

Saurashtra University, Rajkot

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SAURASHTRA UNIVERSITY, RAJKOT



PROJECT REPORT

ON

Voice Enabled Food Ordering System

AS A PARTIAL REQUIREMENT FOR THE DEGREE

OF

MASTER OF COMPUTER APPLICATION

(M.C.A.)

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ACKNOWLEDGEMENT

(Following is just sample text written to suggest the format of acknowledgement, students have to write their own acknowledgement)

This project would not have been possible without the kind support and help of many individuals and institutions. I would like to extend my sincere thanks to all of them **(college, the principal, faculty guide, industry person, family and friends).**

I am highly indebted to (Name of your Organization Guide) for their guidance and constant supervision as well as for providing necessary information regarding the project & also for their support in completing the project.

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I would like to express my special gratitude and thanks to industry persons for giving me such attention and time.

My thanks and appreciations also go to my colleague in developing the project and people who have willingly helped me out with their abilities.

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References

Project name	Voice Enabled Food Ordering System
Technology	Amazon Alexa, Shopify
Project Type	VOICE Services & E-commerce
Front End	Alexa : VUI (Voice User Interface) Dashboard : React
Back End	Alexa : Node js Shopify App : Liquid
Database	Firebase
Documentation Tools	Figma, Creately, Google Docs
Project Co-coordinator	Prof. Atul M. Gonsai
Submitted to	Saurashtra University, Rajkot
Developed By	Dhameliya Priyank K.
	Bhanderi Ashika N.
	Dobariya Mansi

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The Foodie Provides Food Ordering system with the power of voice, divided into two main portions. 1st **Voice enabled Alexa Skill** and 2nd **Shopify App**.

Voice enabled Alexa is making ordering your Mayo cafe's favorites even easier. With the foodie's skill, you can build new orders from scratch, place your easy order or your most recent order. You can ask Alexa for your order's price, cartlist and ingredients. Available only for orders placed in Varachha, Surat.

To get started, enable Amazon Alexa in your device and just say "Alexa, open the foodie." Alexa will connect you to the foodie and get you ordering in no time.

The very first time you order, you just need to grant us permission to access the email address you set up with Alexa app and your location to get delivery. Alexa will simply use the phone number and your name saved in your Profile for further interaction.

- Start by saying "**open the foodie**".
- To order ask Alexa to "**place a new order**" or "**order food for me**",
- To remove order ask Alexa to "**remove food**",
- To know the current price of food ask Alexa to "**what about one burger**",
- To show your cart ask Alexa to "**show my cart**" or "**show my order**",
- You also try "**checkout**",
- And "**confirm**".
- ASK anytime for "**help**".

Device requirements for engaging with ALEXA :

MCU/CPU	Varies based on the desired experience . As a reference, the Echo Wall Clock uses an ARM-Cortex M4 family SOC clocked at 48 MHz.
Memory	A minimum of 16 KB for protocol buffer and security support. The memory requirement may be higher depending on the complexity of the gadget .
Bluetooth	Your gadget must support Bluetooth 4.2 or above. This can be Classic Bluetooth or Bluetooth Low Energy.
Pairing	Your gadget must be able to enter pairing mode , either via a mechanical button or switch, or through some other mechanism like powering off and on.
Speaker with microphone	Your gadget must have mice to commands and speaker retrieving your output.
Compatibility	WORKS WITH ALEXA  Add voice control by combining with an Alexa device
Others	Internet connection ^3G.

- **Amazon Alexa**

- Amazon Alexa, also known simply as Alexa, is a virtual assistant AI technology developed by Amazon, first used in the Amazon Echo smart speakers developed by Amazon Lab126.
- It is capable of voice interaction, music playback, making to-do lists, setting alarms, streaming podcasts, playing audiobooks, and providing weather, traffic, sports, and other real-time information, such as news.
- Alexa can also control several smart devices using itself as a home automation system. Users are able to extend the Alexa capabilities by installing "skills" (additional functionality developed by third-party vendors, in other settings more commonly called apps such as weather programs and audio features).

• What is Amazon Alexa Skills?

- Alexa is a virtual digital assistant developed by Amazon for its Amazon Echo and Echo Dot line of computing devices. Alexa's capabilities mimic those of other intelligent assistants such as Apple Siri, Microsoft Cortana, Google Assistant and Samsung Bixby.
- Alexa responds to voice control by returning information on products (on Amazon of course), music, news, weather, sports and more. The back-end engine for Amazon's Alexa runs on Amazon Web Services in the cloud, enabling Alexa to learn an individual or family's preferences and expand its functionality over time.
- In addition to the Echo products, Alexa is also supported by Amazon's Fire HD tablet and Fire TV set-top box products. A few select third-party products have started to support Alexa as well, including the Nucleus Intercom, Ford SYNC automobile infotainment systems and Invoxia's Triby speaker and message system.
- Apple has Siri. Google Home has the Google Assistant, which comes alive when you say "OK, Google." Amazon has Alexa. But why?
- According to David Limp, the Amazon executive who oversaw the development of the service, the name "Alexa" was chosen for a few reasons. First, the name "Alexa" harks back to the Library of Alexandria, which attempted to collect all of the world's knowledge. Amazon is attempting to do the same thing. Alexa is always learning but, in theory, it should be a seamless source of information.
- More practically, the service was named Alexa because it contains the uncommon "X" sound. Since this service is voice-activated, Amazon wanted to choose a name that wouldn't get confused with other words that could accidentally awaken the device

- "We did go through a number of names and the name is important as much for the personality that it creates around the persona than is this computer-based voice computer in the cloud. But there's computer science behind it, too," Limp said. "If any of you have Echoes, you know that it only wakes up when it hears the word "Alexa," and the phonics of that word and how that word is parsed and the fact that it has a hard consonant with the 'X' in it, is important in making sure that it wakes up only when it's asked for. And so, a combination of those two things allowed us to kind of narrow in on Alexa."

- **How alexa is different?**

- Alexa is the AI assistant for voice-enabled Amazon devices like the Echo smart speaker and Kindle Fire tablet -- Amazon is currently leading the way with voice technology (in terms of sales).
- On the Alexa store, some of the trendiest apps (called "skills") are focused on entertainment, translation, and news, although users can also perform actions like request a ride via the Uber skill, play some music via the Spotify skill, or even order a pizza via the Domino's skill.
- Another interesting example comes from commercial bank Capital One, which introduced an Alexa skill in 2016 and was the first bank to do so. By adding the Capital One skill via Alexa, customers can check their balance and due dates and even settle their credit card bill. PayPal took the concept a step further by allowing users to make payments via Siri on either iOS or the Apple HomePod, and there's also an Alexa skill for PayPal that can accomplish this.
- But what VUIs can do, and what users are actually using them for, are two different things.

- **Architecture of alexa**

- Now there are two possible paths. If the skill code is deployed in AWS Lambda, that service will be triggered within AWS. If it's a web service accessed via HTTPS then the REST API call is made. In either case, Alexa will receive the response as text. Optionally, the response may have images. Alexa will convert the text into speech, which gets streamed to the user via their current device. Images will be served where the device has a display.

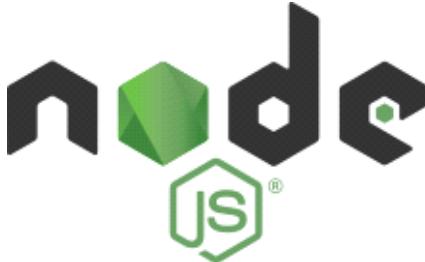
- Alexa resides in the cloud. Access is via the Alexa Voice Service API. Alexa receives requests as speech streams. Alexa analyzes the speech and identifies the requested skill. A structured representation of the skill and intent is created.
- A skill is identified by an invocation name and mapped to a backend service. A skill can be designed to do multiple things, each of which is called an intent . Each intent can be identified by one or more words or phrases, each of which is called an utterance . For example, you may create a travel-related skill that has three intents: rent a car, book a flight, or book a hotel.

 amazon alexa	
<u>Developer(s)</u>	Amazon
Initial release	November 6, 2014; 5 years ago
<u>Operating system</u>	Fire OS 5.0 or later, iOS 11.0 or later Android 4.4 or later
<u>Platform</u>	Amazon Echo Fire OS Linux "https://en.wikipedia.org/wiki/IOS" iOS Android Cortana
Available in	English French German Japanese Italian Spanish Portuguese Hindi
Type	Intelligent personal assistant , cloud-based voice service
Website	developer.amazon.com/alexa
Usage	

Supported Platform(s)	Amazon Echo Fire OS iOS Android Cortana Linux
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- **Node.js**

- JavaScript code outside of a web browser.
- Node.js lets developers use JavaScript to write command line tools and for server-side. Node.js is an open-source, cross-platform, JavaScript runtime environment that executes scripting—running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser.
- Consequently, Node.js represents a "JavaScript everywhere" paradigm, unifying web-application development around a single programming language, rather than different languages for server- and client-side scripts.

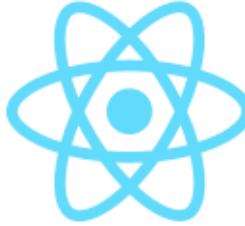


<u>Original author(s)</u>	Ryan Dahl
<u>Developer(s)</u>	Various
<u>Initial release</u>	May 27, 2009
<u>Stable release</u>	14.0.0 / April 21, 2020
<u>Repository</u>	github.com/nodejs/node
<u>Written in</u>	C, C++, JavaScript

<u>Operating system</u>	Linux, macOS, Microsoft Windows, SmartOS, FreeBSD, OpenBSD, IBM AIX <small>[3]</small>
<u>Type</u>	Runtime environment
<u>License</u>	MIT license
<u>Website</u>	nodejs.org

• React JS

- React (also known as React.js or ReactJS) is a JavaScript library for building user interfaces. It is maintained by Facebook and a community of individual developers and companies.
- React can be used as a base in the development of single-page or mobile applications. However, React is only concerned with rendering data to the DOM, and so creating React applications usually requires the use of additional libraries for state management and routing. Redux and React Router are respective examples of such libraries.



<u>Original author(s)</u>	Jordan Walke
<u>Developer(s)</u>	Facebook and community
<u>Initial release</u>	May 29, 2013; 6 years ago
<u>Stable release</u>	16.13.1 / March 19, 2020; 34 days ago
<u>Repository</u>	React Repository
<u>Written in</u>	JavaScript
<u>Platform</u>	Web platform

<u>Type</u>	JavaScript library
<u>License</u>	MIT License
<u>Website</u>	reactjs.org
Usage	
<u>Supported Platform(s)</u>	Web platform

- **Fire Base**



- Firebase is a Back-End Platform for building Web, Android and IOS applications. It offers a real time database, different APIs, multiple authentication types and hosting platforms.
- The Firebase data is representing JSON objects. If you open your app from the Firebase dashboard, you can add data manually by clicking on the + sign.
- Firebase can power your app's backend, including data storage, user authentication, static hosting, and more. Focus on creating extraordinary user experiences.
- We will take care of the rest. Build cross-platform native mobile and web apps with our Android, IOS, and JavaScript SDKs.
- You can also connect Firebase to your existing backend using our server-side libraries or our REST API.

- **Firebase Features**

- Cloud Firestore :-
 - Cloud Firestore is a flexible, scalable database for mobile, web, and server development from Firebase and Google Cloud Platform. Like Firebase Real-time Database.
 - it keeps your data in sync across client apps through Real-time listeners and offers offline support for mobile and web so you can build responsive apps that work regardless of network latency or Internet connectivity.
 - Cloud Firestore also offers seamless integration with other Firebase and Google Cloud Platform products, including Cloud Functions.
- Real-time Database :-
 - Store and sync data between users and devices in Real-time using a cloud-hosted, No SQL database. Updated data syncs across connected devices in milliseconds, and data remains available if your app goes offline, providing a great user experience regardless of network connectivity.
- Authentication :-
 - Manage your users in a simple and secure way. Firebase Author offers multiple methods to authenticate, including email and password, third-party providers like Google or Facebook, and using your existing account system directly.
 - Build your own interface, or take advantage of our open source, fully customizable UI.
- Hosting:-
 - Simplify your web hosting with tools made specifically for modern web apps.
 - When you upload your web assets, we automatically push them out to our global CDN and give them a free SSL certificate so your users get a secure, reliable, low-latency experience, no matter where they are.Cloud Storage:-
 - Store and share user-generated content like images, audio, and video with powerful, simple, and cost-effective object storage built for Google scale.

- The Firebase SDKs for Cloud Storage add Google security to file uploads and downloads for your Firebase apps, regardless of network quality.
- Cloud Functions:-
 - Extend your app with custom backend code without needing to manage and scale your own servers.
 - Functions can be triggered by events, which are emitted by Firebase products, Google Cloud services, or third parties, using Web hooks.

- **Firebase Advantages**

- It is simple and user friendly. No need for complicated configuration.
- The data is real-time, which means that every change will automatically update connected clients.
- Firebase offers simple control dashboard.
- There are a number of useful services to choose.

- **Shopify**



- Shopify is a complete commerce platform that lets you start, grow, and manage a business.
- Create and customize an online store.

- Sell in multiple places, including web, mobile, social media, online marketplaces, brick-and-mortar locations, and pop-up shops.
- Shopify is completely cloud-based and hosted, which means you don't have to worry about upgrading or maintaining software or web servers. This gives you the flexibility to access and run your business from anywhere with an internet connection.
- Shopify is a web application that allows you to create your own online store. It provides you with a wide range of templates that can be customized to meet individual users' branding requirements, and it allows either physical or digital goods to be sold.
- One of the main ideas behind Shopify is that users without much in the way of technical or design skills can create a store without the involvement of a design agency or web developer; however, people who are familiar with HTML and CSS will be pleased to discover that Shopify allows you to edit both, giving you a lot of control over the design of templates.
- Because Shopify is a hosted solution, you don't need to worry about buying web hosting or installing software anywhere; the idea is that pretty much everything you need to build and run your store happens 'out of the box.'
- That said, you can customise a Shopify store to meet more individual requirements through the addition of apps -- more on which later -- or using custom code.
- Shopify is a software as a service ('SaaS') tool - this means that you don't own it but rather pay a monthly fee to use it. As long as you have access to a web browser and the internet, you can manage your store from anywhere.

- **Liquid Language**



- Liquid is an open-source template language created by Shopify and written in Ruby. It is the backbone of Shopify themes and is used to load dynamic content on storefronts.
- Liquid has been in production use at Shopify since 2006 and is now used by many other hosted web applications.
- Liquid is a template engine which was crafted for very specific requirements
- It has to have simple markup and beautiful results. Template engines which don't produce good looking results are no fun to use.
- It needs to be non-evaluating and secure. Liquid templates are made so that users can edit them. You don't want your server running code that your users wrote.
- It has to be stateless. The compile and render steps have to be separate, so that the expensive parsing and compiling can be done once; later on, you can just render it by passing in a hash with local variables and objects.
- It needs to be able to style emails as well as HTML.

This is an evaluation and analysis of the potential of the proposed project which is based on extensive investigation and research to support the process of decision making it assesses the operational, technical and economic merits of the proposed project. The feasibility study is intended to be a preliminary review of the facts to see if it is worthy of proceeding to the analysis phase. From the systems analyst perspective, the feasibility analysis is the primary tool for recommending whether to proceed to the next phase or to discontinue the project

- **Component of feasibility studies**

- Technical feasibility
- Economic feasibility
- Operational feasibility
- Schedule feasibility

- **Technical feasibility**

This assessment is focused on gaining an understanding of the present technical resources of the organization and their applicability to the expected needs of the proposed system. It is an evaluation of the hardware and software and how it meets the needs of the proposed system. The systems project is considered technically feasible if the internal technical capability is sufficient to support the project requirements. The essential questions that help in testing the technical feasibility of a system include the following:

- **Operational feasibility**

Operational feasibility is the measure of how well the project will support the customer and the service provider during the operational phase. It is dependent on human resources available for the project and involves projecting whether the system will be used if it is developed and implemented. The essential questions that help in testing the technical feasibility of a system

- **Economic feasibility**

This assessment aims to determine the positive economic benefits to the organization that the proposed system will provide. It typically involves a cost/ benefits analysis and it's the most frequently used method for evaluating the effectiveness of a new proposed system. Possible questions raised in economic analysis are:

- **Schedule feasibility**

It is the measure of how reasonable the project time table is or the deadline is reasonable or not. During the lack of time or the time become mandatory, we must finish the project within a given time period. It mainly addresses:

The first job was to find out what the present manual system was and how it works. For this we start from official staff.

