

1. INTRODUCTION

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 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.

1.1 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.

1.2 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

2. SCOPE

2.1 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.

2.2 PROPOSED SYSTEM

- 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.

3. HARDWARE AND SOFTWARE REQUIREMENTS

3.1 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

3.2 SOFTWARE REQUIREMENTS

Server Side

- Apache server
- MySQL Database
- File Manager

Client Side

- Basic Computer with Any web browser installed.

3.3 DEVELOPMENT ENVIRONMENT

- IDE: Net beans integrated with Xampp
- Designing Language: HTML, XML and CSS
- Coding Language: JavaScript
- Database: MySQL

4. FEASIBILITY STUDY

4.1 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 FLORAL FASCINATION GUIDE is technically feasible.

4.2 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.

4.3 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.

5. LANGUAGES USED

5.1 JAVA:

Java is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. It is intended to let application developers write once, run anywhere (WORA), meaning that compiled Java code can run on all platforms that support Java without the need for recompilation. Java applications are typically compiled to bytecode that can run on any Java virtual machine (JVM) regardless of the underlying computer architecture. The syntax of Java is similar to C and C++, but it has fewer low-level facilities than either of them. As of 2019, Java was one of the most popular programming languages in use according to GitHub, particularly for client-server web applications, with a reported 9 million developers.

Java was originally developed by James Gosling at Sun Microsystems (which has since been acquired by Oracle) and released in 1995 as a core component of Sun Microsystems' Java platform. The original and reference implementation Java compilers, virtual machines, and class libraries were originally released by Sun under proprietary licenses. As of May 2007, in compliance with the specifications of the Java Community Process, Sun had relicensed most of its Java technologies under the GNU General Public License. Meanwhile, others have developed alternative implementations of these Sun technologies, such as the GNU Compiler for Java (bytecode compiler), GNU Classpath (standard libraries), and IcedTea-Web (browser plugin for applets).

The latest versions are Java 14, released in March 2020, and Java 11, a currently supported long-term support (LTS) version, released on September 25, 2018; Oracle released for the legacy 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, Mike Sheridan, and 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 after an oak tree that stood outside Gosling's office. Later the project went by the name Green and was finally renamed Java, from Java coffee, the coffee from Indonesia. Gosling designed Java with a C/C++-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, instead of directly to architecture-specific machine code. Java bytecode instructions are analogous to machine code, but they are intended to be executed by a virtual machine (VM) written specifically for the host hardware. End users commonly use a Java Runtime Environment (JRE) installed on their machine for standalone Java applications, or in a web browser for Java applets.

Standard libraries provide a generic way to access host-specific features such as graphics, threading, and networking.

The use of universal bytecode makes porting simple. However, the overhead of interpreting bytecode into machine instructions made interpreted programs almost always run more slowly than native executables. Just-in-time (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 for it, which translates the Java bytecode into the platform's machine language.

5.2 HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by tags, written using angle brackets. Tags such as `` 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 such as 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 (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 `` and ``
- 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, `` means the same as ``

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
-
 Inserts a single line break
- <hr> Defines a horizontal rule
- <!--> Defines a comment

5.3 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 code available 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 single for-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, and YouTube.

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.

6. MODULES OF THE PROJECT

Functions and features delivered to the end users

The end users of the proposed system are:

6.1 Admin Module:

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

6.2 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

6.3 Flowers Module:

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

6.4 Fertilizers Module:

- Name
- Chemical combination
- Use to
- Direction

6.5 Diseases Module:

- Name
- Photo
- Solution

6.6 Expert System Module:

- Weather
- Temperature
- Soil

6.7 New Updates Module:

- Subjects
- News

6.8 Query Requests :

- Subject
- Description

7. SYSTEM DESIGN

7.1 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 if it is in first normal form and it should satisfy any one of the following rules.

- 1) Primary key is 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 there exists 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.

