

воспроизведения его содержания. Задания, которые требуют от учащегося понимания и применения знаний (второй и третий уровень целей), как правило, отмечены каким-либо знаком и не всегда используются педагогом.

Методы интерактивного обучения также обеспечивают достижение целей первых трех уровней, причем более эффективно, чем это делают методы традиционной системы обучения. Хорошим подтверждением данному тезису может стать пирамида запоминания (приложение 1). И как следствие, педагоги, работающие в традиционной парадигме, часто используют методы интерактивного обучения для лучшего усвоения учащимися информации. В этом случае речь будет идти только об оптимизации традиционного образовательного процесса. Данная фиксация, является очень важной, потому что может позволить учителю определиться, в плоскости какой стратегии он работает.

Методы интерактивного обучения позволяют достигать в образовательном процессе чаще всего целей высшего порядка (4-6 уровень).

В то же время данные методы содержит еще один блок целей, реализация которых способствует развитию у учащихся социальной компетентности (умение вести дискуссию, работать в группе, разрешать конфликты, слушать других и т. д.).

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#### **CRM (CUSTOMER RELATIONSHIP MANAGEMENT) SYSTEM FOR PUBLIC CATERING**

**Abstract.** Nowadays we have a lot of restaurants, cafes, cafeterias and etc. and also we have a lot companies which makes the products for this restaurants, cafes, cafeterias. To get products restaurant (cafe, cafeteria) managers should go to the companies which makes products and select. To sale products company managers should go to the restaurants (cafe, cafeteria) and offer products. This processes takes a big amount of time. To make this processes easier and to save time, companies can use CRM system.

This paper explains a web application called “Kazsupply”, which gives to provider detailed information on customers’ personal information, purchase history, buying preferences and concerns, with the goal of improving business relationships with customers, assisting in customer retention and driving sales growth and web application which gives to customers detailed information on providers’ personal information and products list of providers. By help of this information customers and providers can easily select partners in business.

**Keywords:** Keywords: restaurants, business relationships, public catering, system, customers, supply, providers.

### **Introduction**

This web application is created for providers and customers who wants to do business without leaving office. Kazsupply consists of two parts. First part is the provider part and the second part is customer part.

Why we need this system? Because, this century is technologies century. We should improve our life by using advantages of technology. This CRM system can give very big opportunities to providers and customers. Providers and customers can make business without leaving home or office.

How it works? First of all, you need to register as provider or customer. After you need to confirm your registration. If you have registered as customer, you should fill information about your company like city, address, contacts and etc. That's all. Now you can search for products you want, add products to cart, buy them, and chat with providers. If you have registered as provider, you should also fill information about company. Then you need to add products to your catalog. After adding products to your catalog, customers can see your product and buy them.

### **Advantages**

This web application can give very big opportunities to providers and customers. Providers and customers can make business without leaving home or office. Web application gives the opportunities to make business everywhere at any time.

The main advantage of this web application is an ease. Everyone can easily use this web application. By clicking of two or three buttons, users can easily offer or order their products.

Online chat. Providers and customers can interact in web application by chat. Why chat? Because chat is free, quick and of course easy. By using this online chat they can talk about order details, about discounts and about products.

Promotion event (action). When many products are in stock at the end of the month, providers can sell the products via promotion events. For example, we have one provider company called "company A", and two customer companies called "company B" and "company C". "Company A" sells potatoes. "Company B" and "company C" wants to buy potatoes. At the end of month "company A" needs to buy all potatoes before the expiry date. Because of this "company A" can add promotion event for potatoes. "Company B" and "company C" can offer price for kilogram or ton. "Company A" can select to which company sell their products.

News and events. Customers can subscribe for news of providers and get latest news about products and company.

Tenders. Customers can add tenders for needed products.

Notifications. Customers and providers can see notifications about new chat message, new orders/offers in web application.

Call friends. Customers and providers can call friends, or other companies to web application by email.

Cross-browser compatibility. Most of the companies use IE. Because of the differences in the way web browsers interpret HTML and JavaScript, web application adapted to work with multiple browsers include.

### **Proposed System**

Kazsupply – is CRM system, which helps providers and customers to make business easily and faster. The main objective for this system is create system which gives to providers detailed information on customers' personal information, purchase history, buying preferences and concerns, with the goal of improving business relationships with customers, assisting in customer retention and driving sales growth and system which gives to customers detailed information on providers' personal information, products list and rating of providers.

