

Feasibility Study

Report

**< Restaurant Management System >**

**< Musharraf Hussain Group (56)>**

**< Agha Ertaza >**

**(Khana Peena Restaurant)**

**< Dr. Mansoor Ebrahim >**

**< https://github.com/Musarraf-Hussain/RestAuto.git >**

**Feasibility Study And Plan:**

A feasibility study is defined as an evaluation or analysis of the potential impact of a proposed project.

**Survey Question:**

**For employees:**

1. What are the problems that you are facing in manual system?
2. Do you have the basic knowledge to operate the computer or data entry?
3. Do you think it is beneficial for you to switch from manual to automation?
4. Do you have any job security issue, if you shift to an automated system?
5. What do you think it will be challenging for you to adjust in the automated system?

**For customers:**

1. What type of facilities you want from the restaurant side?
2. Do you think restaurant automation is also beneficial for the customer?
3. Do you think it saves the waiting time for the customers?

# The Client:

Agha Ertaza, Khaana Peena Restaurant, [Erztaagha86@gmail.com](mailto:Erztaagha86@gmail.com)**;**

# Group Members And Email Address:

# Musharraf Hussain, [hmusharraf367@gmail.com](mailto:hmusharraf367@gmail.com)

# Muhammad Farhan Shahid Siddiqui, [mrgrey785@gmail.com](mailto:mrgrey785@gmail.com)

# Syed Mujtaba Zaheer Zaidi, [Mujtaba.zaheer9@gmail.com](mailto:Mujtaba.zaheer9@gmail.com)

# Muhammad Nehaluddin, [siddiquinehaluddin@gmail.com](mailto:siddiquinehaluddin@gmail.com)

# Faisal Qureshi, [fq164@gmail.com](mailto:fq164@gmail.com)

# The Task to be Undertaken:

# Taking the scenario of “ Fries Shop ” . In this particular situation first customer have to stand in queue to place his order, second they to checkout menu to choose and order and have to wait till it get delivered. Incase if he needs anything else or and have to order again he/she have to repeat the whole process of placing it order again. So chain of huge fries shops all over country having few errors in their system, while billing , providing services, in placing orders, showing latest offers and coupons. They proposed a new idea to develop a new and better version of their system with new features and developing into an application for smartphones and tablets.

The software we are proposing have many enhance features then previous software, as going through pervious software lack of many features are their which cause lacking behind for providing good services.

**Menu Structure:**

* Membership Levels
* items display
* Order placement
* Billing

# Benefits:

Under this, following are the various problems that are faced so often.

* Many a times, we have to wait in long queues for the orders, which in return waste a lot of time and greater level of patience.
* There are many human errors while dealing with the information manually.
* There could be various types of intangible benefits on account of automation. These could include increased customer satisfaction, improvement in product quality better decision making timeliness of information, expediting activities, improved accuracy of operations.

# A Preliminary Requirements Analysis:

### A restaurant POS system:

# One type of POS system which communicates between several stations and updates all needed data in tandem. The mPOS is less difficult to install, and is more easily updated and intuitive. [As additional research](https://lavu.com/ipad-pos-systems) into mPOS systems, you may consider iPad POS systems, which simplify your process, in terms of order taking, convenience, organization, and more.

### Inventory tracking:

By utilizing an inventory tracking feature, you can track the amounts of ingredients you have available, as well as which ingredients are running out quicker than others, and what needs to be stocked in greater quantities. This streamlines your process and allows you to more efficiently place orders to your vendor.

### Table and order management:

Using a table management feature, you can configure a representation of your restaurant’s layout to keep track of open tables, keep tabs on open orders, and efficiently seat your customers. With order management features, you can transfer tickets quickly, split bills, change prices, and more.

### Employee timesheets:

In addition to effectively tracking employees as they clock in and out, you can choose restaurant software that allows employees to manage their shifts, such as when they need another coworker to cover for them. Rather than going through management, allow them to swap shifts as necessary directly through the system.

### CRM integration:

Choose a restaurant management system that either integrates with your preferred CRM or has easily exportable data. With an integrated CRM, you can continue to analyze your customer data in a convenient and familiar manner, or if you choose a system that allows you to export data, you can still easily access what you need, when you need it.

### Marketing and loyalty programs:

Look for marketing tools that are built-in or can integrate into your system, such as loyalty programs. You can allow customers to sign up and earn rewards through your restaurant’s loyalty program, and if you follow the trends of what they’re purchasing, this gives you an opportunity to offer deals on those items and encourage them to come back.