7.2 DATABASE DESIGN

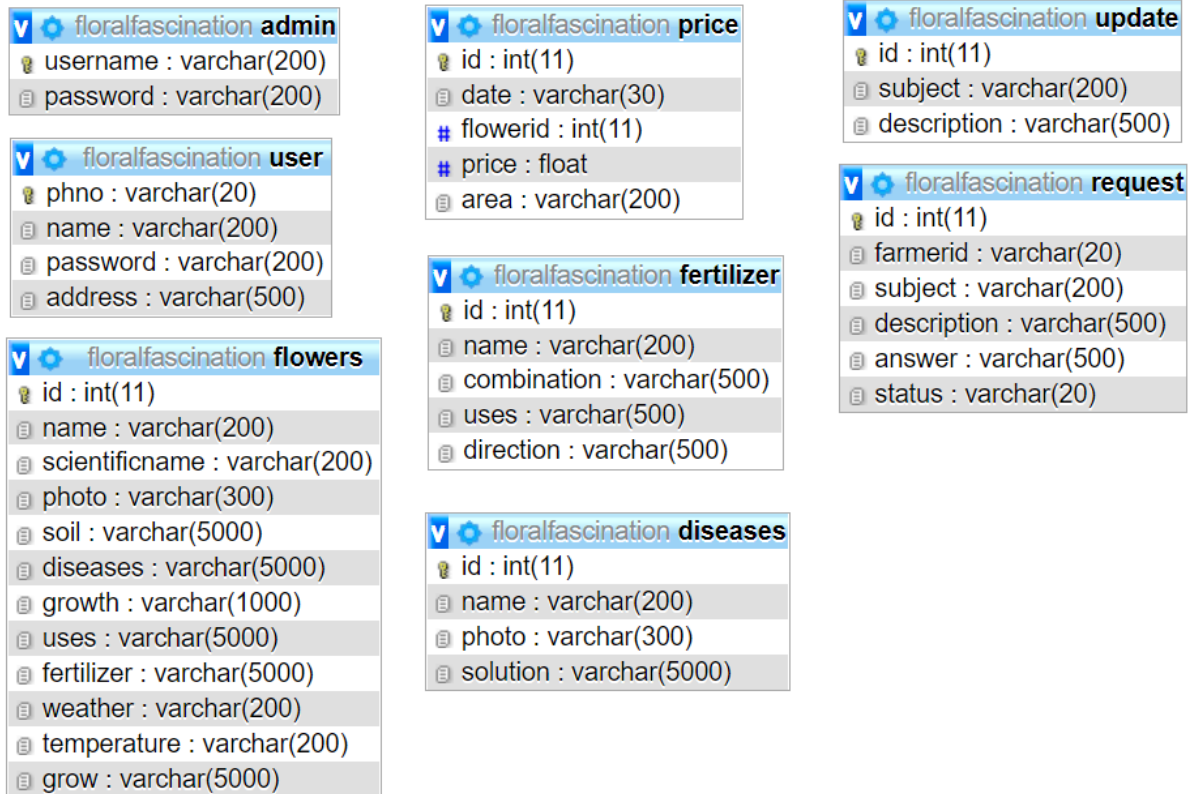


Fig: Database Diagram

7.3 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 top-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'S DIAGRAM

