**ONLINE FOOD SHOPPING SYSTEM**

**ABSTRACT:**

Online Food Ordering System is a part of e-commerce. E-commerce or business through net means distributing, buying, selling, marketing, and servicing of products or services over electronic systems such as the Internet and other computer networks. Thus if we own a restaurant we need to Upload menu online to attract potential customers.

The online food ordering system gives restaurants the ability to increase sales and expand their business by giving customers the facility to order food online. Thus it is a simple, fast and convenient food ordering system giving an edge over the competition at an affordable price.The restaurants’ can even customize online restaurant menu and upload images easily. Having restaurant menu on internet, potential customers can easily access it and place order at their convenience. Online food ordering system is a website designed primarily for use in the food delivery. This system will allow restaurants to increase scope of business by reducing the labor cost involved. The system also allows to quickly and easily manage an online menu which customers can browse and use to place orders with just few clicks. Restaurant employees then use these orders through an easy to navigate graphical interface for efficient processing.

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**EXISTING SYSTEM:**

The existing system happens to be a non computerized operating system were all operations are done manually by the waiter carrying paper and to take down the order of the customer or making an order over the counter. This leads to mistakes because the waiter might not understand what the customer had ordered therefore serving him/her a different menu. This could be so embarrassing because the customer might not take it lightly with the waiter which may lead to misunderstanding.

Due to manual means being employed by the fast food restaurants, it is very difficult to satisfy the wants and needs of the customers. Most of the problems include:

1. Mistakes are made when taking the orders of the customers

2. The process of collecting customers’ purchases order is very tedious. This makes it impossible to deliver goods on time.

3. It leads to lack of understanding between the customers and the employees. 15 4. The record keeping system is poor. Losses of vital records have been reported in the past consequently. Besides, protecting the file system from unauthorized access is a problem that has defiled solution.

5. Unnecessary time is wasted conveying information through the ladder of authority. Management at times seeks to get a copy of the customer’s order form and this may take a lot of time to obtain it.

6. It causes reduction of production flow. These are the major problems facing the existing system and would be corrected with the help of the proposed system.

**PROPOSED SYSTEM:**

To overcome the limitations of above system, an Online Food Ordering System based on Internet of Things is proposed. It is a wireless food ordering system using android devices. Android devices have gained immense popularity and have revolutionized the use of mobile technology in the automation of routine task in wireless environment. To develop a reliable, convenient and accurate Food Ordering System is considered as a general Objective of the study. To develop a system that will surely satisfied the customer service will be considered as an objective. One of the Objective is to design a system that is able to accommodate huge amount of orders at a time and automatically compute the bill. To evaluate its performance and acceptability in terms of security, user-friendliness, accuracy and reliability is an important objective.

It is the purpose of the new system to address all the problems plaguing the present system. This system will do the analyzing and storing of information either automatically or interactively.

1. To allow the customer to make order, view order and make changes before submitting their order and allow them make payment through prepayment card or credit card or debit card.

2. To provide interface that allows promotion and menu.

3. To prevent interface that shows customers’ orders detail to front-end and kitchen staffs for delivering customers’ orders .

4. Tools that generate reports that can be used for decision making .

5. A tool that allows the management to modify the food information such as price, add a new menu and many others as well as tools for managing user, system menu and promotion records.

**AIM:**

Our proposed system is an online food ordering system that enables ease for the customers. It overcomes the disadvantages of the traditional queueing system. Our proposed system is a medium to order online food hassle free from restaurants as well as mess service. This system improves the method of taking the order from customer. The online food ordering system sets up a food menu online and customers can easily place the order as per their wish. Also with a food menu, customers can easily track the orders. This system also provides a feedback system in which user can rate the food items. Also, the proposed system can recommend hotels, food, based on the ratings given by the user, the hotel staff will be informed for the improvements along with the quality. The payment can be made online or pay-on-delivery system. For more secured ordering separate accounts are maintained for each user by providing them an ID and a password.

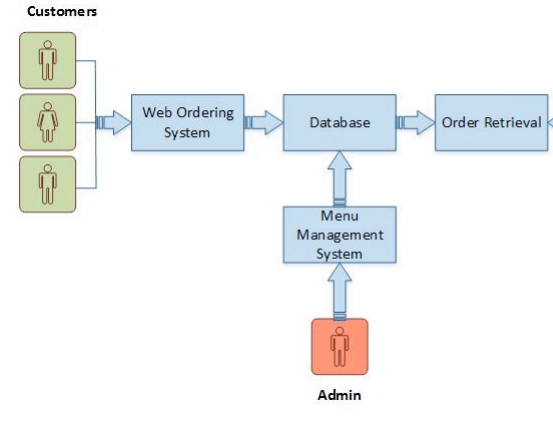
**INTRODUCTION**

It is very typical to establish a small-scale business with less resources to provide quality services. Now a days people are attracted to online business. Let us assume if there is any online business where customers can order their needs and the goods will reach them at the expected delivery time. The customers of today are not only attracted because placing an order online is very convenient but also because they have visibility into the items offered, likewise online food ordering system customers can order their favorite foods and this database will be the barrier for the customers and restaurants to provide the services.

