Department of software Engineering

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Concepts & Implementation of Acustom_Sales Management System for Private Shops in Afghanistan

Bachelor's thesis

Specialization: Computer science

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Declaration

I dedicated my book to my family: A special feeling of gratitude to my loving parents for their endless love, support and encouragement. Thank you for giving me a chance to prove and improve myself through all my walks of life.

Abstract

The Project" Supermarket administration and management system" deals with the automation of supermarket. This software will help salesperson in managing the various types of Records pertaining to his/her customer.

This system is based on the sales transaction of the items in a supermarket. The first activity is based on adding the items on the system along with the rate which are presented in the supermarket and the name of the items which the supermarket will agree to sell. This authority is given only to admin. Any modifications to be done in the item name or in the rate can be done only by admin. He also has the right to delete any item. The system will display all the items whose name starts with the letter selected by the user. This will be saved in the database.

If the stock is not available, the supermarket orders and buys from a prescribed vendor. The amount will be paid by deducting the total amount acquired in the sales activity. And admin can provide a unique username and password for each employee through which he can login. The product will help user to work in a highly effective and efficient environment. The salespersons have been recording the customer information in the past and even in the present through their personal manual efforts.

So there are a lot of reasons I implemented this project. In the manual system, there are number of inefficiencies that a salesperson faces. The information retrieval is one of the foremost problems. It is very difficult to gather the overall performance reports of the customer. So there are many inherent problems that exist in any manual system. Usually they lack efficiency. Less efficiency has a great impact on the productivity of any human. The new system will cater to the need of salespersons of any supermarket so that they can manage the system efficiently.

Acknowledgement

First I would like to express my heartiest thanks to Almighty "Allah" the most gracious and the most merciful. Special appreciation and heartiest gratitude goes to my supervisor, Prof jawed Ahmad Baktash Department computer science and Engineering. His invaluable help of constructive comments and suggestion to my friends. Special thanks, and appreciation to all those names do not appear here who have contributed to successful completion of this project.

I would like to thank all those who assisted, encouraged and supported me during this project, last my deepest gratitude goes to my beloved parents for their support and encouragement for all time in my live.

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Chapter one

Introduction

1.1 Over view of supermarket management system

Web application is the modern form of distributed application. One of most important aspects of web development is platform independence. Web applications consist of three libraries. First pillar is presentation layer; second pillar is serve side programming and third is database.

I have selected PHP as a front end and MYSQL as a backend because they have the best choice for programmers when compared to any other programming language and has been strategically placed by Microsoft to the corner stone of windows programming. Supermarket management system is the system where all the aspects related to the proper management of supermarket is done. These aspects involve managing information about the various products, staff, managers, customers etc. This system provides an efficient way to managing the supermarket information. Also allows the customer to purchase and pay for the item purchased. This system will facilitate to know how many items are sold and how many items are in the store and also we need to know customer balance and also we classify the supermarket it's a profit or less.

The users will consume less time in calculation and the sales activity will be completed within a fraction of seconds whereas manual system will make the user to write it down which is a long procedure and it also consumes a lot of time. The data will be stored in the databases. The project will be user friendly and easy to use. Most of the domestic supermarket management focuses on the theoretical study of database management and network management

1.2 Objectives

- This project is a software application which is designed in PHP for managing sales, purchases, stock details which are going out and coming into supermarket. Details are maintained in centralized database.
- The main objective of our project is to make efficient transaction management system which is user friendly and at the same time powerful.
- Making the system reliable, easier, fast, and more informative.
- It has capability to keep the complete information of a transaction and to copy it whenever required.
- System plays an important role in achieving the desired plant availability at an optimum cost.
- To produce software which manages the sales activity done in a supermarket, maintaining the stock details, maintaining the records of the sales done for a particular month/year.
- The users will consume less time in calculation and the sales activity will be completed within a fraction of seconds whereas manual system will make the users to write it down which is along procedure and it also consumes a lot of times.

1.3 Methodology

The main method used for this research was interview. Data were collected from different supermarket which some half of them use manual system while others use computerized system and customers of both types of supermarket. Interviewing the people who worked and have experience how to manage supermarket. To know the quality and the intensity of the information we need.

1.4 Scope of project

Scope of this project is to investigate and design a software solution which can facilitate both customer and salesperson in performing their daily tasks, improving efficiency, and helping them to be more productive. This project will provide a solution through which salesperson can easily manage, handle and generate all required information in their respective format when needed. It analyses opening of new stocks, stock updates and ability to view existing once. It provides quick way of operation to capturing the manual process and automating them. This solution will help salesperson in reducing effort spend on managing orders. It will also provide them opportunity to explore possibility of generating documents.

1.5 Goals

By using this application, we can check the items present or not form the current location and purchase the items using one of this process credit card, or cash. So we can reduce the time for shopping.

Chapter two

Literature review

2.1 Introduction

This literature review forms the framework on which the research is based as it helps to develop a good understanding of and insight into relevant previous research and emerging trends. A supermarket is a large form of the traditional grocery store, it is self-service shop offering a wide variety food and household products. It is larger in size and has a wider selection than a traditional grocery store, but it smaller and more limited in the range of merchandise than a hypermarket or big-box market.

So it has been determined that the first true supermarket in the united states was opened by a former Kroger employee. In the United Kingdom, self-service shopping took longer to become established. Even in 1947, there were just ten self-service shops in the country. In 1951, ex-US Navy sailor Patrick Galvani made a pitch of the board to open a chain of supermarkets across the country

2.2 Types of supermarket

Supermarket is categorized into different types due to their size, scales, products offered, store format and trends while use the terms “Grocery store”, “Hypermarket”, “Bigboxmarket” interchangeably to refer to retail food stores, industry watches offer more specific guidelines about different types of supermarket.

