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College of Computer and Information Sciences
Information Technology Department

Course Title:	Information Technology Systems
Course Code:	IT 281
Course Instructor:	

Project Title:	Haraj System
Section	374

Agreement:
1- **It was me and my team members NOT external party who performed this project.**   2- **I participated with the group members to accomplish this project effectively and almost equally.**   3- **This project is totally free from copy and any type of cheating from other students' works and projects.**   4- **This project is free from illegal copy from any resources and intellectual property breaches.**   **Based on above I sign below and I accept any corrective action taken in case I breach or don't fulfill the above commitments.**

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Chapter 1: Introduction

1.1 Project Introduction

Recently, the number of people who prefer to buy online has increased, and many of them prefer buying online over going to the stores. Besides, consumer desire to buy and sell used products through these sites, second-hand sites are becoming more and more popular among consumers they prefer buying cars, furniture, electronics, and flats. From this point, the importance of developing the buying and selling systems of these sites and improving them has become a requirement to facilitate them for consumers.

1.2 System Vision

1.2.1 Problem Description

Haraj System provides user to create and publish their ads, the system gives the user the ability to search, sort the ads, and communicate with the sellers. It is important for Haraj System to improve the system methods, Haraj System needs to let all the payment be completely technology. It is also important to link the Haraj system with other systems to work with them for example we will link the system with shipping system. Haraj System should allow the customer/vendor to create a business account for the vendor that only allows him to add/update ads and a customer account for the customer. ,Haraj System needs to be user friendly so we will redesign the user interface. finally, we will allow the customer to evaluate the customer/vendor after purchase.

1.2.2 System Capabilities

The new system should be capable of:
1. Providing an electronic payment method.
2. Improving the user interface and applications for ease of use of the system.
3. Displaying vendor data and documenting it in the system.
4. Communication with customer service and support team through the system.
5. Display and update the status of the product or advertisement at the time of purchase.

1.2.3 Benefits

1. Provide variety of payment methods.
2. Provide a variety of methods to communicate between customer and vendor.

3. Ease of use and mobility of the system.

4. Display the products in a clear way.

1.3   System Vision

1.3.1 Problem Description

Haraj System provides user to create and publish their ads, the system gives the user the ability to search, sort the ads, and communicate with the sellers. It is important for Haraj System to improve the system methods, Haraj System needs to let all the payment be completely technology. It is also important to link the Haraj system with other systems to work with them for example we will link the system with shipping system. Haraj System should allow the customer/vendor to create a business account for the vendor that only allows him to add/update ads and a customer account for the customer. ,Haraj System needs to be user friendly so we will redesign the user interface. finally, we will allow the customer to evaluate the customer/vendor after purchase.

1.3.2 System Capabilities

The new system should be capable of:
6. Providing an electronic payment method.
7. Improving the user interface and applications for ease of use of the system.
8. Displaying vendor data and documenting it in the system.
9. Communication with customer service and support team through the system.
10. Display and update the status of the product or advertisement at the time of purchase.

1.2.3 Benefits

5. Provide variety of payment methods.
6. Provide a variety of methods to communicate between customer and vendor.

7. Ease of use and mobility of the system.

8. Display the products in a clear way.

1.4   Project Plan

i. Discover and understand the details of all aspect of the problem:
   1- Meet with the owner of Haraj system. ~ 3hours
   2- Do a survey for the system users. ~ 2hours
   3- Identify and define use cases. ~ 3hours

ii. Design the component of the solution to the problem:
   1- Design and build database. ~6hours
   2- Design a new user interface. ~ 4hours
   3- Design class diagram. ~ 3hours

iii. Build the component and integrate everything into the solution:
   1- Code and unit test GUI layer program. ~12hours

iv. Perform all system-level tests and then deploy the solution:
   1- Perform system functional testing. ~ 4hours
   2- Perform user acceptance testing. ~ 2hours

1.4.1 System Major components:

1- Vendor information subsystem.
   - Add and modify the products
   - Update product status
2- Customer information subsystem.
   - Save customer information
   - Rate the product and the vendor
   - Notify the customer when a followed vendor uploads a new ad.

