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**Definition, investigation and analysis**

**(1)**   **Definition – nature of the problem**

**Description of the organization:**

The owner of the organization is a businessperson. Recently he opened the restaurant, which is located in central part of Astana in Kazakhstan. The restaurant’s chefs and staff are some of the best professionals in their field. The menu offers customers to try different types of world cuisines, starting from Italian to Japanese cuisine and other types of world cuisine.

**Methods currently in use:**

According to statistics, the demand for restaurant is growing every day, because of this recent tendency the owner decided to realize the possibility to make delivery directly of food to home. However, there is no visual representation of menu; therefore, clients have trouble in making orders, it takes a long time for waiters to take the order and explain every dish the restaurant is offering. Moreover, not everyone could be familiar with the menu, because sometimes there can be people who have never visited restaurant before and want to try its food for the first time.

**Origin of the data:**

The data comes from the clients. The waiters save all of the orders in the spreadsheet, which includes the information of customers such as the name, address, telephone number and dishes they are ordering.

The staff of the restaurant keeps the customer’s order in a spreadsheet that looks like this:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Client # | Name | Telephone Number | Address | Order | Total cost, KZT |
| 1 | Client 1 | +77771234567 | Sarayshik street, 12, 12 | Pizza | 2500 |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |

**(2) Investigation and analysis**

**Investigation:**

To get the information on the current system, how it functions, and its input and output data I decided to do the interview with the staff that is responsible for taking clients’ orders. By taking the interviews, I will ask questions that will help me to identify the main problems of the system and make further research on the ways to overcome them.

Below are the details of the interview – the questions asked and responses.

**Question 1**: Hello, is it okay if I ask you some questions regarding the ordering system in your restaurant?

Hello, yes of course

**Question 2**: Can you please tell me what do you do?

I am the administrator of the restaurant and I am responsible for taking orders from the clients that would like to get the delivery.

**Question 3**: So how much time does the process of ordering by phone usually takes?

Well, it mostly depends on the people, because there are clients that know our menu and there are clients that are not familiar with it.

**Question 4**: What kind of information you need from the client and where do you save it?

To make the order complete, we ask our customers to provide information about their full name, home address, telephone number and order. We save all of the data in the special table, so we would not lose the information and use it if the client wants to make order again.

**Question 5**: What are the main issues with taking orders?

As I mentioned it before the process of ordering takes a lot of time and it is not very convenient for clients, because if they are not familiar with our cuisine, we have to help them and explain everything that we have on our menu. In addition to this, clients have trouble with paying in cash, since neither deliveryman nor client have change.

**Question 6**: If we were to partially computerize the system, what would need to be entered into the system for the results?

I think it would be a great idea if our restaurant will have the system, in which customers can see the visual representation of the menu, the cost of each dish and make online payment through their credit cards. Moreover, it will be very convenient for us, if the newer system will save all of the gathered data in the database, so the admin and the workers can easily prepare orders.

**Analysis:**

Flow chart showing the steps of the current system:

Customer calls the restaurant to make order

Is the customer new or regular?

Waiter searches in table for customer’s information

Waiter asks for the additional information, such as full name, address and telephone number

If needed customer asks for help from the waiter and chooses the dishes he would like to try

The waiter sums prices of all dishes customer ordered

Print the check

Make delivery

Data flow diagram

2

Spreadsheet

Order/data

Ordered Food/Data

1

Order Food

Order/data

Available Dishes

Ordered Food

Menu Details

1.0.

Total bill

Prices of dishes

3

Food delivery

Make delivery

4

Ordered Food

**Data capture method**

**1)Processing**

During ordering process, the stuff of restaurant collects the needed data from client and record it on paper. After transferring every information about client on the spreadsheet, manager or any other worker, who is responsible, must take everything into account and determine the total price.

**2) What works well, what doesn’t?**

The current system needs some upgrades, because there are several drawbacks. The information is stored on the paper. However, if the regular customer wants to get delivery, ha has to provide restaurant’s workers with requested information again. Therefore, sometimes current system can face with the problem of losing previous information. Additionally, explaining the menu’s dishes takes a lot of time. As a result, other clients cannot call the restaurant immediately, thus they have to wait until the line is free.

**3) Inputs**

Name – Text

Street – Text

House and flat number – Integer

Order – Text

Telephone number – Integer

**4) Outputs**

Final Order - Text

Total price – Integer

**5) Storage**

All of the data is saved on paper, special spreadsheet. I plan to have the database that could be available only to the workers of the restaurant

**Alternative approaches:**

* Using the database on the computer

In that way workers will be able to get the previously filled data about the client, so they won’t have to start writing the same information several times. Access can be given only to the staff and there is a much lower possibility of losing data. This approach may be one of the cheapest ways to overcome the issue.

* Creating the mobile app

Basically app will operate the same way as the website does, but it will be available only for those who have downloaded it from the App Store or Play Market. It will be very convenient for those clients who use their smartphones more than computers or laptops. This system can cost more than the first approach costs.

* Creating the website for the restaurant

This is the chosen solution. Right now everyone has the access to the Internet. Thus, by this approach client can easily make orders and make online payment, if they cannot pay in cash. Website can contain any information that customer will need when making order. For example: full menu, with the description of each dish.

**Requirements:**

Here is the list of requirements for the new system which have been discussed and agreed with the owner of restaurant:

* System must be interface and design friendly for the clients, so it will be simple and easy in usage
* System must be able to make simple calculations when giving the total cost
* System must have the search functions, so the workers won’t have to write the same information about regular clients
* Possibility to edit information in case an error has been made
* System should have visual representation of the menu
* Database with all of the information must be available for the staff of the restaurant only
* System must have higher security, because it contains personal information of clients

**Software requirements:**

|  |  |
| --- | --- |
| Software required | Reason |
| Windows Operating System | To use software and hardware when making the project |
| Adobe Dreamweaver | To write the code of the program and to realize the website. It will be the most helpful software, because I will use program languages such as HTML, JavaScript and CSS. |
| Adobe Photoshop | To make the design of each webpage. |
| SQL | To make the database of the website, where the information is kept. |

**Hardware requirements:**

|  |  |  |
| --- | --- | --- |
|  | Device | Function |
| Input | Qwerty keyboard | To type different types of data |
|  | Laser mouse | To navigate and manipulate code, it is requested for the program’s GUI |
| Output | Flat screen monitor | To see actions performed in the program |
|  | Printer | Needed to print various information |
| Storage | External hard drive | To make some copies in case the error might occur and data is lost |
|  | USB key | To transfer files from one computer to another |
| Processing | Additional Processor | To make program’s performance faster and effective |