ID ( Primary key):** Primary key that stores ID of the executive.
* **First\_name:** First name of executve.
* **Last\_name:** Last name of executive.
* **Email:** Email address of executive.
* **Password:** Password to the DeliceryByte account.
* **Salart:** Salary of the executive.
* **WorkTime:** Details of the work time, Full-time or Half-time
* **Phone :** Phone numbers of executive.
* **orderdetails**

Details of the order and products in the order.

Graphical user interface, application

Description automatically generated

* **Order\_ID ( Foreign key):** Foreign key from ***orders*** table
* **Product\_ID( Foreign Key ):** Foreign key from ***product*** table

**CREATING TABLES (DDL)**

Create the schemas

CREATE TABLE Customer (

Customer\_ID CHAR(6),

First\_name VARCHAR(20),

Last\_name VARCHAR(20),

Email VARCHAR(40),

Password VARCHAR(20),

Phone1 CHAR(10),

Phone2 CHAR(10),

CONSTRAINT Customer\_ID\_FMT CHECK (Customer\_ID REGEXP "^C[0-9]{5}$"),

CONSTRAINT Customer\_Email\_FMT CHECK (Email REGEXP "^[a-zA-Z0-9\_]{1,20}\.?[a-zA-Z0-9\_]{0,5}@[a-z]{1,7}(\.com|\.ac\.in)$"),

CONSTRAINT Customer\_Password\_FMT CHECK (Password REGEXP "^[a-zA-Z0-9@#&!\$]{8,20}$"),

CONSTRAINT Customer\_Phone1\_FMT CHECK (Phone1 REGEXP "^[0-9]{10}$"),

CONSTRAINT Customer\_Phone2\_FMT CHECK (Phone2 REGEXP "^[0-9]{10}$"),

CONSTRAINT Customer\_PK PRIMARY KEY (Customer\_ID)

);

CREATE TABLE Address (

Customer\_ID CHAR(6),

Address\_ID CHAR(6),

Pincode CHAR(6),

Street VARCHAR(20),

Landmark VARCHAR(20),

City VARCHAR(20),

State VARCHAR(20),

Type ENUM ("Work", "Home"),

CONSTRAINT Address\_ID\_FMT CHECK (Address\_ID REGEXP "^[0-9]{6}$"),

CONSTRAINT Pincode\_FMT CHECK (Pincode REGEXP "^[0-9]{6}$"),

CONSTRAINT Address\_FK FOREIGN KEY (Customer\_ID) REFERENCES Customer (Customer\_ID) ON DELETE CASCADE,

CONSTRAINT Address\_PK PRIMARY KEY (Customer\_ID, Address\_ID)

);

CREATE TABLE Orders (

Order\_ID CHAR(10),

Customer\_ID CHAR(6),

Address\_ID CHAR(6),

Total\_Price NUMERIC(6, 0) UNSIGNED DEFAULT 0,

Payment\_Method ENUM ("Cash On Delivery", "Debit Card", "Credit Card", "Net Banking"),

Status ENUM ("Delivered", "Not Delivered"),

Order\_Date TIMESTAMP,

CONSTRAINT Orders\_ID\_FMT CHECK (Order\_ID REGEXP "^[A-Z]{2}-[0-9]{7}$"),

CONSTRAINT Orders\_Total\_Price CHECK (Total\_Price >= 0),

CONSTRAINT Orders\_PK PRIMARY KEY (Order\_ID),

CONSTRAINT Orders\_FK FOREIGN KEY (Customer\_ID, Address\_ID) REFERENCES Address (Customer\_ID, Address\_ID) ON DELETE CASCADE

);

CREATE TABLE DeliveryExecutive (

ID CHAR(6),

First\_name VARCHAR(20),

Last\_name VARCHAR(20),

Email VARCHAR(40),

Password VARCHAR(20),

WorkTime ENUM ("Full-Time", "Part-Time"),

Salary NUMERIC(6, 0) UNSIGNED DEFAULT 0,

Phone1 CHAR(10),

Phone2 CHAR(10),

CONSTRAINT DeliveryExecutive\_ID\_FMT CHECK (ID REGEXP "^D[0-9]{5}$"),

CONSTRAINT DeliveryExecutive\_Email\_FMT CHECK (Email REGEXP "^[a-zA-Z0-9\_]{1,20}\.?[a-zA-Z0-9\_]{0,5}@[a-z]{1,7}(\.com|\.ac\.in)$"),

CONSTRAINT DeliveryExecutive\_Password\_FMT CHECK (Password REGEXP "^[a-zA-Z0-9@#&!\$]{8,20}$"),