3- Shipper information subsystem.
   - An external shipping company will Receive shipping requests and deliver shipments to customers
   - Update order status
4- Payment information subsystem.
   - Provide different payment methods for the customer. (Cash, Apple pay, credit card, debit card)

1.4.2 Iterations:

We have 4 Iterations:
For the Vendor subsystem two iteration store vendor information and Create business account,
for the Customer subsystem one iteration save the order data, for the Shipper subsystem one iteration:
an external shipping company will receive and deliver orders, and for the Payment subsystem one
iteration Allow online and secure payment method (Cash, Apple pay, credit card, debit card).

1.4.3 Team Members and Responsibilities

Responsibilities	Responsible Team-Member Name
o Determine the problems in the system and solve it. o Analysis the system.	Eman Alomari Ruba Alhilal Khaznh Alharbi Haton Alhawas
o Develop the system.	
o Design the system components. o Design a new GUI.	

Chapter 2: System Analysis

2.1 Preliminarily System Analysis

2.1.1 Functional requirements:

1- The system must allow the vendor to create a business account.
2- The system should allow the customer to create a customer account.
3- The system must allow the customer to pay online with different method (Cash , Apple pay, credit card , debit card)
4- The system must link the shipment information and send it with an external shipping company

2.1.2 Nonfunctional requirements:

➢ Usability:
  • The System should be user friendly and easy to use.
➢ Reliability:
  • The system must be error-free, and the system data must be backed-up.
➢ Performance:
  • The system response time must not exceed 3 seconds.
  • The system should allow customer to see the payment order history.
➢ Security:
  • The system should allow online and secure payment method.
  • The system should protect user information.