Our solution provides ordering process for the restaurants and customers and the employees of the restaurants. The Items list and categories of the foods are available in the database so that a customer can place an order with multiple items. Once the order is placed restaurant employees process the order and deliver it to the customer at the expected delivery time. at the end of the order customer will know about the amount how much he had to pay for the restaurant for the order. Once the Order is delivered customer can provide the feedback to the restaurant. concentrates on taking orders, streamlining the orders to a specified restaurant and billing. This Database will be a great solution for many start-up food business, they can just start initially with less funds by posting their menu online with this application.

Assume that the customer selected the restaurant of choice and the restaurant will have all the details about the customer. Customer will select the category and them go through the Item list which will have Name, description, preparation time, price etc. Once the Items selected by the user a unique order Id will be generated provided to the customer. The order table will let the customer know about the final order details and expected delivery time. While selecting the Item, customer can specify the needs of the food in comments.

**SYSTEM ARCHITECTURE:**



**FEATURES:**

* Providing single platform for customers’ orders and restaurants.
* Online menu with multiple food varieties.
* Easy access for the customers to place and receive orders.
* Providing the payment gateway for the restaurant
* Check the review of the restaurant before ordering.
* Notifying the customer with actual order time and expected delivery time.
* Restaurant can Track the employee details.

**ADVANTAGES:**

* Unique database for the restaurants about the customers.
* Helps customer to place order online.
* No need of waiting for the food at the restaurant door-step.
* No more order miscommunications between customer’s employees and restaurants.
* Helps restaurants to improve the quality of the service.
* Customer will get benefit by rewards and restaurant will get benefit from the business.
* Suits for small food businesses.

**SYSTEM CONFIGURATION:**

**HARDWARE CONFIGURATION:**

# Processor - Pentium –IV

* Speed - 1.1 Ghz
* RAM - 256 MB(min)
* Hard Disk - 20 GB
* Key Board - Standard Windows Keyboard
* Mouse - Two or Three Button Mouse
* Monitor - SVGA

**SOFTWARE CONFIGURATION:**

* Operating system - Windows 7/10.
* Coding Language - ASP.Net,C#.Net.
* Data Base - SQL Server 2008 R2
* Tool - VISUAL STUDIO 2010.

**RELATED WORK :**

This Case study looks at the problem of setting up a fast food restaurant. In existing system there are few problems:

• For placing any orders customers have to visit hotels or restaurants to know about food items and then place order and pay. In this method time and manual work is required.

• While placing an order over the phone, customer lacks the physical copy of the menu item, lack of visual confirmation that the order was placed correctly.

• Every restaurant needs certain employees to take the order over phone or in-person, to offer a rich dining experience and process the payment. In today’s market, labor rates are increasing day by day making it difficult to find employees when needed. Hence, to solve this issue, what I propose is an “Online Food Order System, originally designed for small scale business like College Cafeterias, Fast Food restaurant or Take-Out, but this system is just as applicable in any food delivery industry.

The main advantage of my system is that it greatly simplifies the ordering process for both the customer and the restaurant and also greatly lightens the load on the restaurant’s end, as the entire process of taking orders is automated.

**ANTICIPATED BENEFITS ARE:**

1. This will minimize the number of employees at the back of the counter.

2. The system will help to reduce labor cost involved.

3. The system will be less probable to make mistake, since it’s a machine.

4. This will avoid long queues at the counter due to the speed of execution and number of optimum screens to accommodate the maximum throughput.

**MODULES:**

1. Register

2. Login

3. Menu Pages

4. Cart Page

5. Payment

**MODULES DESCRIPTION:**

**REGISTER:**

This module is User Registration; all the new users have to register. Each user is given a unique password with their user name. To access their account they have to give their valid username and password i.e. authentication and security is provided for their account.

**LOGIN:**

Logging in is usually used to enter a specific page, which trespassers cannot see. Once the user is logged in, the login token may be used to track what actions the user has taken while connected to the site.

**MENU PAGES:**

In this modules,We add new menu and variety food added etc..,

**CART PAGES:**

In this modules, We booking food show pages

**PAYMENT**

In this modules, We pay for the order of booked food page

**PROPOSED SYSTEM ANALYSIS AND DESIGN**

**4.1 INTORDUCTION**

In product development, it is important to understand the difference between the baseline functionality necessary for any system to compete in that product domain, and features that make the system different from their competitor's products. Some strategies have important implications for software architecture. Specifically, it is not just the Software requirements specifications of the initial release that must be supported in the architecture. The Software requirements specifications of initial products need to be explicitly taken into consideration.