“Hypermarkets” are on the large end of this spectrum and carry a diverse mi, of food and general merchandise. Nomenclature is not always uniform Financial Institution Fund places in the same category as supermarkets, but accounting for only the super centers, grocery division. The food marketing institute classifies superstores as a large type of supermarket, while designating ware house stores as grocery store.

2.3 Inventory management

Inventory management is a process of ensuring adequate quantities, good qualities, at a low cost is procured. Folks (2004) assert that the objective of inventory managements to ensure sufficient levels of stock. To maintain an acceptable level of stock to satisfy the demand while minimizing associated holding, administration and stock out cost, He goes ahead to say that running out of stock is very costly for example if a cost that is persistently out of stock, customer will disappear and find other suppliers elsewhere. Inventory management focuses on how many units of each inventory items a firm should hold ins stock how should would be ordered at the time.

2.4 Manual System

Many small business owners, especially if the business has very few products, keep track of inventory manually. The easiest way to perform manual inventory managements to use a spreadsheet. For example, a small bakery might use a spreadsheet to keep track of inventory purchases and usage. The owner can also setup the spreadsheet to calculate when ingredient need to be reordered. At the start of each week the owner manually counts the raw ingredients and components she has on hand. She enters these values in the spreadsheet. She also enters her expected usage based on existence orders. Using the appropriate spreadsheet formulas, she determines if she has enough materials for the week or if she will need to purchase more, Manual systems allows the small business owner to manage inventory with very little investment in system or training. After manual and handwriting books some supermarkets in Somalia used these systems to calculate their daily activities.

Chapter three

System profile

3.1 Project profile

Our project is considering supermarket management system in an electronic instead of physical shopping in order to perform that. We are giving some information and introduction a bout supermarket, management and system.

3.2 Current system

Currently in most of our supermarkets do not use computers for performing their daily tasks. There are a limited number of supermarket that user Microsoft office products. Such as Ms. Word and MS. Excel for performing their daily inventory tasks. Most of them do not

have information that computer can make a great difference in the way they are doing their tasks when they are programmed to do so

Today in the Somalia Supermarket all the tasks and calculations are being done manually and paper based. In both of the tasks the sales persons and the customers are involved. In the existing systems all transactions, dealings of products, purchasing of products were done manually which time consuming.

Reports are prepared manually as and when needed. Maintaining of reports is very tedious task.

3.3 Data gathering

To collect information, we used interview from supermarkets using manual system and customers. After when we finish our interview we have got the following result.

- The customer's data and registration are kept manually
- It looks long time customers to get their order
- Salesperson spend time to know whether items available or not
- It is difficult admin to control records because admin is just retrieving them from a database.

3.4 Problem statement

It is a becoming a challenge for person to manage that data in an effective way. To be more productive in order processing, he needs a solution which can facilitate their current process with use of technology and software.

With increased amount of orders, it is becoming difficult for salesperson to manage orders in effective and efficient manner. It is very hard to go through all paper work and backtracking orders. If there is any complain or review of any order. It takes large amount of effort and time to backtrack and fix the problem. This results in loss of resources, increased time and low output.

3.5 Proposed system

3.5.1 Overview

The proposed system is intended to provide the facility of automating the inventory tasks such as product management and customer registration for the supermarket. To reduce the bottlenecks of the existing system there is a need to develop a new system. The new system should concern the requirements of customer and the sellers. This project is designed with a goal to making the existing system more informative, reliable, fast and easier. There are many reasons for the starting of the project because in the selling of items through the manual system of salesperson faces a lot of inefficiencies. It requires handling of large

record books that consist of both irrelevant and important information thus making is difficult to find out the required information that necessary.

3.5.2 Benefits of proposed system

Save time and energy: This system facilitates the admin person to know items that are a available the number of items that we have. Also system will facilitate customers to make order of items they need and paying the money using payment cards or cash.

Can provide quality of service to customers and store details of customers for further feedback

Speed and efficiency: A computerized supermarket management system make everything from inputting information to taking inventory easier. Doing a hand count of inventory can be done in a matter of hours.

Entire system will be automated. Managers can analyze sales on daily and monthly bases.

Chapter four

Results and work done

4.1 Requirement

Requirement gathering is the first step of software development life cycle(SDLC) and can be defined as an introductory of what a system really does, what processes are done by stockholders and what are the main business process and business objects, how to find these things? Requirement for developing and building a system have many kinds for example what a system should do all the positive verbs and things and very functionality that a system provides are functional requirement. For example, how a system should be available for the user? We also have software requirements that say in which programming language and framework will be a system made in. which technology are used?

4.2 Functional requirement

Functional requirement is those that a system does or the functionalities that a system has.

As far as an action is done by a person or a system, therefore, we call the performer so called the actor. The actors may be the users that deal with the system or at the administrator. Every system may have a high authorized user and many low authorized users.

Admin functionalities are all listed as following:

- ✓ Having access to both the website and system management

- ✓ Can view the Dashboard
- ✓ Add employee
- ✓ Add products
- ✓ Manage all the employee
- ✓ Manage notification
- ✓ Login and logout

4.3 Non-functional requirement

In the context of non-functional requirements, we have proposed many things in order to make use of the system convenience. The proposed system non-functional requirement are as following: 1. Availability, 2. Ease of use, 3. Simple interface, 4. Responsive, 5. Cross platform, 6. Security, 7. Consistency, 8. Reliability. So the system should always available for users and should provide a simple interface in order to used easily by the users. Users should not have any problem in terms of using the application. A system is class platform which is used through any platform which is intended to be used in. it is compatible for all platforms and and devices that a user may access the system.

4.4 Hardware requirement

The network architecture of this system will be a client/server architecture, therefore; the system should be deployed or installed on server and users should access the system via internet. The system will be an online system, therefore the internet connection required for the users: 1. Web server, 2. Computer, 3. Internet connection, so whenever an instructor or admin wants to print the specific course material they will need print device.