2.1.3 Identify use cases:

1- Vendor:
  • Enter/Update current products.
  • Create account.
  • Add/Update advertisements.
2- Customer:
  • Search for current products.
  • Add/Update products in cart.
  • Create account.
3- Shipper:
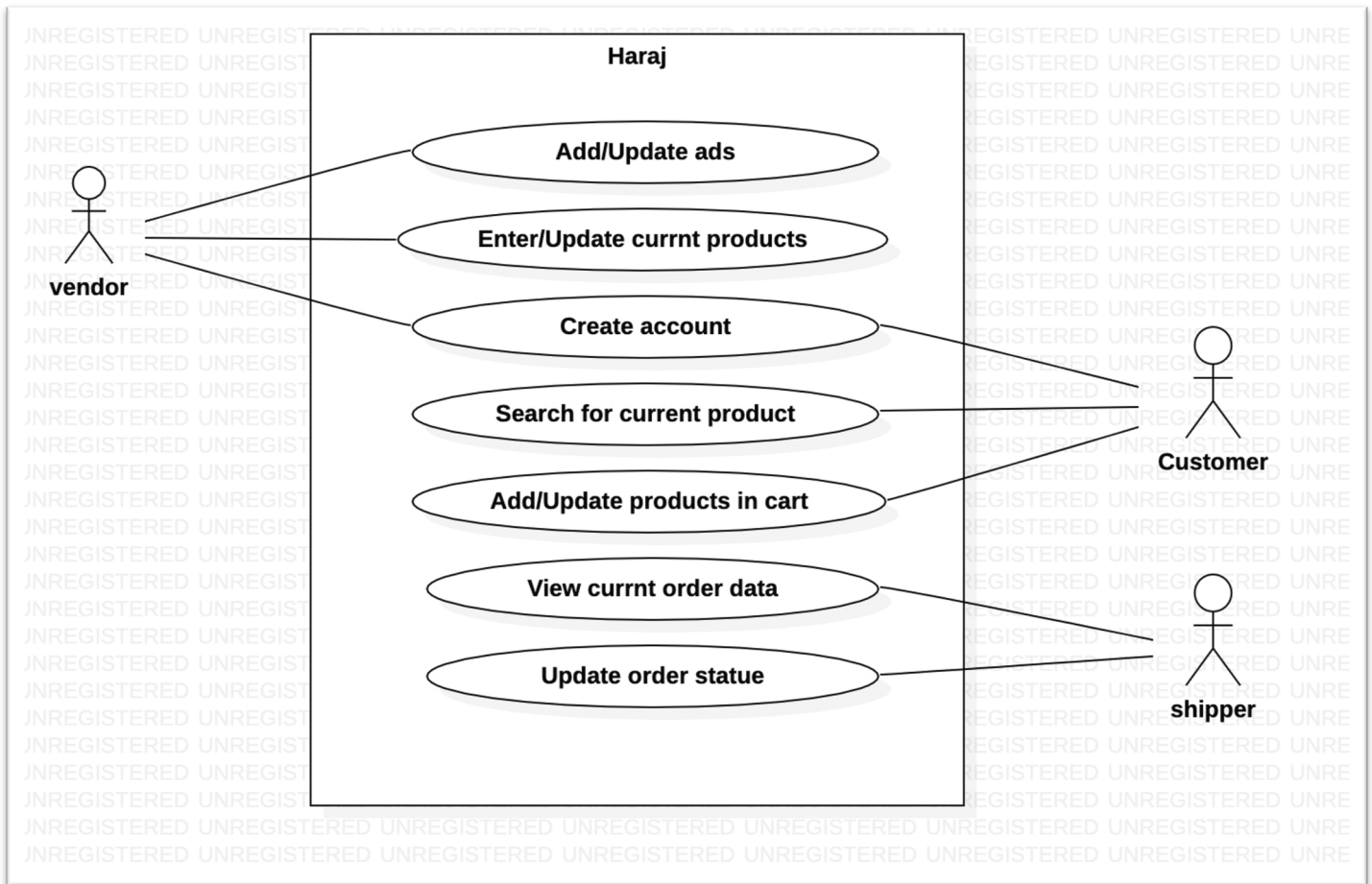 • View current order data.
  • Update order statue.

image 1-1
use case diagram

2.1.4 Identify classes list:

Object classes	Attributes
user	First name, last name, type of user, e-Mail.
Customer	phone number, post address, payment information, city, orders.
Vendor	Name of vendor, ID, phone number, bank account, commercial record, address of shipments, type of account.
History order	order ID, order total, date, order status.
order	order ID, product, tracking number.
product	product ID, product name, description, sold date.
sale	sale ID, date sold, price, amount sold.

