CHAPTER-02

1. INTRODUCTION

Food Order System is a website design primarily for use in the food delivery industry. Through these services Chefs can sell and distribute their resources at minimal resource usage effectively with high profits by gaining the customer trust. The Food Ordering System main purpose is to maintain track of information such as Items, Food, Delivery Address, Order, and Shopping Cart. It keeps track of information about the Item Category, the Customer, the Shopping Cart, and the Item Category. Only the administrator gets access to the project because it is totally built at the administrative level. The project's purpose is to develop software that will cut down on the time spent manually managing Item Category, Food, Customer, and Delivery Address. It saves the Delivery Address, Order, and Shopping Cart information.

The "Food Ordering System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and, in some cases, reduce the hardships faced by this existing system. The application is reduced as much as possible to avoid errors while entering the data. It also provides errornotification while entering invalid data. No formal knowledge is needed for the user to use this system. Thus, by this all it proves it is user-friendly. FoodOrdering System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping.

2. MODULES:

Food Item Management Module: Used for managing the Food Item details.

Confirm Order Module : Used for managing the details of Confirm Order.

Payment Module : Used for managing the details of Payment.

Category Management Module: Used for managing the information and details of the

Category.

Admin Module: Used to manage hotel, payments, orders, users etc.

ChefModule : Used to manage hotel details, food details, order details payments details.

Customer Module : Used for managing the Customer details.

Order Module : Used for managing the Order information's.

Login Module: Used for managing the login details.

Users Module : Used for managing the users of the system.

3. EXISTING SYSTEM OF ONLINE FOOD ORDERING SYSTEM

In the existing system the exams are done only manually but in proposed system we have to computerize the exams using this application.

- Lack of security of data.
- More man power.
- Only outside food.
- Time consuming.
- Consumes large volume of pare work.
- Needs manual calculations.
- No direct role for the higher officials

4. PROPOSED SYSTEM OF ONLINE FOOD ORDERING SYSTEM

The aim of proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system.

The proposed system of an online food ordering system aims to provide a user-friendly, efficient, and convenient platform for customers to browse restaurant menus, place orders, and have food delivered to their desired location

The system provides proper security and reduces the manual work.

- Security of data.
- Ensure data accuracy's.
- Proper control of the higher officials.
- Minimize manual data entry.
- Minimum time needed for the various processing.
- Greater efficiency.
- Better service.
- Only Homemade food
- Increasing employment for House wife's.
- User friendliness and interactive.
- Minimum time required

5. SOFTWARE AND HARDWARE REQUIREMENTS

HARDWARE REQUIREMENTS

• RAM : Min 2 GB or more

CPU : 2 GHz or fasterArchitecture : 32-bit or 64-bit

• **Processor** : Processor – Intel Atom or higher

• Hard Disk : Min 500GB or more

6. SOFTWARE REQUIREMENTS

• Coding Language: HTML, CSS, JS, jQuery, Bootstrap and Python

• Database : MySQL

• Code Editor : Sublime Text Editor

What is HTML?

HTML is the standard markup language for creating Web pages.

HTML, which stands for Hypertext Markup Language, is the standard markup language used to create and structure web pages. It provides the foundation for web development by defining the structure and layout of web content, including text, images, links, multimedia elements, and interactive forms

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.
- **Basic Structure:** HTML documents consist of nested elements enclosed in opening and closing tags. Tags are used to define the structure and content of a webpage.
- **Semantic Markup:** HTML provides semantic elements like <header>, <nav>, <main>, <article>, <section>, <footer>, etc., which give meaning to the content and improve accessibility and SEO.
- **Hyperlinks:** HTML allows the creation of hyperlinks using the <a> (anchor) element, enabling navigation between web pages or sections within the same page.
- **Images and Multimedia:** Images and multimedia content such as audio and video can be embedded using , <audio>, and <video> elements.
- **Forms:** HTML provides form elements like <form>, <input>, <textarea>, <select>, <button>, etc., for collecting user input.
- **Lists:** HTML supports both ordered () and unordered () lists, as well as definition lists (<dl>).