4.5 Software requirement

In case of software requirement we need some programming language, scripting languages, frameworks and some technologies for website. The most important software that are used for a system to build are as follow:

- ✓ HTML/HTML5
- ✓ CSS/ CSS3
- ✓ JAVASCRIPT
- ✓ JQUERY
- ✓ BOOTSTRAP
- ✓ AJAX
- ✓ MYSQL
- ✓ PHP

Chapter five

Design phase

5.1 Model

Model is the best tool for any system. A system should be first designed by any model that is needed then it will be easily implemented. In this project we created many models for our project such as: ER Diagram, use case Diagram, Relational schema.

5.2 Database Model

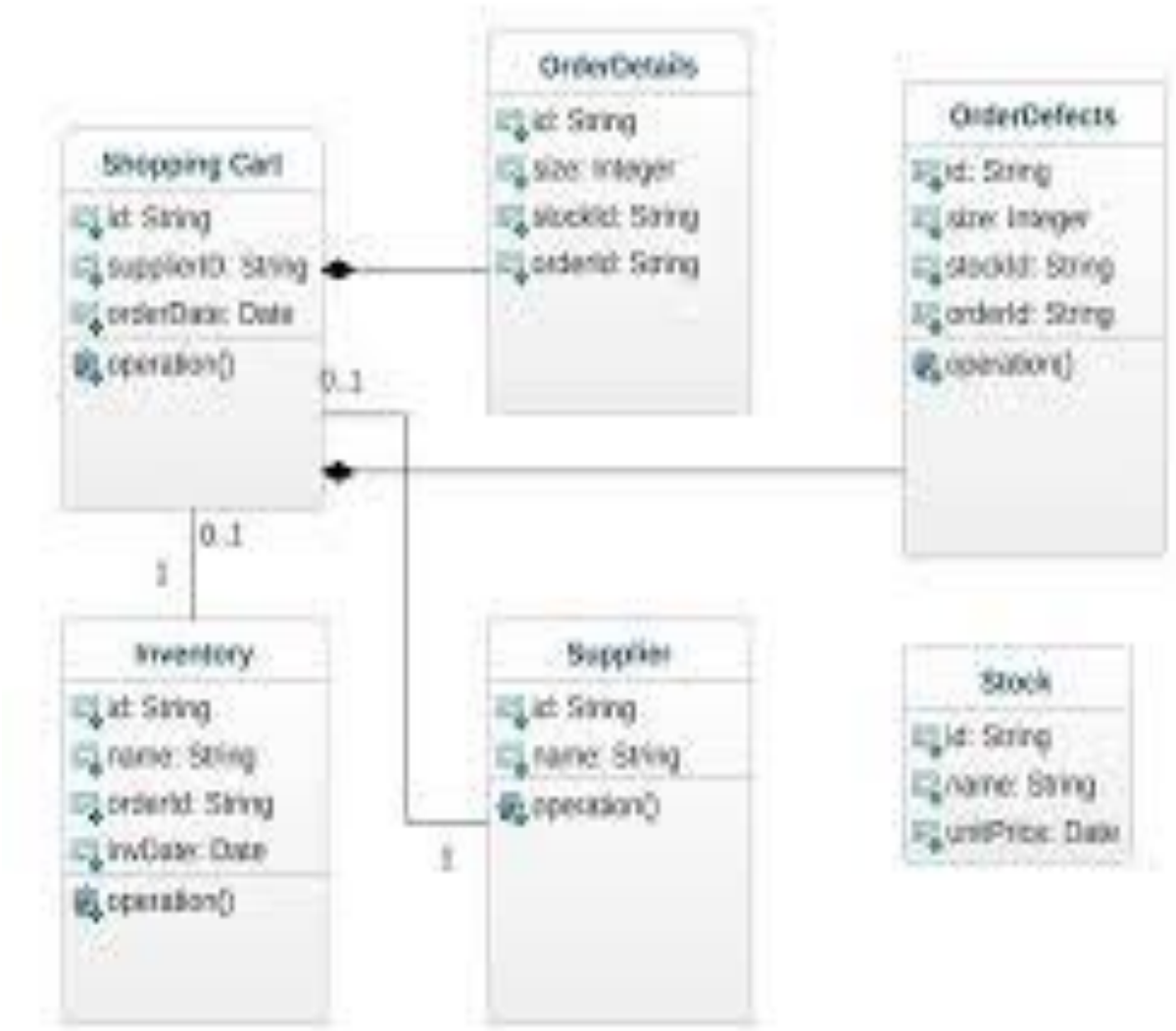
A database model is the theoretical function of a database and fundamentally determines in which manner data can be stored organized and manipulated in a database system. It thereby defines the infrastructure offered by a particular database system.