**4.2 REQUIREMENT ANALYSIS**

**4.2.1 FUNCTIONAL REQUIREMENTS**

In Software engineering and systems engineering, a functional requirement defines a function of a system or its component. A function is described as a set of inputs, the behavior, and outputs. ... This should be contrasted with non-functional requirements which specify overall characteristics such as cost and reliability.

**4.2.1.1 PRODUCT PERSPECTIVE**

The product is supposed to be an open source, under the GNU general Public License. It is a web based system implementing client-server model. The portal System provides simple mechanism for users to share and acquire knowledge.

**4.2.1.2 PRODUCT FEATURES**

The following are the main features

Cross platform support:

Offers operating support for most of the known and commercial operating systems. User account: The system allows the user to create their accounts in the system and provide features of updating and viewing profiles.

**NUMBER OF USERS BEING SUPPORTED BY THE SYSTEM:**

Though the number is precisely not mentioned but the system is able to support a large number of online users at a time. Search: search is simply local search engine based on key words.

Discussion Forum:

Provides users with a platform to discuss and help each other with their problems

Ticketing system: Allows user to submit his issue to the admin in case his problems are not solved by FAQs and discussion forums.

FAQs section: Frequently asked section contain answer of problem which tablet user frequently faced.

**4.2.1.3 USER CHARACTERISTICS**

It is considered that the user do have the basic knowledge of operating the internet and to have access to it. The administrator is expected to be familiar with the interface of the tech support system.

**4.2.1.4 ASSUMPTION AND DEPENDENCIES**

This software highly depends on type and version of browser being installed in the system i.e. browser version should be used which have HTML5 support.

**4.2.1.5 DOMAIN REQUIREMENT**

Domain requirement is the Requirement that comes from the application domain of the system that reflects the characteristics of that domain. Therefore, as our System is an inventory System, the domain requirement of this system should concern about the requirements that reflect characteristic of Inventory System.

**4.2.2 NON-FUNCTIONAL REQUIREMENTS**

In systems engineering and **requirements** engineering, a **non**-**functional requirement** (NFR) is a **requirement** that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. They are contrasted with **functional requirements** that **define** specific behavior or functions.

**4.2.2.1 PRODUCT REQUIREMENTS**

**4.2.2.1.1 EFFICIENCY**

**SPACE EFFICIENCY**

Storage **efficiency** is the ability to store and manage data that consumes the least amount of **space** with little to no impact on performance; resulting in a lower total operational cost. **Efficiency** addresses the real-world demands of managing costs, reducing complexity and limiting risk.

**TIME EFFICIENCY**

The state or quality of being **efficient**, or able to accomplish something with the least waste of **time** and effort is Time efficiency; competency in performance. And accomplishment of or ability to accomplish a job with a minimum expenditure of **time** and effort.

**4.2.2.1.2 RELIABILITY**

Reliability Posted by: Margaret Rouse WhatIs.com Contributor(s): Kaj Backholm Word of the Day 5G 5G is the coming fifth-generation wireless broadband technology based on the IEEE 802.11ac standard. An important goal of 5G is to erase the differences between wireline and wireless networking to accommodate the growing mobility of network users. Subscribe to the Word of the Day Word of the Day Archive 20 Newest and Updated Terms competitive advantage mobile application management (MAM) Avro (Apache Avro) quality assurance (QA) gross revenue voice recognition (speaker recognition) Amazon Pinpoint employee engagement software Microsoft Project Honolulu project scope unstructured data hands-off infrastructure management Microsoft Windows Insider Program for Business risk map (risk heat map) VMware vCenter Server (formerly VMware VirtualCenter) Advanced Message Queuing Protocol (AMQP) network engineer cloud storage service Ansible cloud backup (online backup) Reliability is an attribute of any computer-related component (software, or hardware, or a network, for example) that consistently performs according to its specifications. It has long been considered one of three related attributes that must be considered when making, buying, or using a computer product or component. Reliability, availability, and serviceability - RAS, for short - are considered to be important aspects to design into any system. In theory, a reliable product is totally free of technical errors; in practice, however, vendors frequently express a product's reliability quotient as a percentage.

**4.2.2.1.3 PORTABILITY**

**Portability** is a characteristic attributed to a computer program if it can be used in an operating systems other than the one in which it was created without requiring major rework. Porting is the task of doing any work necessary to make the computer program run in the new environment.

