Aim of the project

The aim of this project is to develop a Data Management System to store, organize, manage and distribute information related to Seller, Buyer and Product.

This includes:

- Implementation of database management system which helps us in centralizing the data used for managing the tasks performed in an E-Commerce Website.

- Sellers who are looking to sell their products online are required to provide their information such as name, email and other contact details, which will be stored in our database in the form of a table.

- Buyers who want to buy a product of given requirements or details need to provide their contact details. We will match their requirements to the product details that we have with us and fetch the results.

- Sellers who are looking to grow their business online can find a big opportunity here, they can sell their products mentioning their important details such as price, customer satisfaction, loyalty of products etc and buyers can easily reach out to the best product that fits their requirements.

- To eliminate the errors involved with the manual method of checking records.

- It provides most of the features that a Database Management System should have. It is developed by using MySQL database.

<u>Hardware and Software Requirements</u>

1. Hardware requirements:

> ❏ Processor- i3 7th generation
> ❏ RAM- 2GB
> ❏ Harddisk-1 TB

2. Software requirements:

> ❏ Operating System- 64 Bit
> ❏ MySQL

Any windows based operating system is recommended.

Also, installation of wamp/ xamp is recommended for proper working of code included in the project.

Description of Modules

- Sellers

  Sellers who are looking to sell their products online are required to provide their information such as name, email and other contact details, which will be stored in our database in the form of a table(seller_details).This table will provide all details that we need of a seller.

- Buyers

  Buyers who want to buy a product of given requirements or details need to provide their contact details which will be stored in our database in the form of a table(buyer_details). We will match their requirements to the product details that we have with us and fetch the results.

- Product

  When we need to fetch data for a product, we can fetch through the table(product_details) in our database.This table stores product details such as product name, type, brand etc.

DBMS concepts used :

- ➢ **MySQL Queries**

Using SQL commands from Command family

- ▪ Data Definition Language (DDL)
- ✓ CREATE
- ✓ ALTER
- ✓ DROP
    - ▪ Data Manipulation Language(DML)
- ✓ INSERT
- ✓ UPDATE
- ✓ SELECT
- ✓ DELETE

- ➢ **Constraints**
- ✓ NOT NULL
- ✓ UNIQUE
- ✓ CHECK
- ✓ DEFAULT
- ✓ KEY CONSTRAINTS-   PRIMARY KEY &
                             FOREIGN KEY

- ➢ **Normalization**
- ✓ Decomposition(lossless)
- ✓ No redundancies

- ➢ **Other important concepts:**
- ✓ JOINS
- ✓ CLAUSES(WHERE clause, HAVING clause, GROUP BY clause and ORDER BY clause)