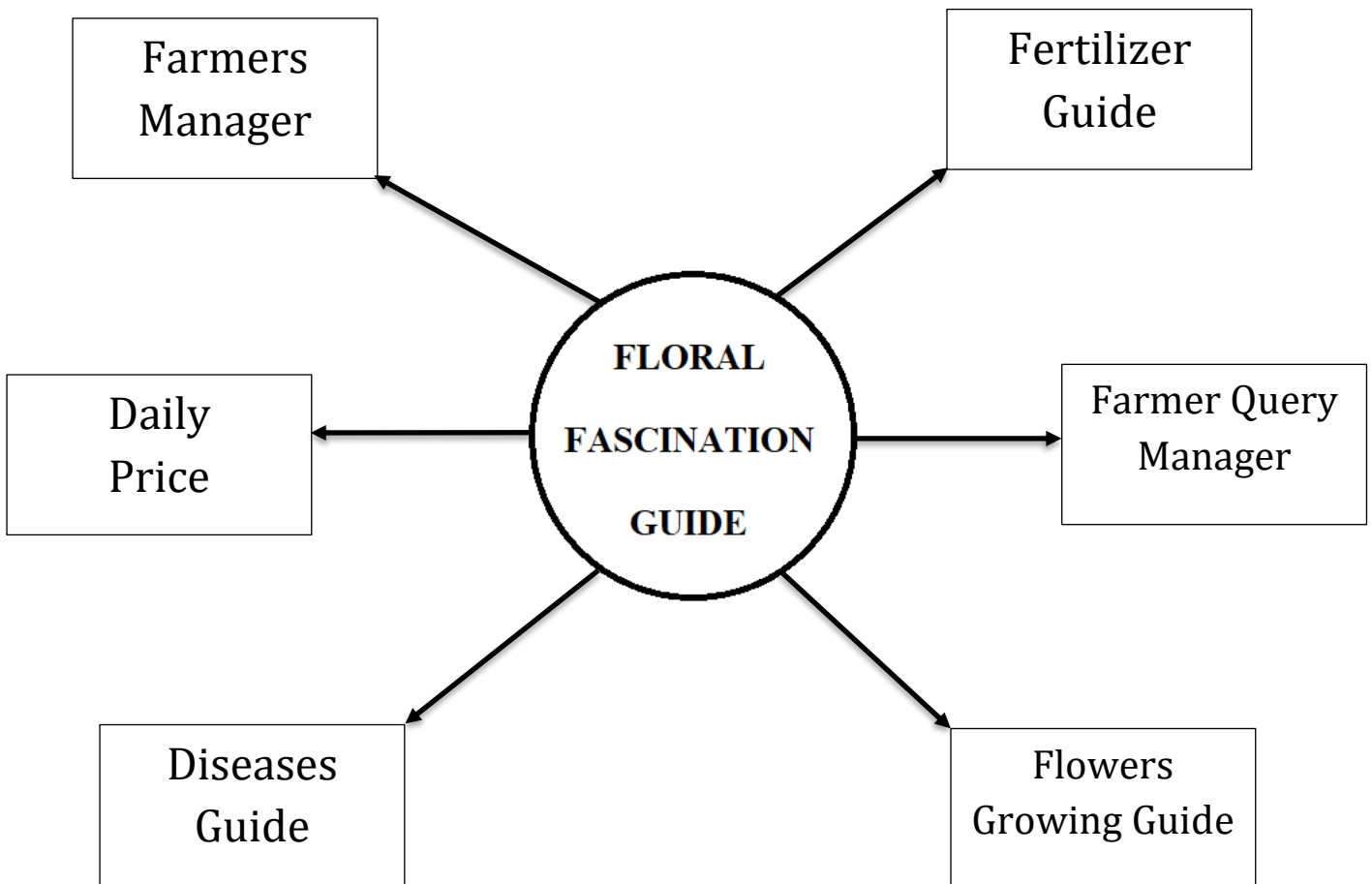


Fig: DFD

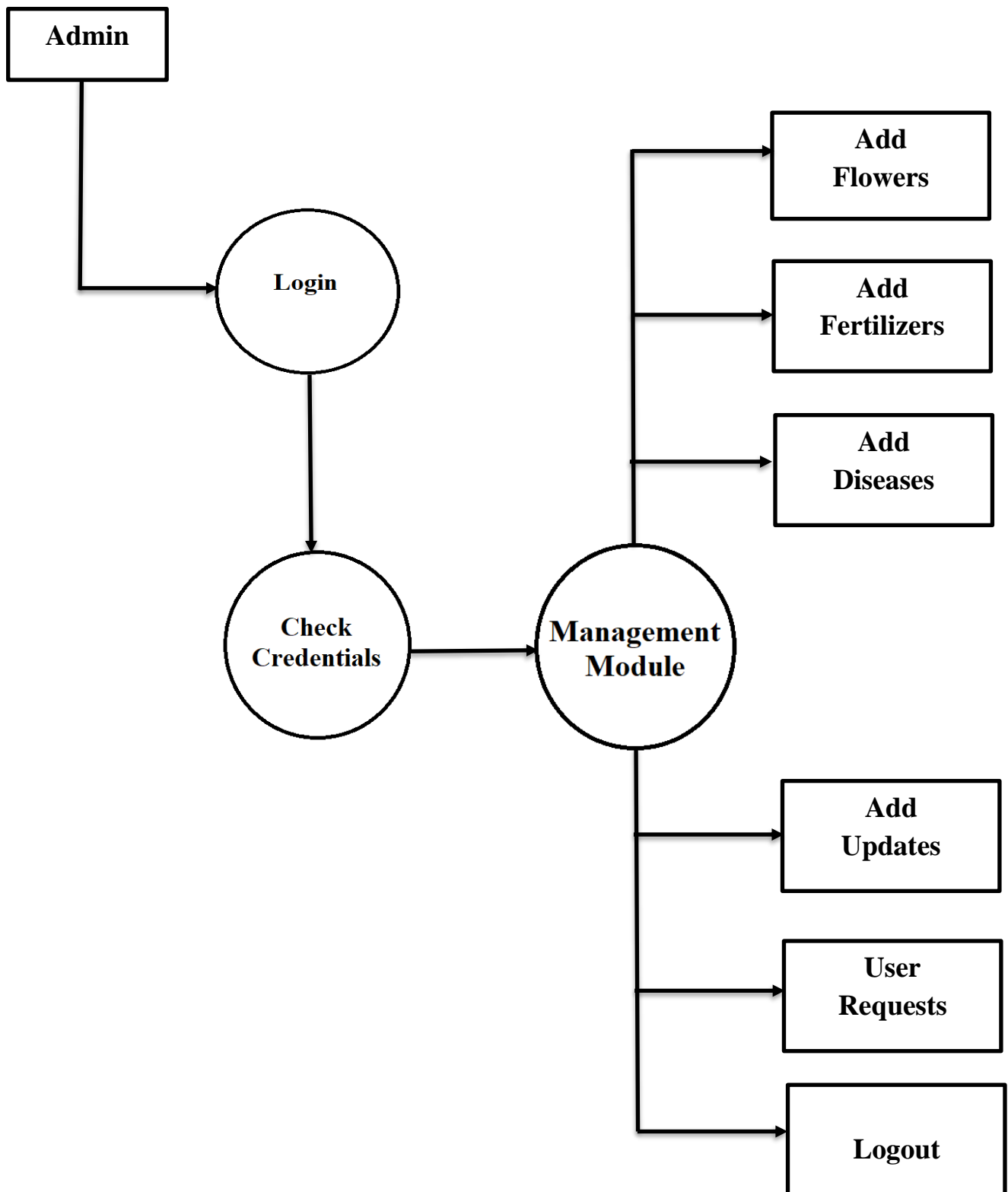


Fig: DFD Admin side

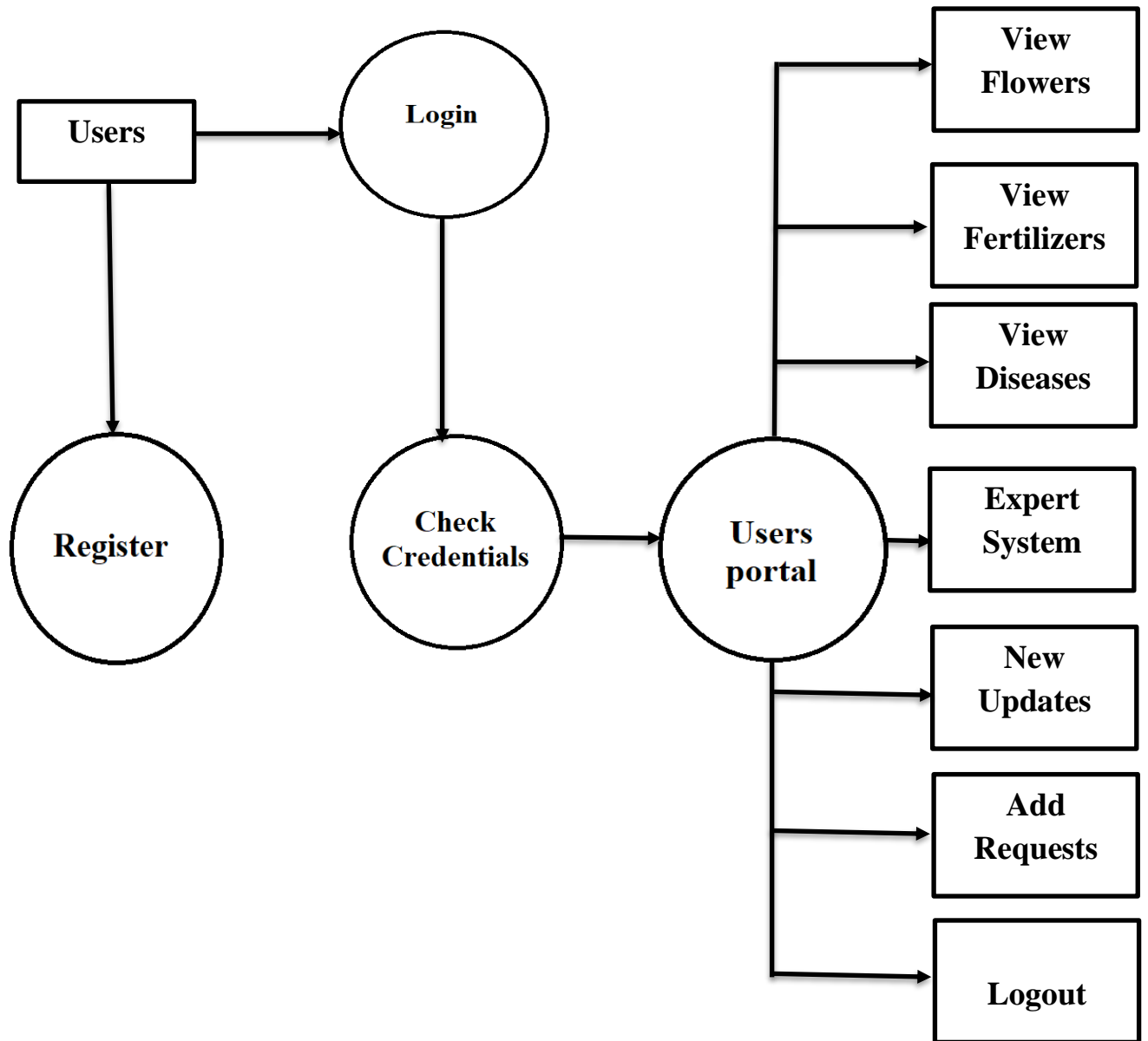


Fig: DFD User side

8. IMPLEMENTATION

```
<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>Floriculture</title>

<meta content="width=device-width, initial-scale=1.0" name="viewport">

<meta content="Free HTML Templates" name="keywords">

<meta content="Free HTML Templates" name="description">

<!-- Favicon -->

<link href="img/favicon.ico" rel="icon">

<!-- Google Web Fonts -->

<link rel="preconnect" href="https://fonts.gstatic.com">

<link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;500;600;700&display=s
wap" rel="stylesheet">

<!-- Font Awesome -->

<link href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.10.0/css/all.min.css"
rel="stylesheet">

<!-- Libraries Stylesheet -->

<link href="lib/owlcarousel/assets/owl.carousel.min.css" rel="stylesheet">

<link href="lib/tempusdominus/css/tempusdominus-bootstrap-4.min.css" rel="stylesheet" />

<!-- Customized Bootstrap Stylesheet -->

<link href="css/style.css" rel="stylesheet">

</head>

<body>
```

```
<!-- Navbar Start -->

<div class="container-fluid position-relative nav-bar p-0">

<div class="container-lg position-relative p-0 px-lg-3" style="z-index: 9;">

<nav class="navbar navbar-expand-lg bg-light navbar-light shadow-lg py-3 py-lg-0 pl-3 pl-
lg-5">

<a href="" class="navbar-brand">

<h2 class="m-0 text-primary"><span class="text-
dark">FloralFascination</span>Guide</h2>

</a>

<button type="button" class="navbar-toggler" data-toggle="collapse" data-