- **Tables:** Tables can be created using the , , , and elements to organize data into rows and columns.
- **Metadata:** Metadata such as page title, character encoding, and viewport settings can be specified using <meta> tags within the <head> section.
- **Document Structure:** HTML documents typically include a <head> section for metadata and a <body> section for the main content.
- Compatibility: HTML is supported by all major web browsers and is a standardized markup language maintained by the World Wide Web Consortium (W3C).

What is CSS?

CSS is the language we use to style a Web page.

Cascading Style Sheets (CSS) is a style sheet language used to describe the presentation of a document written in HTML (Hypertext Markup Language). CSS defines how HTML elements should be displayed on screen, in print, or in other media. It allows developers to control the layout, colors, fonts, spacing, and other visual aspects of web pages

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files
- **Styling:** CSS is used to style the presentation of HTML elements on a webpage, including layout, colors, fonts, spacing, and more.
- **Separation of Concerns:** CSS enables the separation of content (HTML) from presentation (CSS), allowing for easier maintenance and flexibility in design changes.
- Selectors: CSS selectors are used to target specific HTML elements for styling. Selectors can target elements based on their type, class, ID, attributes, and relationships with other elements.
- **Properties and Values:** CSS properties define the visual aspects of elements, such as color, font-size, margin, padding, background, etc. Each property is assigned a value to specify how it should be applied.
- Cascade and Specificity: CSS follows rules of specificity to determine which styles apply to which elements when multiple styles conflict. The cascade refers to the order of precedence in applying styles.
- **Inheritance:** CSS properties can be inherited from parent elements to their child elements, reducing the need to explicitly define styles for every element.

- **Media Queries:** CSS allows for responsive web design by using media queries to apply different styles based on factors such as screen size, device orientation, and resolution.
- **Flexbox and Grid Layout:** CSS provides layout models like Flexbox and Grid, which offer powerful tools for creating complex, responsive layouts with ease.
- **Vendor Prefixes:** Some CSS properties may require vendor prefixes (-webkit-, -moz-, -ms-, etc.) to ensure compatibility with different browsers during experimental or early implementation stages.
- External, Internal, and Inline Styles: CSS styles can be applied externally using separate. CSS files, internally within HTML documents using <style> tags, or inline directly within HTML elements using the style attribute.

What is Javascript?

Javascript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities. JavaScript was first known as Livescript, but Netscape changed its name to JavaScript, possibly because of the excitement being generated by Java. JavaScript made its first appearance in Netscape 2.0 in 1995 with the name LiveScript. The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers. The ECMA-262 Specification defined a standard version of the core JavaScript language. JavaScript is a lightweight, interpreted programming language.

JavaScript is a high-level programming language commonly used to create interactive effects within web browsers. Originally developed by Brendan Eich at Netscape in 1995, JavaScript has since become one of the most popular programming languages in the world, primarily due to its versatility and its role in enabling dynamic web content

JavaScript allows developers to manipulate web page content, control multimedia, animate images, validate form data, create cookies, and much more. It is often used in conjunction with HTML and CSS to enhance the functionality and appearance of web pages. Additionally, with the rise of technologies like Node.js, JavaScript can also be used for server-side programming, making it a full-stack language capable of powering both client-side and server-side components of web applications.

- Designed for creating network-centric applications.
- Complementary to and integrated with Java.
- Complementary to and integrated with HTML.
- Open and cross-platform.
- **Scripting Language:** JavaScript is a high-level, interpreted programming language primarily used for adding interactivity and dynamic behavior to web pages.

