**CHAPTER 1**

**INTRUDUCTION**

Floriculture is an important branch of Horticulture which deals with cultivation of flowers and ornamental crops. Floriculture can be defined as the art and knowledge of growing flowers to perfection. The greatest advantage is that flowers need less land and water for production when compared to cultivation of other crops. We are proposing a project called "Floral Fascination Guide" which provides information about Flowers, Flowering plant cultivation, Flower diseases with solution and their applications. This application is helpful to the farmers for the purpose of cultivating the flowering plants and also helps in marketing purpose. This application will provides an information for the students to their study purpose. Flowers are used for various purpose in our daily life like worshipping, religious celebrations, social functions, wedding, perfume industry, self-adornment and also used as raw materials in cosmetic and in pharmaceutical sector. All of this done through the Floriculture. So, our application will provides a knowledge to cultivating the flowering plants in a systematic manner. The system will take care of all the servicing activity in a quick manner. It will be able to check any information at any time.

**ABSTRACTION**

Floral Fascination Guide is the web-based application for the floriculture. If people are cultivating the flowering plants, they directly concerned to nursery, horticulture office or experts but sometimes people doesn't know specific information about particular flowering plants. So, this application will provides to improving more knowledge about floriculture.Our application will provides a broad information about flower farming such as how to grow in a particular soil with suitable weather, what kind of medicine and fertilizer should be given to a plant in a proper time and what disease occurs at what time and its solution. By applying proper medicine and fertilizer at correct time they will get more yield. This application gives information about more uses of flowers and people can know price details of the flowers in many cities. This application will save a time and avoids repeated visits to Horticulture office/nursery. Our software works perfectly as expert

**OBJECTIVES**

Floral Fascination Guide project main objective is to give step by step information of flower cultivation, soil, weather, Diseases information and solution this system will take care of all the servicing activity in a quick manner it will be able to check any information at any time

This software includes: -

* Information of flowers
* Fertilizer
* Diseases
* Price details
* Request
* Update

**CHAPTER 2**

**SYSTEM ANALYSIS**

**EXISTING SYSTEM**

* In the existing "Floriculture System" if users want any Information about flowers and cultivation, they are searching through Google or Browser.
* It has many information and links due to this user may get confused and they didn't get particular information about what they want. Otherwise, they are collect the information from the Horticulture office or Florists, by this process it will take long time to get an information about flowers and their cultivation.
* Flowers requires routine maintenance to keep them looking their best so they want fertilizer treatment 1 to 3 times per month. That’s why the farmers can't go again and again to the Horticulture office.
* Farmers grow some flowers in different weathers it may lead to loss soil fertilizers they don’t know which flowers to grow in which season or weathers.
* Farmers loss their money due to diseased flower and they cannot get any information from Browser Links.
* Users cannot get knowledge of giving medicine to diseased flowers from floriculture app. Student cannot know about biological and botanical information of flowers like scientific name, different colour, diseases, medicine how to cultivate a flower.

**PROPOSED SYSYTEM**

* The proposed system overcomes the drawback in the existing system. The

proposed Floral Fascination Guide provides a very effective solution in which one can login into software and can view every details of the flower.

* People will get information about medicine, fertilizer, uses, disease and their solution via the proposed software.
* It is not required to go the Horticulture office every time. One can login to the system and get every relevant information and also can take every relevant action.
* Too the proposed software overcomes the disadvantages of the existing system and the record of the entire activity happening in the Horticulture office. The report generated will enhance the efficiency of the application. Users can ask queries and other details to Admin, and Admin can view quarries and update details. Entire activities of the Flower farming information included through the software.
* From this application student can also login and see information’s of flowers for their studies, projects, etc.
* In this application we are giving information of flowers like name, scientific name, weather, soil, fertilizer, growth, uses, diseases, medicine, daily price, etc.
* There will be request if there any doubt they can ask to the admin and there will be news updates.

**CHAPTER 3**

**FEASIBILITY STUDY**

**TECHNICAL FEASIBILITY**

The technical feasibility in the proposed system deals with the technology used in the system. It deals with the hardware and software used in the system whether they are of latest technology or not. It happens that after a system is prepared a new technology arises and the user wants the system based on that technology. This system use windows or linux platform, JAVA, HTML as front end technology and Mysql as backend technology. Thus ONLINE COLLEGE EVENT MANAGEMENT SYSTEM is technically feasible.

**ECONOMICAL FEASIBILITY**

Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis. JAVA and Mysql database easily available in internet

**OPERATIONAL FEASIBILITY**

The project has been developed in such a way that it becomes very easy even for a person with little computer knowledge to operate it. This software is very user friendly and does not require any technical person to operate .Thus the project is even operationally feasible.

**CHAPTER 4**

**REQUIREMENT ANALYSIS AND SPECIFICATION**

Functions and features delivered to the end users

The end users of the proposed system are:

**Admin Module:**

* Add flowers
* Add fertilizers
* Add diseases
* Price updates
* Query manager
* Farmer list
* News updates

**User Module:**

All the new users can login using this module and can access information’s of flowers which they are looking for.

* View flowers lists
* View fertilizer lists
* View diseases lists
* Expert system
* View news updates
* View privacy
* Query requests

**Flowers Module:**

* Name
* Photo
* Scientific name
* Soil
* Diseases
* Fertilizer
* Growth
* Weather
* Temperature
* Uses
* Price

**Fertilizers Lists:**

* Name
* Chemical combination
* Use to
* Direction

**Diseases List**

* Name
* Photo
* Solution

**Expert System**

* Weather
* Temperature
* Soil

**New Updates**

* Subjects
* News

**Add Requests**

* Subject
* Description

**HARDWARE REQUIREMENTS**

The section of hardware configuration is an important task related to the software development insufficient random access memory may affect adversely on the speed and efficiency of the entire system. The process should be powerful to handle the entire operations. The hard disk should have sufficient capacity to store the file and application.

**Server Side**

* Processor: Intel Core i3 higher
* Ram: 2GB
* Memory: 30GB

**Client Side**

* Basic Computer which is able to run a web browser

**Software requirements**

**Server Side**

* Apache server
* Mysql Database
* File Manager

**Client Side**

* Basic Computer with Any web browser installed.

**Development Environment**

* IDE: Net beans integrated with Xampp
* Designing Language: HTML, XML and CSS.
* Coding Language: JavaScript.
* Database: Mysql.