2.2 Detailed System Analysis

2.2.1 Use case description

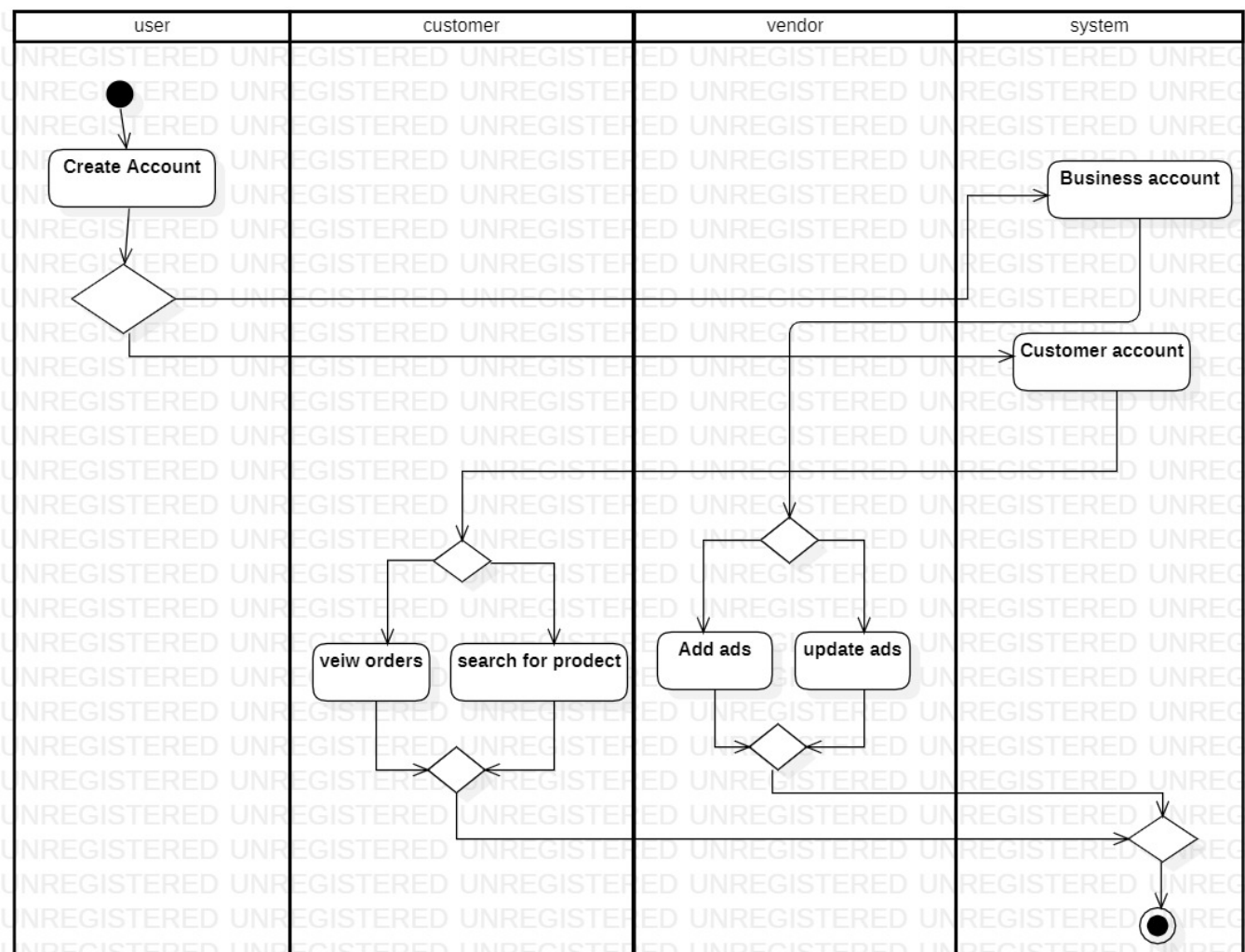| Use case	Description
Search for current products	Use ID to find the products
Create account	Use user information to create a new account
View current order data	Upload order data for shipping system
Add/Update advertisement	Add(new) or update(existing) advertisement

Image 1-2

Activity diagram

Chapter 3: System Design

3.1 User Experiences

3.1.1 Screen and reports for major use cases:

1. If user click on sign in and account is available, he should enter username and password, if he does not have an account he should click new user.