To find the overview of the existing system and to find the problem we had to understand the operation, nature of operations, dealing and the problem was arising.

Thus, for the system to develop it was necessary to identify various output generated, various inputs to the system, method of listing and implementation of process.

- Some of the system of the questions what we asked to staff when we gathered requirement.

- How existing system works?
 - What problems where arising in existing system?
 - What change the need in existing system?
 - What report generated by existing system?
 - What reports they need by proposed system?
 - What automation they want to implement in system?
 - What is knowledge level of the user?
 - Need for automation and separate their functionality.
 - Hoe to manage travel module?
- After requirement gathering, we analyze that system need following.

- **UserRegistration:**

- Add User information
- Edit User information
- Delete User information
- View

- **Admin Registration:**

- Add Admin information
- Edit Admin information
- View

- **Product:**

- Add Product information
- Remove Product information
- View

- **FUTURE SCOPE OF ORDER FOOD ONLINE SYSTEM**

- This order food online system project aimed at developing an online food ordering system which can be used in small places, and medium cities firstly and then on a large scale.
- It is developed to help restaurants to simplify their daily operational and managerial task as well as improve the dining experience of customers.
- And also helps restaurant develop healthy customer relationships by providing good services. The system enables staff to let update and make changes to their food and beverage list information based on the orders placed and the orders completed

Admin:

- As an Administrator you can achieve the following tasks by using this system:
- Admin is providing facility to add or modify the property detail.
- Admin manage the property master, Customer View Property easily.
- Users register in web and provide login id and password for they registration.
- Admin have facility of all view.

User:

- User can be register in the our system.
- Users can book purchase property in our system.
- Users see all different type of property and purchase that property in our system.
- Functionality is providing this project is sends any feedback to improve project to user requirement.

Visitor:

- Visitor can be registered in our system.
- Visitor can book more than one place in our system.
- Visitor view more than one place in website.
- Visitor can contact with email address.
- Functionality is providing this project is sending any feedback to improve project to customer requirement.

- **You need internet access.**

- Reliable internet access is required to check order and customer add new order that are made over the phone. However, services like fore UP can be run on mobile internet connections. Given the industry's transition to online tools, it's a good idea to invest in the best internet service possible for your region.

- **You need to be ready for an influx of new customers.**

- More and more people prefer doing business online these days, so web-based food ordering system is a great way to attract new customers.
- If you're running a small operation and have no means of quickly hiring more staff members or expanding your resources, the unexpected growth can pose a challenge to your operations.

❖ Alexa Pros & Cons ❖

- **Features & specifications**

- Meet Echo - Echo connects to Alexa to play music, make calls, set music alarms and timers, ask questions, control smart home devices, and more — instantly.
- Voice Control Your Music - Stream music from Amazon Prime Music, JioSaavn, and Gaana – just ask for a song, artist, or genre.
- Enjoy great sound - Enjoy crisp vocals and dynamic bass response with Dolby processing.
- Connect with others - Call or message almost anyone who has an Echo device or the Alexa App, hands-free. Use Alexa to make Skype calls.
- Ready to help - Echo hears you from any direction - even while music is playing. Echo is designed around your privacy. You can press the microphone off button to disconnect the microphones.
- Do more with Alexa - Get calendar, traffic, weather and news updates, set alarms, manage shopping lists, control compatible smart home devices with Alexa.
- Alexa has skills - Alexa is always getting smarter and adding new features and skills like booking a cab, playing games, and more.

- **Limitations**

- Takes several days to update the new version of Software into device.
- The major pros and cons is related to home privacy.
- People can identify who is present on the home based on echo private conversations.
- Others can also access echo conversations.
- People can use your location using different techniques and deliver their location based services
- It's a cloud based devices so it can create problems if any trouble in cloud.
- Echo must be plugged in to use since it has no internal battery.
- Amazon retains digital recordings of users' audio spoken after the "wake up word"

❖ Shopify Pros & Cons❖

• **Pros**

- With its 'Lite' plan, Shopify represents one of the cheapest ways to start selling online using a hosted solution.
- Abandoned cart saving functionality is available on all plans, even the cheapest \$9 'Lite' plan.
- It's a very good option for anyone interested in dropshipping.
- There are no transaction fees if you are happy to use the built in payment processing system, Shopify Payments.
- It has a clean, easy-to-use interface.

- The Lite Plan's 'Buy Button' allows you to use Shopify to sell products easily on an existing website.
- It provides a good range of free, responsive and attractive templates.
- The point-of-sale options are excellent and help Shopify stand apart from its competitors.
- Shopify states that over 1,000,000 stores have been built using the platform, which makes it a relatively safe bet that the company (and thus your online store!) is not going to disappear any time soon.
- You can extend Shopify's functionality easily thanks to a huge range of third-party apps (although note that you will have to pay to use many of them).
- Shopify handles the creation and application of product categories really well.
- Multi-currency selling is possible, although you'll probably need to rely on an app for this.
- VAT MOSS rates are automatically calculated and applied by Shopify.
- The Shopify Buy Button allows you to use Shopify with an existing website built using another platform (for example [Wordpress](#), [Squarespace](#), [Wix](#) or [Jimdo](#)).
- Shopify comes with a built in blog.
- You can create AMP versions of product pages (albeit with the help / additional cost of a third-party app).
- Both iOS and Android apps are provided to enable you to manage your store on the go.

• **Cons**

4Whilst you can create 100 variants of a product, these can only involve up to 3 product options.

- Some key functionality which you might expect to be provided out of the box requires installation of an app (notable examples include facilitating digital downloads and reviews and ratings).

- Adding custom fields such as text boxes or file upload options, whilst doable, is unnecessarily complicated (or involves purchasing an app).
- Professional reporting functionality is only provided on more expensive plans.
- There is no longer an official Mailchimp-Shopify integration available.
- Shopify's built in payment processor, Shopify Payments, only allows you to sell from certain countries. If you want to sell from countries that are not currently supported by Shopify Payments, you will need to use a third-party payment gateway.
- You can't avoid transaction fees if you use a third-party payment gateway.
- There is no way to automatically ensure that product images are displayed using the same aspect ratio. This can lead to messy presentation of your products unless you have cropped all your images in advance of uploading them to Shopify.
- It would be nice if the abandoned cart saver allowed you to send more than one automated follow-up email.
- When using a drop shipping app in Shopify, it's hard to be confident that the goods you're selling are ethically produced.
- Getting your site to be GDPR compliant where cookies are concerned will involve use of a third party cookie banner app.
- The cheapest plan (the \$9 'Lite' offering) doesn't permit you to create a fully-featured online store.
- It's not easy to export blog posts from Shopify.
- Phone numbers for Shopify Support are only listed for certain countries.

❖ Advantages of online ordering system ❖

1. Makes the ordering process easier

- Traditionally, people had to make calls to place orders or drive to the restaurants for a take-out, then wait for the food to be prepared and delivered. Sometimes, placing an order on the phone means that there could be mistakes in order. Clearly, these aren't really the best solutions to order food from restaurants especially for people with busy lifestyles.
- The best solution is switching over to online ordering. Restaurants owners can create a website or an app or both that will not only make the ordering process easier for customers but also streamline restaurant operations. Having an online ordering system can make the day-to-day operations more efficient for a restaurant. On the other hand, when a customer places an order online, they take their time to browse the menu and get familiar with add-on deals and offers that your restaurant must be offering. This can lead to an exponential increase in the total sale value per order.

2. Efficient customer and order management

- An online ordering system for Restaurants helps enhance the customer-restaurant relationship by providing end to end Customer Relationship Management (CRM) system. It provides a complete sales dashboard with information about new/active/canceled orders, lifetime sales details, etc.
- It also comes with an order management system that streamlines the entire ordering process starting from order placement to final delivery.
- Whenever customers place an order, an efficient online ordering system sends notifications via email or SMS to help the restaurant staff make the order execution faster. On the other hand, such software are also equipped with GPS systems that help you capture the entire address that in turn ensure timely and fast deliveries.

3. Monitor your expenses incurred in real time

- This is the greatest benefit of the online ordering system, it gives precise information about the cash flow in the restaurant. You get to keep track of costs incurred during preparing an order and compare it to the cost you are giving it to the customer, all this while keeping a track on the profitability. In a day when you receive hundreds of orders, an online ordering system will give you an accurate monetary translation of each order without having you look into cash registers.
- Cash Flow management and much more! Click to check out Resto labs features here.

4. Free and cheap marketing

- By enhancing your brand's online presence in the market, you can boost your sales with additional new and returning customers.
- Having a strong online presence simply means being in front of your customers 24X7 without having to pay for expensive media advertising and billboards. How? Internet is a free community and all you need is a user-friendly website and a decent social media engagement on social platforms like Facebook and Instagram to reach your target audience. All this comes at a fraction of the cost that you would have spent on traditional means of marketing and promotions. You can also invest some time in creating a strong company profile on Google My Business so people looking out to order food in your area or in your delivery range can find your business with a quick search. Having a dedicated team that can post on social media regularly and engages with your customers will prove to be a good investment to drive traffic and sales on the website.
- Pro Tip: Show the human side of the business and engage with the local community positively. Establish yourself as someone who really cares about the customers, and don't be shy to show it. Use these social platforms to their fullest.

5. Better customers data

- Who are your regular customers? What do they like ordering from your restaurant? Which food items are popular? Are they aware of the promotions and offers on the website? Do they prefer ordering from website or app? These and many other related questions can be answered using analytics and insights provided by a robust online ordering system for restaurants. This data is valuable since you can use it to send targeted promotions to your customers and entice them to keep coming back.

- In-house solutions allow you to analyze ordering trends and customer preferences in depth so you can customize your menu, offerings, deals prices, and so on to provide a tailored experience to everyone.
- Click [here](#) to checkout our customer data management and many other features.

6. The convenience of mobile ordering

- From meetings to crowded areas, there are times when one may not be able to make a phone call to order food. Online ordering allows customers to order anytime, anywhere using their mobiles, tablets or other handheld devices. There is no need for the customer to reach out and make a call meanwhile disturbing their privacy or disrupting a meeting for a lunch order. With a mobile app, the customer can quietly place an order without the hassle of talking over the phone. A mobile-friendly website or app will make sure that you never lose a customer.

7. Stay ahead of the competition

- Did you know there are only 2-3% of restaurants in the world that offer online ordering facility? This is your chance to make the most of this opportunity and make your restaurants available to your customers on their fingertips. With the growing consumer demand for faster, more convenient ways to order, independent restaurants are investing in this new takeout technology to stay ahead in the competition.
- "In 2016, the percentage of restaurant orders placed online exceeded the quantity placed verbally over the phone".
- Domino's Pizza introduced their online ordering system in 2010 and since then the company has grown to become the second-largest pizza chain in the world with the stock price rising from \$8 to \$200.

8. Grow your bottom line

- Because in the end, that's what that really matters!
- According to the survey conducted by Restolabs' research team, it was found that Orders placed online are 20 percent larger on average, which means more revenue. When

customers can browse the menu without feeling rushed by lines, they tend to spend more time deciding what to order. The math is simple: the more time they have to look over, the more they are likely to order. You can highlight specific items on menus and run promotions to influence their purchase. Now that's profit!

- Take the first step towards increasing your profits now.

9. Greater reach

- Your restaurant seating capacity may be 100-200 at a time, or even less, but with online ordering, you can reach thousands of people at a time, and cater to a much larger number without having to make any additional investment in staff or infrastructure. All you need is a well-integrated online ordering system and you are good to go!

- The data flow diagrams are an initiative way of showing how data is processed by a system. The symbols used in the DFD for this project are shown below.
- **Data flow**
Following symbol is used to show data flow.
- **Process**
People, procedures or devices that use or produce data.
- **Data storage**
Here data are stored or reference process in the system.

In the DFD we define the flow of data and how the system data flow managed by grouping the data with entity relationship. In this way, we find out the need of the system and managed it in particular way by which we can easily access with the system.

Types of data flow diagram

Data flow diagram is divided into 3 types according to system data flow represent.

- **Context level DFD**

It define data flow diagram in very small and as whole system only the external input/output entities the described with this level diagram.

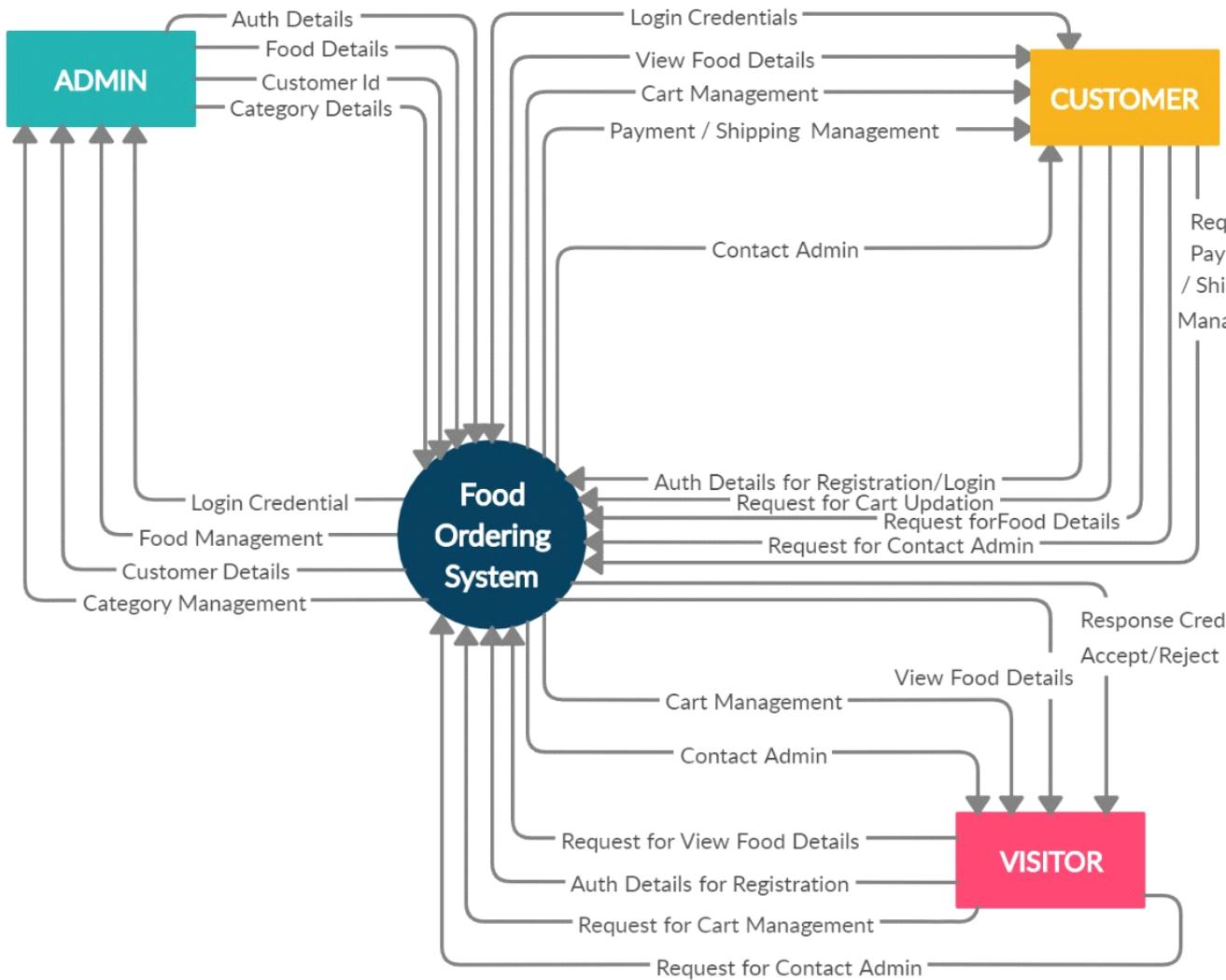
2. 1st level DFD

It describe whole system with its all processes and sub-processes as simple diagram, one can view whole system as single diagram for data transportation.