**4.2.2.1.4 USABILITY**

**Usability** is the ease of use and learnability of a human-made object such as a tool or device. In **software engineering**, **usability** is the degree to which a **software**can be used by specified consumers to achieve quantified objectives with effectiveness, efficiency, and satisfaction in a quantified context of use.

**4.2.2.2 ORGANISATIONAL REQUIREMENTS**

**4.2.2.2.1 IMPLEMENTATION REQUIREMENTS**

**LANGUAGE SPECIFICATION:**

**.NET TECHNOLOGY:**

**THE .NET FRAMEWORK:**

The .NET Framework is a new computing platform that simplifies application development in the highly distributed environment of the Internet.

**OBJECTIVES OF. NET FRAMEWORK:**

* To provide a consistent object-oriented programming environment whether object codes is stored and executed locally on Internet-distributed, or executed remotely.
* To provide a code-execution environment to minimizes software deployment and guarantees safe execution of code.
* Eliminates the performance problems.

There are different types of application, such as Windows-based applications and Web-based applications.

To make communication on distributed environment to ensure that code be accessed by the .NET Framework can integrate with any other code.

**COMPONENTS OF .NET FRAMEWORK:**

**THE COMMON LANGUAGE RUNTIME (CLR):**

The common language runtime is the foundation of the .NET Framework. It manages code at execution time, providing important services such as memory management, thread management, and remoting and also ensures more security and robustness. The concept of code management is a fundamental principle of the runtime. Code that targets the runtime is known as managed code, while code that does not target the runtime is known as unmanaged code.

**THE .NET FRAME WORK CLASS LIBRARY:**

It is a comprehensive, object-oriented collection of reusable types used to develop applications ranging from traditional command-line or graphical user interface (GUI) applications to applications based on the latest innovations provided by ASP.NET, such as Web Forms and XML Web services.

The .NET Framework can be hosted by unmanaged components that load the common language runtime into their processes and initiate the execution of managed code, thereby creating a software environment that can exploit both managed and unmanaged features. The .NET Framework not only provides several runtime hosts, but also supports the development of third-party runtime hosts.

Internet Explorer is an example of an unmanaged application that hosts the runtime (in the form of a MIME type extension). Using Internet Explorer to host the runtime to enables embeds managed components or Windows Forms controls in HTML documents.

**FEATURES OF THE COMMON LANGUAGE RUNTIME:**

The common language runtime manages memory; thread execution, code execution, code safety verification, compilation, and other system services these are all run on CLR.

* Security.
* Robustness.
* Productivity.
* Performance.

**Security:**

The runtime enforces code access security. The security features of the runtime thus enable legitimate Internet-deployed software to be exceptionally feature rich. With regards to security, managed components are awarded varying degrees of trust, depending on a number of factors that include their origin to perform file-access operations, registry-access operations, or other sensitive functions.

**ROBUSTNESS:**

The runtime also enforces code robustness by implementing a strict type- and code-verification infrastructure called the common type system (CTS). The CTS ensures that all managed code is self-describing. The managed environment of the runtime eliminates many common software issues.

**PRODUCTIVITY:**

The runtime also accelerates developer productivity. For example, programmers can write applications in their development language of choice, yet take full advantage of the runtime, the class library, and components written in other languages by other developers.

**PERFORMANCE:**

The runtime is designed to enhance performance. Although the common language runtime provides many standard runtime services, managed code is never interpreted. A feature called just-in-time (JIT) compiling enables all managed code to run in the native machine language of the system on which it is executing. Finally, the runtime can be hosted by high-performance, server-side applications, such as Microsoft® SQL Server™ and Internet Information Services (IIS).

**FEATURES OF ASP.NET**

##### **ASP.NET**

ASP.NET is the next version of Active Server Pages (ASP); it is a unified Web development platform that provides the services necessary for developers to build enterprise-class Web applications. While ASP.NET is largely syntax compatible, it also provides a new programming model and infrastructure for more secure, scalable, and stable applications.

ASP.NET is a compiled, NET-based environment, we can author applications in any .NET compatible language, including Visual Basic .NET, C#, and JScript .NET. Additionally, the entire .NET Framework is available to any ASP.NET application. Developers can easily access the benefits of these technologies, which include the managed common language runtime environment (CLR), type safety, inheritance, and so on.

ASP.NET has been designed to work seamlessly with WYSIWYG HTML editors and other programming tools, including Microsoft Visual Studio .NET. Not only does this make Web development easier, but it also provides all the benefits that these tools have to offer, including a GUI that developers can use to drop server controls onto a Web page and fully integrated debugging support. Developers can choose from the following two features when creating an ASP.NET application. Web Forms and Web services, or combine these in any way they see fit. Each is supported by the same infrastructure that allows you to use authentication schemes, cache frequently used data, or customize your application's configuration, to name only a few possibilities. Web Forms allows us to build powerful forms-based Web pages. When building these pages, we can use ASP.NET server controls to create common UI elements, and program them for common tasks. These controls allow we to rapidly build a Web Form out of reusable built-in or custom components, simplifying the code of a page.