target="#navbarCollapse">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse justify-content-between px-3" id="navbarCollapse">

<div class="navbar-nav ml-auto py-0">

<a href="index.html" class="nav-item nav-link">Home</a>

<a href="admin.jsp" class="nav-item nav-link active">Admin</a>

<a href="user.jsp" class="nav-item nav-link">User</a>

</div>

</div>

</nav>

</div>

</div>

<!-- Navbar End -->

<!-- Registration Start -->

<div class="container-fluid bg-registration py-5" style="margin: 90px 0;">

<div class="container py-5">
```

```
<div class="row align-items-center">
<div class="col-lg-7 mb-5 mb-lg-0">
</div>
<div class="col-lg-5">
<div class="card border-0">
<div class="card-header bg-primary text-center p-4">
<h1 class="text-white m-0">Admin Login</h1>
</div>
<div class="card-body rounded-bottom bg-white p-5">
<form action="adminlogin" method="POST">
<div class="form-group">
<input type="text" name="username" class="form-control p-4" placeholder="Enter Your
Username" required="required" />
</div>
<div class="form-group">
<input type="password" name="password" class="form-control p-4" placeholder="Enter
Your Password" required="required" />
</div>
<div>
<input class="btn btn-primary btn-block py-3" type="submit" value="Login"/>
</div>
</form>
</div>
</div>
</div>
</div>
```



```
</div>

</div>

<!-- Registration End -->

<!-- Footer Start -->

<div class="container-fluid bg-dark text-white border-top py-4 px-sm-3 px-md-5"
style="border-color: rgba(256, 256, 256, .1) !important;">

<div class="row">

<div class="col-lg-6 text-center text-md-left mb-3 mb-md-0">

<p class="m-0 text-white-50">Developed By<a href="#"> Students</a>

</p>

</div>

</div>

</div>