3. 2nd level DFD

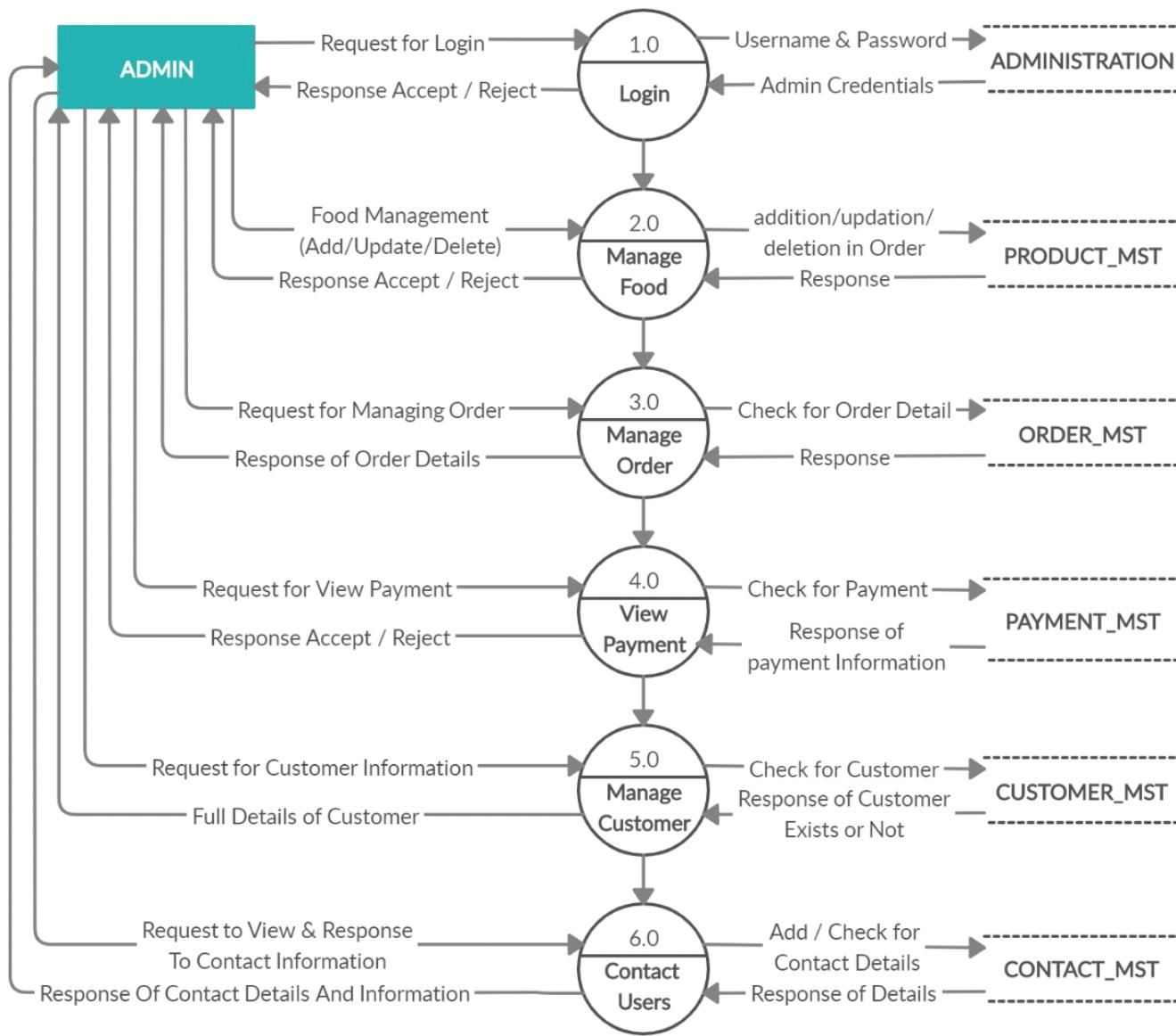
It describe each process in very deeply with its all relative processes.

- Context Level DFD For Food Ordering System



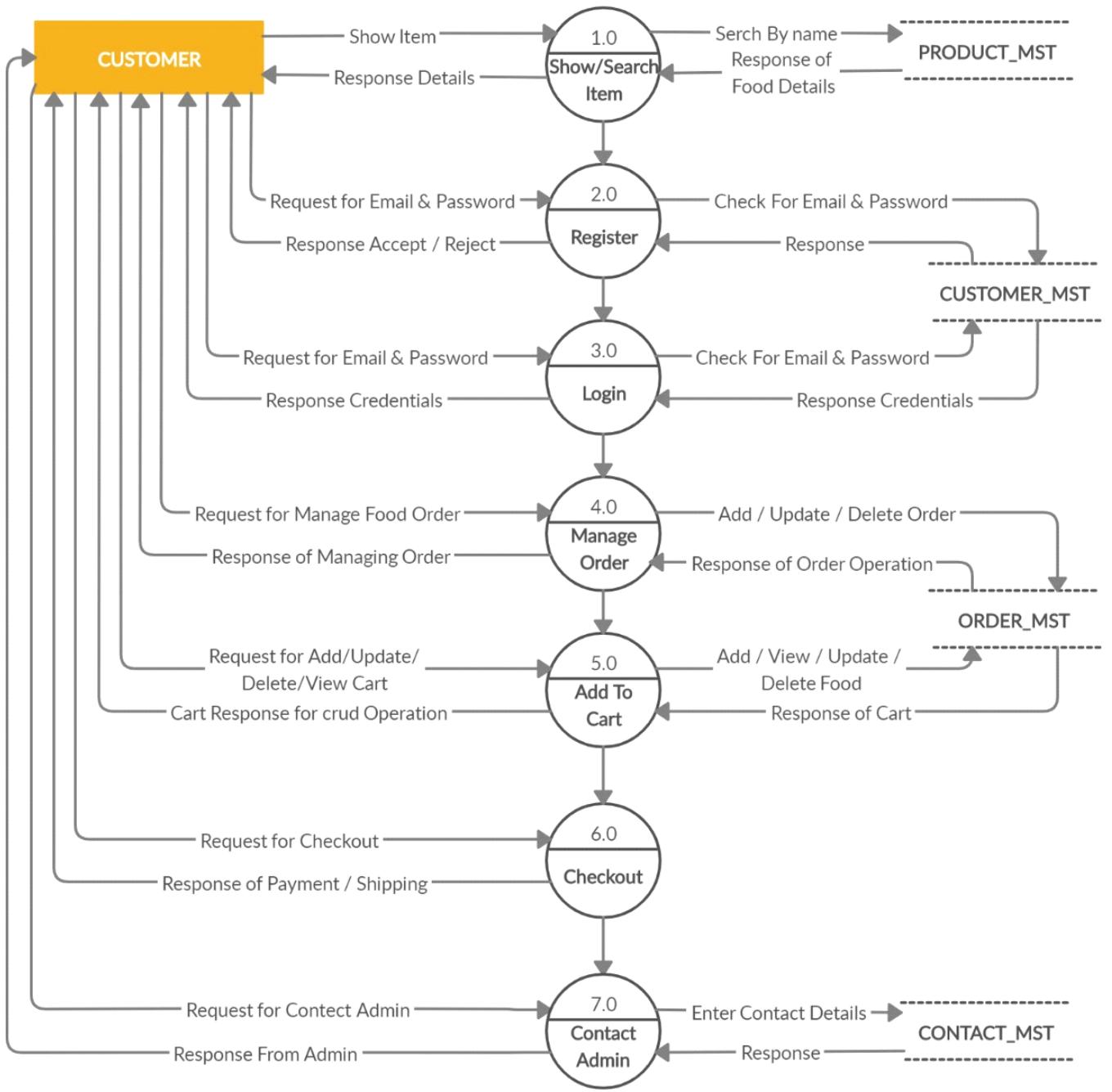
[0 level Data Flow Diagram]

- 1st Level DFD For Admin



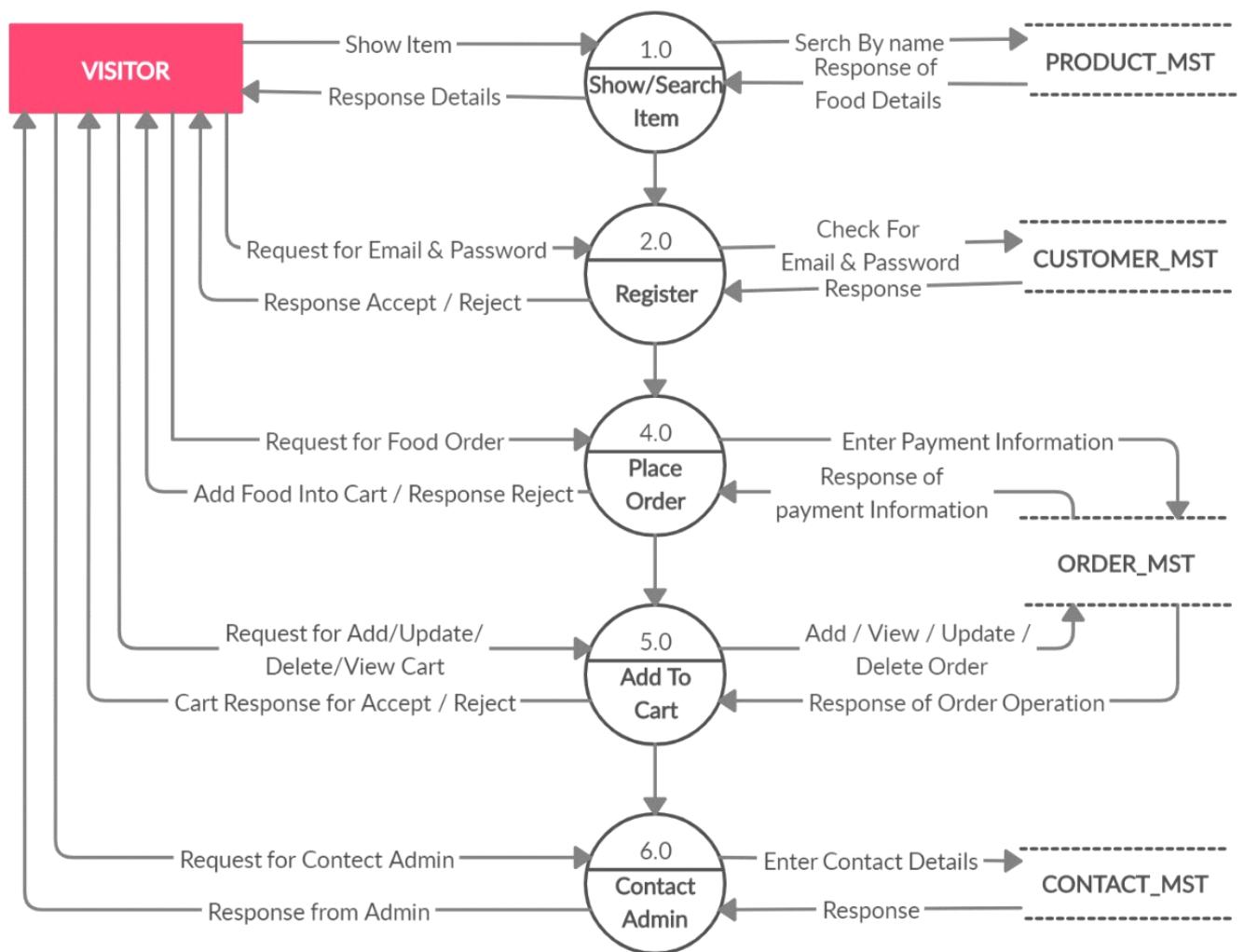
[1st Level DFD For Admin]

- 1st Level DFD For Customers



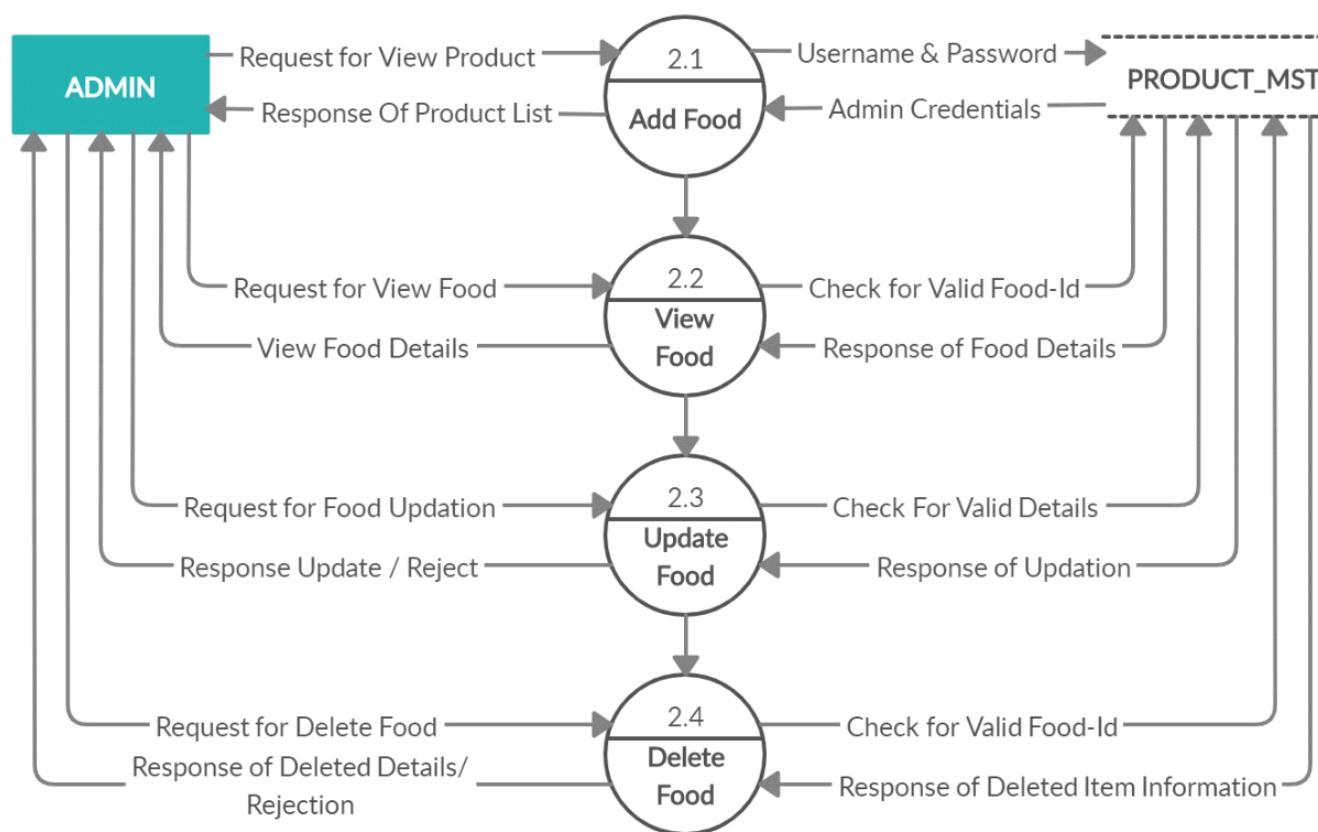
[1st Level DFD For Customer]

- 1st Level DFD For Visitor



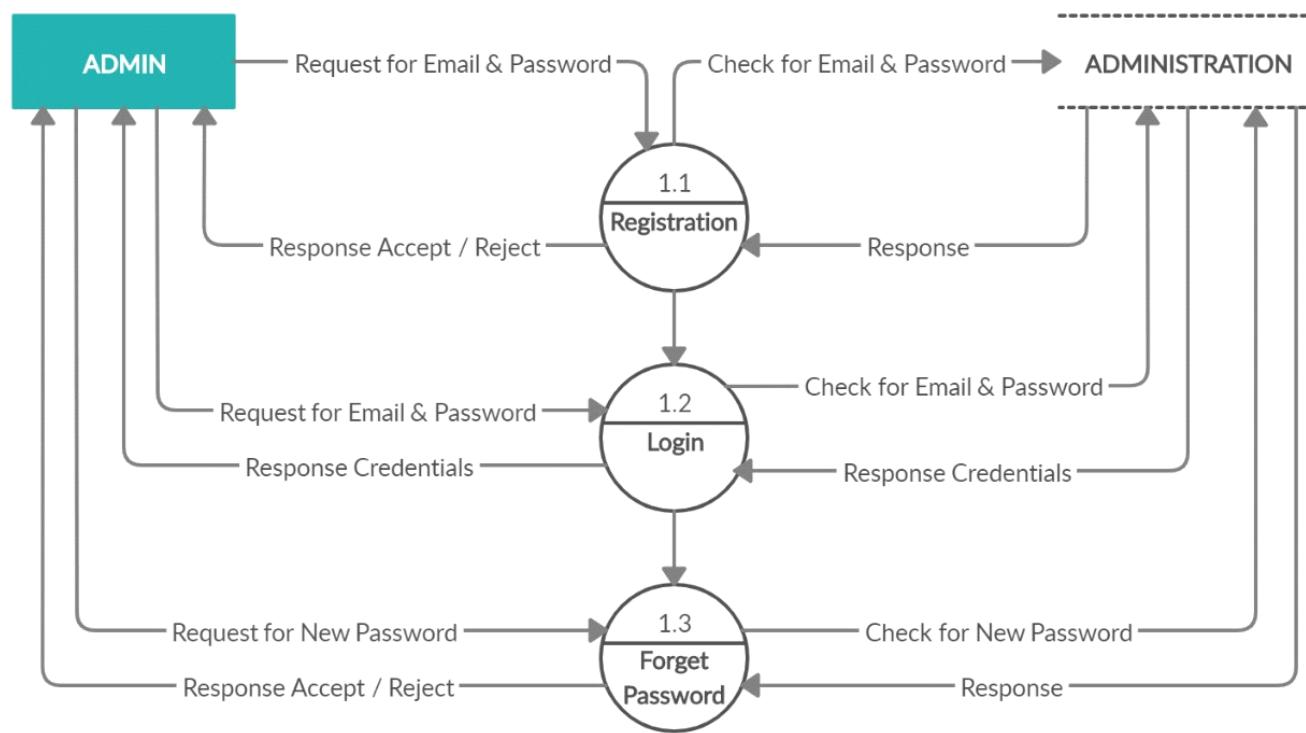
[1st Level DFD For Visitor]