An XML Web service provides the means to access server functionality remotely. Using Web services, businesses can expose programmatic interfaces to their data or business logic, which in turn can be obtained and manipulated by client and server applications. XML Web services enable the exchange of data in client-server or server-server scenarios, using standards like HTTP and XML messaging to move data across firewalls. XML Web services are not tied to a particular component technology or object-calling convention.

As a result, programs written in any language, using any component model, and running on any operating system can access XML Web services

Each of these models can take full advantage of all ASP.NET features, as well as the power of the .NET Framework and .NET Framework common language runtime. Accessing databases from ASP.NET applications is an often-used technique for displaying data to Web site visitors. ASP.NET makes it easier than ever to access databases for this purpose. It also allows us to manage the database from your code .

ASP.NET provides a simple model that enables Web developers to write logic that runs at the application level. Developers can write this code in the global.aspx text file or in a compiled class deployed as an assembly. This logic can include application-level events, but developers can easily extend this model to suit the needs of their Web application.

ASP.NET provides easy-to-use application and session-state facilities that are familiar to ASP developers and are readily compatible with all other .NET Framework APIs.ASP.NET offers the IHttpHandler and IHttpModule interfaces. Implementing the IHttpHandler interface gives you a means of interacting with the low-level request and response services of the IIS Web server and provides functionality much like ISAPI extensions, but with a simpler programming model. Implementing the IHttpModule interface allows you to include custom events that participate in every request made to your application.

ASP.NET takes advantage of performance enhancements found in the .NET Framework and common language runtime. Additionally, it has been designed to offer significant performance improvements over ASP and other Web development platforms. All ASP.NET code is compiled, rather than interpreted, which allows early binding, strong typing, and just-in-time (JIT) compilation to native code, to name only a few of its benefits. ASP.NET is also easily factorable, meaning that developers can remove modules (a session module, for instance) that are not relevant to the application they are developing.

ASP.NET provides extensive caching services (both built-in services and caching APIs). ASP.NET also ships with performance counters that developers and system administrators can monitor to test new applications and gather metrics on existing applications.

Writing custom debug statements to your Web page can help immensely in troubleshooting your application's code. However, it can cause embarrassment if it is not removed. The problem is that removing the debug statements from your pages when your application is ready to be ported to a production server can require significant effort.

ASP.NET offers the Trace Context class, which allows us to write custom debug statements to our pages as we develop them. They appear only when you have enabled tracing for a page or entire application. Enabling tracing also appends details about a request to the page, or, if you so specify, to a custom trace viewer that is stored in the root directory of your application. The .NET Framework and ASP.NET provide default authorization and authentication schemes for Web applications. we can easily remove, add to, or replace these schemes, depending upon the needs of our application .

ASP.NET configuration settings are stored in XML-based files, which are human readable and writable. Each of our applications can have a distinct configuration file and we can extend the configuration scheme to suit our requirements.

**DATA ACCESS WITH ADO.NET:**

As you develop applications using ADO.NET, you will have different requirements for working with data. You might never need to directly edit an XML file containing data - but it is very useful to understand the data architecture in ADO.NET.

ADO.NET offers several advantages over previous versions of ADO:

* Interoperability
* Maintainability
* Programmability
* Performance Scalability

**INTEROPERABILITY:**

ADO.NET applications can take advantage of the flexibility and broad acceptance of XML. Because XML is the format for transmitting datasets across the network, any component that can read the XML format can process data. The receiving component need not be an ADO.NET component.

The transmitting component can simply transmit the dataset to its destination without regard to how the receiving component is implemented. The destination component might be a Visual Studio application or any other application implemented with any tool whatsoever.

The only requirement is that the receiving component be able to read XML. SO, XML was designed with exactly this kind of interoperability in mind.

**MAINTAINABILITY:**

In the life of a deployed system, modest changes are possible, but substantial, Architectural changes are rarely attempted because they are so difficult. As the performance load on a deployed application server grows, system resources can become scarce and response time or throughput can suffer. Faced with this problem, software architects can choose to divide the server's business-logic processing and user-interface processing onto separate tiers on separate machines. In effect, the application server tier is replaced with two tiers, alleviating the shortage of system resources. If the original application is implemented in ADO.NET using datasets, this transformation is made easier.

ADO.NET data components in Visual Studio encapsulate data access functionality in various ways that help you program more quickly and with fewer mistakes.

**PERFORMANCE:**

ADO.NET datasets offer performance advantages over ADO disconnected record sets. In ADO.NET data-type conversion is not necessary.