2. When he clicks new user, he should input user information and choose if he is a vendor or a customer.

3. If he clicks customer this page will come out.

4. If he clicks vendor, he should input vendors information.

5. The customer can add in the Wishlist, and he could see product availability, vendor name, and rate the product and vendor.
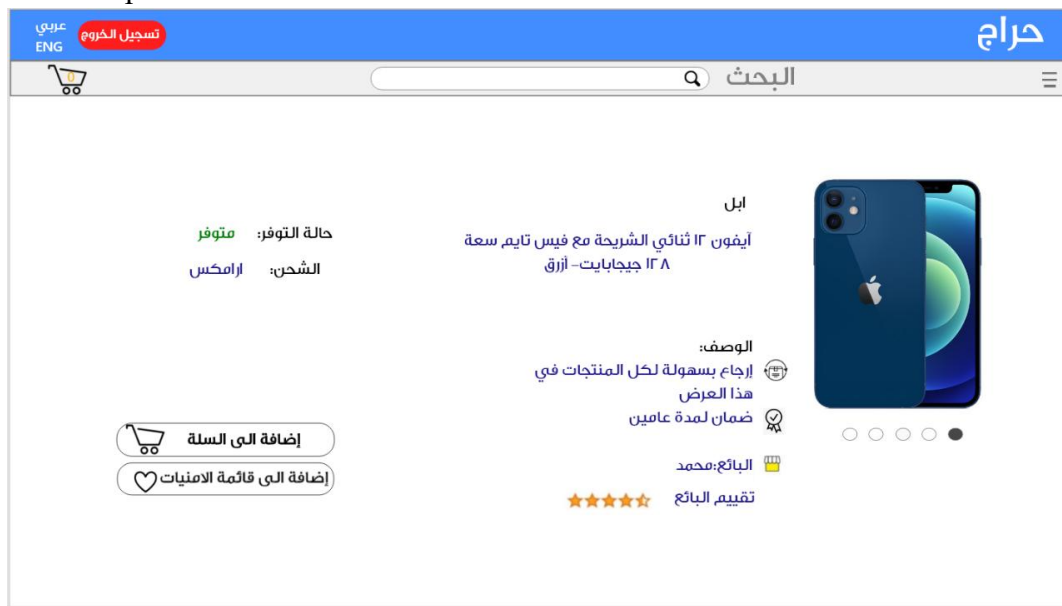
6. The customer can view his order history and save products in favorite list in his customer account.