- 2nd Level DFD For Admin



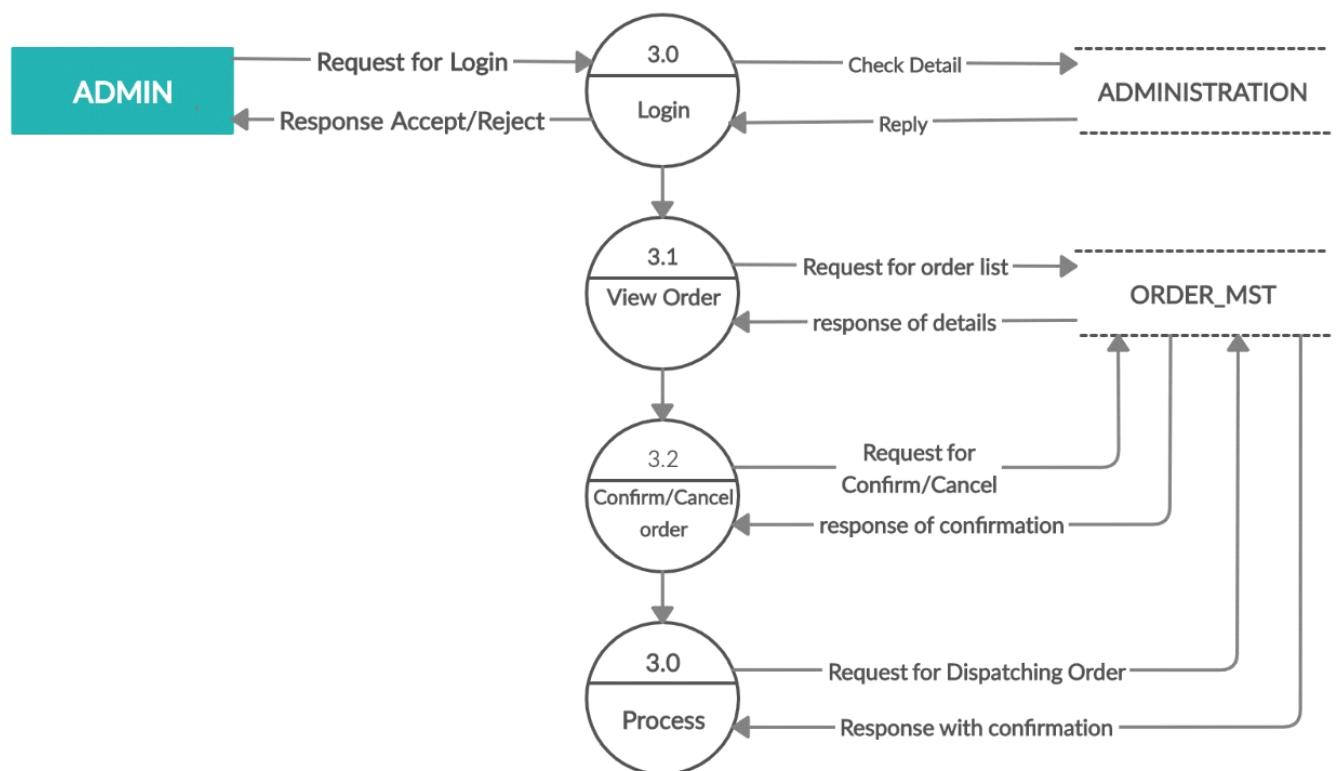
[2nd Level DFD For Admin]

- 2nd Level DFD For Admin (1.0)



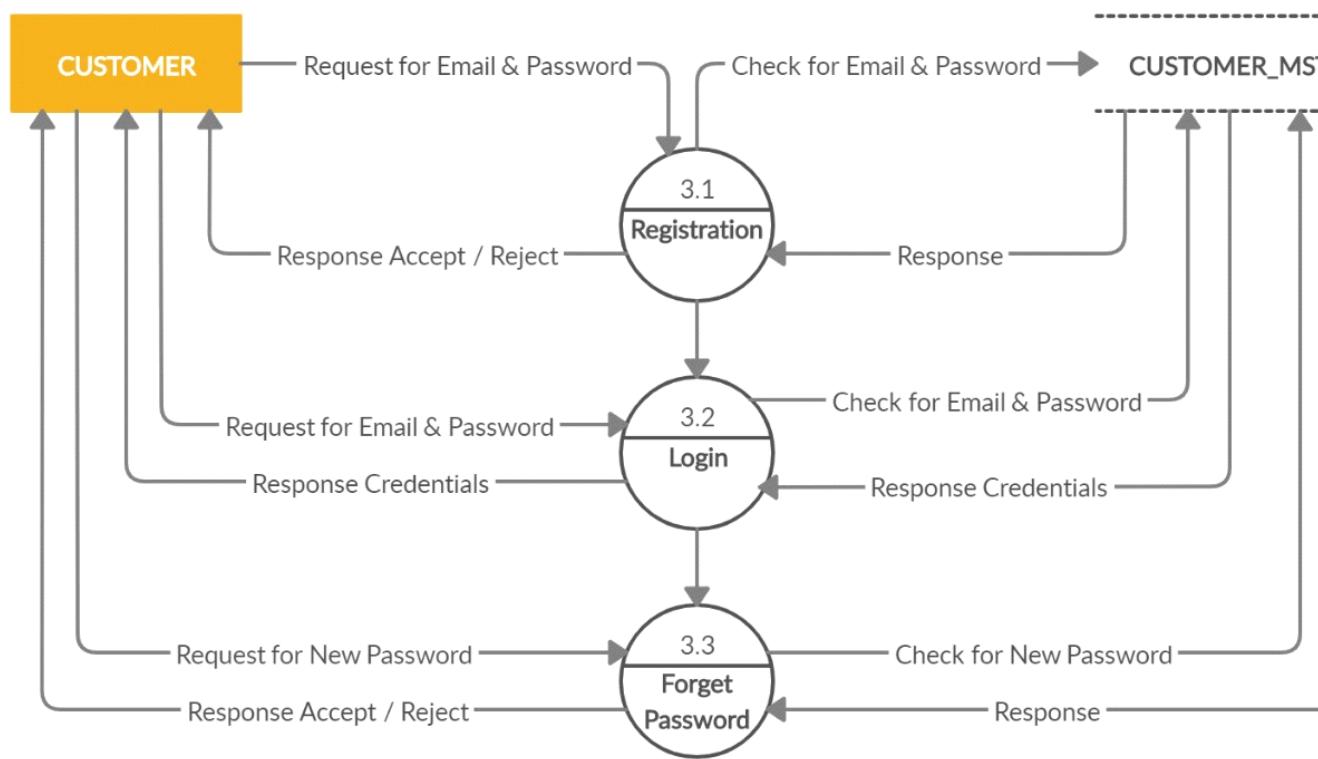
[2nd Level DFD For Admin (1.0)]

- 2nd Level DFD For Admin (3.0)



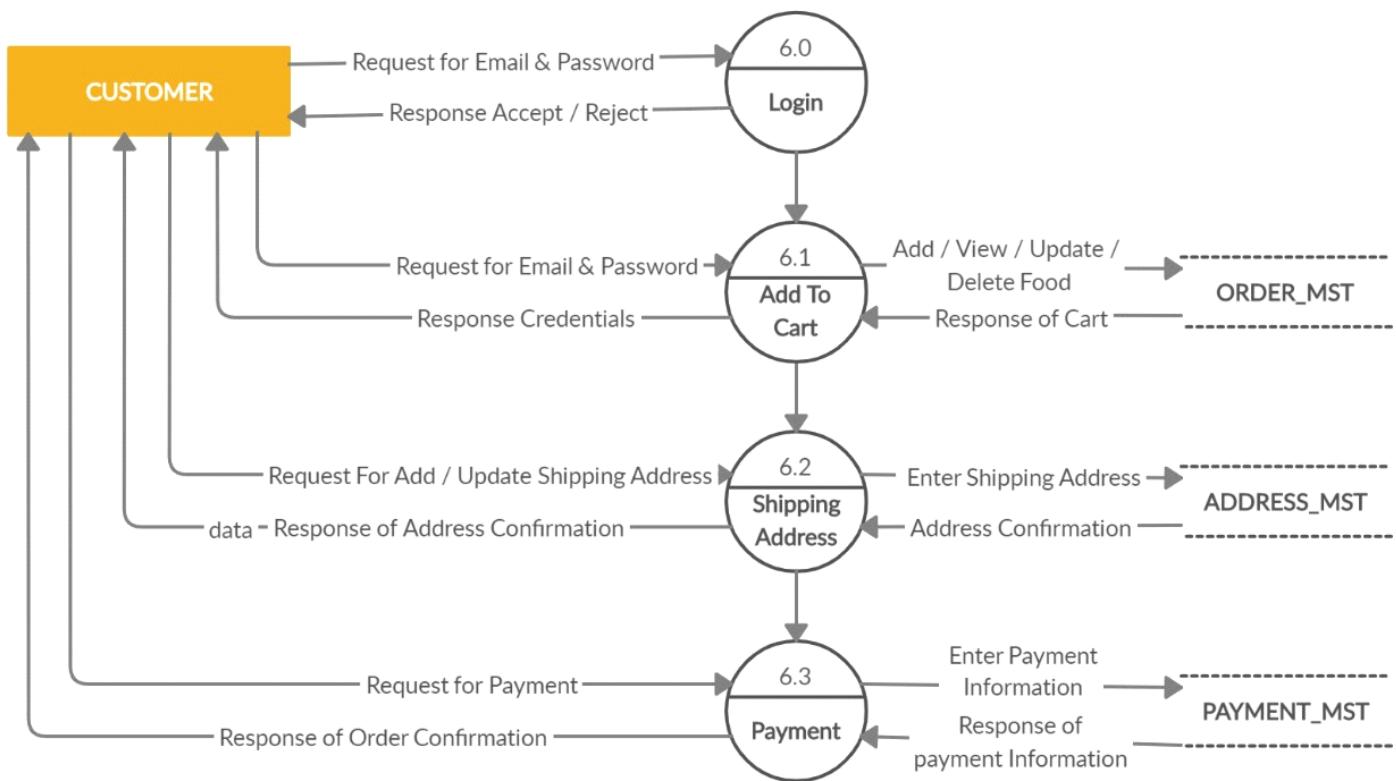
[2nd Level DFD For Admin (3.0)]

- 2nd Level DFD For Customer (3.0)



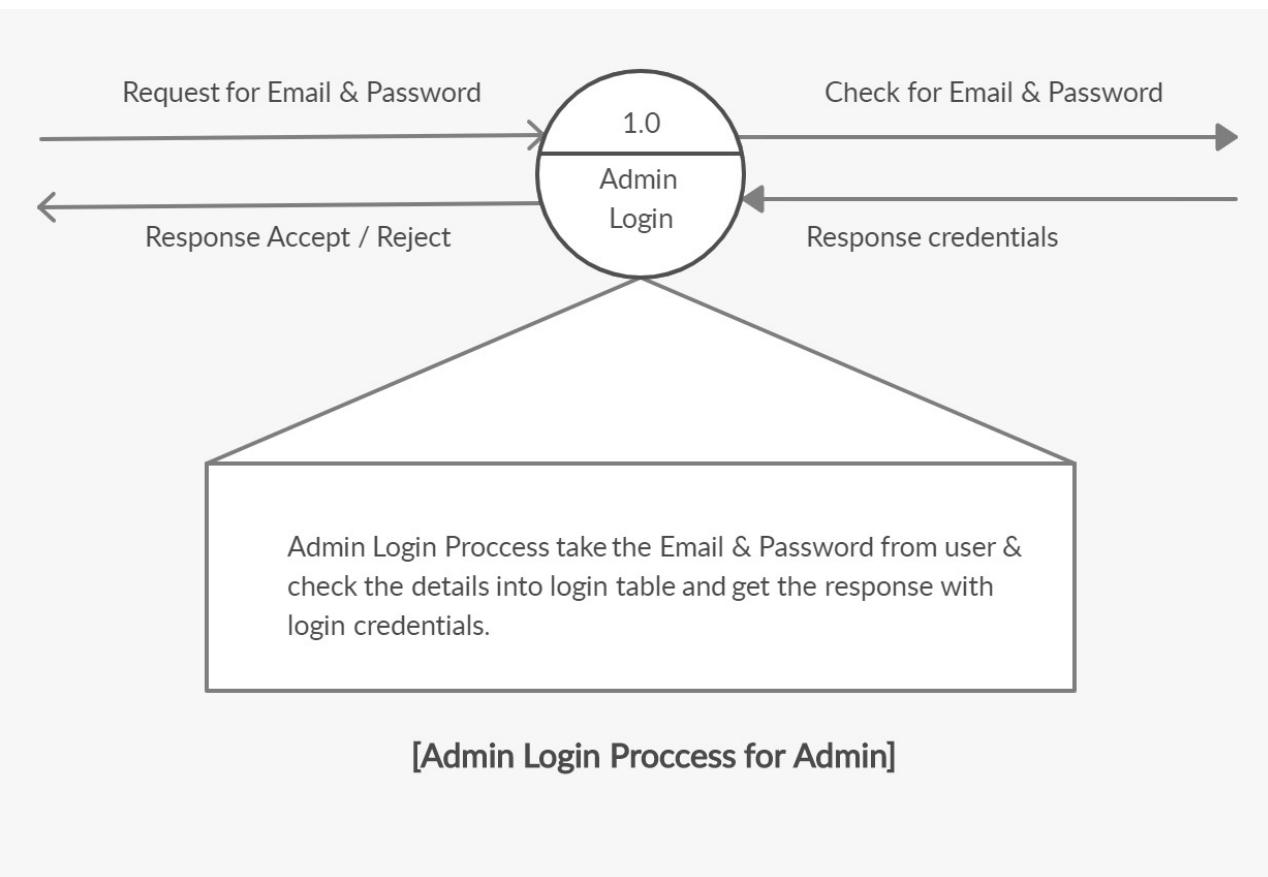
[2nd Level DFD For Customer (3.0)]