- Client-Side Execution: JavaScript code is executed on the client-side (in the user's web browser), allowing for dynamic updates and interaction without requiring communication with the server.
- Event-Driven Programming: JavaScript is event-driven, meaning it responds to user actions (such as clicks, mouse movements, and keyboard inputs) and other events triggered by the browser or the document.
- **DOM Manipulation:** JavaScript can manipulate the Document Object Model (DOM), allowing developers to dynamically modify the structure, content, and styling of web pages in response to user interactions or other events.
- Data Manipulation: JavaScript provides built-in objects and functions for working with data, including arrays, objects, strings, numbers, and dates. It also supports operations like parsing and formatting data.
- **Asynchronous Programming:** JavaScript supports asynchronous programming through mechanisms like callbacks, promises, and async/await, enabling non-blocking execution and handling of tasks such as fetching data from servers.
- Browser API Interaction: JavaScript interacts with various browser APIs (Application Programming Interfaces) to access features like manipulating the browser history, handling cookies, accessing geolocation information, and more.
- Cross-Browser Compatibility: JavaScript is supported by all major web browsers and follows standards set by the ECMAScript specification. Libraries and frameworks like jQuery, React, and Vue.js help abstract away browser differences and streamline development.
- Client-Side Validation: JavaScript is often used for client-side form validation, allowing for immediate feedback to users when they input invalid data before submitting a form.
- Server-Side Development: While JavaScript is primarily associated with client-side scripting, it is also used for server-side development using platforms like Node.js, enabling developers to use JavaScript for both frontend and backend development.

What is Python?

Python is a popular programming language. It was created by Guido van Rossum, and released in 1991,Python has since become one of the most popular programming languages worldwide, particularly in fields such as web development, data science, artificial intelligence, scientific computing, and automation.

- **General-Purpose:** Python is a general-purpose programming language, meaning it can be used for a wide range of applications, including web development, data analysis, artificial intelligence, scientific computing, automation, and more.
- **Interpreted:** Python code is executed line by line by an interpreter, rather than being compiled into machine code. This allows for rapid development and testing, as code changes can be immediately executed without needing to recompile.
- Readable and Expressive Syntax: Python's syntax is designed to be clear, concise, and
 easy to read, with a focus on readability. It uses indentation to define code blocks, which
 promotes code readability and reduces the need for explicit syntax like curly braces.
- **Dynamic Typing:** Python is dynamically typed, meaning variable types are inferred at runtime rather than being explicitly declared. This allows for flexible and concise code, but it also requires careful attention to data types to avoid runtime errors.
- Large Standard Library: Python comes with a comprehensive standard library that provides modules and functions for performing a wide range of tasks, such as file I/O, networking, mathematics, and string manipulation, without requiring additional installations.
- Extensive Ecosystem: Python has a vast ecosystem of third-party libraries and frameworks that extend its capabilities for specific domains. For example, Django and Flask are popular frameworks for web development, NumPy and Pandas are used for data analysis, and TensorFlow and PyTorch are used for machine learning.
- Cross-Platform: Python is available on multiple platforms, including Windows, macOS, and various Unix-like operating systems, making it highly portable and accessible across different environments.

- Community and Support:Python has a large and active community of developers who contribute to its development, provide support through forums and online communities, and create tutorials, documentation, and open-source projects.
- Object-Oriented and Functional Programming: Python supports both object-oriented and functional programming paradigms, allowing developers to choose the approach that best suits their needs and preferences.
- Ease of Learning: Python is often recommended as a beginner-friendly programming language due to its simple syntax, extensive documentation, and readability. It emphasizes code readability and encourages good programming practices.

It is used for:

- Web development(server-side),
- Software development,
- Mathematics,
- System scripting.

What can Python do?

- Python can be used on a server to create web applications.
- Python can be used alongside software to create workflows.
- Python can connect to database systems. It can also read and modify files.
- Python can be used to handle big data and perform complex mathematics.
- Python can be used for rapid prototyping, or for production-ready software development.

Why Python?

- Python has a simple syntax similar to the English language.
- Python works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc).
- Python has syntax that allows developers to write programs with fewer lines than

some other programming languages.

- Python runs on an interpreter system, meaning that code can be executed as soon as it
 is written. This means that prototyping can be very quick.
- Python can be treated in a procedural way, an object-oriented way or a functional way.

Sublime Text editor is a sophisticated text editor which is widely used among developers. It includes wide features such as Syntax Highlight, Auto Indentation, File Type Recognition, Sidebar, Macros, Plug-in and Packages that make it easy for working with code base. This tutorial gives you a comprehensive coverage of concepts of Sublime Text and makes you comfortable to use it in your software development projects.