Screen shots of the output

(Performed on MySQL cmd)

```
C:\Program Files (x86)\MySQL\MySQL Server 5.0\bin\mysql.exe                                                           —    □    ×

mysql> show tables;
+------------------------------+
| Tables_in_pbl                |
+------------------------------+
| buyer_details                |
| product_details              |
| seller_buyer_product_details |
| seller_details               |
+------------------------------+
4 rows in set (0.00 sec)

mysql> desc seller_details;
+---------------------+--------------+------+-----+---------+----------------+
| Field               | Type         | Null | Key | Default | Extra          |
+---------------------+--------------+------+-----+---------+----------------+
| seller_id           | int(255)     | NO   | PRI | NULL    | auto_increment |
| seller_name         | varchar(255) | NO   |     |         |                |
| seller_company_name | varchar(255) | NO   |     |         |                |
| seller_email        | varchar(255) | NO   |     |         |                |
| seller_contact      | int(11)      | NO   |     |         |                |
| seller_address      | varchar(255) | NO   |     |         |                |
+---------------------+--------------+------+-----+---------+----------------+
6 rows in set (0.03 sec)

mysql> select * from seller_details;
+-----------+--------------+---------------------+-----------------------------+----------------+-------------------------------------------+
| seller_id | seller_name  | seller_company_name | seller_email                | seller_contact | seller_address                            |
+-----------+--------------+---------------------+-----------------------------+----------------+-------------------------------------------+
|         1 | Rohan Verma  | Verma footware      | rohan.vermafootware@gmail.com |     918273645 | 125 b block city center gwalior          |
|         2 | Neena jain   | neena accessories   | neena.jain123@gmail.com     |      991828342 | 120 b, mahesh nagar, delhi                |
|         3 | Ria sharma   | ria ornaments       | ria.ornamentss892@gmail.com |      881293573 | 12c, chandini chowk, delhi                |
|         4 | Mahek kapoor | kapoor store        | mahekkapoor.store@gmail.com |      772357438 | 10b, patel nagar, agra                    |
|         5 | rahul gaur   | gaur brothers       | rahul.footware@gmail.com    |      918273690 | 19d, main road, mahta nagar, New delhi    |
|         6 | Mahesh Sinha | Sinha sons          | sinhamahesh@gmail.com       |      900054120 | 07 c, gauri nagar, agra                   |
+-----------+--------------+---------------------+-----------------------------+----------------+-------------------------------------------+
6 rows in set (0.00 sec)

mysql> desc buyer_details;
+----------------+--------------+------+-----+---------+----------------+
| Field          | Type         | Null | Key | Default | Extra          |
+----------------+--------------+------+-----+---------+----------------+
| buyer_id       | int(255)     | NO   | PRI | NULL    | auto_increment |
| buyer_name     | varchar(255) | NO   |     |         |                |
| buyer_email    | varchar(255) | NO   |     |         |                |
| buyer_contact  | int(11)      | NO   |     |         |                |
| buyer_address  | varchar(255) | NO   |     |         |                |
+----------------+--------------+------+-----+---------+----------------+
```

```
C:\Program Files (x86)\MySQL\MySQL Server 5.0\bin\mysql.exe                                                           —    □    ×

mysql> select * from buyer_details;
+----------+------------------+------------------------+---------------+----------------------------+
| buyer_id | buyer_name       | buyer_email            | buyer_contact | buyer_address              |
+----------+------------------+------------------------+---------------+----------------------------+
|        1 | Roshini Khanna   | roshini345@gmail.com   |     918273645 | 120 shastri nagar agra     |
|        2 | Mehul verma      | verma123@gmail.com     |     998877665 | 12 a new colony delhi      |
|        3 | disha mansi gaur | dishagaur892@gmail.com |     928345671 | 11b radiant colony delhi   |
|        4 | ram prajapati    | ram0908@gmail.com      |     898976542 | 123c patel nagar, gwalior  |
+----------+------------------+------------------------+---------------+----------------------------+
4 rows in set (0.00 sec)

mysql> desc product_details;
+--------------------+--------------+------+-----+---------+----------------+
| Field              | Type         | Null | Key | Default | Extra          |
+--------------------+--------------+------+-----+---------+----------------+
| product_id         | int(255)     | NO   | PRI | NULL    | auto_increment |
| product_name       | varchar(255) | NO   |     |         |                |
| product_type       | varchar(255) | NO   |     |         |                |
| product_brand_name | varchar(255) | NO   |     |         |                |
| product_price      | varchar(255) | NO   |     |         |                |