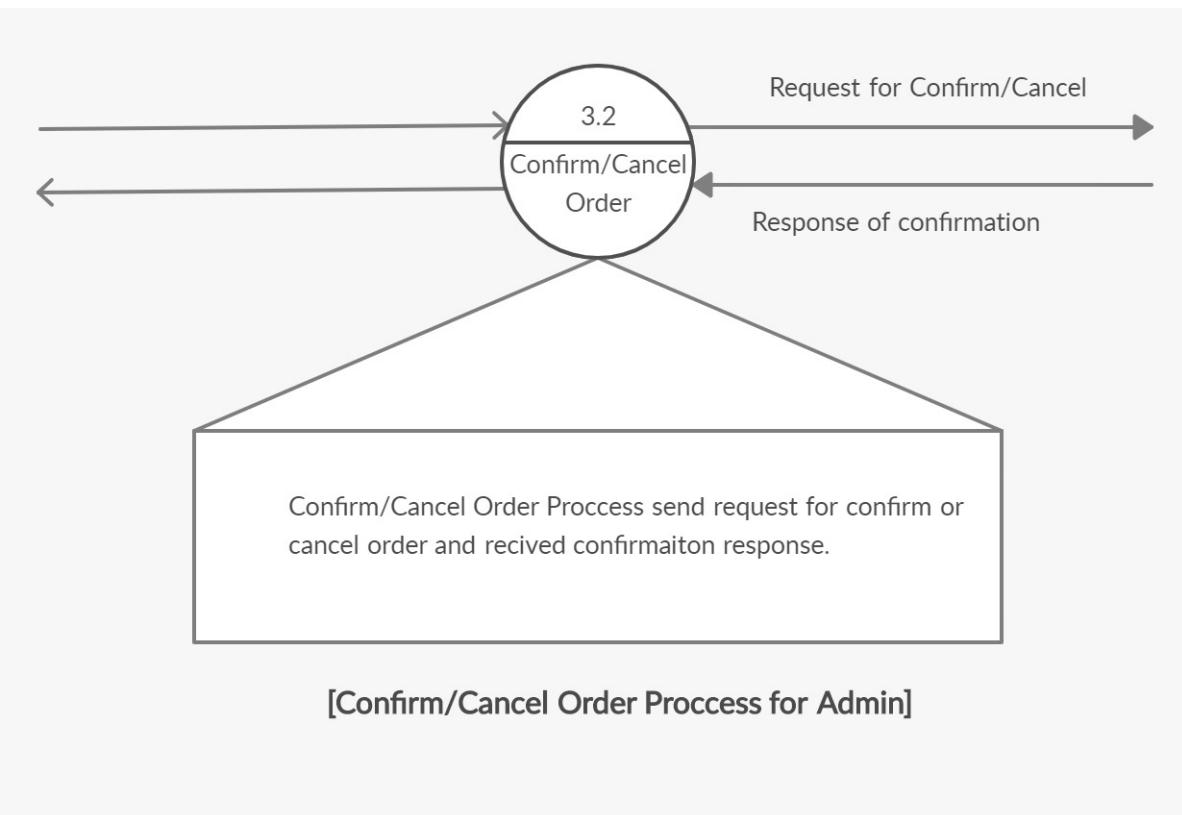
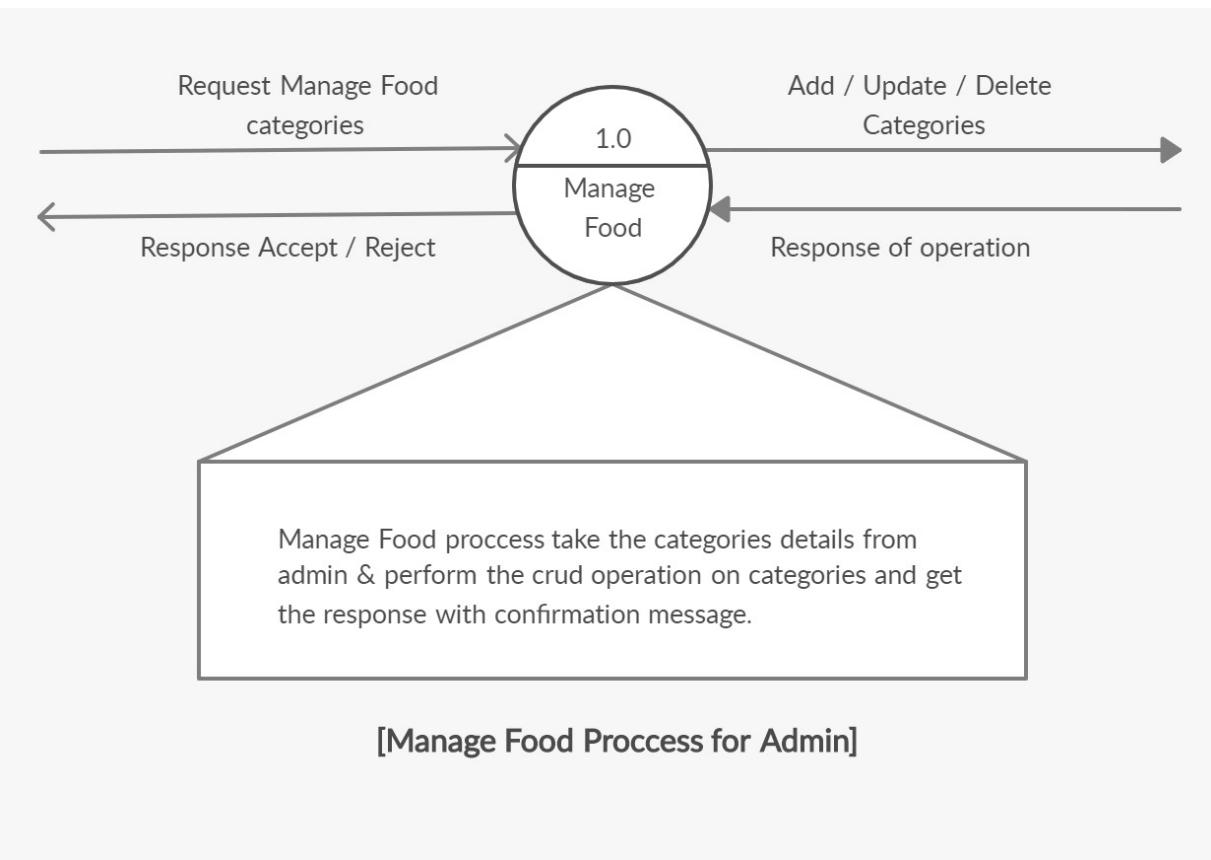
- 2nd Level DFD For Customer (6.0)

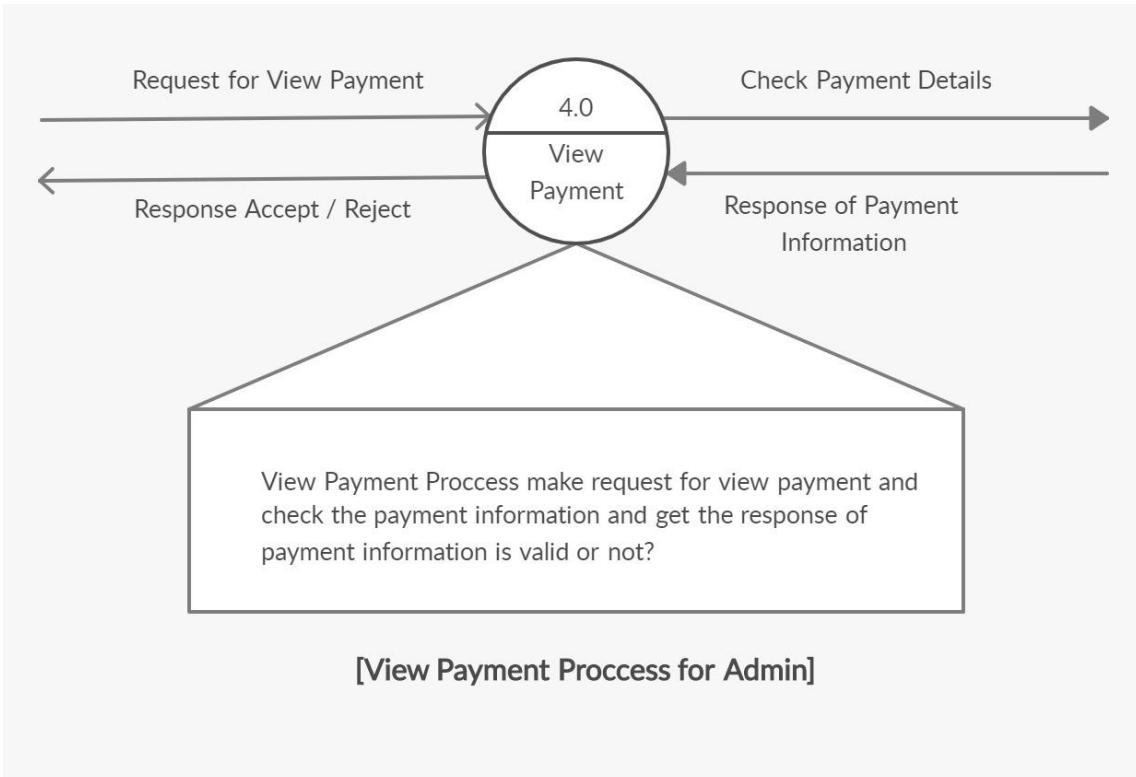
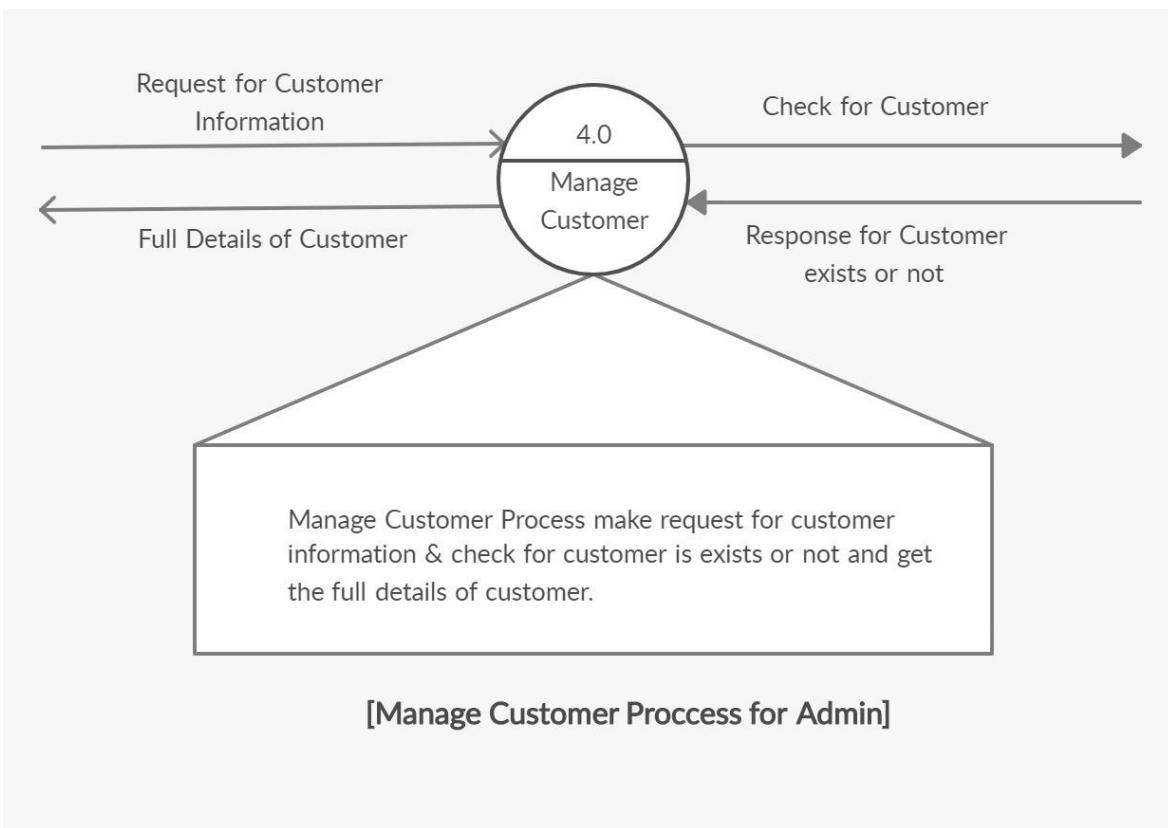


[2nd Level DFD For Customer (6.0)]