Sublime Text is a popular text editor used by developers for writing code, markup, and prose. It is known for its speed, simplicity, and extensive customization options.

Features and characteristics of Sublime Text

- **Cross-Platform:** Sublime Text is available for Windows, macOS, and Linux, making it accessible to developers using different operating systems.
- **Speed:** Sublime Text is renowned for its fast performance, allowing users to open and edit large files quickly without experiencing lag or slowdowns.
- User Interface: The interface of Sublime Text is clean and minimalistic, with a distraction-free environment that focuses on the content being edited. It includes features such as split editing, distraction-free mode, and customizable themes and color schemes.
- **Customizability:** Sublime Text offers extensive customization options, allowing users to tailor the editor to their preferences and workflow. This includes custom key bindings, menus, commands, snippets, and plugins.
- **Multiple Selections and Editing:** Sublime Text supports multiple cursors and selections, enabling users to make simultaneous edits across multiple locations in a file. This feature enhances productivity and efficiency when editing code.
- Powerful Search and Replace: Sublime Text includes powerful search and replace
 functionality, with support for regular expressions, case-sensitive search, whole-word
 matching, and incremental search. Users can quickly find and replace text within a file or
 across multiple files.

- Syntax Highlighting and Auto-Completion: Sublime Text provides syntax highlighting for a wide range of programming languages and file types, making code easier to read and understand. It also offers auto-completion suggestions based on context, reducing typing and potential errors.
- Plugin Ecosystem: Sublime Text has a vibrant ecosystem of plugins and packages
 developed by the community, extending its functionality and adding features such as
 version control integration, project management, linters, and language support for niche
 languages.
- Command Palette: The Command Palette allows users to quickly access and execute commands, navigate to files, switch between projects, install packages, and customize settings without needing to memorize keyboard shortcuts or navigate menus.
- **Version Control Integration:** Sublime Text integrates with version control systems like Git, Mercurial, and Subversion, allowing users to perform version control operations directly within the editor.

What is MySQL?

MySQL is an open-source relational database management system (RDBMS) that allows users to store, organize, and manage structured data. It is one of the most popular database systems in the world and is widely used in various applications ranging from small personal projects to large-scale enterprise systems.

- MySQL is a relational database management system
- MySQL is open-source
- MySQL is free
- MySQL is ideal for both small and large applications
- MySQL is very fast, reliable, scalable, and easy to use
- MySQL is cross-platform
- MySQL is compliant with the ANSI SQL standard
- MySQL was first released in 1995
- MySQL is developed, distributed, and supported by Oracle Corporation

7. PYTHON AND MYSQL E-COMMERCE DEVELOPMENT

- Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Developed by Guido van Rossum. Python is commonly used for developing websites and software, task automation, data analysis, and data visualization
- MySQL is a widely used open-sourcerelational database management system (RDBMS).that can store product information, user data, order details, and other relevant information for an e-commerce platform.
- By combining Python and MySQL effectively, you can build a robust and efficient ecommerce platform that meets that meet the needs of both your business and your customer

Security Consideration:

- ➤ E-commerce system deal with sensitive information such as payment details and personal data, so security is paramount.
- ➤ Implement measures such as SSL encryption, secure authentication, and regular security audits to protect customer data.

Scalability and Performance:

- E-commerce scalability refers to the ability of an online store or platform to handle increasing levels of traffic, transactions, and data volume without compromising performance, reliability, or user experience. Scalability is essential for e-commerce businesses to accommodate growth, seasonal fluctuations in demand, and unexpected spikes in traffic without experiencing downtime or degradation in service quality.
- ➤ E-commerce performance refers to the speed, responsiveness, and efficiency of an online store or platform in delivering content, processing transactions, and providing a seamless user experience to customers. Performance optimization is crucial for e-commerce businesses to ensure fast page load times, smooth navigation, and high conversion rates, ultimately leading to increased sales and customer satisfaction.

8. SYSTEM TESTING AND IMLEMENTATION

System Testing

The testing phase is an important part of software development. It is the processes of finding errors and missing operations and also a complete verifications to determine whether the objectives are requirements are satisfied.