+--------------------+--------------+------+-----+---------+----------------+
5 rows in set (0.09 sec)

mysql> select * from product_details;
+------------+------------------+---------------------+--------------------+---------------+
| product_id | product_name     | product_type        | product_brand_name | product_price |
+------------+------------------+---------------------+--------------------+---------------+
|          1 | dresses          | women clothing      | BIMA               | 1200          |
|          2 | t shirts         | men clothing        | Manhattan          | 1780          |
|          3 | hair accessories | hair care products  | zara               | 400           |
|          4 | denim dresses    | kids clothing       | amazonion          | 600           |
|          5 | soft toys        | toys                | firstcry           | 890           |
|          6 | charger          | phone accessories   | real mi            | 2000          |
|          7 | shirts           | formal men clothing | future group       | 2500          |
|          8 | saari            | women ethnic wear   | reliance trends    | 2200          |
|          9 | handbags         | bags and laguage    | london tourister   | 5600          |
+------------+------------------+---------------------+--------------------+---------------+
9 rows in set (0.00 sec)

mysql> desc seller_buyer_product_details;
+------------+----------+------+-----+---------+----------------+
| Field      | Type     | Null | Key | Default | Extra          |
+------------+----------+------+-----+---------+----------------+
| user_id    | int(255) | NO   | PRI | NULL    | auto_increment |
| seller_id  | int(255) | NO   | MUL |         |                |
| buyer_id   | int(255) | NO   | MUL |         |                |
| product_id | int(255) | NO   | MUL |         |                |
+------------+----------+------+-----+---------+----------------+
4 rows in set (0.14 sec)
```

```
C:\Program Files (x86)\MySQL\MySQL Server 5.0\bin\mysql.exe                                    –  □  ×

mysql> use pbl;
Database changed
mysql> show tables;
+--------------------------------+
| Tables_in_pbl                  |
+--------------------------------+
| buyer_details                  |
| product_details                |
| seller_buyer_product_details   |
| seller_details                 |
+--------------------------------+
4 rows in set (0.00 sec)

mysql> desc buyer_details;
+----------------+--------------+------+-----+---------+----------------+
| Field          | Type         | Null | Key | Default | Extra          |
+----------------+--------------+------+-----+---------+----------------+
| buyer_id       | int(255)     | NO   | PRI | NULL    | auto_increment |
| buyer_name     | varchar(255) | NO   |     |         |                |
| buyer_email    | varchar(255) | NO   |     |         |                |
| buyer_contact  | int(11)      | NO   |     |         |                |
| buyer_address  | varchar(255) | NO   |     |         |                |
+----------------+--------------+------+-----+---------+----------------+
5 rows in set (0.41 sec)

mysql> SELECT buyer_id, buyer_name, buyer_email
    -> FROM Buyer_details
    -> GROUP BY buyer_name;
+----------+------------------+------------------------+
| buyer_id | buyer_name       | buyer_email            |
+----------+------------------+------------------------+
|        3 | disha mansi gaur | dishagaur892@gmail.com |
|        2 | Mehul verma      | verma123@gmail.com     |
|        4 | ram prajapati    | ram0908@gmail.com      |
|        1 | Roshini Khanna   | roshni345@gmail.com    |
+----------+------------------+------------------------+
4 rows in set (0.13 sec)

mysql> desc product_details;
+--------------------+--------------+------+-----+---------+----------------+
| Field              | Type         | Null | Key | Default | Extra          |
+--------------------+--------------+------+-----+---------+----------------+
| product_id         | int(255)     | NO   | PRI | NULL    | auto_increment |
| product_name       | varchar(255) | NO   |     |         |                |
| product_type       | varchar(255) | NO   |     |         |                |
| product_brand_name | varchar(255) | NO   |     |         |                |
| product_price      | varchar(255) | NO   |     |         |                |
+--------------------+--------------+------+-----+---------+----------------+
5 rows in set (0.14 sec)
```

```
C:\Program Files (x86)\MySQL\MySQL Server 5.0\bin\mysql.exe                                    –  □  ×

mysql> SELECT product_id, product_name,product_type,product_price
    -> FROM product_details
    -> ORDER BY product_price;
+------------+------------------+---------------------+---------------+
| product_id | product_name     | product_type        | product_price |
+------------+------------------+---------------------+---------------+
|          1 | dresses          | women clothing      | 1200          |
|          2 | t shirts         | men clothing        | 1780          |
|          6 | charger          | phone accessories   | 2000          |