7. The vendor can view his sales history and can add and edit products, he also could view the complaints and feedbacks.
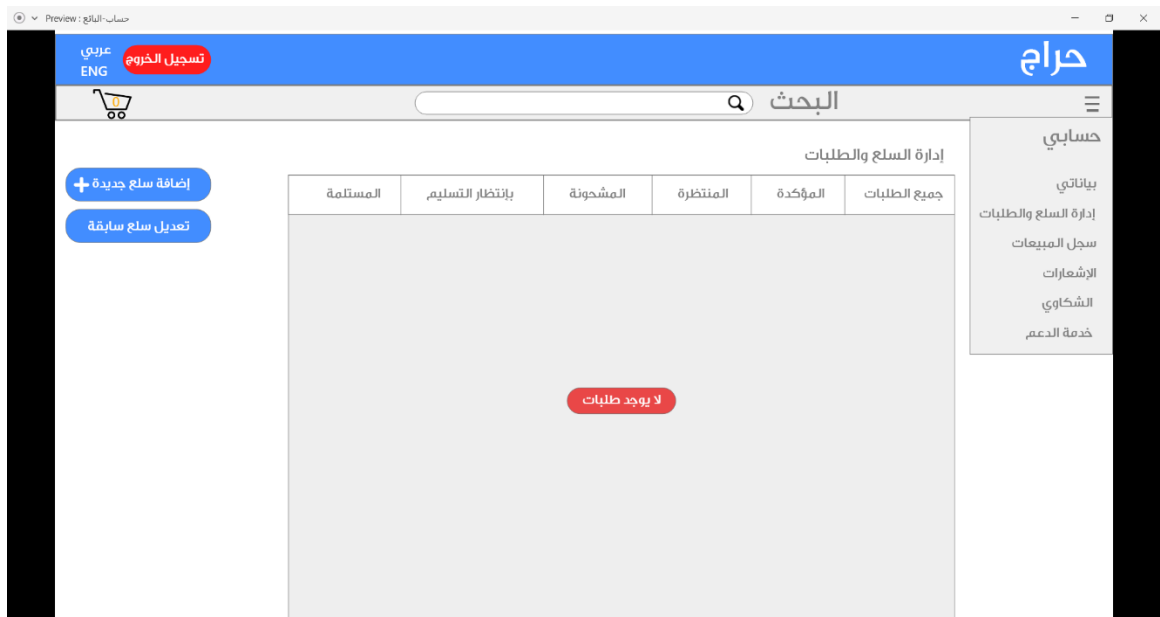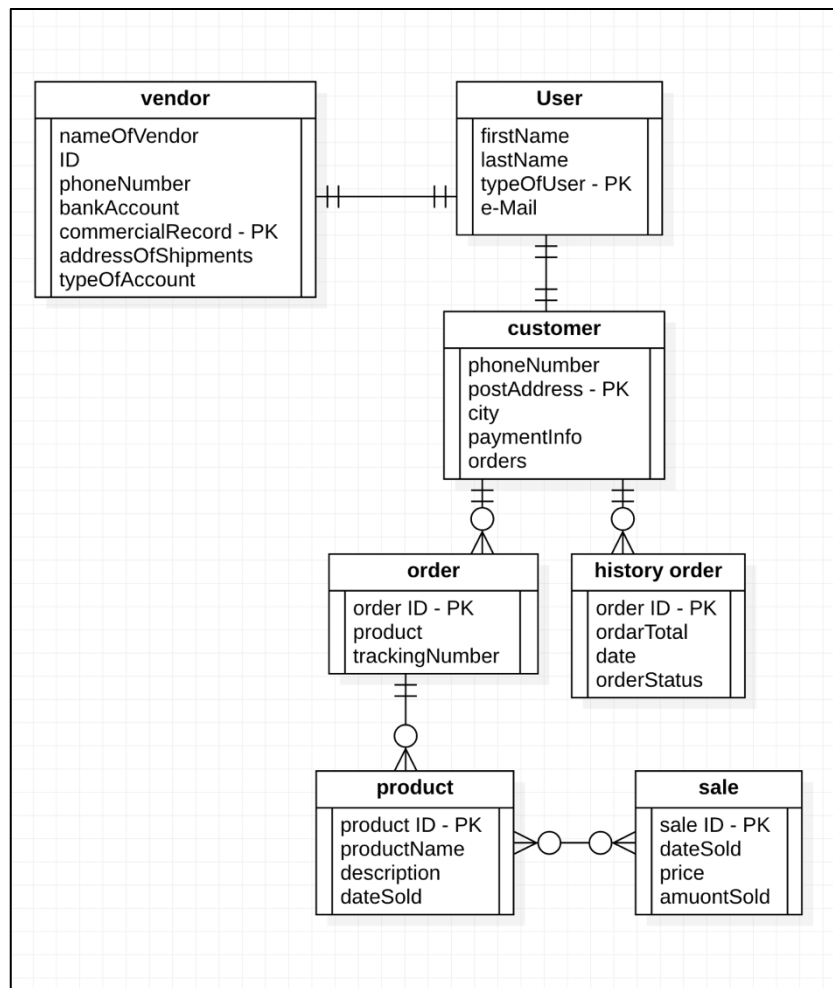