</div>

<!-- Footer End -->

<!-- Back to Top -->

<a href="#" class="btn btn-lg btn-primary btn-lg-square back-to-top"><i class="fa fa-angle-
double-up"></i></a>

<!-- JavaScript Libraries -->

<script src="https://code.jquery.com/jquery-3.4.1.min.js"></script>

<script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.4.1/js/bootstrap.bundle.min.js"></script>

<script src="lib/easing/easing.min.js"></script>

<script src="lib/owlcarousel/owl.carousel.min.js"></script>

<script src="lib/tempusdominus/js/moment.min.js"></script>

<script src="lib/tempusdominus/js/moment-timezone.min.js"></script>

<script src="lib/tempusdominus/js/tempusdominus-bootstrap-4.min.js"></script>
```

```
<!-- Contact Javascript File -->

<script src="mail/jqBootstrapValidation.min.js"></script>

<script src="mail/contact.js"></script>

<!-- Template Javascript -->

<script src="js/main.js"></script>

</body>

</html>
```

```
/*
```

```
 * To change this license header, choose License Headers in Project Properties.
```

```
 * To change this template file, choose Tools | Templates
```

```
 * and open the template in the editor.
```

```
*/
```

```
import database.DBConfig;

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.Connection;

import java.sql.ResultSet;

import java.sql.Statement;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.servlet.http.HttpSession;

/**

 *

 * @author USER
```

```
*/  
  
public class adminlogin extends HttpServlet {  
  
/**  
  
* Processes requests for both HTTP <code>GET</code> and <code>POST</code>  
* methods.  
  
*  
* @param request servlet request  
* @param response servlet response  