**NETBEANS**

NETBEANS  is an [integrated development environment](https://en.wikipedia.org/wiki/Integrated_development_environment) (IDE) for [Java](https://en.wikipedia.org/wiki/Java_(programming_language)). Net Beans allows applications to be developed from a set of modular [software components](https://en.wikipedia.org/wiki/Software_component) called modules. Net Beans runs on [Microsoft Windows](https://en.wikipedia.org/wiki/Microsoft_Windows), MACOS, [Linux](https://en.wikipedia.org/wiki/Linux) and [Solaris](https://en.wikipedia.org/wiki/Solaris_(operating_system)). In addition to Java development, it has extensions for other languages like [PHP](https://en.wikipedia.org/wiki/PHP), [C](https://en.wikipedia.org/wiki/C_(programming_language)), [C++](https://en.wikipedia.org/wiki/C%2B%2B), [HTML5](https://en.wikipedia.org/wiki/HTML5), and [Java script](https://en.wikipedia.org/wiki/JavaScript). Applications based on Net Beans, including the Net Beans IDE, can be extended by third party developers.

**Advantages:**

* **It provides a very comprehensive overview.** Of all the key Net Beans APIs, all in one place, as opposed to scattered all over the Web. The benefit is that it gives you everything you need, all in one place.
* **It combines theory and practice.** Each chapter is split between a theoretical understanding of a particular topic and a series of step by step instructions for applying the concepts. The benefit is that you're given the opportunity of learning about the "why", followed and supported by the "how". By the end of each chapter, you have a thorough understanding of the concept, together with a lot of code samples that you can apply to your own scenarios.
* **It provides many samples.** There isn't a single sample that is built throughout the book, but many smaller samples built within each chapter. The benefit is that you can jump into a particular chapter, such as on "Lookup" or "Nodes" and then learn everything you need to learn on that topic, with several samples built from scratch within that chapter.
* **It is a "living book".** That means that the authors will provide updates over time. I.e., several comments have already been received on the [Feedback Page](https://leanpub.com/nbp4beginners/feedback) for the book and these will be incorporated into revisions of the book which will be made available for free to everyone who has bought it. If you have feedback on the book, make sure to provide it on the Feedback Page or in e-mails to the authors.

**Disadvantages:**

1. **Learning curve**: IDEs are complicated tools. Maximizing their benefit will require and patience.

2. **A sophisticated IDE may not be a good tool for beginning programmers**: If you throw the learning curve of an IDE on top of learning how to program, it can be quite frustrating. Further, features and shortcuts for experienced programmers often hide crucial but mundane details of a language. Details should not be overlooked when learning a new language. Using an IDE may hamper the learning of a new language.

3. **Will not fix bad code, practices, or design**: You still need to be proficient and meticulous. An IDE will not eliminate efficiency or performance problems in your application. IDEs are like paintbrushes. Whether you create a Van Gogh or a Velvet Elvis is dictated by your skill and decisions.

**Features:**

* Static code analysis support, in particular, Find Bugs integration.
* Smoother start-up and faster project scanning.
* New, better, and faster tools throughout the Java Editor.
* Enhancements for Java EE developers, such as JPA code completion and Prime Faces 3.2.
* Better Java FX tools, in particular, Java FX Scene Builder integration.
* Even more Net Beans love for Maven.
* Tools and templates for Test NG.
* New JAVA frameworks integrated, together with more editor tools.
* Groovy & Grails faster and more tools.

**XAMPP:**

**Xampp** is a free and open-source cross-platform [web server](https://en.wikipedia.org/wiki/Web_server) [solution stack](https://en.wikipedia.org/wiki/Solution_stack) package developed by Apache Friends, consisting mainly of the [Apache HTTP Server](https://en.wikipedia.org/wiki/Apache_HTTP_Server), [MariaDB](https://en.wikipedia.org/wiki/MariaDB) [database](https://en.wikipedia.org/wiki/Database), and [interpreters](https://en.wikipedia.org/wiki/Interpreter_(computing)) for scripts written in the [PHP](https://en.wikipedia.org/wiki/PHP) and [Perl](https://en.wikipedia.org/wiki/Perl) [programming languages](https://en.wikipedia.org/wiki/Programming_language). Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server possible. XAMPP's ease of deployment means a [WAMP](https://en.wikipedia.org/wiki/WAMP) or [LAMP](https://en.wikipedia.org/wiki/LAMP_(software_bundle)) stack can be installed quickly and simply on an operating system by a developer, with the advantage a number of common add-in applications such as [Wordpress](https://en.wikipedia.org/wiki/Wordpress) and [Joomla!](https://en.wikipedia.org/wiki/Joomla!) Can also be installed with similar ease using bitnami.

**What Does XAMPP Mean?**

* X - The cross-browser tool which may be launched on Windows, Linux, OS Mac, and etc.
* A - Apache - the web server software.
* M - MySQL - the database type.
* P - PHP - scripting language.
* P - Perl - scripts’ language too.

**Why XAMPP?**

* In order to avoid adding entries to registry XAMPP doesn’t need to run on user computer. It offers batch files to start and stop the server and database engine. This means you can even take XAMPP on your USB drive and run the server. There is no need for admin rights & also have advantage of portability.
* This article is written keeping Windows XP home & pro edition users in mind. Uninstall your previous installations of PHP and MySQL.

**Features:**

XAMPP is regularly updated to the latest releases of [Apache](https://en.wikipedia.org/wiki/Apache_HTTP_Server), [MariaDB](https://en.wikipedia.org/wiki/MariaDB), [PHP](https://en.wikipedia.org/wiki/PHP) and [Perl](https://en.wikipedia.org/wiki/Perl). It also comes with a number of other modules. Including [OpenSSL](https://en.wikipedia.org/wiki/OpenSSL), [phpMyAdmin](https://en.wikipedia.org/wiki/PhpMyAdmin), [MediaWiki](https://en.wikipedia.org/wiki/MediaWiki)including [OpenSSL](https://en.wikipedia.org/wiki/OpenSSL), [phpMyAdmin](https://en.wikipedia.org/wiki/PhpMyAdmin), [MediaWiki](https://en.wikipedia.org/wiki/MediaWiki), [Joomla](https://en.wikipedia.org/wiki/Joomla), [WordPress](https://en.wikipedia.org/wiki/WordPress) and more. Self-contained, multiple instances of XAMPP can exist on a single computer and any given instance can be copied from one computer to another. XAMPP is offered in both a full and a standard version (Smaller version).