5.3 Relational model

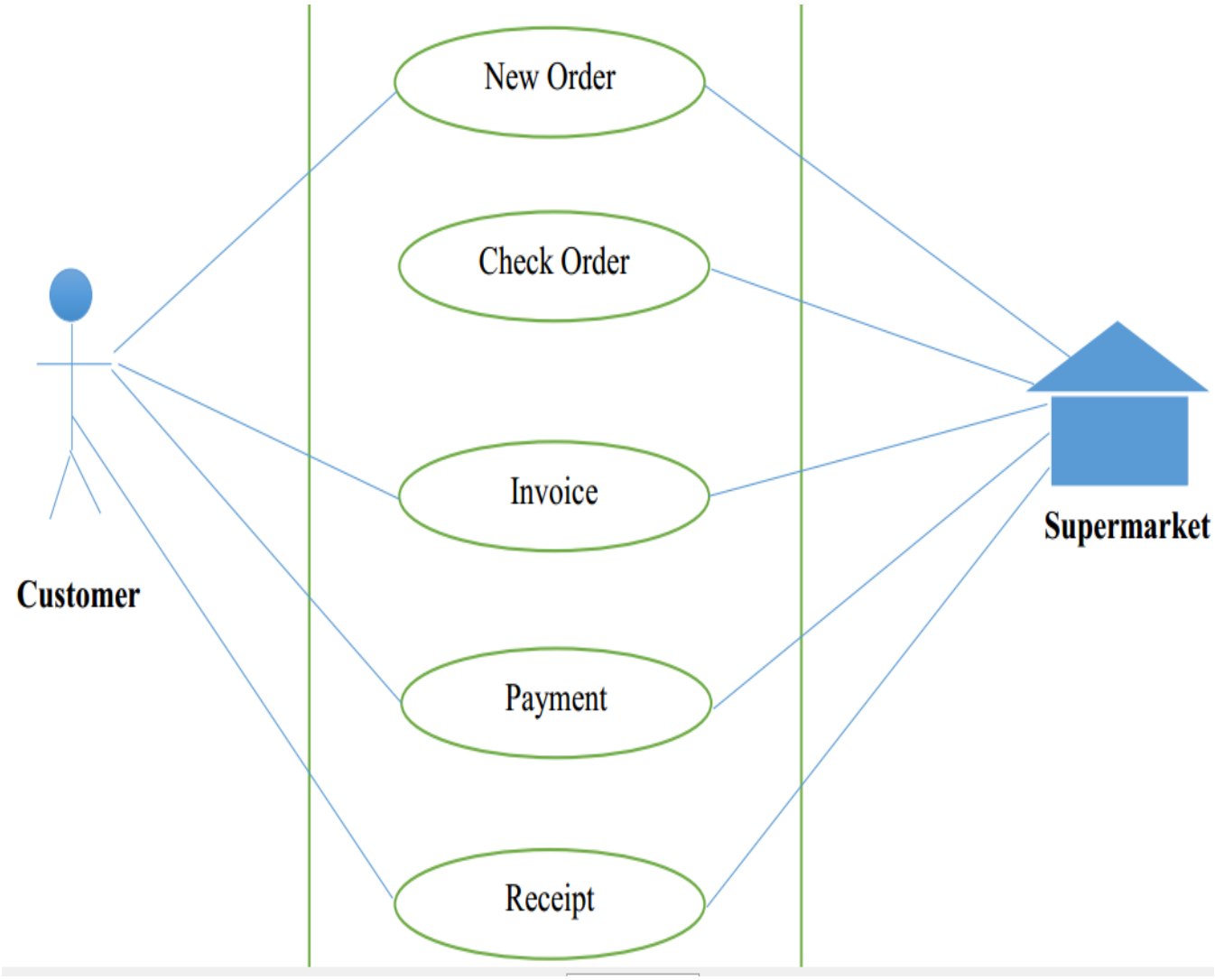
The relational database model was conceived by E.F. Code in 1969, then a researcher at IBM. The model is based on branches of mathematics called set theory and predicate logic. The basic idea behind the relational model is that a database consist of a series of unordered tables that can be manipulated using of non-procedural operations that returns tables. It is commonly through that the world relational in the relational model comes from the fact that you relate together tables in a relational database. Although this is a convened way to think of the term, it is not accurate. instead the world relational model. The relational model can be applied to both database and database management systems.

5.4 UML (Unified model language)

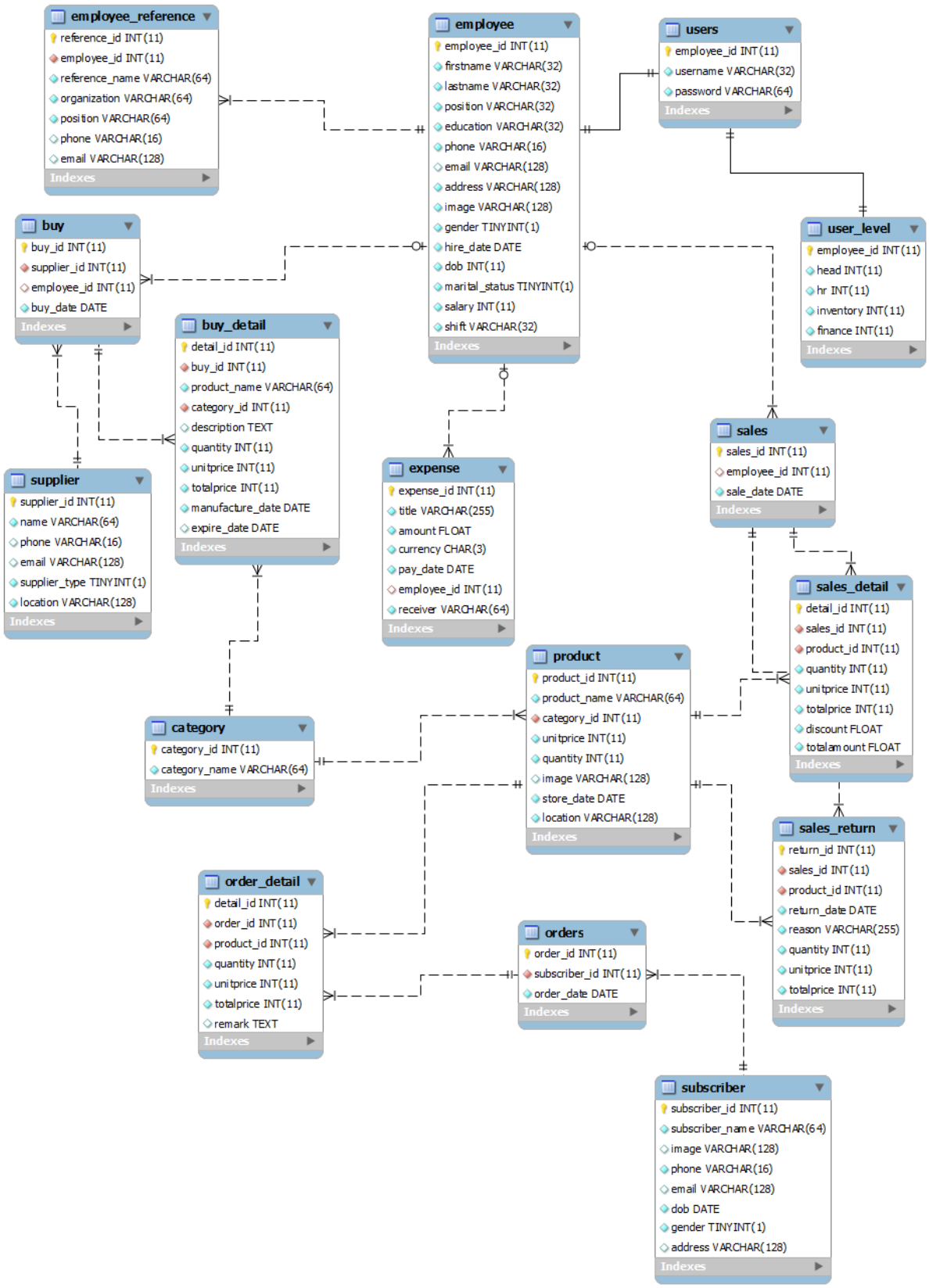
The first time this diagram appeared was in the 1990 as an effort to select the best elements from the many modeling systems proposed at the time, and to combine them in to a single coherent notation. The use of UML as a tool for defined the structure of a system is very useful way to manage large, complex systems Having a clearly visible structure makes it easy to introduce new people to an existing project.