**SCALABILITY:**

ADO.NET accommodates scalability by encouraging programmers to conserve limited resources. Any ADO.NET application employs disconnected access to data; it does not retain database locks or active database connections for long durations.

**VISUAL STUDIO .NET:**

Visual Studio .NET is a complete set of development tools for building ASP Web applications, XML Web services, desktop applications, and mobile applications In addition to building high-performing desktop applications, you can use Visual Studio's powerful component-based development tools and other technologies to simplify team-based design, development, and deployment of Enterprise solutions. Visual Basic .NET, Visual C++ .NET, and Visual C# .NET all use the same integrated development environment (IDE), which allows them to share tools and facilitates in the creation of mixed-language solutions.

In addition, these languages leverage the functionality of the .NET Framework and simplify the development of ASP Web applications and XML Web services.

Visual Studio supports the .NET Framework, which provides a common language runtime and unified programming classes; ASP.NET uses these components to create ASP Web applications and XML Web services. Also it includes MSDN Library, which contains all the documentation for these development tools.

**MS-SQL SERVER 2005:**

**FEATURES OF SQL-SERVER 2005**

The OLAP Services feature available in SQL Server version 7.0 is now called SQL Server 2005 Analysis Services. The term OLAP Services has been replaced with the term Analysis Services. Analysis Services also includes a new data mining component. The Repository component available in SQL Server version 7.0 is now called Microsoft SQL Server 2005 Meta Data Services. References to the component now use the term Meta Data Services. The term repository is used only in reference to the repository engine within Meta Data Services SQL-SERVER database consist of six type of objects,

They are,

* TABLE
* QUERY
* FORM
* REPORT
* MACRO

**TABLE:**

A database is a collection of data about a specific topic.

VIEWS OF TABLE:

We can work with a table in two types,

* Design View
* Datasheet View

Design View

To build or modify the structure of a table we work in the table design view. We can specify what kind of data will be hold.

Datasheet View

To add, edit or analyses the data itself we work in tables datasheet view mode.

**QUERY:**

A query is a question that has to be asked the data. Access gathers data that answers the question from one or more table. The data that make up the answer is either dynaset (if you edit it) or a snapshot(it cannot be edited).Each time we run query, we get latest information in the dynaset.Access either displays the dynaset or snapshot for us to view or perform an action on it ,such as deleting or updating.

**FORMS:**

A form is used to view and edit information in the database record by record .A form displays only the information we want to see in the way we want to see it. Forms use the familiar controls such as textboxes and checkboxes. This makes viewing and entering data easy.

**Views of Form:**

We can work with forms in several primarily there are two views:

* Design View
* Form View

Design View:

To build or modify the structure of a form, we work in forms design view. We can add control to the form that are bound to fields in a table or query, includes textboxes, option buttons, graphs and pictures.

Form View:

The form view which display the whole design of the form.

**REPORT:**

A report is used to vies and print information from the database. The report can ground records into many levels and compute totals and average by checking values from many records at once. Also the report is attractive and distinctive because we have control over the size and appearance of it.

MACRO:

A macro is a set of actions. Each action in macros does something. Such as opening a form or printing a report .We write macros to automate the common tasks the work easy and save the time.

MODULE:

Modules are units of code written in access basic language. We can write and use module to automate and customize the database in very sophisticated ways. It is a personal computer based RDBMS. This provides most of the features available in the high-end RDBMS products like Oracle, Sybase, and Ingress etc. VB keeps access as its native database. Developer can create a database for development & further can create. The tables are required to store data. During the initial Development phase data can be stored in the access database & during the implementation phase depending on the volume data can use a higher – end database.

**4.2.2.2.2 ENGINEERING STANDARD REQUIREMENTS**

This standard replaces IEEE 830-1998, IEEE 1233-1998, IEEE 1362-1998. ISO/IEC/IEEE 29148:2011 contains provisions for the processes and products related to the engineering of requirements for systems and software products and services throughout the life cycle. It defines the construct of a good requirement, provides attributes and characteristics of requirements, and discusses the iterative and recursive application of requirements processes throughout the life cycle. ISO/IEC/IEEE 29148:2011 provides additional guidance in the application of requirements engineering and management processes for requirements-related activities in ISO/IEC 12207 and ISO/IEC 15288. Information items applicable to the engineering of requirements and their content are defined. The content of ISO/IEC/IEEE 29148:2011 can be added to the existing set of requirements-related life cycle processes defined by ISO/IEC 12207 or ISO/IEC 15288, or can be used independently**.**

**4.2.2.3. OPERATIONAL REQUIREMENTS**

Operational requirements are those statements that "identify the essential capabilities, associated requirements, performance measures, and the process or series of actions to be taken in effecting the results that are desired in order to address mission area deficiencies, evolving applications or threats, emerging technologies, or system cost improvements [1]." The operational requirements assessment starts with the Concept of Operations (CONOPS) and goes to a greater level of detail in identifying mission performance assumptions and constraints and current deficiencies of or enhancements needed for operations and mission success. Operational requirements are the basis for system requirements.