* @throws ServletException if a servlet-specific error occurs  
* @throws IOException if an I/O error occurs  
*/  
  
protected void processRequest(HttpServletRequest request, HttpServletResponse response)  
throws ServletException, IOException {  
response.setContentType("text/html;charset=UTF-8");  
PrintWriter out = response.getWriter();  
try {  
String username=request.getParameter("username");  
String password=request.getParameter("password");  
Class.forName("com.mysql.jdbc.Driver");  
Connection con=new DBConfig().getConnection();  
Statement sta=con.createStatement();  
ResultSet res=sta.executeQuery("select * from admin where username='"+username+"' and  
password='"+password+"'");  
int flage=0;  
while(res.next())  
{
```

```
flage=1;

}

if(flage==1)

{

HttpSession hs=request.getSession();

hs.setAttribute("username", username);

hs.setAttribute("password", password);

response.sendRedirect("flower.jsp");

}

else

{

out.println("<script>alert('Username or Password incorrect')</script>");

out.println("<meta http-equiv='refresh' content='0;admin.jsp'/>");

}

}

catch(Exception e){

out.println(e);

}

}

// <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the + sign on
the left to edit the code.">

/**

 * Handles the HTTP <code>GET</code> method.

 *

 * @param request servlet request

 * @param response servlet response
```

* @throws ServletException if a servlet-specific error occurs

* @throws IOException if an I/O error occurs

*/

@Override

protected void doGet(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

processRequest(request, response);

}

/**

* Handles the HTTP <code>POST</code> method.