5.5 Use case diagram



5.6 ERD (Entity relationship diagram)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organization VARCHAR(64)
position VARCHAR(64)
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email VARCHAR(128)
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lastname VARCHAR(32)
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image VARCHAR(128)
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salary INT(11)
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password VARCHAR(64)
Indexes
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expire_date DATE
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employee_id INT(11)
receiver VARCHAR(64)
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sales_id INT(11)
product_id INT(11)
quantity INT(11)
unitprice INT(11)
totalprice INT(11)
discount FLOAT
totalamount FLOAT
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unitprice INT(11)
totalprice INT(11)
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orders
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subscriber_id INT(11)
order_date DATE
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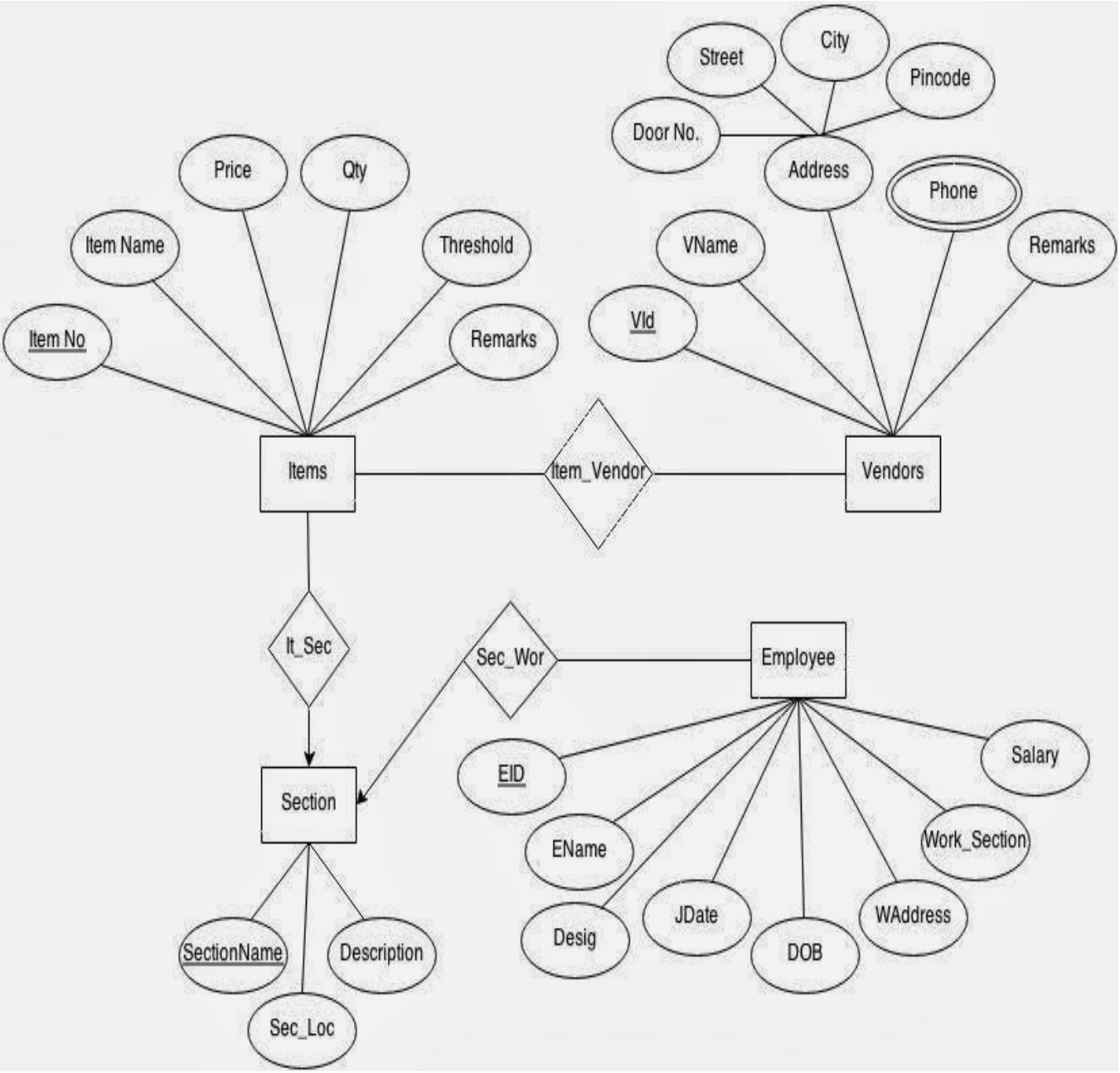
subscriber_name VARCHAR(64)
image VARCHAR(128)
phone VARCHAR(16)
email VARCHAR(128)
dob DATE
gender TINYINT(1)
address VARCHAR(128)
Indexes

