**Assignment # 1**

**DBMS**

**Total Marks:** 50 **Date:** 30-03-2023

**Submission Date:** 04-04-2023

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_**

**Instructions:**

**I. Assignment should be hand written and on online tool as well.**

**II. You should create your own solution according to your logic. Any similarity with other student and internet will be consider as cheating and your assignment will be marked as ZERO.**

**III. Attach this page as front page of your assignment solution.**

**Question # 1: [25 Marks]**

A new international company want to open online grocery store in Pakistan. They decided to first start with 3 big cities of Pakistan (Karachi, Lahore and Islamabad) and start their services in these cities. Their business modal is same as “my cart” and working structure is also same. You are required to design the database. For this purpose, you need define the Entities and their required attributes. The attributes that work as keys and each entity cardinality.

Draw the ER-Diagram and convert in to ER-Modal .

For idea you can visit <https://www.mycart.pk/> website.

**Note: Submitted on Handwriting and also Draw Diagram on tool as well.**

**Question # 2: [25 Marks]**

There is a need for creating a database for Library Management System for a university. The requirements for the System are mentioned below (8)

1. Their system should store books price, their location, its authors, its subject category, and subcategory.
2. Staff/Employee info like name email, phone no, and address should be stored.
3. Book authors record like their full name comprises of last and first name, email, number of publications.
4. The system should maintain records of the persons to whom books are allocated. The person can be a student, employee, or author of the other book. How many books are allocated to a student and how to time the book is allocated should also be recorded.
5. The system should record fine also. In fine details total fine, some day’s books allocated and person info should be recorded.

**Note:**

**Erd should contain attributes and their types, relations, cardinality, weak and strong entities details.**

**Note: Submitted on Handwriting and also Draw Diagram on tool as well.**