**Usage:**

The most obvious characteristic of XAMPP is the ease at which a [WAMP](https://en.wikipedia.org/wiki/WAMP) webserver stack can be deployed and instantiated. Later some common packaged applications that could be easily installed were provided by [Bitnami](https://en.wikipedia.org/wiki/Bitnami).

Officially, XAMPP's designers intended it for use only as a development tool, to allow website designers and programmers to test their work on their own computers without any access to the Internet. To make this as easy as possible, many important security features are disabled by default. XAMPP has the ability to serve web pages on the [World Wide Web](https://en.wikipedia.org/wiki/World_Wide_Web). A special tool is provided to [password-protect](https://en.wikipedia.org/wiki/Password) the most important parts of the package.XAMPP also provides support for creating and manipulating databases in mariaDB and SQLite among others. Once XAMPP is installed, it is possible to treat a [localhost](https://en.wikipedia.org/wiki/Localhost) like a remote host by connecting using an [FTP](https://en.wikipedia.org/wiki/File_Transfer_Protocol) client.

**MySQL server:**

MySQL server is an [open source](https://en.wikipedia.org/wiki/Open-source_software) [relational database management system](https://en.wikipedia.org/wiki/Relational_database_management_system) (RDBMS). Its name is a combination of "My", the name of co-founder [Michael Widenius](https://en.wikipedia.org/wiki/Michael_Widenius)'s daughter, and "[SQL](https://en.wikipedia.org/wiki/SQL)", the abbreviation for [Structured Query Language](https://en.wikipedia.org/wiki/Structured_Query_Language). The MySQL development project has made its [source code](https://en.wikipedia.org/wiki/Source_code) available under the terms of the [GNU General Public License](https://en.wikipedia.org/wiki/GNU_General_Public_License), as well as under a variety of [proprietary](https://en.wikipedia.org/wiki/Proprietary_software) agreements. MySQL was owned and sponsored by a single [for-profit](https://en.wikipedia.org/wiki/Business) firm, the [Swedish](https://en.wikipedia.org/wiki/Sweden) company [MySQL AB](https://en.wikipedia.org/wiki/MySQL_AB), now owned by [Oracle Corporation](https://en.wikipedia.org/wiki/Oracle_Corporation).For proprietary use, several paid editions are available, and offer additional functionality.

MySQL is a central component of the [LAMP](https://en.wikipedia.org/wiki/LAMP_(software_bundle)) open-source web application software stack (and other "[AMP](https://en.wikipedia.org/wiki/List_of_AMP_packages)" stacks). LAMP is an acronym for "[Linux](https://en.wikipedia.org/wiki/Linux), [Apache](https://en.wikipedia.org/wiki/Apache_HTTP_Server), MySQL, [Perl](https://en.wikipedia.org/wiki/Perl)/ [PHP](https://en.wikipedia.org/wiki/PHP)/ [Python](https://en.wikipedia.org/wiki/Python_(programming_language))". Applications that use the MySQL database include: [TYPO3](https://en.wikipedia.org/wiki/TYPO3), [MODx](https://en.wikipedia.org/wiki/MODx), [Joomla](https://en.wikipedia.org/wiki/Joomla), [WordPress](https://en.wikipedia.org/wiki/WordPress), [Simple Machines Forum](https://en.wikipedia.org/wiki/Simple_Machines_Forum), [phpBB](https://en.wikipedia.org/wiki/PhpBB), [MyBB](https://en.wikipedia.org/wiki/MyBB), and [Drupal](https://en.wikipedia.org/wiki/Drupal). MySQL is also used in many high-profile, large-scale [websites](https://en.wikipedia.org/wiki/Website), including [Google](https://en.wikipedia.org/wiki/Google) (though not for searches), [Facebook](https://en.wikipedia.org/wiki/Facebook), [Twitter](https://en.wikipedia.org/wiki/Twitter), [Flickr](https://en.wikipedia.org/wiki/Flickr), and [YouTube](https://en.wikipedia.org/wiki/YouTube).

**Apache:**

Apache is a freely available Web [server](https://whatis.techtarget.com/definition/server) that is distributed under an "open source" license. Version 2.0 runs on most [UNIX](https://searchdatacenter.techtarget.com/definition/Unix)-based operating systems (such as [Linux](https://searchdatacenter.techtarget.com/definition/Linux-operating-system), [Solaris](https://searchoracle.techtarget.com/definition/Solaris), Digital UNIX, and [AIX](https://search400.techtarget.com/definition/AIX)), on other UNIX/[POSIX](https://whatis.techtarget.com/definition/POSIX-Portable-Operating-System-Interface)-derived systems (such as Rhapsody, [BeOS](https://whatis.techtarget.com/definition/BeOS), and BS2000/OSD), on Amiga OS, and on [Windows 2000](https://searchenterprisedesktop.techtarget.com/definition/Windows-2000). According to a Netcraft (www.netcraft.com) Web server survey 60% of all Web sites on the Internet are using Apache (62% including Apache derivatives), making Apache more widely used than all other Web servers combined.

**LANGUAGES USED**

**JAVA:**

**Java** is a [general-purpose](https://en.wikipedia.org/wiki/General-purpose_language) [programming language](https://en.wikipedia.org/wiki/Programming_language) that is [class-based](https://en.wikipedia.org/wiki/Class-based_programming), [object-oriented](https://en.wikipedia.org/wiki/Object-oriented_programming), and designed to have as few implementation [dependencies](https://en.wikipedia.org/wiki/Dependency_(computer_science)) as possible. It is intended to let [application developers](https://en.wikipedia.org/wiki/Application_developer) write once, run anywhere (WORA), meaning that [compiled](https://en.wikipedia.org/wiki/Compiler) Java code can run on all platforms that support Java without the need for recompilation. Java applications are typically compiled to [bytecode](https://en.wikipedia.org/wiki/Java_bytecode) that can run on any [Java virtual machine](https://en.wikipedia.org/wiki/Java_virtual_machine) (JVM) regardless of the underlying [computer architecture](https://en.wikipedia.org/wiki/Computer_architecture). The [syntax](https://en.wikipedia.org/wiki/Syntax_(programming_languages)) of [Java](https://en.wikipedia.org/wiki/Java_(software_platform)) is similar to [C](https://en.wikipedia.org/wiki/C_(programming_language)) and [C++](https://en.wikipedia.org/wiki/C%2B%2B), but it has fewer [low-level](https://en.wikipedia.org/wiki/Low-level_programming_language) facilities than either of them. As of 2019, Java was one of the most [popular programming languages in use](https://en.wikipedia.org/wiki/Measuring_programming_language_popularity) according to [GitHub](https://en.wikipedia.org/wiki/GitHub), particularly for [client-server](https://en.wikipedia.org/wiki/Client%E2%80%93server) [web applications](https://en.wikipedia.org/wiki/Web_applications), with a reported 9 million developers.