5.7 Relational diagram



5.8 Entity

Entities are concepts within the data model. Each entity is represented by a box within the ERD. Entities are abstract concepts, each representing one or more instances of the concept in

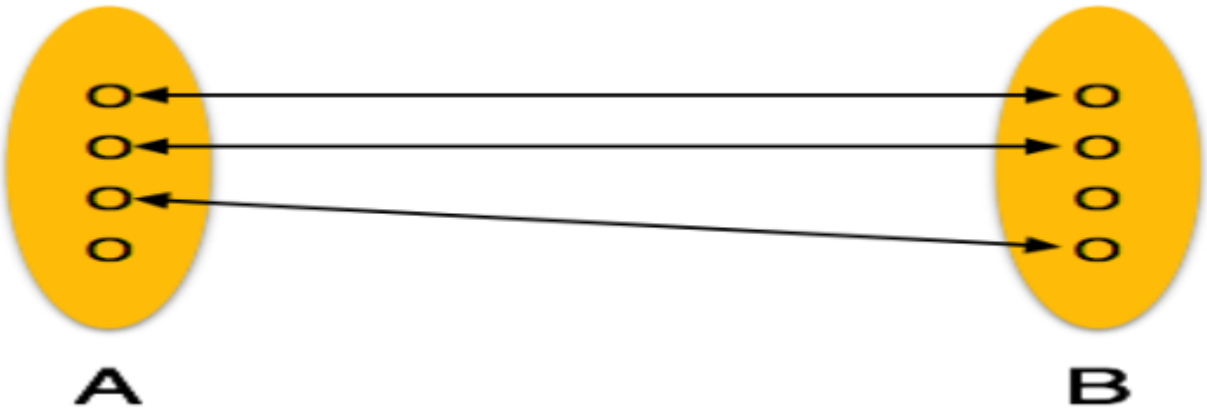
question. An entity might be considered a container that holds all of the instances of a particular thing in a system. Entities are equivalent to database tables in a relational database, with each row of the table representing an instance of that entity.

5.9 Relationships

Relationships are representing by lines between entities. Relationships line indicate that each instance of an entity may have a relationship with instance of the connected entity and vice versa.

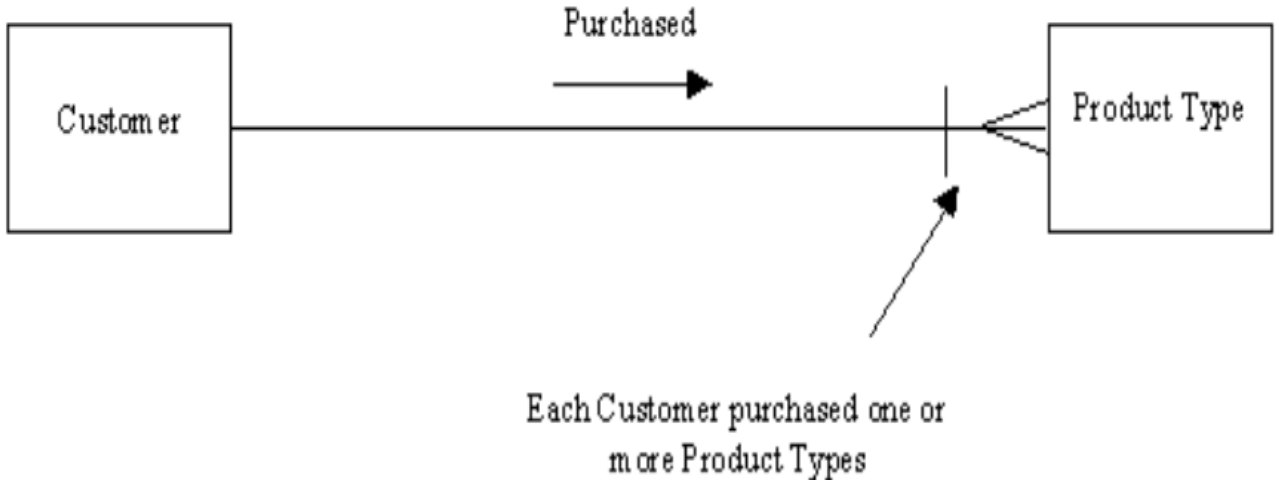
5.9.1 One-to-One

One instance of entity (A) is associated with one other instance of another entity(B). For example, in a database of employee name (A) is associated with only one social security number (B).