### Easy menu setup:

Customize your menu the way you want it! Choose your menu items, prices, ingredients, and appearance, and have the menu rotate throughout the day for different meal periods. Keep everything up-to-date and incorporate enticing features like daily specials and happy hours. Allow front-of-house staff to access this custom menu when they take orders, or let customers access it if they’re using a self-service kiosk.

### Detailed reporting and data:

Need to download a specific sales report, or ingredients usage report? No problem! Choose a restaurant management system that allows you to download detailed reports however you need them. Check real-time sales from wherever you are.

### Technical support:

Be sure you’re given access to technical support, should you need to troubleshoot any issues that arise. Make a point to ask about this when shopping around for restaurant software.

### Integrations:

Select restaurant software that allows for [integrations](https://www.lavu.com/integrations) with several types of software. For instance, choose a system that can integrate with the best accounting software, such as QuickBooks or Xero, as well as kitchen management software and CRMs. Integration abilities are also an excellent source of added convenience, as you can incorporate tools that you’re already using and familiar with.

# Technical Requirements – Feasibility:

Functional requirements focus on how system will work according to the structure of sailing and purchasing, we describe the function requirements using the various use cases:

### Sales and tax tracking

Your RMS should track all sales data – such as your top menu items, busiest selling times, best-performing team members and profits – to help you make important business decisions. Your software should also provide detailed records for tax reporting purposes.

### Order management

Your restaurant staff should be able to easily manage tables, reservations, checks and menu items through your RMS. You and your managers should also be able to control refunds, voids, and comps and view order statuses. If you operate a bar, your RMS should allow you to pre-authorize credit cards to open tabs.

### Inventory management

Knowing exactly how much product you have on hand will help you determine when and how much to reorder from your vendors. Some RMS software offers inventory management options, while others may require integration with third-party software to help you with this.

### Reporting and customer data

If your chosen RMS tracks and filters your sales and customer data, you'll have access to a wealth of information to help you grow your business and make better marketing decisions.

### Marketing, gift cards and reward programs

Consider a system that offers marketing tools such as promotions and loyalty or rewards programs. Your RMS may have native marketing tools or require third-party software integration for this. If you're interested in offering gift cards for your restaurant, make sure your RMS can help you manage that as well.

A good restaurant management system makes all the difference in how well your restaurant runs. While there are many factors to consider, it is worth taking the time to determine exactly how the system must serve your business and what you want to gain from it. When you have a clear goal in mind and a list of non-negotiable features, you're well on your way to getting up and running with a restaurant management system.

# Scope:

**In-scope:**

* Information regarding menu.
* Online ordering
* Digital payment system
* Personal account facility
* Seat availability
* Statement
* Fire alarms

**Out-scope:**

* Confusion regarding menu
* Cash payment

# Suggested Deliverables:

**Management Deliverables:**

* + Requirements Analysis – a document and a presentation to go over the formal requirements of the project, both functional and non-functional. This deliverable ensures that the Group is working on a system that closely matches to the wishes of the Client. This deliverable gives the Client a chance to modify and correct items that were mis-communicated or missed out before allowing the Group to proceed further in the design.
  + Design Document – a document and a presentation to go over the design of the system. This is the Group’s opportunity to go over how the project is to be implemented to the Client. This deliverable is done by the more technical and experienced in the Group, based on the understanding of the requirements established in the previous deliverable.
  + Source Code – a document, presentation along with the source code of the final completed project. This final deliverable wraps up and concludes the project. In this deliverable, the Group delivers the final implementation based on the requirements specified and the design developed in previous stages. The system would have been tested thoroughly with unit tests and with a final acceptance test and would be ready for deployment to the production system.

**Technical Deliverables:**

* A database with the required tables to support the inventory system—a database needs to be set up on the library servers with the tables needed in the system to store the inventory information, geo-referenced materials, and other cartographic data.
* An administrative interface to add, modify, delete and search for inventor webpage designed to allow the administrator (ie., the Client) of the system to add information to the inventory system for every map that is found in the library and to build up an electronic record of the resources that are found in the library.
* An interactive map with labeled countries and clear national boundaries—a map of the world with zooming capabilities and re-centering functions, labeled with names corresponding to the current view of the map, that has clear boundary lines (ie., country border) on a web page.
* A side menu that is populated with cartographic information based on the inventory—a portion of the web page that shows available cartographic resources for the selected region, based on information in the inventory database. The information that will be displayed has yet to be decided.