Java was originally developed by [James Gosling](https://en.wikipedia.org/wiki/James_Gosling) at [Sun Microsystems](https://en.wikipedia.org/wiki/Sun_Microsystems) ([which has since been acquired by Oracle](https://en.wikipedia.org/wiki/Sun_acquisition_by_Oracle)) and released in 1995 as a core component of Sun Microsystems' [Java platform](https://en.wikipedia.org/wiki/Java_(software_platform)). The original and [reference implementation](https://en.wikipedia.org/wiki/Reference_implementation) Java [compilers](https://en.wikipedia.org/wiki/Compiler), virtual machines, and [class libraries](https://en.wikipedia.org/wiki/Library_(computing)) were originally released by Sun under [proprietary licenses](https://en.wikipedia.org/wiki/Proprietary_license). As of May 2007, in compliance with the specifications of the [Java Community Process](https://en.wikipedia.org/wiki/Java_Community_Process), Sun had [relicensed](https://en.wikipedia.org/wiki/Software_relicensing) most of its Java technologies under the [GNU General Public License](https://en.wikipedia.org/wiki/GNU_General_Public_License). Meanwhile, others have developed alternative implementations of these Sun technologies, such as the [GNU Compiler for Java](https://en.wikipedia.org/wiki/GNU_Compiler_for_Java) (bytecode compiler), [GNU Classpath](https://en.wikipedia.org/wiki/GNU_Classpath) (standard libraries), and [IcedTea](https://en.wikipedia.org/wiki/IcedTea)-Web (browser plugin for applets).

The latest versions are [Java 14](https://en.wikipedia.org/wiki/Java_version_history), released in March 2020, and Java 11, a currently supported [long-term support](https://en.wikipedia.org/wiki/Long-term_support) (LTS) version, released on September 25, 2018; [Oracle](https://en.wikipedia.org/wiki/Oracle_Corporation) released for the [legacy](https://en.wikipedia.org/wiki/Legacy_system) [Java 8](https://en.wikipedia.org/wiki/Java_8) LTS the last free public update in January 2019 for commercial use, while it will otherwise still support Java 8 with public updates for personal use up to at least December 2020. Oracle (and others) highly recommend uninstalling older versions of Java because of serious risks due to unresolved security issues. Since Java 9, 10, 12 and 13 are no longer supported, Oracle advises its users to immediately transition to the latest version (currently Java 14) or an LTS

[James Gosling](https://en.wikipedia.org/wiki/James_Gosling), Mike Sheridan, and [Patrick Naughton](https://en.wikipedia.org/wiki/Patrick_Naughton) initiated the Java language project in June 1991.Java was originally designed for interactive television, but it was too advanced for the digital cable television industry at the time. The language was initially called [Oak](https://en.wikipedia.org/wiki/Oak_(programming_language)) after an [oak](https://en.wikipedia.org/wiki/Oak) tree that stood outside Gosling's office. Later the project went by the name Green and was finally renamed Java, from [Java coffee](https://en.wikipedia.org/wiki/Java_coffee), the coffee from [Indonesia](https://en.wikipedia.org/wiki/Indonesia). Gosling designed Java with a [C](https://en.wikipedia.org/wiki/C_(programming_language))/[C++](https://en.wikipedia.org/wiki/C%2B%2B)-style syntax that system and application programmers would find familiar.

One design goal of Java is portability, which means that programs written for the Java platform must run similarly on any combination of hardware and operating system with adequate run time support. This is achieved by compiling the Java language code to an intermediate representation called [Java bytecode](https://en.wikipedia.org/wiki/Java_bytecode), instead of directly to architecture-specific [machine code](https://en.wikipedia.org/wiki/Machine_code). Java bytecode instructions are analogous to machine code, but they are intended to be executed by a [virtual machine](https://en.wikipedia.org/wiki/Virtual_machine) (VM) written specifically for the host hardware. [End users](https://en.wikipedia.org/wiki/End_user) commonly use a [Java Runtime Environment](https://en.wikipedia.org/wiki/Java_virtual_machine) (JRE) installed on their machine for standalone Java applications, or in a web browser for [Java applets](https://en.wikipedia.org/wiki/Java_applet).

Standard libraries provide a generic way to access host-specific features such as graphics, [threading](https://en.wikipedia.org/wiki/Thread_(computing)), and [networking](https://en.wikipedia.org/wiki/Computer_network).

The use of universal bytecode makes porting simple. However, the overhead of [interpreting](https://en.wikipedia.org/wiki/Interpreter_(computing)) bytecode into machine instructions made interpreted programs almost always run more slowly than native [executables](https://en.wikipedia.org/wiki/Executable). [Just-in-time](https://en.wikipedia.org/wiki/Just-in-time_compilation) (JIT) compilers that compile byte-codes to machine code during runtime were introduced from an early stage. Java itself is platform-independent and is adapted to the particular platform it is to run on by a [Java virtual machine](https://en.wikipedia.org/wiki/Java_virtual_machine) for it, which translates the [Java bytecode](https://en.wikipedia.org/wiki/Java_bytecode) into the platform's machine language.

**HTML**

**Hypertext Markup Language** (**HTML**) is the standard [markup language](https://en.wikipedia.org/wiki/Markup_language) for creating [web pages](https://en.wikipedia.org/wiki/Web_page) and [web applications](https://en.wikipedia.org/wiki/Web_application). With [Cascading Style Sheets](https://en.wikipedia.org/wiki/Cascading_Style_Sheets) (CSS) and [JavaScript](https://en.wikipedia.org/wiki/JavaScript), it forms a triad of [cornerstone](https://en.wikipedia.org/wiki/Cornerstone) technologies for the [World Wide Web](https://en.wikipedia.org/wiki/World_Wide_Web).

[Web browsers](https://en.wikipedia.org/wiki/Web_browser) receive HTML documents from a [web server](https://en.wikipedia.org/wiki/Web_server) or from local storage and [render](https://en.wikipedia.org/wiki/Browser_engine) the documents into multimedia web pages. HTML describes the structure of a web page [semantically](https://en.wikipedia.org/wiki/Semantic_Web) and originally included cues for the appearance of the document.