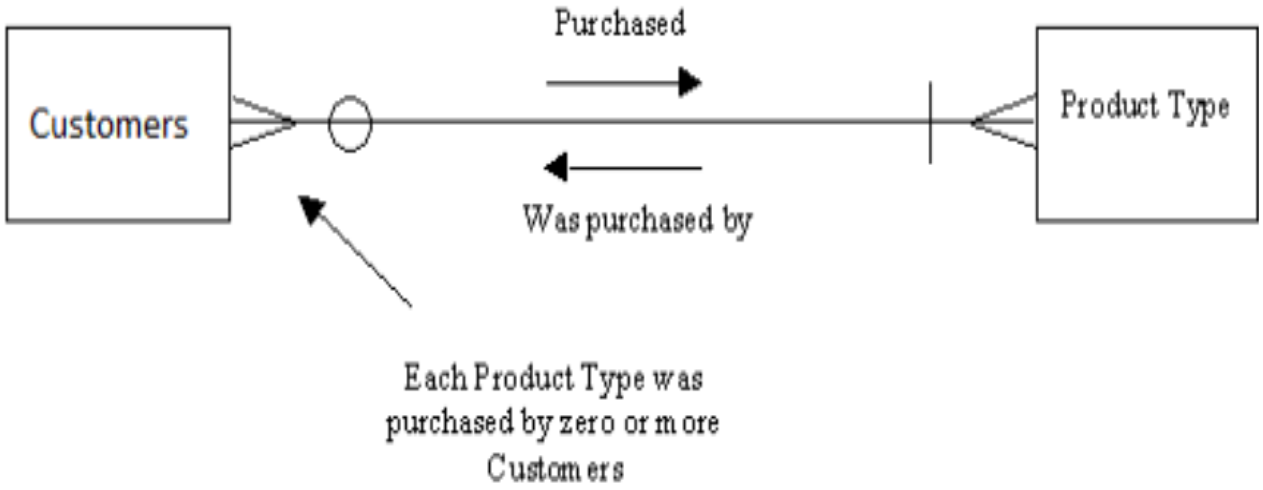
5.9.2 One-to-Many

One instance of an entity (A) is associated with zero, one or more instances of another entity (B), but for one instance of entity B there is only one instance of entity A. For example, for a company with all employees working in one building, the building name (A) is associated with many different employees (B), but those employees all share the same singular association with entity A.



5.9.3 Many-to-Many

One instance of an entity (A) is associated with one, zero or many instances of another of entity (B), and one instance of entity B is associated with one, zero or more instance of entity A. For example, in which all of its employees work on multiple projects, each instance of an employee (A) is associated with many instances of a project (B), and at the same time, each instance of a project (B) has multiple employees (A) associated with it.



Chapter six

Conclusion and future work

6.1 Conclusion

The internet has become a major resource in modern business, thus electronic supermarket has gained significance not only from the entrepreneurs but also from the customer's point of view. For the entrepreneur electronic supermarket generates new business opportunities and for the customer, it makes comparative shopping's possible.

This projects helps in understanding the creation of an interactive web pages and in the technologies used to implement it. The design of the projects which include data model and process model illustrates how the database is built with different tables, how the data is accessed and processed from the tables. The building of the project has given me a precise knowledge about how Larval is used to develop a website, how it connects to database to access the data and how the data and web pages are modified to provide the user with a shopping card application.

6.2 Future work

This system is web application system and administration system in a future we will upgrade develop and change this in an online system with a finger print which people can access through internet. People will purchase items and make order staying their home not taking any step to the supermarket.