|          8 | saari            | women ethnic wear   | 2200          |
|          7 | shirts           | formal men clothing | 2500          |
|          3 | hair accessories | hair care products  | 400           |
|          9 | handbags         | bags and laguage    | 5600          |
|          4 | denim dresses    | kids clothing       | 600           |
|          5 | soft toys        | toys                | 890           |
+------------+------------------+---------------------+---------------+
9 rows in set (0.00 sec)

mysql> SELECT product_id, product_name,product_type,product_brand_name
    -> FROM product_details
    -> ORDER BY product_type;
+------------+------------------+---------------------+--------------------+
| product_id | product_name     | product_type        | product_brand_name |
+------------+------------------+---------------------+--------------------+
|          9 | handbags         | bags and laguage    | london tourister   |
|          7 | shirts           | formal men clothing | future group       |
|          3 | hair accessories | hair care products  | zara               |
|          4 | denim dresses    | kids clothing       | amazonion          |
|          2 | t shirts         | men clothing        | Manhattan          |
|          6 | charger          | phone accessories   | real mi            |
|          5 | soft toys        | toys                | firstcry           |
|          1 | dresses          | women clothing      | BIMA               |
|          8 | saari            | women ethnic wear   | reliance trends    |
+------------+------------------+---------------------+--------------------+
9 rows in set (0.00 sec)

mysql> SELECT product_id, product_name
    -> FROM product_details
    -> ORDER BY product_name;
+------------+------------------+
| product_id | product_name     |
+------------+------------------+
|          6 | charger          |
|          4 | denim dresses    |
|          1 | dresses          |
|          3 | hair accessories |
|          9 | handbags         |
|          8 | saari            |
|          7 | shirts           |
|          5 | soft toys        |
```
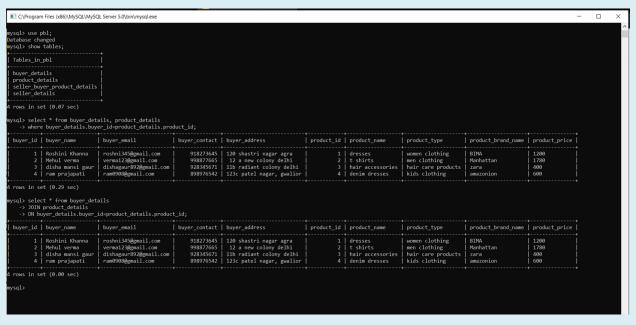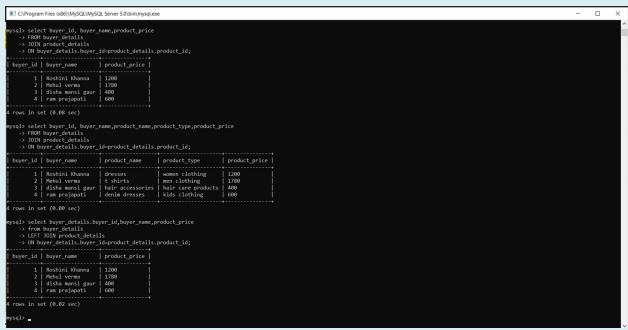
```
C:\Program Files (x86)\MySQL\MySQL Server 5.0\bin\mysql.exe                                                    —  □  ×

mysql> use pbl;
Database changed
mysql> show tables;
+-----------------------------+
| Tables_in_pbl               |
+-----------------------------+
| buyer_details               |
| product_details             |
| seller_buyer_product_details |
| seller_details              |
+-----------------------------+
4 rows in set (0.07 sec)

mysql> select * from buyer_details, product_details
    -> where buyer_details.buyer_id=product_details.product_id;
+----------+---------------+---------------------+--------------+-------------------------+------------+------------------+-------------------+-------------------+---------------+
| buyer_id | buyer_name    | buyer_email         | buyer_contact| buyer_address           | product_id | product_name     | product_type      | product_brand_name| product_price |
+----------+---------------+---------------------+--------------+-------------------------+------------+------------------+-------------------+-------------------+---------------+
|        1 | Roshini Khanna| roshni345@gmail.com |    918273645 | 120 shastri nagar agra  |          1 | dresses          | women clothing    | BIMA              | 1200          |
|        2 | Mehul verma   | verma123@gmail.com  |    998877665 |  12 a new colony delhi  |          2 | t shirts         | men clothing      | Manhattan         | 1780          |
|        3 | disha mansi gaur| dishagaur892@gmail.com | 928345671 | 11b radiant colony delhi |         3 | hair accessories | hair care products| zara              | 400           |
|        4 | ram prajapati | ram0908@gmail.com   |    898976542 | 123c patel nagar, gwalior|          4 | denim dresses    | kids clothing     | amazonion         | 600           |
+----------+---------------+---------------------+--------------+-------------------------+------------+------------------+-------------------+-------------------+---------------+
4 rows in set (0.29 sec)

mysql> select * from buyer_details
    -> JOIN product_details
    -> ON buyer_details.buyer_id=product_details.product_id;
+----------+---------------+---------------------+--------------+-------------------------+------------+------------------+-------------------+-------------------+---------------+
| buyer_id | buyer_name    | buyer_email         | buyer_contact| buyer_address           | product_id | product_name     | product_type      | product_brand_name| product_price |
+----------+---------------+---------------------+--------------+-------------------------+------------+------------------+-------------------+-------------------+---------------+
|        1 | Roshini Khanna| roshni345@gmail.com |    918273645 | 120 shastri nagar agra  |          1 | dresses          | women clothing    | BIMA              | 1200          |