System testing is a level of software testing where a complete and integrated software system is tested as a whole to ensure that it meets specified requirements and performs as expected in its intended environment. It involves testing the system as a whole to validate its functionality, performance, reliability, and other quality attributes.

Software testing is carried out in three steps:

The first step includes unit testing where in each module is tested to provide its correctness, to determine any missing operations and to verify whether the objectives have been met. "Errors are noted down and corrected immediately". Unit testing is the important and major part of the project. So errors are rectified easily in particular modules and program quality is increased. In this project, entire system is divided into several modules.

Second step include integration testing .If we need not be the case that software whose modules when run individually and showing perfect result with also show perfect result as whole .The individual modules are clipped under this major module and tested again and verified the results. The module can have inadvertent, adverse effect on any other on the global data structure causing serious problems.

The final step involves validation and testing which determines whether these software function as the user expected.

Artificial data are usually created for running the first test. The data should contain all possible combinations formats and values. Artificial data should include deliberate mistakes, such as numbers occurring on an alphabet A input field where a program expects a name. The mistake takes us to check the system editing, errors and corrections procedures.

Levels in testing

- Unit testing
- Integration testing

Unit testing: It is the process of taking each program modules and runs in isolation from the rest of the modules, by using prepared inputs and comparing the results with the results predicted by the specifications and design of modules. This enables the tester to detect errors in coding and logic that are contained within that module one. Unit testing is a software testing technique in which individual units or components of a software application are tested in isolation to ensure that they perform as expected. The term "unit" typically refers to the smallest testable part of the software, such as a function, method, or class

Integration testing: Integration testing is a systematic technique for constructing tests to uncover errors associated within the interfaces. In this testing, all the modules are combined, and then the entire program is tested as a whole. Integration testing is a phase of software testing where individual units or modules of a software application are combined and tested as a group. The purpose of integration testing is to ensure that these units work together as expected when integrated into the complete system.

9. SYSTEM IMPLEMENTATION

System implementation is the process of bringing the developed system and turning it over to user. It can be the most crucial stage in achieving a successful new system and in giving the users confidence that the new system will work and be effective. Implementation plan or successful implementations of the system, implementation plan is necessary. Its major elements include test plan, training plans, an equipment installation plan and a conversion plan. The test plan provides for the preparations of the test ad for testing the system in a planned, structured manner, training plan is necessary to ensure that all people who are associated with the computer related information system have the necessary knowledge and skills .The important activities are preparations, equipment installation and hardware -software checkout. Conversion is the process if initiating and performing all the physical operations that result directly in the turnover of the new system to the user. There are two parts of conversion. The conversion plan is implemented throughout the development phase into the operational phase. The conversion plan includes procedural conversion, program conversion and the file conversion. The changeover plan also specifies the method of change from old to new system. Choices of changeover methods include parallel operations, immediate replacement and physical changeover.

Features of System Implementation

- Code Development: Writing, compiling, and testing the code to implement the desired functionality of the software system. This includes implementing algorithms, business logic, user interfaces, data processing, and other core functionalities.
- Database Design and Implementation: Designing the database schema, tables, relationships, and constraints based on the data requirements identified during the analysis phase. Implementing database operations such as CRUD (Create, Read, Update, Delete) operations and data manipulation functions.
- User Interface Development: Designing and developing user interfaces (UIs) for interacting with the software system. This includes creating intuitive and visually appealing interfaces for different types of users (e.g., end-users, administrators) using appropriate design principles and technologies (e.g., HTML/CSS, JavaScript frameworks).
- **Integration of Components:** Integrating various software components, modules, and third-party services to ensure seamless communication and interoperability. This may involve integrating APIs, libraries, frameworks, and external systems to enhance the functionality and capabilities of the software system.
- Testing and Quality Assurance: Conducting various types of testing to verify and validate the functionality, performance, reliability, and security of the software system. This includes unit testing, integration testing, system testing, acceptance testing, performance testing, security testing, and usability testing.
- **Deployment and Configuration:** Deploying the software system to the production environment or targeted platforms (e.g., web servers, cloud platforms, mobile devices). Configuring the system settings, environment variables, and deployment parameters to ensure optimal performance and scalability.
- User Training and Documentation: Providing training and support to end-users, administrators, and other stakeholders on how to use the software system effectively.
 Creating user manuals, guides, tutorials, and documentation to help users understand the system's features, functionalities, and best practices.