[HTML elements](https://en.wikipedia.org/wiki/HTML_element) are the building blocks of HTML pages. With HTML constructs, [images](https://en.wikipedia.org/wiki/HTML_element#Images_and_objects) and other objects such as [interactive forms](https://en.wikipedia.org/wiki/Fieldset) may be embedded into the rendered page. HTML provides a means to create [structured documents](https://en.wikipedia.org/wiki/Structured_document) by denoting structural [semantics](https://en.wikipedia.org/wiki/Semantics) for text such as headings, paragraphs, lists, [links](https://en.wikipedia.org/wiki/Hyperlink), quotes and other items. HTML elements are delineated by tags, written using [angle brackets](https://en.wikipedia.org/wiki/Bracket#Angle_brackets). Tags such as <img/> and <input/> directly introduce content into the page. Other tags such as <p> surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a [scripting language](https://en.wikipedia.org/wiki/Scripting_language) such as [JavaScript](https://en.wikipedia.org/wiki/JavaScript), which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The [World Wide Web Consortium](https://en.wikipedia.org/wiki/World_Wide_Web_Consortium) (W3C), maintainer of both the HTML and the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.

**What are HTML tags?**

* HTML tags are used to mark-up HTML elements
* HTML tags are surrounded by the two characters < and >
* The surrounding characters are called angle brackets
* HTML tags normally come in pairs like <b> and </b>
* The first tag in a pair is the start tag, the second tag is the end tag
* The text between the start and end tags is the element content
* HTML tags are not case sensitive, <b> means the same as <B>

**Tag Attributes:**

Tags can have attributes. Attributes can provide additional information about the HTML elements on your page. The <tag> tells the browser to do something, while the attribute tells the browser how to do it. For instance, if we add the bgcolor attribute, we can tell the browser that the background color of your page should be blue, like this: <body bgcolor="blue">. This tag defines an HTML table: <table>. With an added border attribute, you can tell the browser that the table should have no borders: <table border="0">. Attributes always come in name/value pairs like this: name="value". Attributes are always added to the start tag of an HTML element and the value is surrounded by quotes.

**Basic HTML Tags**

The most important tags in HTML are tags that define headings, paragraphs and line breaks.

* <html> Defines an HTML document
* <body> Defines the document's body
* <h1> to <h6> Defines header 1 to header 6
* <p> Defines a paragraph
* <br> Inserts a single line break
* <hr> Defines a horizontal rule
* <!--> Defines a comment

**MYSQL**

MySQL is an open source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language. The MySQL development project has made its source codeavailable under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a singlefor-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. For proprietary use, several paid editions are available, and offer additional functionality.

MySQL is a central component of the LAMP open-source web application software stack (and other "AMP" stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/ PHP/ Python". Applications that use the MySQL database include: TYPO3, MODx, Joomla, WordPress, Simple Machines Forum, phpBB, MyBB, and Drupal. MySQL is also used in many high-profile, large-scale websites, including Google (though not for searches), Facebook Twitter, Flickr, andYouTube.

**Features**

MySQL is offered under two different editions: the open source MySQL Community Server and the proprietary Enterprise Server. MySQL Enterprise Server is differentiated by a series of proprietary extensions which install as server plugins, but otherwise shares the version numbering system and is built from the same code base.

Major features as available in MySQL 5.6:

* A broad subset of ANSI SQL 99, as well as extensions
* Cross-platform support
* Stored procedures, using a procedural language that closely adheres to SQL/PSM
* Triggers
* Cursors
* Updatable views
* Online Data Definition Language (DDL) when using the InnoDB Storage Engine.
* Information schema
* Performance Schema that collects and aggregates statistics about server execution and query performance for monitoring purposes.
* A set of SQL Mode options to control runtime behaviour, including a strict mode to better adhere to SQL standards.
* X/Open XA distributed transaction processing (DTP) support; two phase commit as part of this, using the default InnoDB storage engine
* Transactions with save points when using the default InnoDB Storage Engine. The NDB Cluster Storage Engine also supports transactions.
* ACID compliance when using InnoDB and NDB Cluster Storage Engines.
* SSL support.
* Query caching.
* Sub-SELECTs (i.e. nested SELECTs).
* Built-in replication support (i.e., master-master replication and master-slave replication) with one master per slave, many slaves per master. Multi-master replication is provided in MySQL Cluster, and multi-master support can be added to unclustered configurations using Galera Cluster.
* Full-text indexing and searching.
* Embedded database library.
* Unicode support.
* Partitioned tables with pruning of partitions in optimizer
* Shared-nothing clustering through MySQL Cluster
* Multiple storage engines, allowing one to choose the one that is most effective for each table in the application.
* Native storage engines InnoDB, MyISAM, Merge, Memory (heap), Federated, Archive, CSV, Blackhole, NDB Cluster.
* Commit grouping, gathering multiple transactions from multiple connections together to increase the number of commits per second.

**CHAPTER 5**

**SYSTEM DESIGN**

**INTRODUCTION**

Software design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm and area of application. Design is the first step in the development phase for any engineered product or system. The designer’s goal is to produce a model or representation of an entity that will later be built. Beginning, once system requirement have been specified and analyzed, system design is the first of the three technical activities -design, code and test that is required to build and verify software.

The importance can be stated with a single word “Quality”. Design is the place where quality is fostered in software development. Design provides us with representations of software that can assess for quality. Design is the only way that we can accurately translate a customer’s view into a finished software product or system. Software design serves as a foundation for all the software engineering steps that follow. Without a strong design we risk building an unstable system – one that will be difficult to test, one whose quality cannot be assessed until the last stage.

During design, progressive refinement of data structure, program structure, and procedural details are developed reviewed and documented. System design can be viewed from either technical or project management perspective. From the technical point of view, design is comprised of four activities – architectural design, data structure design, interface design and procedural design.

**NORMALIZATION**

It is a process of converting a relation to a standard form. The process is used to handle the problems that can arise due to data redundancy i.e. repetition of data in the database, maintain data integrity as well as handling problems that can arise due to insertion, updation, deletion anomalies.

Decomposing is the process of splitting relations into multiple relations to eliminate anomalies and maintain anomalies and maintain data integrity. To do this we use normal forms or rules for structuring relation.