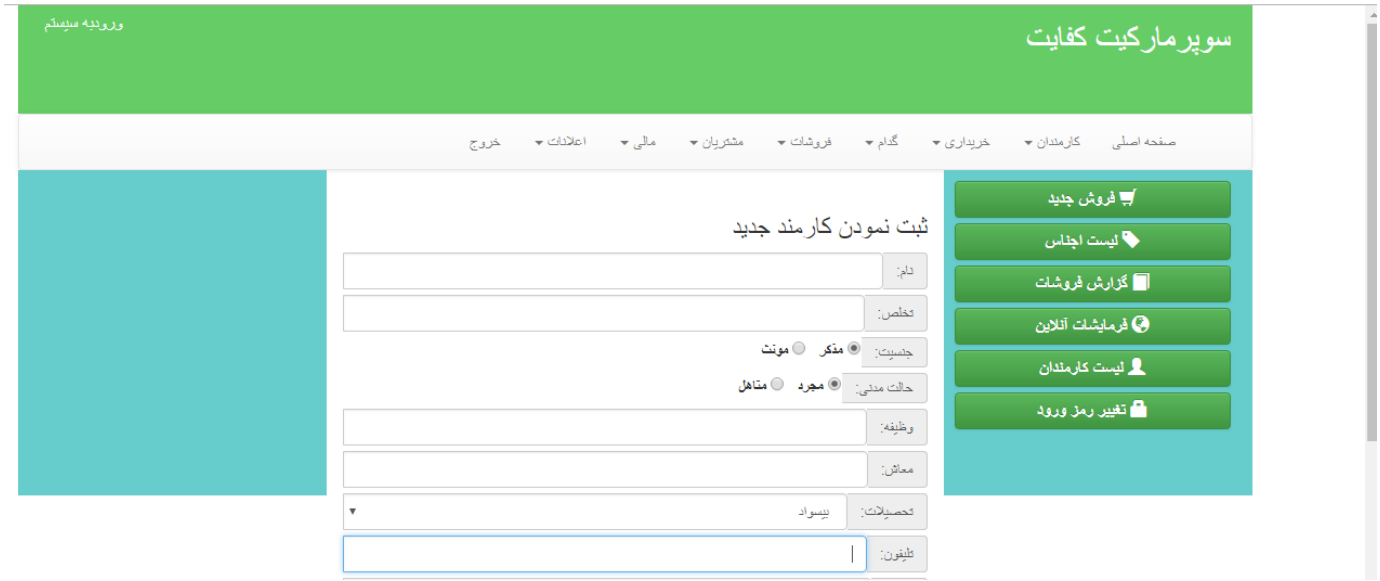
Chapter seven

List of figures

7.1 Login form

7.2 Home page form

7.3 Employees form



7.3 Employees form

7.4 buys form


سوپر مارکیت کفایت
ورودبه سیستم
صفحه اصلی
کارمندان
خریداری
گدام
فروشات
مشتریان
مالی
اعلانات
خروج
فروش جدید
لیست اجناس
گزارش فروشات
فرمایشات آنلاین
لیست کارمندان
تغیر رمز ورود
ثبت خریداری جدید
فروشنده:
حبیب الله گلزارمند
خریدار:
ali karimi
تاریخ خریدار:
2018-12-12
ثبت نمودن
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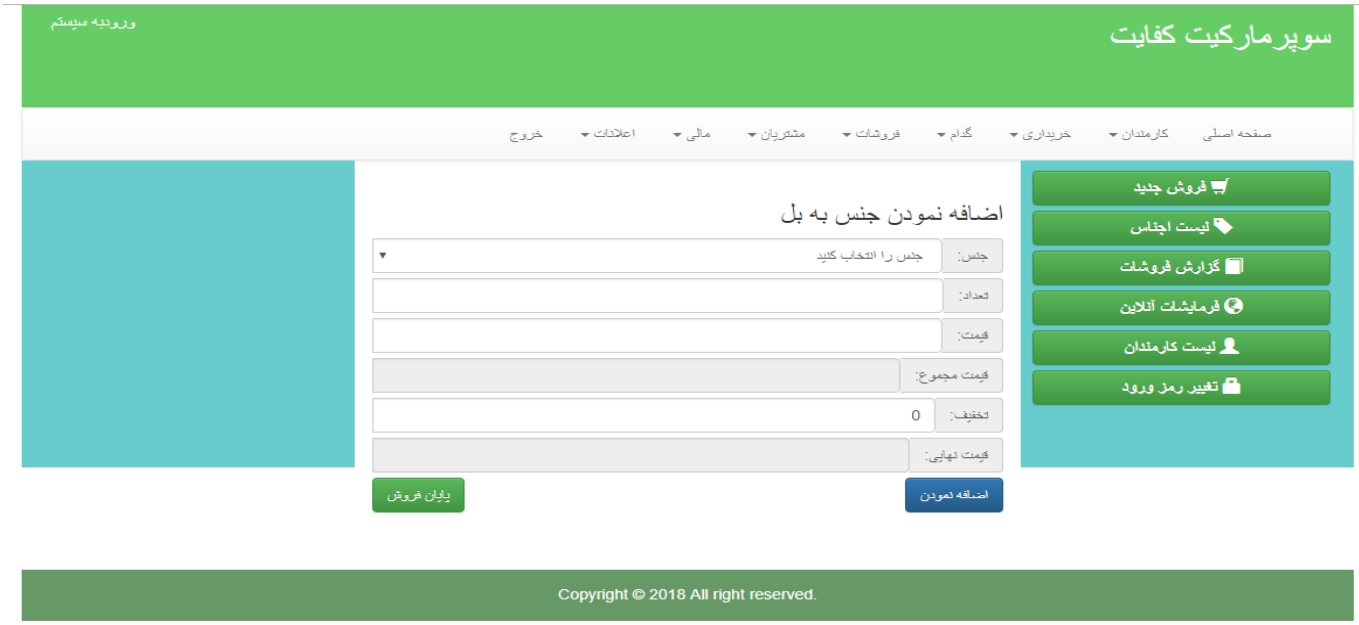
7.4 Buys form

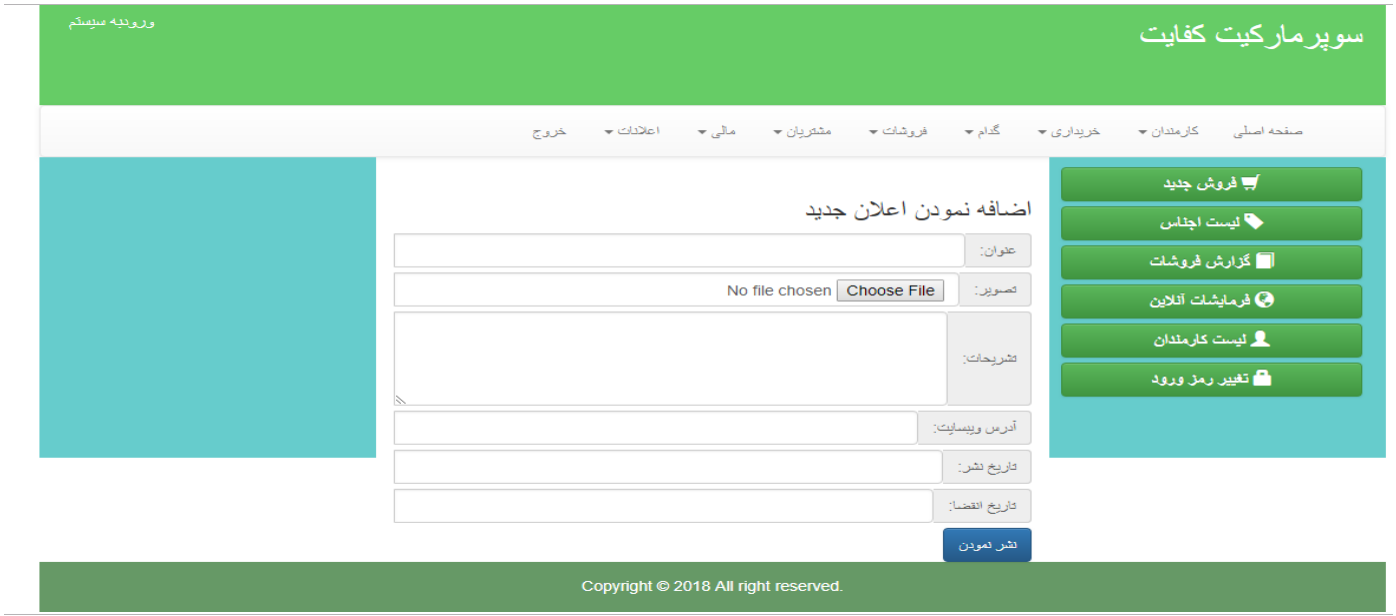
7.5 Sales form



7.6 Customer form

7.7 Finance form

7.8 Advertisement form



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