|        2 | Mehul verma   | verma123@gmail.com  |    998877665 |  12 a new colony delhi  |          2 | t shirts         | men clothing      | Manhattan         | 1780          |
|        3 | disha mansi gaur| dishagaur892@gmail.com | 928345671 | 11b radiant colony delhi |         3 | hair accessories | hair care products| zara              | 400           |
|        4 | ram prajapati | ram0908@gmail.com   |    898976542 | 123c patel nagar, gwalior|          4 | denim dresses    | kids clothing     | amazonion         | 600           |
+----------+---------------+---------------------+--------------+-------------------------+------------+------------------+-------------------+-------------------+---------------+
4 rows in set (0.00 sec)

mysql>
```

```
C:\Program Files (x86)\MySQL\MySQL Server 5.0\bin\mysql.exe                                                    —  □  ×

mysql> select buyer_id, buyer_name,product_price
    -> FROM buyer_details
    -> JOIN product_details
    -> ON buyer_details.buyer_id=product_details.product_id;
+----------+---------------+---------------+
| buyer_id | buyer_name    | product_price |
+----------+---------------+---------------+
|        1 | Roshini Khanna| 1200          |
|        2 | Mehul verma   | 1780          |
|        3 | disha mansi gaur| 400         |
|        4 | ram prajapati | 600           |
+----------+---------------+---------------+
4 rows in set (0.08 sec)

mysql> select buyer_id, buyer_name,product_name,product_type,product_price
    -> FROM buyer_details
    -> JOIN product_details
    -> ON buyer_details.buyer_id=product_details.product_id;
+----------+---------------+------------------+-------------------+---------------+
| buyer_id | buyer_name    | product_name     | product_type      | product_price |
+----------+---------------+------------------+-------------------+---------------+
|        1 | Roshini Khanna| dresses          | women clothing    | 1200          |
|        2 | Mehul verma   | t shirts         | men clothing      | 1780          |
|        3 | disha mansi gaur| hair accessories | hair care products | 400         |
|        4 | ram prajapati | denim dresses    | kids clothing     | 600           |
+----------+---------------+------------------+-------------------+---------------+
4 rows in set (0.00 sec)

mysql> select buyer_details.buyer_id,buyer_name,product_price
    -> from buyer_details
    -> LEFT JOIN product_details
    -> ON buyer_details.buyer_id=product_details.product_id;
+----------+---------------+---------------+
| buyer_id | buyer_name    | product_price |
+----------+---------------+---------------+
|        1 | Roshini Khanna| 1200          |
|        2 | Mehul verma   | 1780          |
|        3 | disha mansi gaur| 400         |
|        4 | ram prajapati | 600           |
+----------+---------------+---------------+
4 rows in set (0.02 sec)

mysql>
```

```
C:\Program Files (x86)\MySQL\MySQL Server 5.0\bin\mysql.exe                                                    —    □    ×

mysql> select seller_name,seller_company_name,product_name,product_price
    -> from seller_details
    -> join product_details
    -> on seller_details.seller_id=product_details.product_id;
+--------------+---------------------+------------------+---------------+
| seller_name  | seller_company_name | product_name     | product_price |
+--------------+---------------------+------------------+---------------+
| Rohan Verma  | Verma footware      | dresses          | 1200          |
| Neena jain   | neena accessories   | t shirts         | 1780          |
| Ria sharma   | ria ornaments       | hair accessories | 400           |
| Mahek kapoor | kapoor store        | denim dresses    | 600           |
| rahul gaur   | gaur brothers       | soft toys        | 890           |
| Mahesh Sinha | Sinha sons          | charger          | 2000          |
+--------------+---------------------+------------------+---------------+
6 rows in set (0.18 sec)

mysql> select buyer_name,buyer_contact,buyer_address,product_type,product_price
    -> from buyer_details
    -> join product_details
    -> on buyer_details.buyer_id=product_details.product_id;
+-----------------+---------------+------------------------+--------------------+---------------+
| buyer_name      | buyer_contact | buyer_address          | product_type       | product_price |
+-----------------+---------------+------------------------+--------------------+---------------+
| Roshini Khanna  |     918273645 | 120 shastri nagar agra | women clothing     | 1200          |
| Mehul verma     |     998877665 | 12 a new colony delhi  | men clothing       | 1780          |
| disha mansi gaur|     928345671 | 11b radiant colony delhi| hair care products | 400           |
| ram prajapati   |     898976542 | 123c patel nagar, gwalior| kids clothing     | 600           |
+-----------------+---------------+------------------------+--------------------+---------------+
4 rows in set (0.00 sec)

mysql> Select s.seller_name,s.seller_company_name,p.product_name,p.product_type from seller_details s,product_details p,seller_buyer_product_details sb where s.seller_id = sb.seller_id and p.product_
id = sb.product_id;
Empty set (0.09 sec)

mysql> _
```