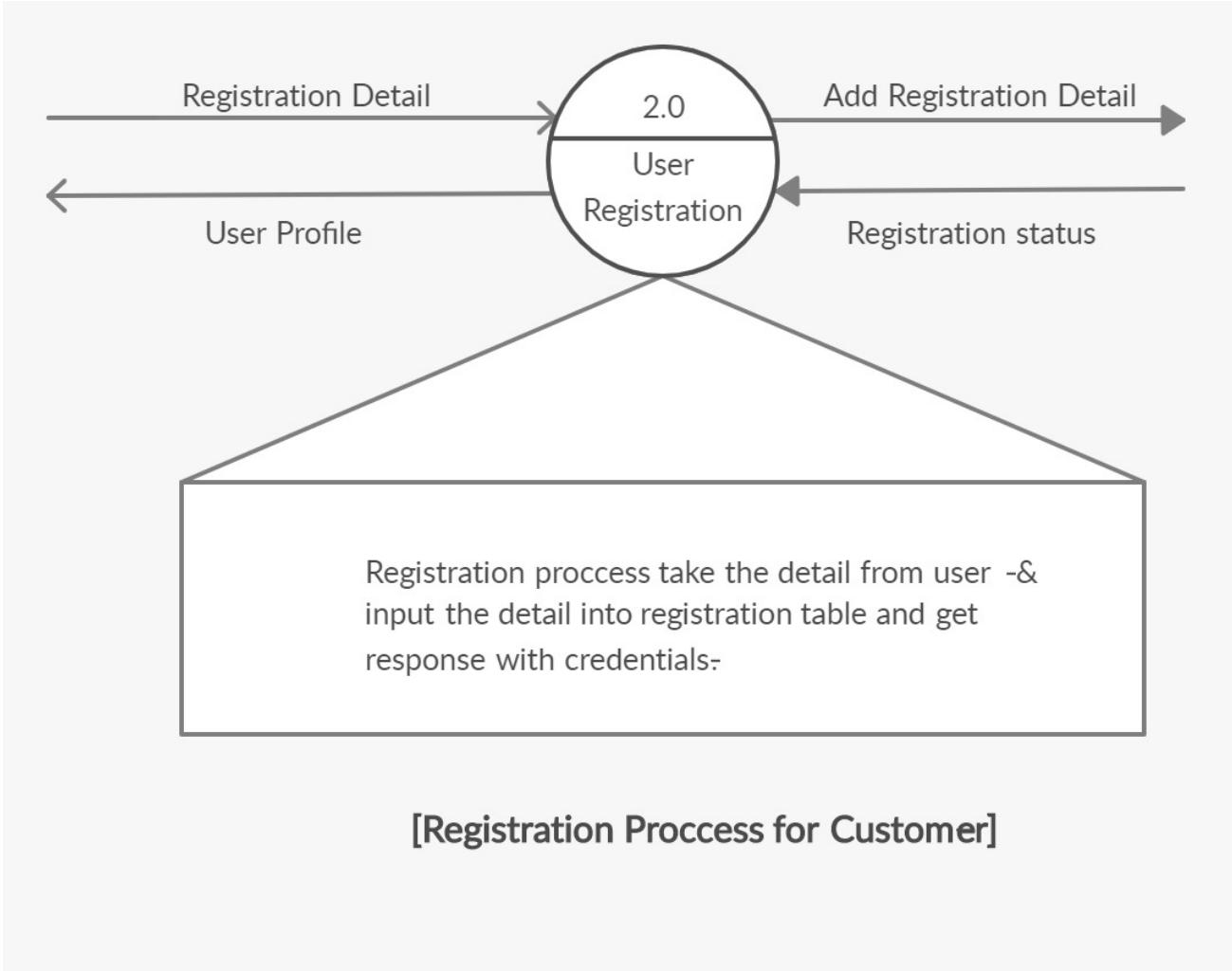
- **Process Specification of Admin**

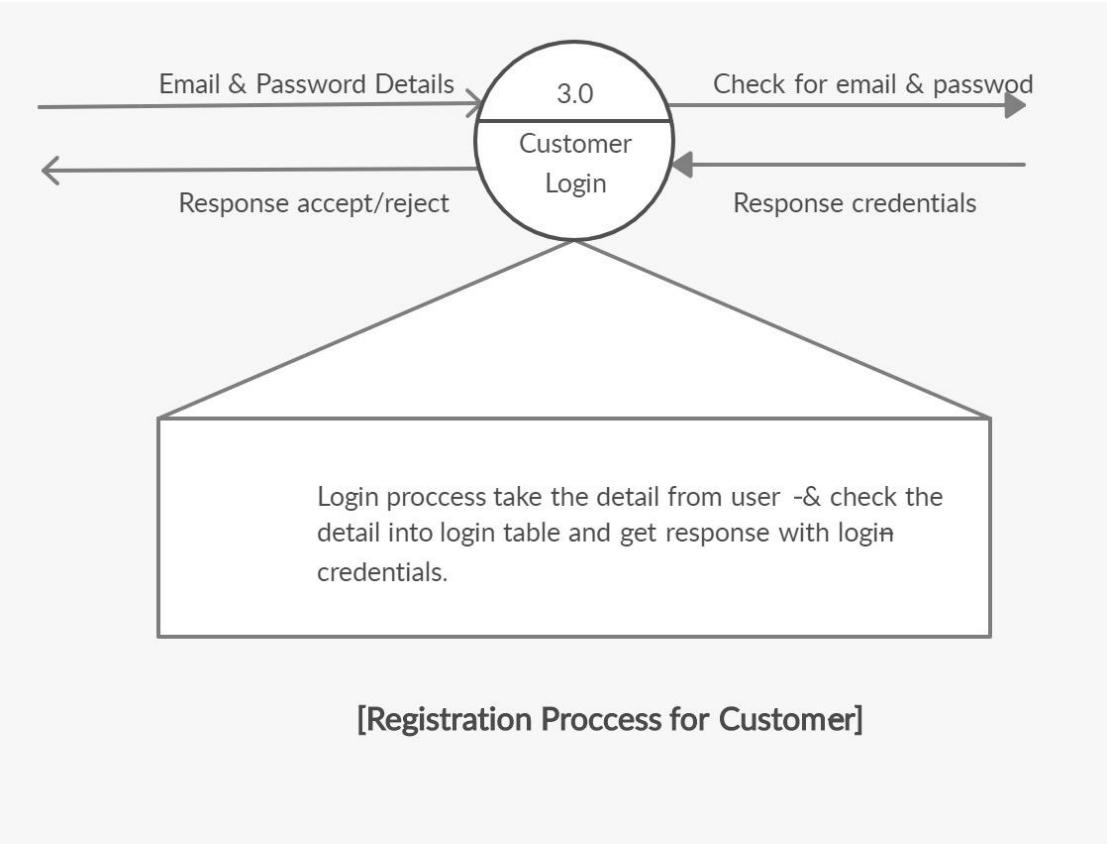


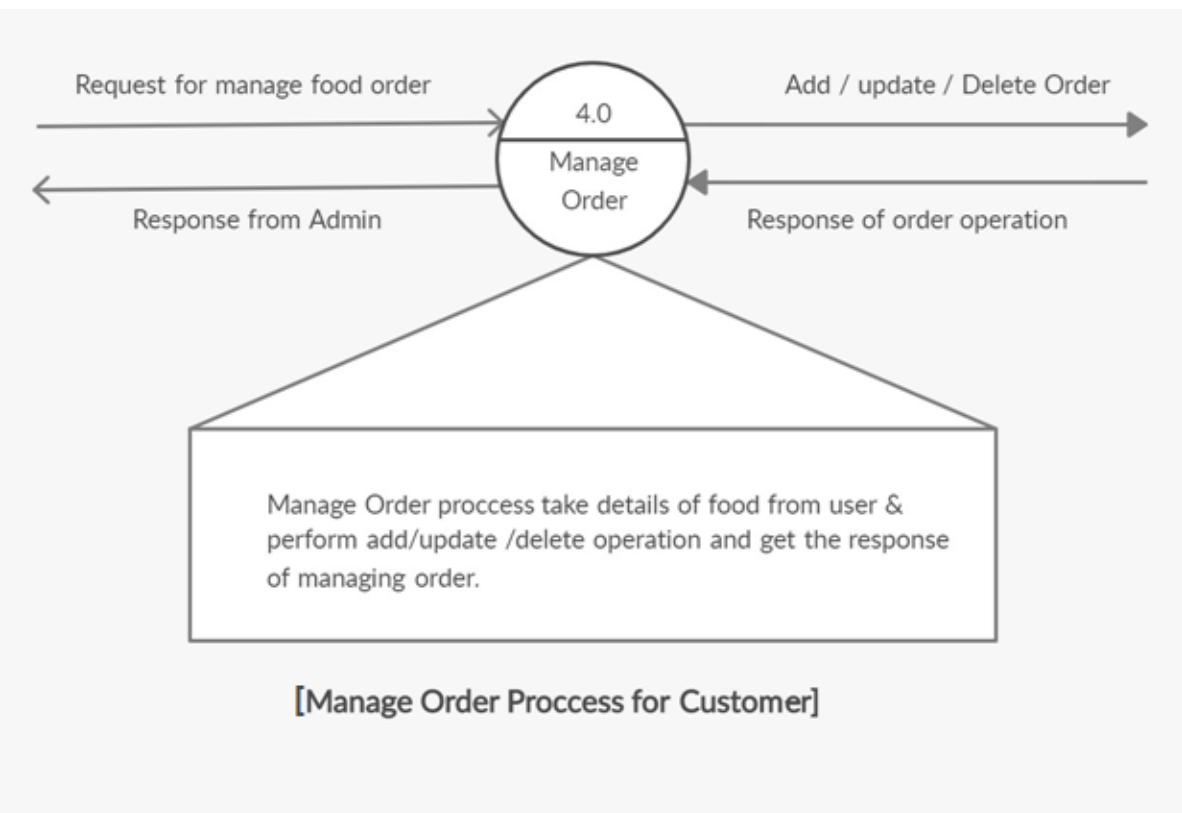
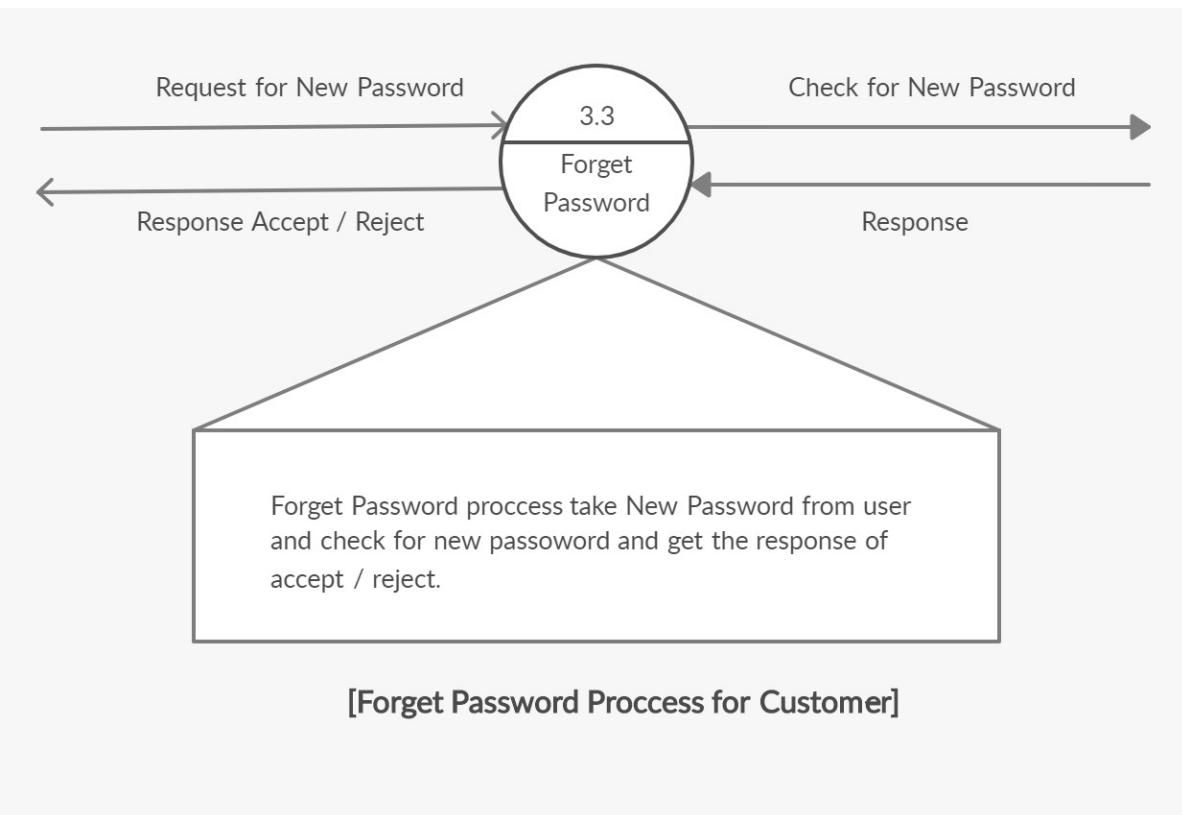


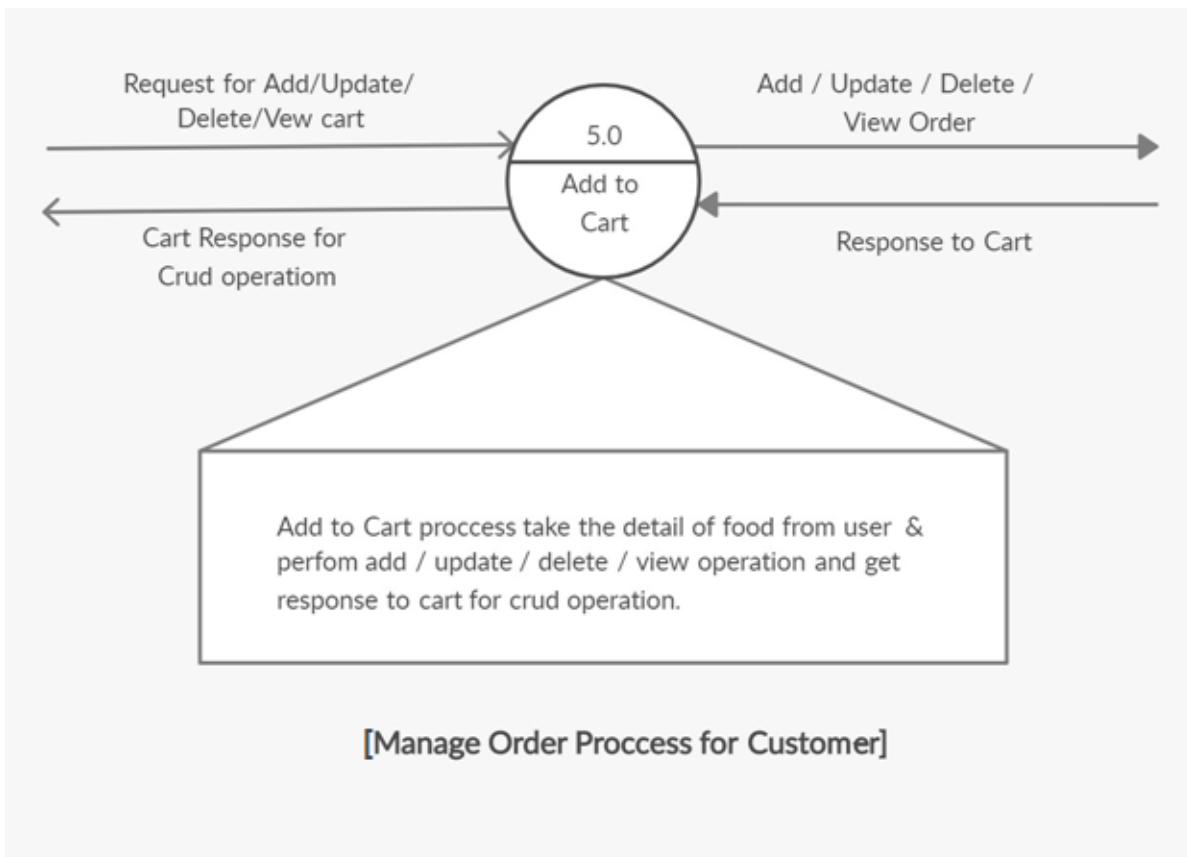
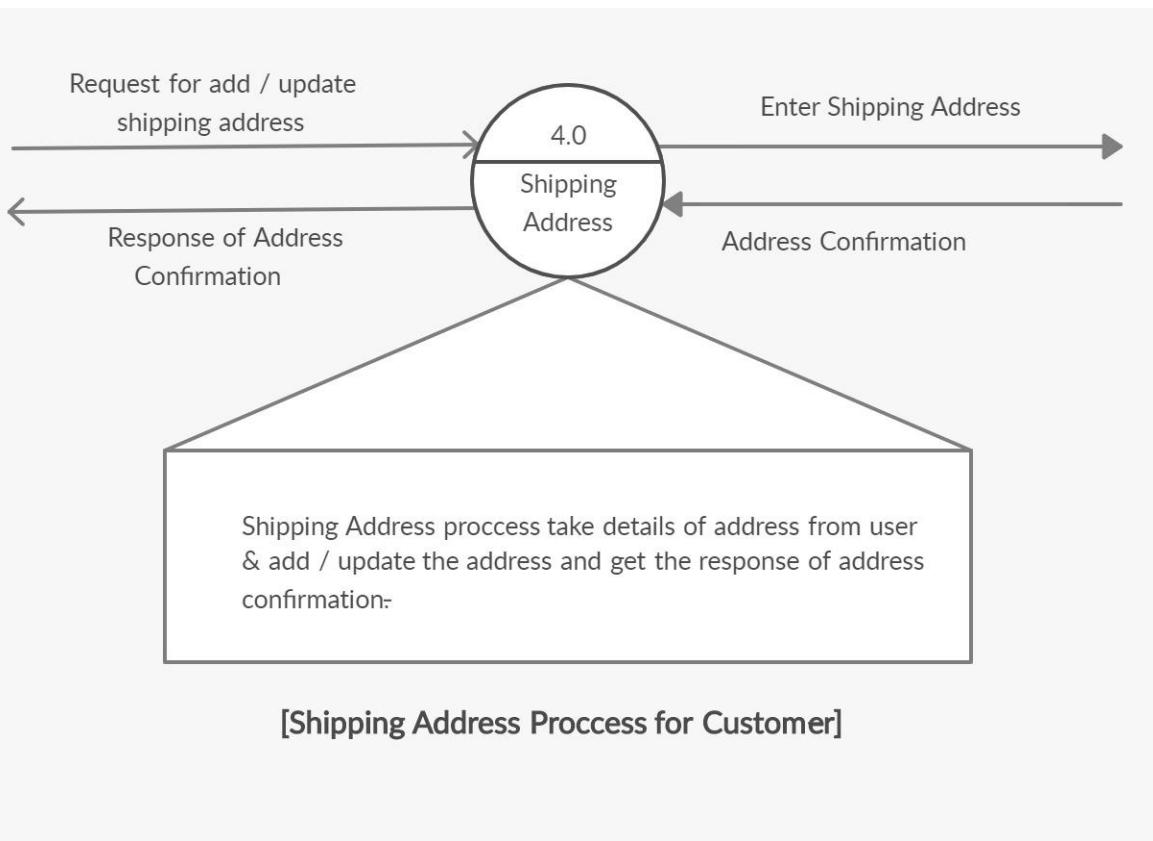