- **Data Migration and Conversion:** Migrating existing data from legacy systems or external sources to the new software system. Converting data formats, structures, and representations as needed to ensure compatibility and integrity with the new system.
- Change Management and Version Control: Managing changes, updates, and enhancements to the software system over time. Implementing version control systems and change management processes to track code changes, manage releases, and facilitate collaboration among development team members.
- Post-Implementation Support: Providing ongoing support and maintenance for the software system after deployment. Addressing user feedback, resolving issues, applying patches and updates, and continuously improving the system based on evolving requirements and technology trends.

10.FEASIBILITY STUDY

A feasibility analysis usually involves a thorough assessment of the operational (need), financial and technical aspects of a proposal. Feasibility study is the test of the system proposal made to identify whether the user needs may be satisfied using the current software and hardware technologies, whether the system will be cost effective from a business point of view and whether it can be developed with the given budgetary constraints. A feasibility study should be relatively cheap and done at the earliest possible time. Depending on the study, the decision is made whether to go ahead with a more detailed analysis.

When a new project is proposed, it normally goes through feasibility assessment. Feasibility study is carried out to determine whether the proposed system is possible to develop with available resources and what should be the cost consideration. Facts considered in the feasibility analysis were

- Operational Feasibility
- Technical Feasibility
- Feasibility

Operational Feasibility

This analysis involves how it will work when it is installed and the assessment of managerial environment in which it is implemented. People are inherently resistant to change and computers have been known to facilitate change. The new proposed system is very much useful to the users and therefore it will accept broad audience from around the world.

Operational feasibility refers to the assessment of whether a proposed project or solution is viable and practical from an operational standpoint. It involves evaluating the operational processes, procedures, and resources required to implement, support, and sustain the project over its lifecycle.

Technical Feasibility

Technical feasibility includes whether the technology is available in the market for development and its availability. The assessment of technical feasibility must be based on an outline design of system requirements in terms of input, output, files, programs and procedures. This can be qualified in terms of volumes of data, trends, frequency of updating, cycles of activity etc, in order to give an introduction of technical system. Considering our project it is technical feasible. Training and Placement System, with its emphasis on a more strategic decision-making process is fast gaining ground as a popular outsourced function.

Technical feasibility refers to the assessment of whether a proposed project or solution can be successfully implemented from a technical standpoint. It involves evaluating the technical requirements, constraints, and capabilities needed to develop, deploy, and maintain the project

Economic Feasibility

This feasibility study present tangible and intangible benefits from the project by comparing the development and operational cost. The technique of cost benefit analysis is often used as a basis for assessing economic feasibility. This system needs some more initial investment than the existing system, but it can be justifiable that it will improve quality of service.

Economic feasibility refers to the assessment of whether a proposed project or investment is financially viable and justifiable within the constraints of available resources. It involves evaluating the costs and benefits associated with the project to determine if the expected returns outweigh the expenses incurred. Economic feasibility analysis helps stakeholders make informed decisions about whether to proceed with a project, invest in a new initiative, or allocate resources effectively

Thus, feasibility study should centre along the following points:

- > Improvement resulting over the existing method in terms of accuracy, timeliness.
- Cost comparison

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- > Estimate on the life expectancy of the hardware.
- > Overall objective.
- > Our project is economically feasible. It does not require much cost to be involved in the overall process. The overall objective is in easing out the recruitment processes.

11.CONCLUSION

This system helps to increase the productivity and efficiency of the Food. By having this ordering system, the customers can make their order through the system or phone. Then, the order will pass to the Chef, the chef will be manage by the admin. The Chefs will accept the request, and start to cook when they see the order of the customers. Everything is done by the systemand the hotel no need to wait for the customers to make the payment because we are using online payment in this project.