*

* @param request servlet request

* @param response servlet response

* @throws ServletException if a servlet-specific error occurs

* @throws IOException if an I/O error occurs

*/

@Override

protected void doPost(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

processRequest(request, response);

}

/**

* Returns a short description of the servlet.

*

* @return a String containing servlet description

```
*/
```

```
@Override
```

```
public String getServletInfo() {
```

```
    return "Short description";
```

```
}// </editor-fold>
```

```
}
```

```
public class userlogin extends HttpServlet {
```

```
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
```

```
        throws ServletException, IOException {
```

```
        response.setContentType("text/html;charset=UTF-8");
```

```
        PrintWriter out = response.getWriter();
```

```
        try {
```

```
            String username=request.getParameter("username");
```

```
            String password=request.getParameter("password");
```

```
            Class.forName("com.mysql.jdbc.Driver");
```

```
            Connection con=new DBConfig().getConnection();
```

```
            Statement sta=con.createStatement();
```

```
            ResultSet res=sta.executeQuery("select * from user where phno='"+username+"' and  
            password='"+password+"'");
```

```
            int flage=0;
```

```
            while(res.next())
```

```
            {
```

```
                flage=1;
```

```
            }
```

```
            if(flage==1)
```

```
{  
    HttpSession hs=request.getSession();  
    hs.setAttribute("username", username);  
    hs.setAttribute("password", password);  
    response.sendRedirect("userflower.jsp");  
}  
else  
{  
    out.println("<script>alert('Username or Password incorrect')</script>");  
    out.println("<meta http-equiv='refresh' content='0;user.jsp'/>");  
}  
}  
catch(Exception e){  
    out.println(e);  
}  
}  
}
```

9. SYSTEM TESTING

9.1 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.

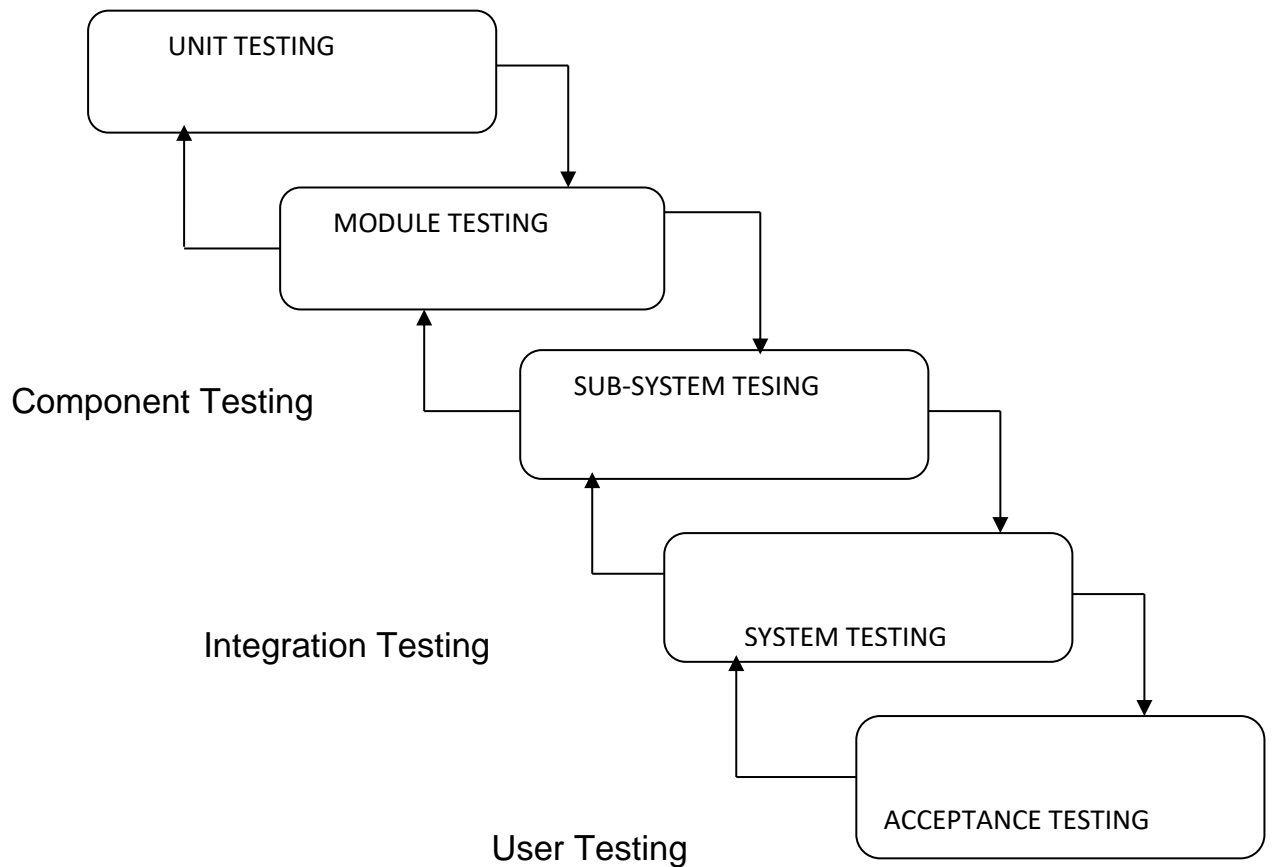
A strategy for software testing integrates software test case design methods into a well-planned series of steps that result in the successful construction of software. Testing is the set of activities that can be planned in advance and conducted systematically. The underlying motivation of program testing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