The following are the operation requirements.

* Economic
* Environmental
* Social
* Ethical
* Health and Safety
* Sustainability

**ECONOMIC**

Software engineering economics is about making decisions related to software engineering in a business context. ... Software engineering economics provides a way to study the attributes of software and software processes in a systematic way that relates them to economic measures.

**ENVIRONMENTAL**

System requirements are all of the requirements at the system level that describe the functions which the system as a whole should fulfill to satisfy the stakeholder needs and requirements. The system environment includes everything external to the software that might vary from one user to the next, or vary over time. If the system behaves differently depending on the amount of available memory, that's part of the system environment. If the system expects a message exchange over the network to finish within a certain amount of time, the network speed/reliability might be part of the system environment. If the system expects to use a certain amount of disk space, the disk capacity is part of the system environment. Those are simple examples, but I hope they get the point across.

**SOCIAL**

The consideration of social factors in software engineering activities, processes and CASE tools is deemed to be useful to improve the quality of both development process and produced software. Examples include the role of situational awareness and multi-cultural factors in collaborative software development. On the other hand, the dynamicity of the social contexts in which software could operate (e.g., in a cloud environment) calls for engineering social adaptability as a runtime iterative activity. Examples include approaches which enable software to gather users' quality feedback and use it to adapt autonomously or semi-autonomously.

**ETHICAL REQUIREMENT**

Principles that when followed, promote values such as trust, good behavior, fairness, and/or kindness. There is not one consistent set of standards that all companies follow, but each company has the right to develop the standards that are meaningful for their organization.

**SAFETY REQUIREMENTS**

A goal is a statement of the importance of achieving a desired target regarding some behavior, datum, characteristic, interface, or constraint. It is above the level of a policy and not sufficiently formalized to be verifiable.

A quality goal is a goal stating the importance of achieving a desired target regarding some quality factor or subfactor. A safety goal is a quality goal stating the importance of achieving a desired target regarding some safety factor (e.g., Health Safety) or safety subfactor (e.g., Hazard Protection”). Examples of such safety goals would be “The system must not harm its users” or “The petroleum refinery control system must eliminate the hazards involving chemical explosions”.

A policy is any strategic decision that establishes a desired goal. A quality policy is a policy mandating a desired criterion (or type of criteria) of a quality factor or subfactor. A safety policy is a quality policy mandating a safety criterion (or type of safety criterion). An example of a safety policy would be “The petroleum refinery control system must keep the pressures within reactant tanks significantly below their maximum pressure ratings”.

A requirement is any mandatory, externally observable, verifiable (e.g., testable), and validatable behavior, datum, characteristic, or interface. A quality requirement is any requirement that specifies a minimum amount of a mandatory quality subfactor in terms of a quality criterion and quality metric. A quality requirement is a kind of non-functional requirement like a data requirement, an interface requirement, or a constraint. A safety requirement is any quality requirement that specifies a minimum, mandatory amount of safety (subfactor) in terms of a system-specific quality criterion and a minimum level of an associated metric. An example of a safety requirement would be “The petroleum refinery control system shall keep the pressures within reactant tanks at least 30% below their maximum pressure ratings at all times”. Sometimes, safety requirements can be specified in an equivalent inverse of the normal way (e.g., in terms of the maximum acceptable amount of harm rather than the minimum acceptable amount of harm protection).

**SUSTAINABILITY**

Sustainable engineering is the process of designing or operating systems such that they use energy and resources sustainably, in other words, at a rate that does not compromise the natural environment, or the ability of future generations to meet their own needs.

**CHAPTER 5**

**SYSTEM TESTING AND MAINTENANCE:**

Testing is vital to the success of the system. System testing makes a logical assumption that if all parts of the system are correct, the goal will be successfully achieved. In the testing process we test the actual system in an organization and gather errors from the new system operates in full efficiency as stated. System testing is the stage of implementation, which is aimed to ensuring that the system works accurately and efficiently.

In the testing process we test the actual system in an organization and gather errors from the new system and take initiatives to correct the same. All the front-end and back-end connectivity are tested to be sure that the new system operates in full efficiency as stated. System testing is the stage of implementation, which is aimed at ensuring that the system works accurately and efficiently.

The main objective of testing is to uncover errors from the system. For the uncovering process we have to give proper input data to the system. So we should have more conscious to give input data. It is important to give correct inputs to efficient testing.