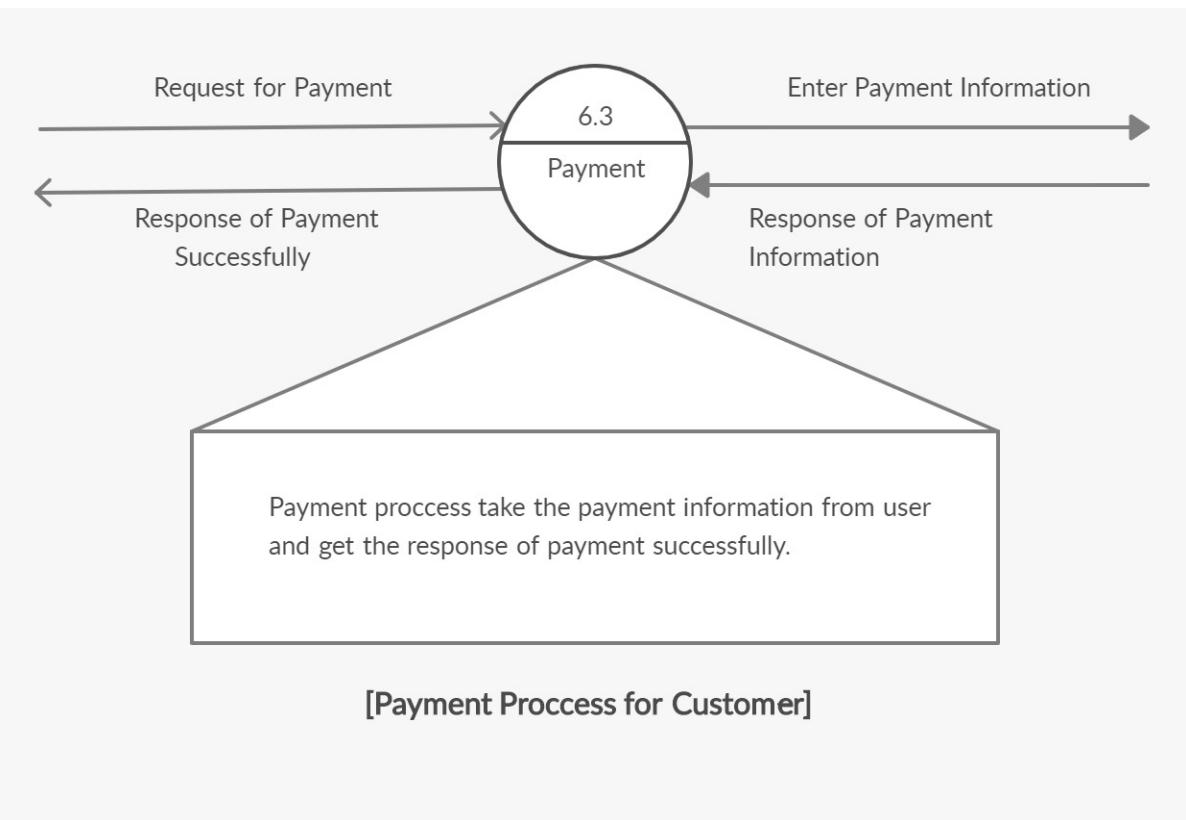
- **Process Specification of Customer**

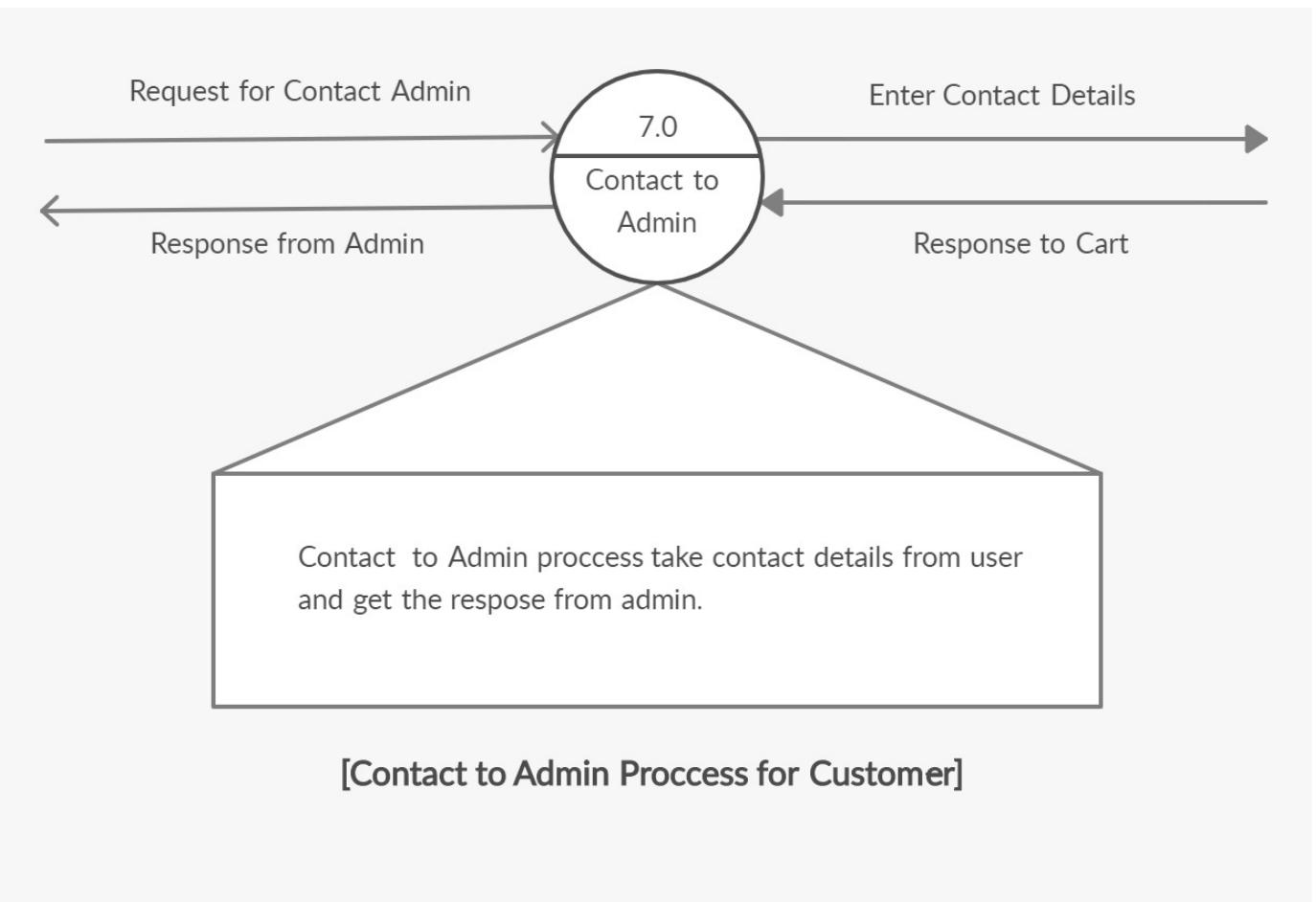




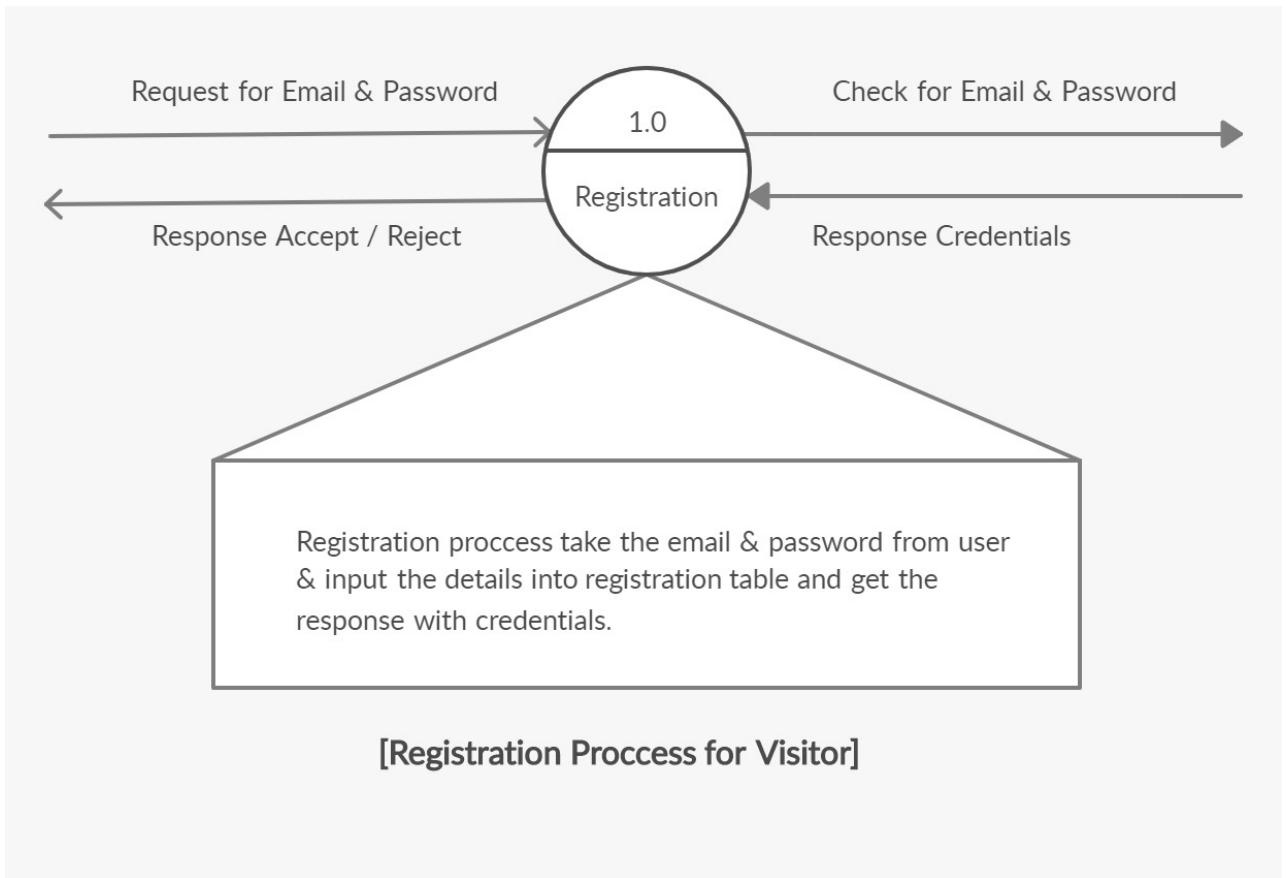


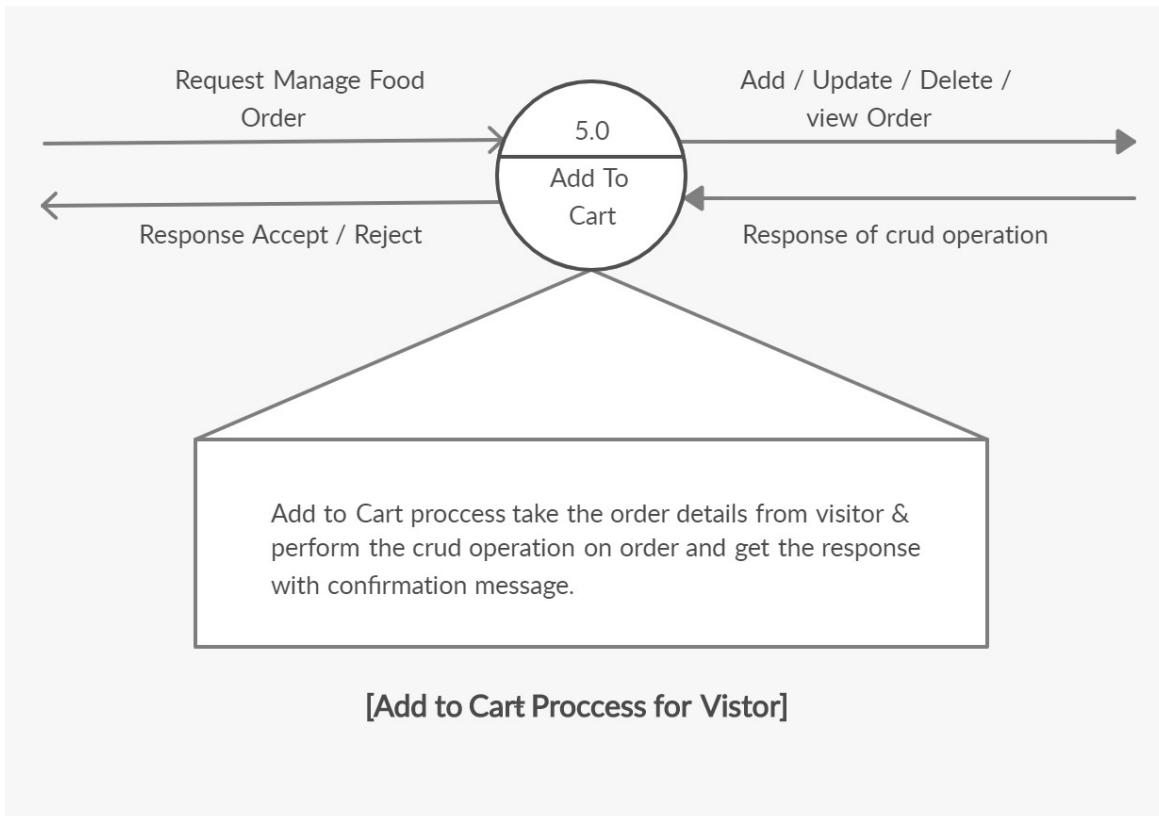
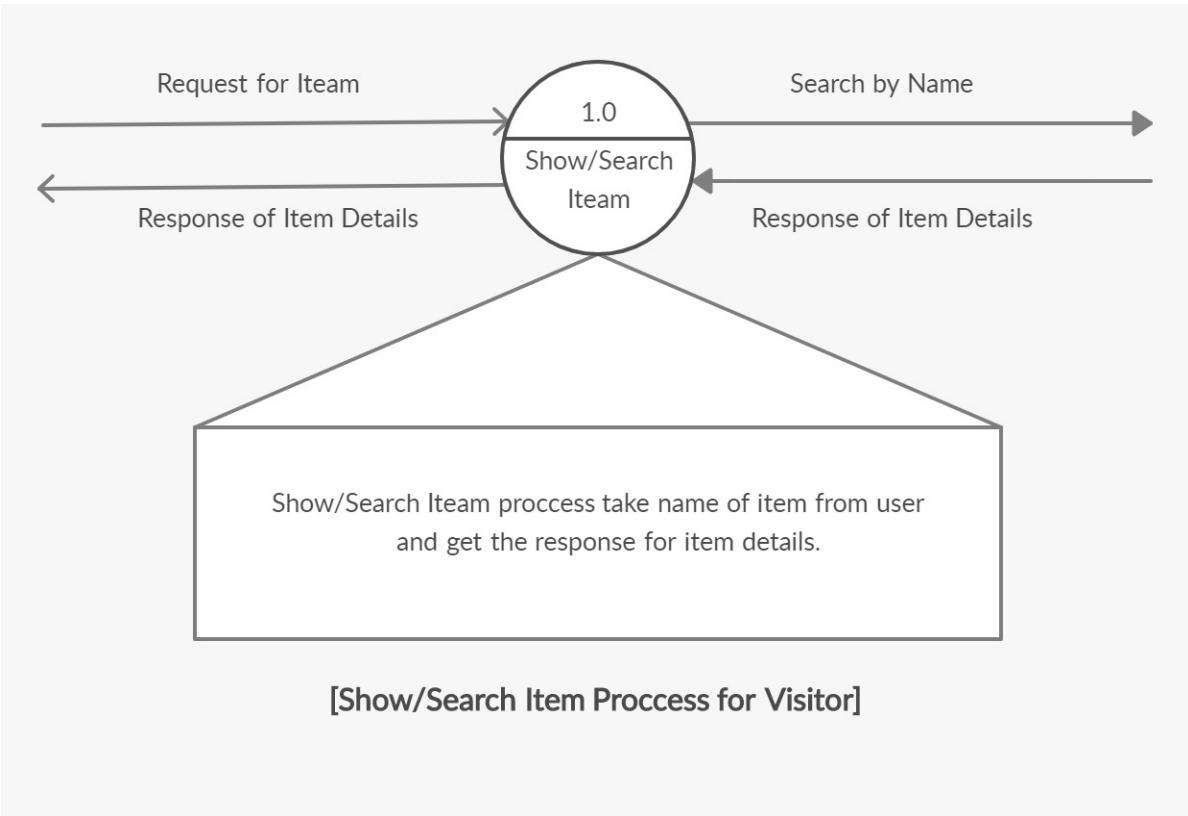






- **Process Specification of Customer**





A data dictionary is a catalogue, a repository of the element system. As the name suggest the element center on the data and they are structures to meet use requirement and organization needs, Thus data dictionary gives the details and description of the data flow, process and store used diagram.

- Import of Data Dictionary:**

- To manage the details in- large system.
- To communicate a common meaning for all elements.
- To document the feature of the system.
- To facilitate analysis of the details in order to evaluate characteristics and
- determine where system change should be made.
- To locate errors and omissions in system.