3.1.2 Detailed Class Diagram

Image 3-1
Class diagram (schema)
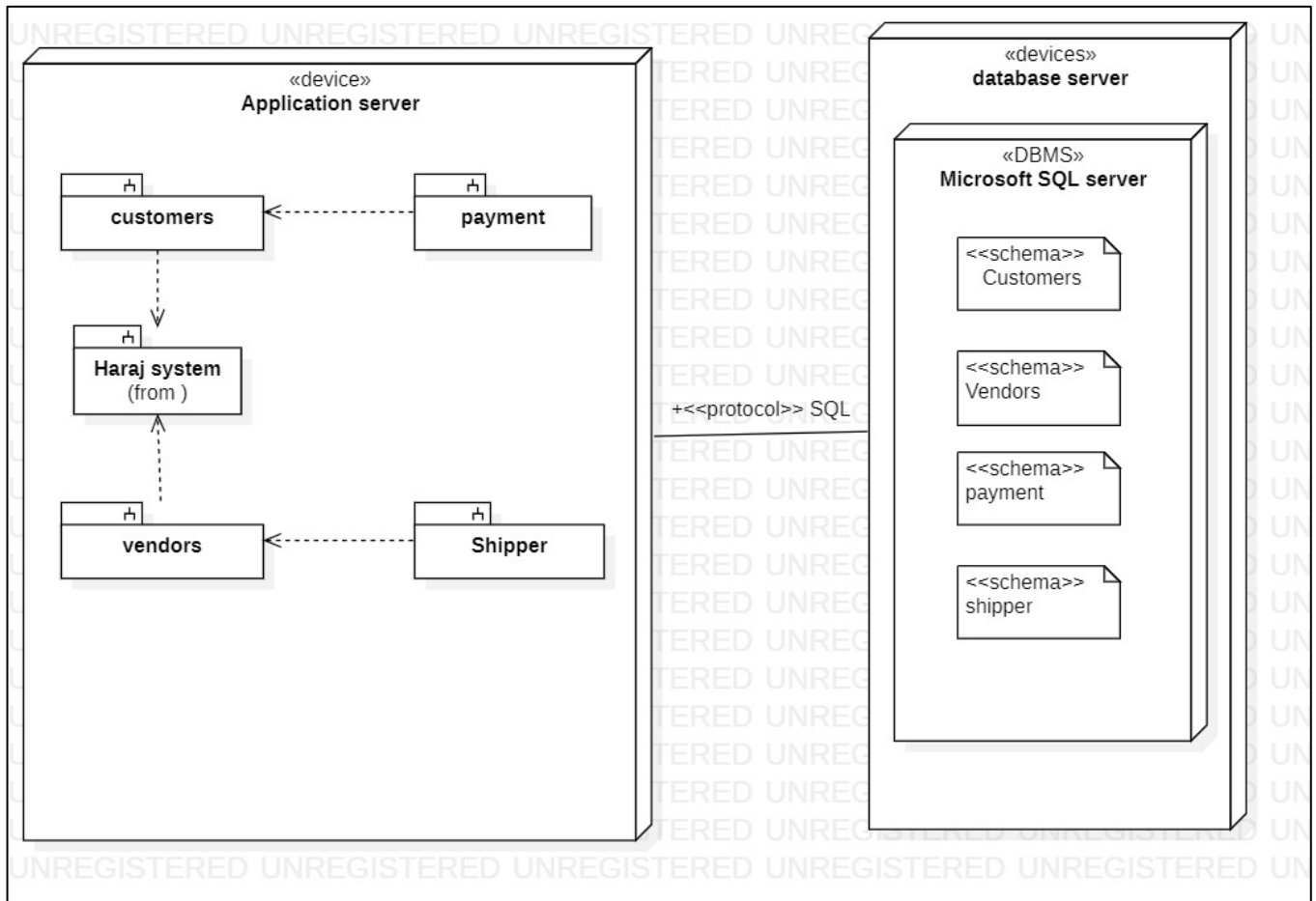
3.1.3 Architectural Configuration Diagrams

Image 3-2
Deployment diagram

Conclusion

Technology has made significant progress over the years to provide consumers with a better online shopping experience and will continue to do so for years to come. We now have a developed system that provides many new features that support it and makes it more flexible when using it. Now, the user interface is clearer and neater than before, the Communication with vendors has become easier and more reliable to include all approved contact information, Also, the listed ads are classified according to the content of the product for easy access through the search box. Now the customer can pay by online payment, view the order history, and also view the status of the order and previous orders. All these new features that we have developed in the Haraj system will make it more usable and flexible than before.

References

Systems Analysis and Design in a Changing World, Seventh Edition John W. Satzinger, Robert B.Jackson, Stephen D. Burd