**Insertion anomaly**: Inability to add data to the database due to absence of other data.

**Deletion anomaly**: Unintended loss of data due to deletion of other data.

**Update anomaly**: Data inconsistency resulting from data redundancy and partial update

**Normal Forms**: These are the rules for structuring relations that eliminate anomalies.

**FIRST NORMAL FORM**:

A relation is said to be in first normal form if the values in the relation are atomic for every attribute in the relation. By this we mean simply that no attribute value can be a set of values or, as it is sometimes expressed, a repeating group.

**SECOND NORMAL FORM**:

A relation is said to be in second Normal form is it is in first normal form and it should satisfy any one of the following rules.

1. Primary key is a not a composite primary key
2. No non key attributes are present
3. Every non key attribute is fully functionally dependent on full set of primary key.

**THIRD NORMAL FORM**:

A relation is said to be in third normal form if their exits no transitive dependencies.

**Transitive Dependency**: If two non key attributes depend on each other as well as on the primary key then they are said to be transitively dependent.

The above normalization principles were applied to decompose the data in multiple tables thereby making the data to be maintained in a consistent state.

**DATABASE DESIGN**

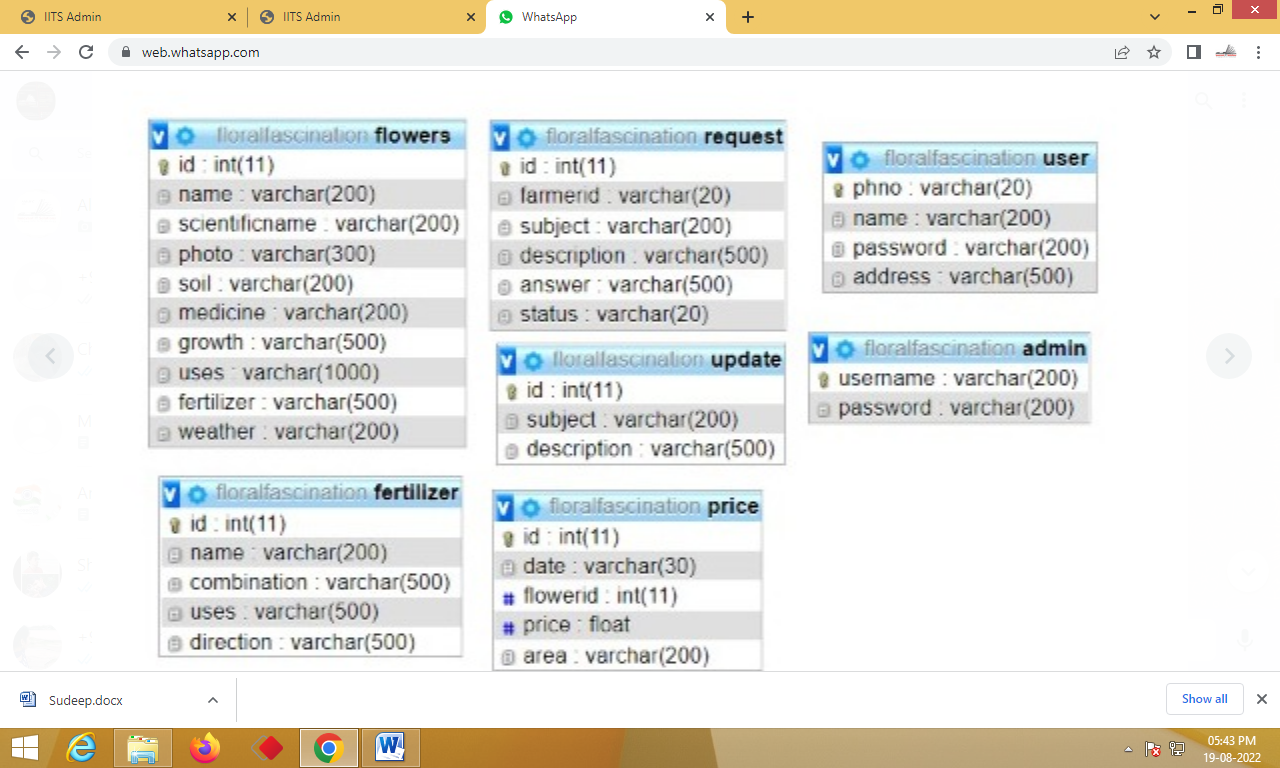


Fig: Database Diagram

**DATAFLOW DIAGRAM**

A data flow diagram is graphical tool used to describe and analyze movement of data through a system. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processed, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implements and movement of data between people, departments and workstations. A full description of a system actually consists of a set of data flow diagrams. Using two familiar notations Yourdon, Gane and Sarson notation develops the data flow diagrams. Each component in a DFD is labeled with a descriptive name. Process is further identified with a number that will be used for identification purpose. The development of DFD’S is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level. The lop-level diagram is often called context diagram. It consists a single process bit, which plays vital role in studying the current system. The process in the context level diagram is exploded into other process at the first level DFD.

The idea behind the explosion of a process into more process is that understanding at one level of detail is exploded into greater detail at the next level. This is done until further explosion is necessary and an adequate amount of detail is described for analyst to understand the process.

Larry Constantine first developed the DFD as a way of expressing system requirements in a graphical from, this lead to the modular design.

A DFD is also known as a “bubble Chart” has the purpose of clarifying system requirements and identifying major transformations that will become programs in system design. So it is the starting point of the design to the lowest level of detail. A DFD consists of a series of bubbles joined by data flows in the system.

**DFD SYMBOLS:**

In the DFD, there are four symbols

1. A square defines a source(originator) or destination of system data
2. An arrow identifies data flow. It is the pipeline through which the information flows
3. A circle or a bubble represents a process that transforms incoming data flow into outgoing data flows.
4. An open rectangle is a data store, data at rest or a temporary repository of data

Process that transforms data flow.

Source or Destination of data

Data Flow

Data Store

**CONSTRUCTING A DFD:**

Several rules of thumb are used in drawing DFD’S:

1. Process should be named and numbered for an easy reference. Each name should be representative of the process.
2. The direction of flow is from top to bottom and from left to right. Data traditionally flow from source to the destination although they may flow back to the source. One way to indicate this is to draw long flow line back to a source. An alternative way is to repeat the source symbol as a destination. Since it is used more than once in the DFD it is marked with a short diagonal.
3. When a process is exploded into lower level details, they are numbered.
4. The names of data stores and destinations are written in capital letters. Process and dataflow names have the first letter of each work capitalized

A DFD typically shows the minimum contents of data store. Each data store should contain all the data elements that flow in and out.