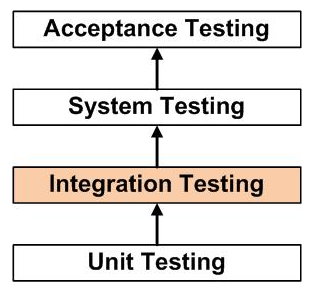
Testing is done for each module. After testing all the modules, the modules are integrated and testing of the final system is done with the test data, specially designed to show that the system will operate successfully in all its aspects conditions. Thus the system testing is a confirmation that all is correct and an opportunity to show the user that the system works. Inadequate testing or non-testing leads to errors that may appear few months later.

This will create two problems, Time delay between the cause and appearance of the problem. The effect of the system errors on files and records within the system. The purpose of the system testing is to consider all the likely variations to which it will be suggested and push the system to its limits.

The testing process focuses on logical intervals of the software ensuring that all the statements have been tested and on the function intervals (i.e.,) conducting tests to uncover errors and ensure that defined inputs will produce actual results that agree with the required results. Testing has to be done using the two common steps Unit testing and Integration testing. In the project system testing is made as follows:

The procedure level testing is made first. By giving improper inputs, the errors occurred are noted and eliminated. This is the final step in system life cycle. Here we implement the tested error-free system into real-life environment and make necessary changes, which runs in an online fashion. Here system maintenance is done every months or year based on company policies, and is checked for errors like runtime errors, long run errors and other maintenances like table verification and reports.

Integration Testing is a level of software testing where individual units are combined and tested as a group.



The purpose of this level is to expose faults in the interaction between integrated units. Test drivers and test stubs are used to assist in Integration testing.

**METHOD**

Any of [Black Box Testing](http://softwaretestingfundamentals.com/black-box-testing/), [White Box Testing](http://softwaretestingfundamentals.com/white-box-testing/), and [Gray Box Testing](http://softwaretestingfundamentals.com/gray-box-testing/) methods can be used. Normally, the method depends on your definition of ‘unit’.

**TASKS**

* Integration Test Plan
  + Prepare
  + Review
  + Rework
  + Baseline
* Integration Test Cases/Scripts
  + Prepare
  + Review
  + Rework
  + Baseline
* Integration Test
  + Perform

**UNIT TESTING:**

Unit testing verification efforts on the smallest unit of software design, module. This is known as “Module Testing”. The modules are tested separately. This testing is carried out during programming stage itself. In these testing steps, each module is found to be working satisfactorily as regard to the expected output from the module.

**BLACK BOX TESTING**

**Black box testing,** also known as Behavioral Testing, is a software testing method in which the internal structure/ design/ implementation of the item being tested is not known to the tester. These tests can be functional or non-functional, though usually functional.

**WHITE-BOX TESTING**

**White-box testing** (also known as clear box testing, glass box testing, transparent box testing, and structural testing) is a method of testing software thattests internal structures or workings of an application, as opposed to its functionality (i.e. black-box testing).

**GREY BOX TESTING**

**Grey box testing** is a technique to test the application with having a limited knowledge of the internal workings of an application. To test the Web Services application usually the Grey box testing is used. Grey box testing is performed by end-users and also by testers and developers.

**INTEGRATION TESTING:**

Integration testing is a systematic technique for constructing tests to uncover error associated within the interface. In the project, all the modules are combined and then the entire programmer is tested as a whole. In the integration-testing step, all the error uncovered is corrected for the next testing steps.

Software integration testing is the incremental integration testing of two or more integrated software components on a single platform to produce failures caused by interface defects.

The task of the integration test is to check that components or software applications, e.g. components in a software system or – one step up – software applications at the company level – interact without error.

**ACCEPTANCE TESTING**

User Acceptance Testing is a critical phase of any project and requires significant participation by the end user. It also ensures that the system meets the functional requirements.

Acceptance testing for Data Synchronization:

* The Acknowledgements will be received by the Sender Node after the Packets are received by the Destination Node
* The Route add operation is done only when there is a Route request in need
* The Status of Nodes information is done automatically in the Cache Updating process

**BUILD THE TEST PLAN**

Any project can be divided into units that can be further performed for detailed processing. Then a testing strategy for each of this unit is carried out. Unit testing helps to identity the possible bugs in the individual component, so the component that has bugs can be identified and can be rectified from errors.

**CONCLUSION:**

Finally, in Online Food Ordering system, we have developed secure, user-friendly food ordering Management System. This System can take care of each member whether it is an Administrator or Customer. This System will help them to properly manage the meals of the customers, the delivery boy’s data and help in growth without creating any hassle. This System is completely secure since every user is provided with user ID and Password so there is no chance of any unauthorized access. Online Payment, Registration and cancellation make it easier to use. So, using this system will help in reducing the labour and provide more facility for Customer to like the services.