# Software Development Process:

One of the more recognizable project management methodologies, [Agile](https://zenkit.com/en/blog/agile-methodology-an-overview/) is best suited for projects that are iterative and incremental. It’s a type of process where demands and solutions evolve through the collaborative effort of self-organizing and [cross-functional teams](https://zenkit.com/en/blog/6-tips-to-supercharge-cross-team-collaboration/) and their customers. Originally created for software development, it was established as a response to the inadequacies of the Waterfall method (info on it later below), the processes of which did not meet the demands of the highly competitive and constant movement of the software industry.

* Customer satisfaction through early and continuous software delivery
* Accommodate changing requirements throughout the development process
* Frequent delivery of working software
* Collaboration between the business stakeholders and developers throughout the project
* Support, trust, and motivate the people involved
* Enable face-to-face interactions
* Working software is the primary measure of progress
* Agile processes to support a consistent development pace
* Attention to technical detail and design enhances agility
* Simplicity
* Self-organizing teams encourage great architectures, requirements, and designs
* Regular reflections on how to become more effective

# Visibility Plan & Business Considerations:

* **Better employee productivity**: Restaurant management software is intended to facilitate and assist the work of restaurant managers, liberating them from having to perform many menial (yet necessary) activities. As such, restaurant management platforms allow managers to become more productive by focusing on the human side of running a restaurant business.
* **Higher profits**: Restaurant management software can lead to higher profits in several ways: improving employee productivity; avoiding costly financial mistakes; preventing inventory waste, theft, and loss; increasing customer retention figures; and more.
* **Greater customer loyalty**: By capturing customer feedback data and tracking it over time, restaurant management software provides insights about how your performance on customer experience metrics. Restaurants can use this feedback to make improvements to the menu and customer service, which in turn inspires greater customer loyalty.
* **Ease of use**: Restaurant management software doesn’t require a degree in computer science to start using it. Many restaurant management platforms have been designed with usability in mind, so that everyone in the business can take advantage of it.
* **Unique features**: Depending on your needs as a business, you may wish to use restaurant management software with a particular set of features: for example, the ability to accept gift cards, or the ability to track the performance of advertising campaigns.

# Risk Analysis:

1. Changing Requirements:

The Client may have various thoughts regarding the framework over the span of the venture. Contingent upon the circumstance, the progressions that the Client wishes to have actualized may require pretty much nothing or significant changes to the engineering.

Arrangement: To diminish the chance of this happening, the Group needs to set up an unmistakable perceivability plan with the Client.

1. Incomplete Requirements:

It is conceivable that necessities might be inferred yet not talked about or misconstrued. This often happens after gatherings.

Arrangement: The Group's translation of the Client's necessities will be introduced back to the Client to get an affirmation on whether the Group has comprehended the Client. Visit customer refreshes and a significant level of perceivability will likewise help point out any false impressions.

1. Lack of Resources, Tools:

For the venture to meet one of the useful prerequisites (clicking a region of a guide inside the limits of a nation should choose that nation), a geo-deciphering instrument is required. In any case, at the hour of composing of this report, no open/free instruments can be discovered that can do this longitude-scope pair and nation change.

Arrangement: A workaround is recommended that would meet the negligible degree of this necessity by characterizing the fringes of the choice territory to be a square shape characterized by the most extreme and least longitude and scope sets.

1. System Integration:

Depending fair and square of access to the workers that the Group gets, the Group may need to chip away at the framework disconnected and in the long run incorporate with the creation framework when it is prepared and completely tried. Because of various programming design, there might be eccentric hindrances.

Arrangement: To guarantee a smooth framework coordination, the Group should know about however much about the design as ahead of schedule as could reasonably be expected.

1. Technical Requirements:

The product and equipment worker condition are not entirely sure now. The customer doesn't know about the specialized parts of the venture. The specialized worker arrangement may have an effect on framework engineering and plan.

Arrangement: To determine this issue, the Group has mentioned the customer to allude the Group to the specialized staff working at the library for additional requests.

1. Non-functional Requirements:

Similar to fragmented necessities, non-useful prerequisites is something that has not been raised in the underlying gathering with the Client. These remember prerequisites for the quantity of clients that the framework hopes to help simultaneously, and the reaction season of the database query.

Arrangement: A subsequent gathering is expected to indicate the non-useful necessities.