Questionnaires should contain all the data elements that flow in and out. Missing interfaces redundancies and like is then accounted for often through interviews.

**TYPES OF DATA FLOW DIAGRAMS**

1. Current Physical
2. Current Logical
3. New Logical
4. New Physical

**CURRENT PHYSICAL:**

In Current Physical DFD process label include the name of people or their positions or the names of computer systems that might provide some of the overall system-processing label includes an identification of the technology used to process the data. Similarly data flows and data stores are often labels with the names of the actual physical media on which data are stored such as file folders, computer files, business forms or computer tapes.

**CURRENT LOGICAL:**

The physical aspects at the system are removed as mush as possible so that the current system is reduced to its essence to the data and the processors that transform them regardless of actual physical form.

**NEW LOGICAL**:

This is exactly like a current logical model if the user were completely happy with he user were completely happy with the functionality of the current system but had problems with how it was implemented typically through the new logical model will differ from current logical model while having additional functions, absolute function removal and inefficient flows recognized.

**NEW PHYSICAL:**

The new physical represents only the physical implementation of the new system.

**RULES GOVERNING THE DFD’S**

**PROCESS**

1. No process can have only outputs.
2. No process can have only inputs. If an object has only inputs than it must be a sink.
3. A process has a verb phrase label.

**DATA STORE**

1. Data cannot move directly from one data store to another data store, a process must move data.
2. Data cannot move directly from an outside source to a data store, a process, which receives, must move data from the source and place the data into data store
3. A data store has a noun phrase label.

**DATA FLOW**

1. A Data Flow has only one direction of flow between symbols. It may flow in both directions between a process and a data store to show a read before an update. The later is usually indicated however by two separate arrows since these happen at different type.
2. A join in DFD means that exactly the same data comes from any of two or more different processes data store or sink to a common location.
3. A data flow cannot go directly back to the same process it leads. There must be atleast one other process that handles the data flow produce some other data flow returns the original data into the beginning process.
4. A Data flow to a data store means update (delete or change).
5. A data Flow from a data store means retrieve or use.

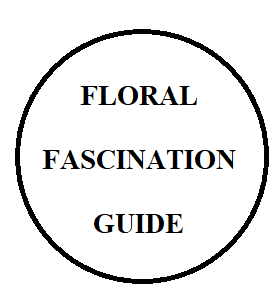
A data flow has a noun phrase label more than one data flow noun phrase can appear on a single arrow as long as all of the flows on the same arrow move together as one package.

**DFD’S DIAGRAM**

Fertilizer Guide

Farmers Manager

Farmers Manager



Daily Price

Farmer Query Manager

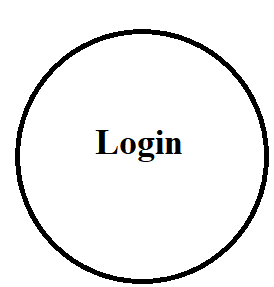
Diseases Guide

Flowers Growing Guide

Fig: DFD

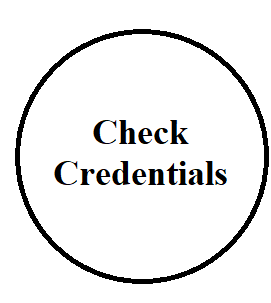
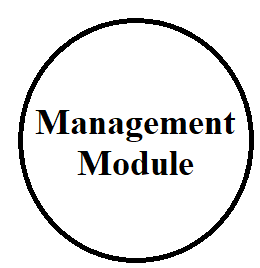
**Admin**

**Add Flowers**



**Add Fertilizers**

**Add Diseases**

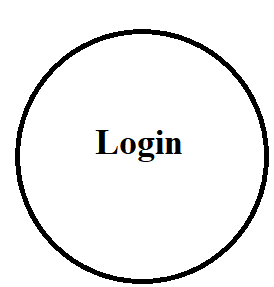
**Add Updates**

**User Requests**

**Logout**

Fig: DFD Admin side

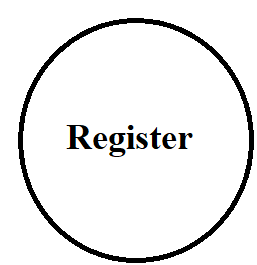
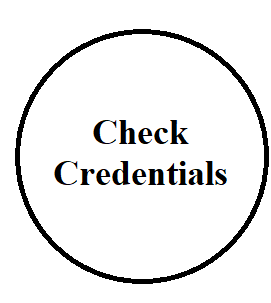
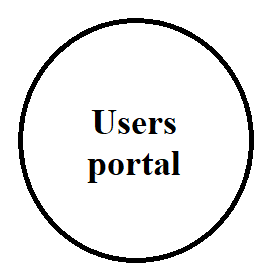
**View Flowers**



**View Fertilizers**

**Users**

**View Diseases**

**New Updates**

**Expert System**

**Add Requests**

**Logout**

Fig: DFD User side

**CHAPTER 6**

**OUTPUT SCREENS:**

**CHAPTER 7**

**SYSTEM TESTING AND IMPLEMENTATION**

**INTRODUCTION**

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. In fact, testing is the one step in the software engineering process that could be viewed as destructive rather than constructive.

A strategy for software testing integrates software test case design methods into a well-planned series of steps that result in the successful construction of software. Testing is the set of activities that can be planned in advance and conducted systematically. The underlying motivation of program testing is to affirm software quality with methods that can economically and effectively apply to both strategic to both large and small-scale systems.

**STRATEGIC APPROACH TO SOFTWARE TESTING**

The software engineering process can be viewed as a spiral. Initially system engineering defines the role of software and leads to software requirement analysis where the information domain, functions, behavior, performance, constraints and validation criteria for software are established. Moving inward along the spiral, we come to design and finally to coding. To develop computer software we spiral in along streamlines that decrease the level of abstraction on each turn.

A strategy for software testing may also be viewed in the context of the spiral. Unit testing begins at the vertex of the spiral and concentrates on each unit of the software as implemented in source code. Testing progress by moving outward along the spiral to integration testing, where the focus is on the design and the construction of the software architecture. Talking another turn on outward on the spiral we encounter validation testing where requirements established as part of software requirements analysis are

validated against the software that has been constructed. Finally we arrive at system testing, where the software and other system elements are tested as a whole.