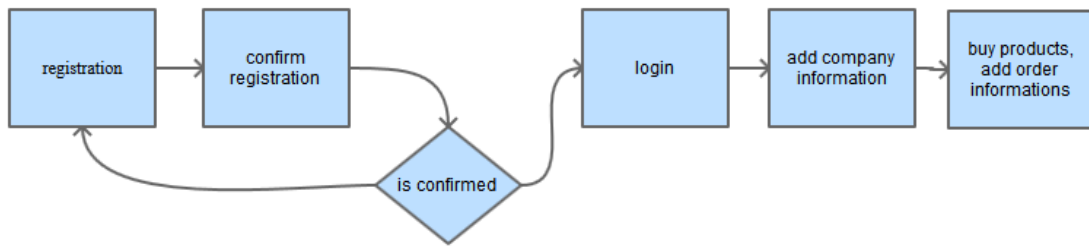


Diagram 1. Steps of customer

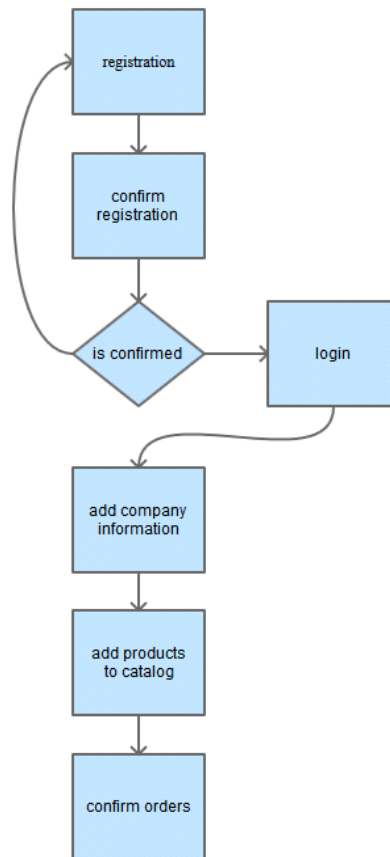


Diagram 2. Steps of provider

**Development platforms and hardware**

We have used MODX as CMS. Because MODX is an open source and can be installed under servers like Apache, nginx, IIS and etc. Also MODX has admin part, which helps to control your web application.

For saving information we have used MySQL database. Because MySQL is widely used database and it is also open source. It has GUI (phpMyAdmin). And of course MySQL has great performance.

To create design, to draw icons and modals of web application we have used Adobe Photoshop.

Also we have used other tools like LESS (CSS that is more maintainable), Pencil Project (to create mockups), UMLet (to create UML diagrams like actors' use case diagram), Font Awesome (for some icons) and Bootstrap (for front-end development).

### Server side

First of all, we get hosting from nurhost with supporting of php, MySQL, ftp and cPanel. By help of phpMyAdmin we create our database. In our database there are 17 tables which are connected between each other.

