**Database Management System - Assignments**

**Session 1**

**Assignment 1**

There is an Organization (StoreFront) that would like to go online for selling their products. We have the following information to build an application that meets the requirements:

* Application contains many Products.
* Categories will categorised the Products.
* Categories can be nested.
* A Product can fall into multiple Categories.
* A Product can have one or more Images.
* User can be a Shopper or Administrator.
* Shopper can place an order having one or more products.
* Shopper can shop only those products which are in stock.
* Shopper can have multiple Shipping Addresses.
* Independent items in an Order can be shipped, canceled or returned.

1. Identify the participating entities.

a. User

b.Order

c.Product

d. Shipping

e. Category

1. Identify the relations.

a.User-Order

b.order-product

c.product-Category

d.order-shipping

e.user-shipping

1. Identify the key attributes.

a. User\_id

B.order\_id

c.Product\_id

D.shipping\_id

E. categorieid

**Assignment 2**

* Explain Normalization techniques (along with an example) as discussed during Session.

Normalization is the process of organizing data in a database to reduce redundancy and improve data integrity. It involves dividing large tables into smaller ones and defining relationships among them.

There are different normal forms (NF) in normalization :

1. First normal form
2. Second normal form
3. Third normal form
4. Boyce-Codd Normal Form

**Assignment 3**

* Install and connect to MySQL