CONSTRAINT DeliveryExecutive\_Salary CHECK (Salary >= 0),

CONSTRAINT DeliveryExecutive\_Phone1\_FMT CHECK (Phone1 REGEXP "^[0-9]{10}$"),

CONSTRAINT DeliveryExecutive\_Phone2\_FMT CHECK (Phone2 REGEXP "^[0-9]{10}$"),

CONSTRAINT DeliveryExecutive\_PK PRIMARY KEY (ID)

);

CREATE TABLE Delivery (

Order\_ID CHAR(10),

ID CHAR(6),

CONSTRAINT Delivery\_FK\_1 FOREIGN KEY (Order\_ID) REFERENCES Orders (Order\_ID) ON DELETE CASCADE,

CONSTRAINT Delivery\_FK\_2 FOREIGN KEY (ID) REFERENCES DeliveryExecutive (ID) ON DELETE CASCADE,

CONSTRAINT Delivery\_PK PRIMARY KEY (Order\_ID, ID)

);

CREATE TABLE Product (

Product\_ID CHAR(10),

Name VARCHAR(20),

Category VARCHAR(20),

Price NUMERIC(6, 0) UNSIGNED DEFAULT 0,

Rating NUMERIC(2, 1) UNSIGNED DEFAULT 0,

Seller VARCHAR(20),

Quantity NUMERIC(3, 0) UNSIGNED DEFAULT 0,

CONSTRAINT Product\_ID\_FMT CHECK (Product\_ID REGEXP "^[A-Z]{3}-[0-9]{6}$"),

CONSTRAINT Product\_Price CHECK (Price >= 0),

CONSTRAINT Product\_Rating CHECK (Rating >= 0 and Rating <= 5),

CONSTRAINT Product\_PK PRIMARY KEY (Product\_ID)

);

CREATE TABLE Cart (

Customer\_ID CHAR(6),

Prod\_ID1 CHAR(10),

Prod\_ID2 CHAR(10),

Prod\_ID3 CHAR(10),

Prod\_ID4 CHAR(10),

Prod\_ID5 CHAR(10),

CONSTRAINT Cart\_Customer\_ID\_FK FOREIGN KEY (Customer\_ID) REFERENCES Customer (Customer\_ID) ON DELETE CASCADE,

CONSTRAINT Cart\_Prod\_ID1\_FK FOREIGN KEY (Prod\_ID1) REFERENCES Product (Product\_ID) ON DELETE SET NULL,

CONSTRAINT Cart\_Prod\_ID2\_FK FOREIGN KEY (Prod\_ID2) REFERENCES Product (Product\_ID) ON DELETE SET NULL,

CONSTRAINT Cart\_Prod\_ID3\_FK FOREIGN KEY (Prod\_ID3) REFERENCES Product (Product\_ID) ON DELETE SET NULL,

CONSTRAINT Cart\_Prod\_ID4\_FK FOREIGN KEY (Prod\_ID4) REFERENCES Product (Product\_ID) ON DELETE SET NULL,

CONSTRAINT Cart\_Prod\_ID5\_FK FOREIGN KEY (Prod\_ID5) REFERENCES Product (Product\_ID) ON DELETE SET NULL,

CONSTRAINT Customer\_PK PRIMARY KEY (Customer\_ID)

);

CREATE TABLE OrderDetails (

Order\_ID CHAR(10),

Product\_ID CHAR(10),

CONSTRAINT OrderDetails\_FK\_1 FOREIGN KEY (Order\_ID) REFERENCES Orders (Order\_ID) ON DELETE CASCADE,

CONSTRAINT OrderDetails\_FK\_2 FOREIGN KEY (Product\_ID) REFERENCES Product (Product\_ID) ON DELETE CASCADE

);

**CONCLUSION**

Because of the very limited time, I was unable to fully finish implementing all the functionalities, and I willl be adding the functionalities of the project (front end) . But I have successfully finished implementing the database based on MySQL completely, and a lot of core functionalities of the website. The idea is to build a comprehensive, fully functioning online shopping website. I’d like to thank our professor for his due guidance in this project, and throughout the course.

**DECLARATION**

I hereby declare that the project entitled **“*\_DeliverByte: Order Delivery*\_**” submitted as part of the partial course requirements for the course \_***Relational Database Management Systems***\_\_, for the award of the degree of Bachelor of Technology in Computer Science Engineering at Manipal University Jaipur during the \_***4th***  *June, 2021* semester, has been carried out by me. I declare that the project has not formed the basis for the award of any degree, associate ship, fellowship or any other similar titles elsewhere.

Further, I declare that I will not share, re-submit or publish the code, idea, framework and/or any publication that may arise out of this work for academic or profit purposes without obtaining the prior written consent of the Course Faculty Mentor and Course Instructor.

Signature of the Student:

*Sarthak Ahuja*

Place:

Date:2/05/2021