actions	cart	delivery	demands	demand_offers
<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>providerId: INTEGER</li> <li>productId: INTEGER</li> <li>actionTitle: VARCHAR(255)</li> <li>actionText: VARCHAR(2000)</li> <li>productNewPrice: VARCHAR(10)</li> <li>startDatetime: TIMESTAMP</li> <li>endDatetime: TIMESTAMP</li> <li>createdon: TIMESTAMP</li> <li>isRemoved: INTEGER</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>customerId: INTEGER</li> <li>productId: INTEGER</li> <li>productAmount: INTEGER</li> <li>createdon: TIMESTAMP</li> <li>isRemoved: INTEGER</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>totalCost: VARCHAR(10)</li> <li>deliveryDate: DATE</li> <li>deliveryTimeStart: TIME</li> <li>deliveryTimeEnd: TIME</li> <li>deliveryAddress: VARCHAR(1000)</li> <li>deliveryNote: VARCHAR(1000)</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>tenderId: INTEGER</li> <li>demandName: VARCHAR(50)</li> <li>demandVolume: VARCHAR(11)</li> <li>demandVolumeText: VARCHAR(10)</li> <li>demandDesiredPrice: VARCHAR(10)</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>providerId: INTEGER</li> <li>demandId: INTEGER</li> <li>offeredPrice: VARCHAR(10)</li> <li>offeredVolume: VARCHAR(10)</li> <li>offerNegotiability: INTEGER</li> <li>offerComment: VARCHAR(255)</li> <li>createdon: TIMESTAMP</li> <li>offerStatus: INTEGER</li> </ul>
invitations	fav	modx_users	modx_user_attributes	modx_user_messages
<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>customerId: INTEGER</li> <li>invitationEmail: VARCHAR(255)</li> <li>invitationStatus: INTEGER</li> <li>createdon: TIMESTAMP</li> <li>isRemoved: INTEGER</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>providerId: INTEGER</li> <li>customerId: INTEGER</li> <li>createdon: TIMESTAMP</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>username: VARCHAR(100)</li> <li>password: VARCHAR(100)</li> <li>classKey: VARCHAR(100)</li> <li>active: INTEGER</li> <li>hash_class: VARCHAR(100)</li> <li>salt: VARCHAR(100)</li> <li>sudo: INTEGER</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>internalKey: INTEGER</li> <li>fullname: VARCHAR(100)</li> <li>email: VARCHAR(1100)</li> <li>phone: VARCHAR(100)</li> <li>mobilephone: VARCHAR(100)</li> <li>blocked: INTEGER</li> <li>logincount: INTEGER</li> <li>lastlogin: TIMESTAMP</li> <li>thislogin: TIMESTAMP</li> <li>failedlogincount: INTEGER</li> <li>sessionId: VARCHAR(100)</li> <li>gender: INTEGER</li> <li>address: VARCHAR(1000)</li> <li>country: VARCHAR(255)</li> <li>city: VARCHAR(255)</li> <li>state: VARCHAR(25)</li> <li>zip: VARCHAR(25)</li> <li>fax: VARCHAR(100)</li> <li>photo: VARCHAR(255)</li> <li>comment: VARCHAR(1000)</li> <li>website: VARCHAR(255)</li> <li>extended: VARCHAR(1000)</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>type: VARCHAR(15)</li> <li>subject: VARCHAR(255)</li> <li>message: VARCHAR(1000)</li> <li>sender: INTEGER</li> <li>recipient: INTEGER</li> <li>private: INTEGER</li> <li>date_sent: TIMESTAMP</li> <li>read: INTEGER</li> </ul>
orders	news_subscription	products	news	tenders
<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>providerId: INTEGER</li> <li>customerId: INTEGER</li> <li>productId: INTEGER</li> <li>deliveryId: INTEGER</li> <li>orderAmount: INTEGER</li> <li>orderCost: VARCHAR(50)</li> <li>orderDiscountAmount: INTEGER</li> <li>createdon: TIMESTAMP</li> <li>orderStatus: INTEGER</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>providerId: INTEGER</li> <li>customerId: INTEGER</li> <li>notice: INTEGER</li> <li>read: INTEGER</li> <li>createdon: TIMESTAMP</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>providerId: INTEGER</li> <li>productName: VARCHAR(255)</li> <li>productCategoryId: INTEGER</li> <li>productSubCategoryId: INTEGER</li> <li>productPrice: VARCHAR(50)</li> <li>productPhoto: VARCHAR(255)</li> <li>productPackage: VARCHAR(255)</li> <li>productAmount: INTEGER</li> <li>productCountry: VARCHAR(255)</li> <li>productWeight: VARCHAR(255)</li> <li>productProducer: VARCHAR(255)</li> <li>createdon: TIMESTAMP</li> <li>isRemoved: INTEGER</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>providerId: INTEGER</li> <li>newsContent: VARCHAR(1000)</li> <li>newsShortDescription: VARCHAR(255)</li> <li>newsTitle: VARCHAR(255)</li> <li>newsPhoto: VARCHAR(255)</li> <li>createdon: TIMESTAMP</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>customerId: INTEGER</li> <li>tenderTitle: VARCHAR(255)</li> <li>tenderNote: VARCHAR(1000)</li> <li>tenderPeriod: VARCHAR(50)</li> <li>tenderPayment: VARCHAR(50)</li> <li>tenderDelay: VARCHAR(10)</li> <li>tenderDelivery: VARCHAR(50)</li> <li>tenderDeadline: TIMESTAMP</li> <li>createdon: TIMESTAMP</li> <li>isRemoved: INTEGER</li> </ul>
product_category	product_subcategory			
<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>name: VARCHAR(255)</li> </ul>	<ul style="list-style-type: none"> <li>id: INTEGER</li> <li>categoryId: INTEGER</li> <li>name: VARCHAR(255)</li> </ul>			

Figure 1. Database tables

Figure 1 shows us all 17 tables in our database. On this 17 tables we have saved all information related for web application.

Then we create design and draw icons for web application. After we have convert PSD to HTML. Then we have installed MODX to our hosting and created pages using our .html files. Finally, we wrote snippets to get/set data from/to our database.

On customer part customers:

- can search, filter and order product;
- can cancel order;
- can add, update and remove information about company;
- can subscribe and unsubscribe for provider news;
- can see news;

- can add provider to favorites;
- can see and clear order history;
- can add tenders.

On provider part providers:

- can add, update, remove products;
- can add, update and remove information about company;
- can add, remove promotion event (action) for products;
- can add, update and remove news;
- can see, confirm and clear orders.

### Conclusion

This web application created for providers and customers who wants to do business without leaving the office. Web application gives to provider detailed information on customers' personal information, purchase history, buying preferences and concerns, with the goal of improving business relationships with customers, assisting in customer retention and driving sales growth and web application which gives to customers detailed information on providers' personal information, products list and rating of providers. We think this web application will be really interesting.

Although the web application works fine, it could be further developed. Because, we think that, search will work slowly if in database will be more than million products. With chat also same problem, if many people will use chat simultaneously it will work slowly and web application's server could down. In future, we will improve search and chat algorithms and we will add one extra page where customers and providers can see graphs of all statistics.

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## BUS TICKET ORDERRING SYSTEM

**Abstract.** Nowadays we have a lot of problems with ticket ordering. To order ticket we should go to bus station. There are long queues. First, you waste your time and money. That is the problem. It is so hard for people. To simplify this process we going to create the simple, but useful service which get small time and money.

This paper introduces the new Bus Ticket Ordering System, which called "BusZhol". BusZhol is – Mobile and Web Application to order Bus tickets to all bus directions.

Traveling is a large growing business across all countries. Bus ticket reservation system deals with maintenance of records of details of each bus and passenger who had reserved a seat for a journey. It also includes maintenance of information like schedule, rating and details of each bus.