Administration Login

Table name	Administration
Alias Name	Administration login details
Where use	Used to store all the information regarding the administration login.
Description	Username + Password

CUSTOMER_MST

Table name	CUSTOMER_MST
Alias Name	None
Where use	CUSTOMER_MST table user to stored

	customer related information.
Description	User_id + name + email_id + mobile + address

PRODUCT_MST

Table name	PRODUCT_MST
Alias Name	None
Where use	PRODUCT_MST used to store all the information related to product.
Description	Product+id + product_name+ prodict_type + descriptions + product_qty + price + image_name + stock_kepping_unit + +available_qty

ORDER_MST

Table name	ORDER_MST
Alias Name	None
Where use	ORDER_MST table used to store all the information related to order and order status.
Description	Order_id + product_id + user_id + product_name + qty + price + grand_total + payment_type + payment_status

CONTACT_MST

Table name	CONTACT_MST
Alias Name	None
Where use	CONTACT_MST used to contact to admin and send the message regarding any query.
Description	User_id + fullname + email + mobile + message

PAYMENT_MST

Table name	PAYMENT_MST
Alias Name	None
Where use	PAYMENT_MST table used to store payment related information and also use regarding to a payment status.
Description	Payment_id + user_id + payment_type + payment_amt + payment_status

Table:- Administration

Field Name	Data Type	Constraint
Username	Text	Primary key
Password	Text	Not null

Table:- Administration

Field Name	Data Type	Constraint
User_id	Text	Primary key
Name	Text	Not null
Email_id	Text	Not null
Mobile	Text	Not null
Address	Text	Not null

Table:- Administration

Field Name	Data Type	Constraint
Product_id	Text	Primary key
Product_name	Text	Not null
Product_type	Text	Not null
Description	Text	Not null
Product_qty	Number	Not null
Price	Number	Not null
Product_image	Text	Not null
Available_qty	Number	Not null

Table:- Order_MST

Field Name	Data Type	Constraint
Order_id	Text	Primary key
Product_id	Text	Reference key
User_id	Text	Reference key
Product_name	Text	Not null
Qty	Number	Not null
Price	Number	Not null
Grand_total	Number	Not null
Payment_type	Text	Not null
Payment_status	Text	Not null

Table:- Contact_MST

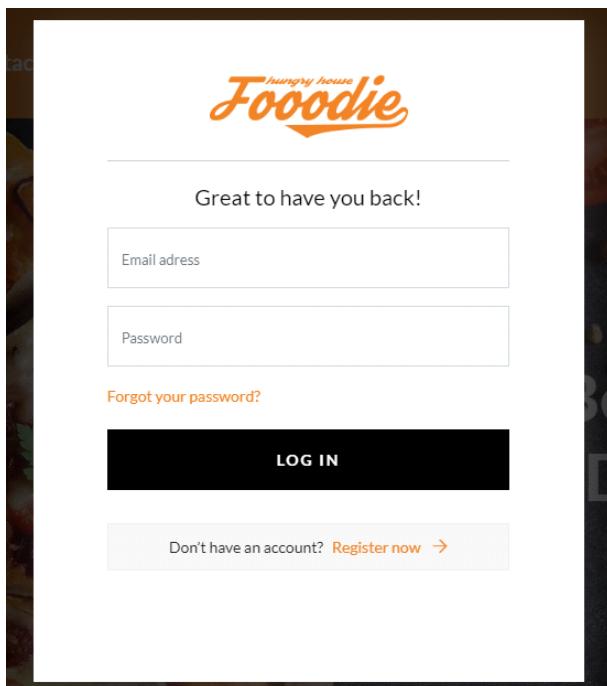
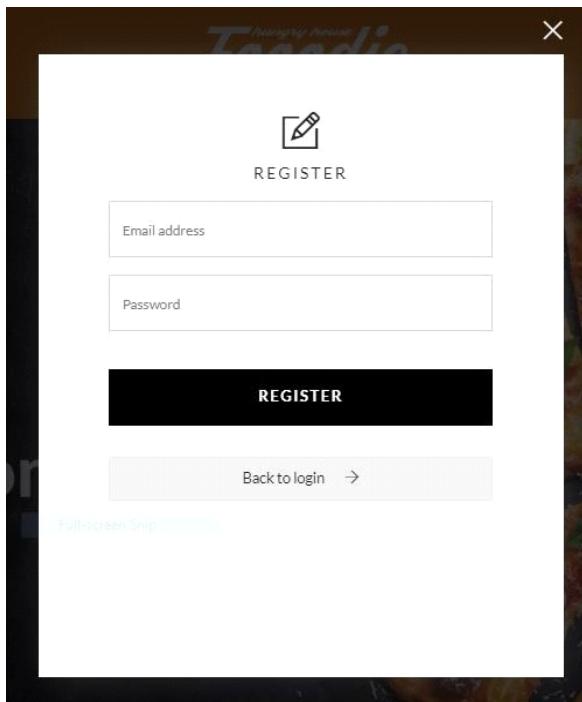
Field Name	Data Type	Constraint
User_id	Text	Primary key
fullName	Text	Not null
Email	Text	Not null
Mobile	Text	Not null
Message	Text	Not null

Table:- Payment_MST

Field Name	Data Type	Constraint
Payment_id	Text	Primary key
User_id	Text	Reference key
Payment_type	Text	Not null

Payment_amt	Number	Not null
Payment_status	Text	Not null





 **LOGIN**

Email address

Password

LOG IN

[Return to Store](#) [Forgot your password?](#)

 **REGISTER**

Email address

Password

REGISTER

[Return to Store](#)



RESET YOUR PASSWORD

Email address

SUBMIT

Cancel

≡ MENU

LOGIN

HOME

CATEGORY >

ABOUT US

CONTACT US

X CLOSE

Home Category About Us Contact Us



Pizza Collection

Made By TeamFooodie

Shop now



<https://shop.fooodie.tk/?key=f9a/4da30127/b79/b15e919dbb/1a8f73a93bf16b...>

Home
Category
About Us
Contact Us
Fooodie
🔍
🛒
Cart 0



Burger
9 Items

[View more product](#)



New Item
9 Items

[View more product](#)



Pastry
1 Item

[View more product](#)



Pepsi
8 Items

[View more product](https://shop.fooodie.tk/collections/frontpage)



Pizza
8 Items

[View more product](#)



Samosa
8 Items

[View more product](#)

❖ Collection Page ❖

☰
🔍
🛒
Cart 0

ABOUT US

Who We Are

Food democracy

We created the concept and system of rules by which we are able to realize all ideas and always achieve successful solutions. Team FooodieCreation was built on the principles of personal development and growth in 2020, so that we invest in our education and acquired knowledge immediately apply in practice. Each of our employees is an expert in the field and the assigned activity, because as a team we form leaders in their field, we are able to cover the vast majority of desired services in web designing & web development, digital marketing, Mobile Applications for iOS Android, Blackberry Windows, Domain web hosting services as well.



SHOPPING CART		
		7
	Chese Classic Burger - Big QTY: 1 Rs. 150.00	X
	Burger Sandwich - Big QTY: 1 Rs. 199.00	X
	Wild Salmon Burgers - Medium QTY: 1 Rs. 110.00	X
	Pepsi Tin - Small QTY: 3 Rs. 20.00	X
	Pepper Barbeque - Big / Chese QTY: 1 Rs. 230.00	X
Total:		Rs. 749.00
VIEW CART		CHECK OUT



Fooodie

Portobello Mushroom Burgers.
Rs. 70.00

SIZE SMALL MEDIUM BIG

ADD TO CART **1**

CATEGORIES: Burger

SHARE: [Twitter](#) [Facebook](#) [Pinterest](#)

❖ View Page❖

Home Category About Us Contact Us **Fooodie**

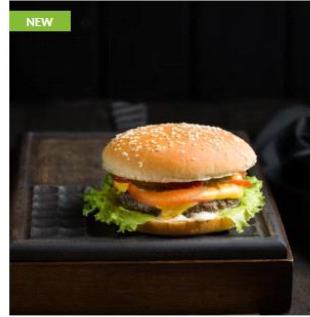
YOU SEARCH FOR "BURGER"



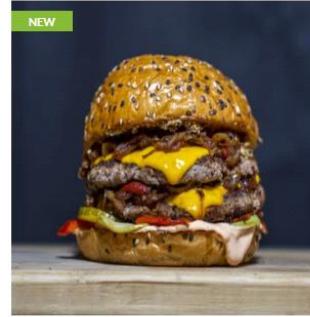
NEW
Cheese Classic Burger
Rs. 60.00
<https://shop.fooodie.tk>



NEW
Burger Sandwich
Rs. 100.00
<https://shop.fooodie.tk>



NEW
Double Classic Burger
Rs. 140.00
<https://shop.fooodie.tk>



NEW
Bison Burgers
Rs. 110.00
<https://shop.fooodie.tk>



Cart > Information > Shipping > Payment

Contact information



(demo@gmail.com)
Log out

Keep me up to date on news and exclusive offers

Shipping address

Saved addresses
yogi chowk, 395010 surat GJ, India (demo patel)

First name (optional)
demo

Last name
patel

Address
yogi chowk

Apartment, suite, etc. (optional)

City
surat

Country/Region
India

State
Gujarat

PIN code
395010

[« Return to cart](#)

[Continue to shipping](#)



3 IndianTandooriPaneer
Big

Rs. 597.00



10 Fish Samosa
small

Rs. 500.00

Subtotal

Rs. 1,097.00

Shipping

Calculated at next step

Total

Rs. 1,097.00



Cart > Information > Shipping > Payment

Contact	demo@gmail.com	Change
Ship to	yogi chowk, 395010 surat GJ, India	Change
Method	Standard - Free	



IndianTandooriPaneer
Big

Rs. 597.00



Fish Samosa
small

Rs. 500.00

Subtotal

Rs. 1,097.00

Shipping

Free

Taxes

Rs. 197.46

Total

Rs. 1,294.46

Payment

All transactions are secure and encrypted.

Credit card

Card number

Name on card

Expiration date (MM / YY) Security code

Billing address

Select the address that matches your card or payment method.

Same as shipping address

Use a different billing address

[Return to shipping](#)

[Pay now](#)



Order #1008
Thank you demo!



Shipping address
Surat, Gujarat

Your order is confirmed
You'll receive a confirmation email with your order number shortly.

Customer information	
Contact information	Payment method
demo@gmail.com	B ending with 1 - Rs. 1,294.46
Shipping address	Billing address
demo patel yogi chowk 395010 surat GJ India	demo patel yogi chowk 395010 surat GJ India
Shipping method	
Standard	

Need help? Contact us [Continue shopping](#)

	3 Indian Tandoori Paneer Big	Rs. 597.00
	10 Fish Samosa small	Rs. 500.00
Subtotal		Rs. 1,097.00
Shipping		Free
Taxes		Rs. 197.46
Total		Rs. 1,294.46

Demo@Gmail.Com
(not demo@gmail.com? [Sign out](#)).

RECENT ORDERS

Order	Date	Payment Status	Fulfillment Status	Total	Action
#1006	March 20, 2020	Paid	Unfulfilled	Rs. 1,189.44	View
#1005	March 17, 2020	Paid	Unfulfilled	Rs. 224.20	View
#1004	March 16, 2020	Paid	Unfulfilled	Rs. 601.80	View

[Full-screen Snp](#) **BILLING ADDRESS** [Edit](#)

yogi chowk
surat
GJ
395010
India

My Account

[Return to Account Details](#)

Order #1007
March 22, 2020 06:48AM

Product	SKU	Price	Quantity	Total
Pizza Shrimp Pepper & Sausage - Big		Rs. 170.00	1	Rs. 170.00
Subtotal				Rs. 170.00
Shipping (Standard)				Rs. 0.00
Tax (IGST 18.0%)				Rs. 30.60
Total				Rs. 200.60 INR

foodieskill Admin

Home Orders Products All products Transfers Inventory Collections Gift cards Customers Analytics Marketing Discounts Apps Online Store Messenger Settings

Products

Export Import Add product

All

<input type="checkbox"/>	Product	Inventory	Type	Vendor
<input type="checkbox"/>	Beef Burgers	25 in stock for 3 variants	burger	foodieskill
<input type="checkbox"/>	Bison Burgers	10 in stock	burger	foodieskill
<input type="checkbox"/>	Black Bean Burgers	10 in stock for 3 variants	burger	foodieskill
<input type="checkbox"/>	burger sandwich	30 in stock for 3 variants	sandwich	foodieskill
<input type="checkbox"/>	Cauliflower Samosa	18 in stock for 2 variants	samosa	foodieskill

foodieskill

Search

foodieskill Admin

Home

Orders 8

All orders

Drafts

Abandoned checkouts

Products

Customers

Analytics

Marketing

Discounts

Apps

SALES CHANNELS

Online Store

Messenger

Settings

Orders

Export

Create order

All	Open	Unfulfilled and partially fulfilled	Unpaid		Total
<input type="checkbox"/> Order #1008	14 Apr at 02:29 pm	demo@gmail.com	Paid	Unfulfilled	Rs.1,294.46
<input type="checkbox"/> #1007	22 Mar at 06:48 am	demo@gmail.com	Paid	Unfulfilled	Rs.200.60
<input type="checkbox"/> #1006	20 Mar at 03:18 am	demo@gmail.com	Paid	Unfulfilled	Rs.1,189.44
<input type="checkbox"/> #1005	17 Mar at 05:25 am	demo@gmail.com	Paid	Unfulfilled	Rs.224.20
<input type="checkbox"/> #1004	16 Mar at 07:18 am	demo@gmail.com	Paid	Unfulfilled	Rs.601.80
<input type="checkbox"/> #1003	14 Mar at 12:17 pm	tusharbeladiya145@gmail.com	Paid	Unfulfilled	Rs.177.00
<input type="checkbox"/> #1002	14 Mar at 12:09 pm	domadiya@gmail.com	Paid	Unfulfilled	Rs.672.60
<input type="checkbox"/> #1001	14 Mar at 10:52 am	bhavindomadiya@gmail.com	Paid	Unfulfilled	Rs.934.56

foodieskill Admin

Orders (8)

#1008 April 14, 2020 at 2:29 pm from Online Store Paid Unfulfilled

Print Refund Edit More actions

Test order
Your payment gateway was in test mode when this order was created.

Unfulfilled (13)

	IndianTandooriPaner Big	Rs. 199.00 × 3	Rs. 597.00
	Fish Samosa small	Rs. 50.00 × 10	Rs. 500.00

Paid

Subtotal	13 items	Rs. 1,097.00
Shipping	Standard (0.0 kg)	Rs. 0.00
Tax	IGST 18%	Rs. 197.46
Total		Rs. 1,294.46

Paid by customer Rs. 1,294.46

Timeline Show comments

Notes Edit
No notes from customer

Customer
No orders

Contact Information Edit
demo@gmail.com
No phone number

Shipping Address Edit
demo patel
yeol chowk
395010 surat GJ
India
View map

Billing Address Same as shipping address

foodieskill Admin

Customers (8)

Import customers Export

All New Returning Abandoned checkouts Email subscribers From India

Filter customers Tagged with Customer account status More filters Saved

Showing 17 of 17 customers Sort by Last update (newest first)

Customer	Orders	Spent
demo@gmail.com Surat, GJ, India	0 orders	₹0.00 spent
nayanvariya54@gmail.com	0 orders	₹0.00 spent
romit@gmail.com	0 orders	₹0.00 spent
bhautikkoshiya@gmail.com	0 orders	₹0.00 spent
tusharbeldiya145@gmail.com Surat, GJ, India	0 orders	₹0.00 spent

- **Software Testing**

Software testing is a critical element of software quality assurance and represents the ultimate review of specification design and coding. Testing is an exposure of a system to trial input to see whether it produces correct output. Testing cannot be determined whether software meets user's needs, only whether it appears to confirm to requirements. Testing can show that a system is free of errors, only that it contains error. Testing finds errors, it does not correct errors. Software success is a quality product, on time and within cost. Though testing can reveal critical (costly) mistakes. Testing should therefore,

Some of the Amazon's third party retailers saw their product price is reduced to 1p due to a software glitch. They were left with heavy losses.

Validate Performance.

Detects Errors.

Identify Inconsistencies.

- Requirement errors typically cost well over 10 times more to repair than other errors.
- Requirement errors typically comprise over 40% of all errors in a software project.

- **Test Planning**

- Test planning evolves the following steps:
- Estimate the size and cost of the testing efforts.
- May allocate test resources
- Schedule test activities in accord with other development work.

- Generate test cases

- **Generating Test Cases**

- A test case is a unit of testing activity. Test cases have three parts:
- Goal- the aspect of the system being tested
- Input and system state- data provided to the system under stated conditions.
- Expected behavior- the output or action the system should take according to these requirements

• **Future Scope:**

The following section describes the work that will be implemented with future releases of the software.

- Customize orders: Allow customers to customize food orders
- Enhance User Interface by adding more user interactive features. Provide Deals and promotional
- Offer details to home page. Provide Recipes of the Week/Day to Home Page
- Payment Options: Add different payment options such as PayPal, Cash, Gift Cards etc.
Allow to
 - save payment details for future use.
 - Allow to process an order as a Guest
 - Delivery Options: Add delivery option
- Order Process Estimate: Provide customer a visual graphical order status bar
- Order Status: Show only Active orders to Restaurant Employees.
- Order Ready notification: Send an Order Ready notification to the customer
- Restaurant Locator: Allow to find and choose a nearby restaurant
- Integrate with In store touch screen devices like iPad

- <https://www.stylefactoryproductions.com/blog/shopify-review>
- [https://scholarworks.gvsu.edu/cgi/viewcontent.cgi?article=1222 HYPERLINK "https://scholarworks.gvsu.edu/cgi/viewcontent.cgi?article=1222&context=cistechnologylib"& HYPERLINK "https://scholarworks.gvsu.edu/cgi/viewcontent.cgi?article=1222&context=cistechnologylib" context=cistechnologylib](https://scholarworks.gvsu.edu/cgi/viewcontent.cgi?article=1222)
- <http://www.google.com/>
- <https://www.jornaldev.com>
- [HYPERLINK "https://abhiandroid.com" "https://abhiandroid.com"](https://abhiandroid.com)
- <https://www.vogella.com/tutorials/firebase/article.html>
- <https://www.youtube.com/watch?v=71H9-MRXYOE>
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