

**COMSATS University Islamabad**

**Abbottabad, Pakistan**

**Sabzi Mandi Management System**

***By***

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**The candidate confirms that the work submitted is their own and appropriate  
 credit has been given where reference has been made to the work of others**.



**EXECUTIVE SUMMARY**

In Abbottabad, Pakistan, the collaboration, and management of data between customers, vendors, and supervisors (AC) in the local Sabzi Mandi (vegetable market) have been a major challenge. The existing system of issuing paper-based lists by the AC to vendors often leads to discrepancies, with vendors deviating from the approved list or making unauthorized changes, resulting in unexpected price inflation. Additionally, the lack of proper data storage and analytics hinder effective decision-making by the government.

To address these issues, we propose the development of a comprehensive Sabzi Mandi database system. This system will facilitate seamless collaboration and ensure transparency among all stakeholders. The system will include an administrative interface for the AC, allowing them to upload and manage the approved daily lists. Customers will have access to view the daily list, ensuring they have up-to-date information. Vendors will be provided with the list directly from the database, preventing unauthorized changes.

By implementing this database system, we aim to eliminate data discrepancies, prevent unauthorized modifications to the list, and enhance transparency in the pricing and availability of fruits and vegetables. The centralized database will enable efficient data storage and retrieval, reducing the chances of data loss and facilitating accurate analytics for informed decision-making by the government.

In conclusion, the Sabzi Mandi database system offers a comprehensive solution to the challenges faced in Abbottabad's Sabzi Mandi. By leveraging technology, stakeholders can collaborate effectively, ensuring adherence to approved lists, combating inflation, and enabling data-driven decision-making. This system will revolutionize the Sabzi Mandi operations, benefiting customers, vendors, and the overall economy.

1. **Introduction**

The Sabzi Mandi Management System is a groundbreaking project designed to address collaboration and data management challenges in Abbottabad's Sabzi Mandi. By implementing a centralized database, the project aims to ensure transparency and prevent unauthorized modifications to the daily lists issued by the supervisors (AC). This digital system will empower customers to access the approved list while providing vendors with a secure and unalterable source of information, ultimately improving efficiency and trust within the Sabzi Mandi.

* 1. **Relevance to Course Modules**

The project is implemented by using the different concepts of database system. It is covering all the concepts of data modeling , including ERD diagram , normalization and creating database Schema.

* 1. **Project Background**

In Abbottabad, Pakistan, the collaboration, and management of data between customers, vendors, and supervisors (AC) in the local Sabzi Mandi (vegetable market) have been a major challenge. The existing system of issuing paper-based lists by the AC to vendors often leads to discrepancies, with vendors deviating from the approved list or making unauthorized changes, resulting in unexpected price inflation. Additionally, the lack of proper data storage and analytics hinder effective decision-making by the government.

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* 1. **Literature Review**

There are a lot of projects on internet working on this project. But real-life implementation is not available .

1. **Problem Definition**

In Abbottabad, Pakistan, the collaboration, and management of data between customers, vendors, and supervisors (AC) in the local Sabzi Mandi (vegetable market) have been a major challenge. The existing system of issuing paper-based lists by the AC to vendors often leads to discrepancies, with vendors deviating from the approved list or making unauthorized changes, resulting in unexpected price inflation. Additionally, the lack of proper data storage and analytics hinder effective decision-making by the government.

* 1. **Problem Statement**

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* 1. **Proposal**

The proposed project aims to develop a comprehensive fruit and vegetable management system specifically designed for Sabzi Mandi in Pakistan. The system aims to streamline operations, enhance productivity, and improve data accuracy. It will transition from manual record-keeping to a digital platform. The system will enable vendors, buyers, and administrators to access real-time information, ensuring transparency and improving decision-making. It will address corruption issues through regular backups and integrity checks. The proposed system modules include price monitoring, AC approves lists , buyers can view daily list. The software requirements for the project include Star UML, Oracle 19c and MySQL. The proposed fruit and vegetable management system for Sabzi Mandi aims to revolutionize operations, improve data accuracy, and increase productivity within the market.

1. **ERD Diagram**
   1. **Level 0 ERD Diagram**

### Description:

In Sabzi Mandi Management System there is a admin. He is responsible to approves the lists of fruit and vegetables daily. One Admin can approve many lists. Approved list can be viewed by customers and given to Vendors. Customers can view one list at the time. One list is given to Vendors daily. Fruit lists and vegetable lists contain many items in it.

### Entities:

* VegeList
* Admin
* Customers
* Vendor
* FruitList
* Items

### Diagram:

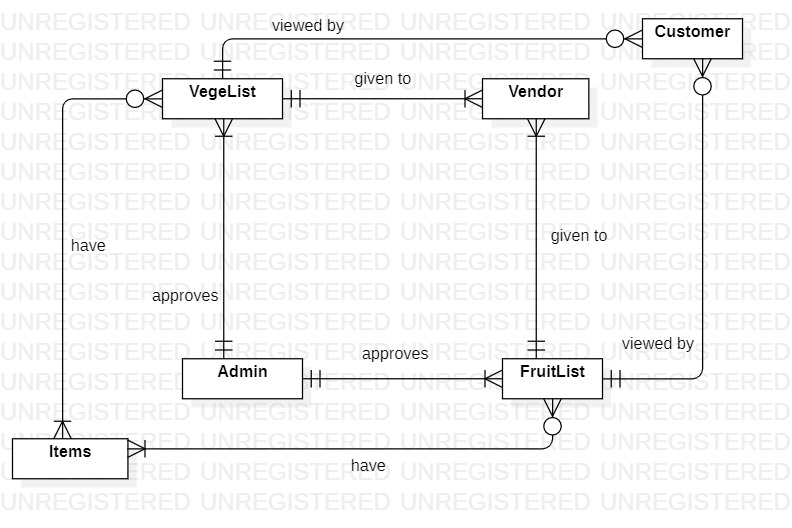


* 1. **Level 1 ERD Diagram**

### Relations:

* Admin can approve one or many list of fruits and vegetables , at least one list of fruit and vegetable can be approved by admin daily.
* Fruits and Vegetables list can be viewed by many customers or may not be viewed by a single customer daily.
* Fruits and Vegetables list can be given to one or many vendors, one vendor gets only one list.
* Fruits and Vegetables lists have at least one or many items, but items can be present in many lists or may not be present in any list.

### Diagram:



* 1. **Level 2 ERD Diagram**

### Description Of ERD:

**Relations:**

* Admin approves the vegetable List and the fruit List.
* Fruit List and the Vegetable List are given to the vendors.
* Fruit List and the Vegetable List is viewed by the customer.
* Vegetable List have vegetable List Item.
* Fruit List have Fruit List Item.
* Items present in the vegetable list and the fruit list.

**Scenario:**

In Sabazi Mandi Management System, admin is responsible for entering the data to the database and responsible for approving the lists which contain the data present in database. The list view will be generated, and it would only be available for view (i.e., read only access) to the customers and vendors who are registered in the database. The customers and vendors are not able to update or change the list.

The above description is level 0 of the sabzi management system, It contains many to many relations between entities so to solve those many to many relations we will draw level 1 by entering the gerund entities between those entities which have many to many relations. We will just insert the gerund entity between those entities which have many to many relations and then we will put the primary keys of both the entities into the gerund entity as foreign key .

### Diagram:

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1. **Normalization**