UNIT TESTING

MODULE TESTING

SUB-SYSTEM TESING

SYSTEM TESTING

ACCEPTANCE TESTING

Component Testing

Integration Testing

User Testing

**Unit Testing**

Unit testing focuses verification effort on the smallest unit of software design, the module. The unit testing we have is white box oriented and some modules the steps are conducted in parallel.

**WHITE BOX TESTING**

This type of testing ensures that

* All independent paths have been exercised at least once
* All logical decisions have been exercised on their true and false sides
* All loops are executed at their boundaries and within their operational bounds
* All internal data structures have been exercised to assure their validity.

To follow the concept of white box testing we have tested each form .we have created independently to verify that Data flow is correct, All conditions are exercised to check their validity, All loops are executed on their boundaries.

**BASIC PATH TESTING**

Established technique of flow graph with Cyclomatic complexity was used to derive test cases for all the functions. The main steps in deriving test cases were:

Use the design of the code and draw correspondent flow graph.

Determine the Cyclomatic complexity of resultant flow graph, using formula:

V(G)=E-N+2 or

V(G)=P+1 or

V(G)=Number Of Regions

Where V(G) is Cyclomatic complexity,

E is the number of edges,

N is the number of flow graph nodes,

P is the number of predicate nodes.

Determine the basis of set of linearly independent paths.

**CONDITIONAL TESTING**

In this part of the testing each of the conditions were tested to both true and false aspects. And all the resulting paths were tested. So that each path that may be generate on particular condition is traced to uncover any possible errors.

**DATA FLOW TESTING**

This type of testing selects the path of the program according to the location of definition and use of variables. This kind of testing was used only when some local variable were declared. The *definition-use chain* method was used in this type of testing. These were particularly useful in nested statements.

**CHAPTER 8**

**SYSTEM SECURITY**

# INTRODUCTION

The protection of computer based resources that includes hardware, software, data, procedures and people against unauthorized use or natural

Disaster is known as System Security.

System Security can be divided into four related issues:

* Security
* Integrity
* Privacy
* Confidentiality

**SYSTEM SECURITY** refers to the technical innovations and procedures applied to the hardware and operation systems to protect against deliberate or accidental damage from a defined threat.

**DATA SECURITY** is the protection of data from loss, disclosure, modification and destruction.

**SYSTEM INTEGRITY** refers to the power functioning of hardware and programs, appropriate physical security and safety against external threats such as eavesdropping and wiretapping.

**PRIVACY** defines the rights of the user or organizations to determine what information they are willing to share with or accept from others and how the organization can be protected against unwelcome, unfair or excessive dissemination of information about it.

**CONFIDENTIALITY** is a special status given to sensitive information in a database to minimize the possible invasion of privacy. It is an attribute of information that characterizes its need for protection.

## SECURITY IN SOFTWARE

System security refers to various validations on data in form of checks and controls to avoid the system from failing. It is always important to ensure that only valid data is entered and only valid operations are performed on the system. The system employees two types of checks and controls:

**CLIENT SIDE VALIDATION**

Various client side validations are used to ensure on the client side that only valid data is entered. Client side validation saves server time and load to handle invalid data. Some checks imposed are:

* VBScript in used to ensure those required fields are filled with suitable data only. Maximum lengths of the fields of the forms are appropriately defined.
* Forms cannot be submitted without filling up the mandatory data so that manual mistakes of submitting empty fields that are mandatory can be sorted out at the client side to save the server time and load.
* Tab-indexes are set according to the need and taking into account the ease of user while working with the system.

**SERVER SIDE VALIDATION**

Some checks cannot be applied at client side. Server side checks are necessary to save the system from failing and intimating the user that some invalid operation has been performed or the performed operation is restricted. Some of the server side checks imposed is:

* Server side constraint has been imposed to check for the validity of primary key and foreign key. A primary key value cannot be duplicated. Any attempt to duplicate the primary value results into a message intimating the user about those values through the forms using foreign key can be updated only of the existing foreign key values.
* User is intimating through appropriate messages about the successful operations or exceptions occurring at server side

**CONCLUSION**

The Floral Fascination Guide is one of the most effective software for the users who are looking for data related to the flower farming and who do not have enough time to spend for collecting information from the Horticulture office or Florists. This software is helpful for user to get a proper information from anywhere and anytime. this software help users to get knowledge about fertilizers. This software reduces time for searching various information . This software gives easy tips and tricks for users for cultivation and harvesting the flowers.

**BENEFITS:**

The project is identified by the merits of the system offered to the user. The merits of this project are as follows: -

* It’s a web-enabled project.
* This project offers user to enter the data through simple and interactive forms. This is very helpful for the client to enter the desired information through so much simplicity.
* The user is mainly more concerned about the validity of the data, whatever he is entering. There are checks on every stages of any new creation, data entry or updation so that the user cannot enter the invalid data, which can create problems at later date.
* Sometimes the user finds in the later stages of using project that he needs to update some of the information that he entered earlier. There are options for him by which he can update the records. Moreover there is restriction for his that he cannot change the primary data field. This keeps the validity of the data to longer extent.
* User is provided the option of monitoring the records he entered earlier. He can see the desired records with the variety of options provided by him.
* From every part of the project the user is provided with the links through framing so that he can go from one option of the project to other as per the requirement. This is bound to be simple and very friendly as per the user is concerned. That is, we can sat that the project is user friendly which is one of the primary concerns of any good project.
* Data storage and retrieval will become faster and easier to maintain because data is stored in a systematic manner and in a single database.
* Decision making process would be greatly enhanced because of faster processing of information since data collection from information available on computer takes much less time then manual system.
* Allocating of sample results becomes much faster because at a time the user can see the records of last years.
* Easier and faster data transfer through latest technology associated with the computer and communication.
* Through these features it will increase the efficiency, accuracy and transparency,

**LIMITATIONS:**

* The size of the database increases day-by-day, increasing the load on the database back up and data maintenance activity.
* Training for simple computer operations is necessary for the users working on the system.

**FUTURE IMPROVEMENT**

This System being web-based and an undertaking of Cyber Security Division, needs to be thoroughly tested to find out any security gaps

* A console for the data center may be made available to allow the personnel to monitor on the sites which were cleared for hosting during a particular period.
* Moreover, it is just a beginning; further the system may be utilized in various other types of auditing operation viz. Network auditing or similar process/workflow based applications...

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