9.2 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

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.

9.3 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.

9.4 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:

$$V(G)=E-N+2 \text{ or}$$

$$V(G)=P+1 \text{ or}$$

$$V(G)=\text{Number of Regions}$$

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.

9.5 CONDITIONAL TESTING

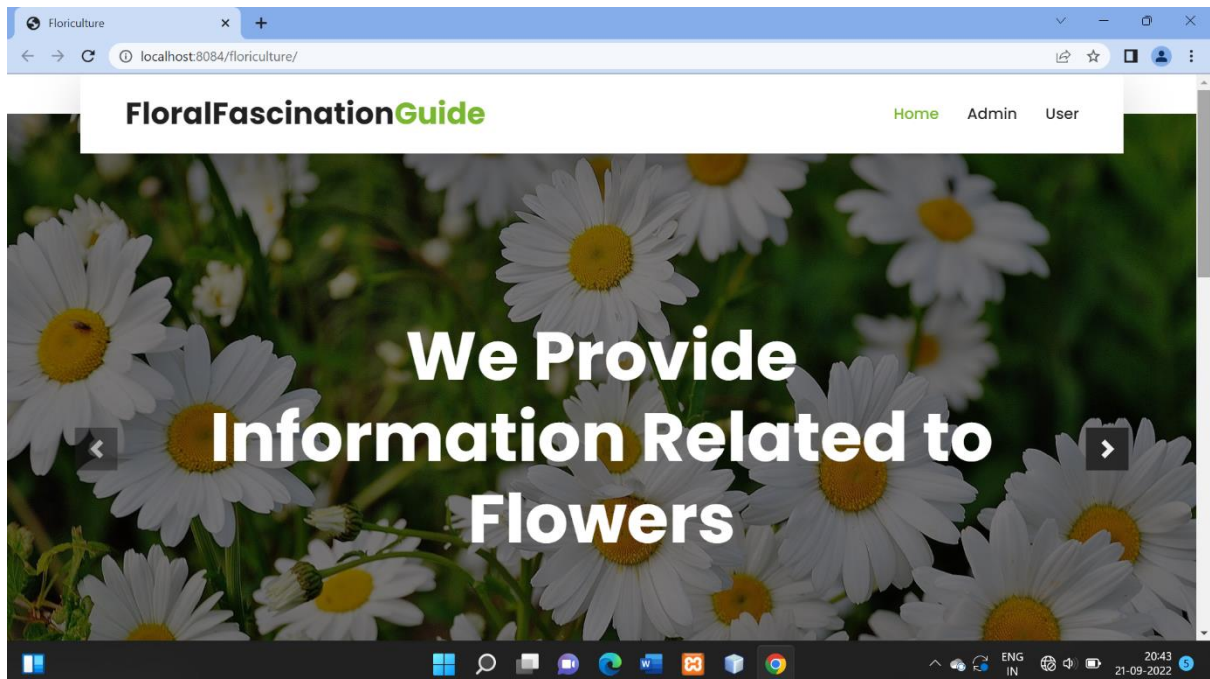
In this part of the testing each of the conditions were tested to both true and false aspects. And all the resulting paths were tested. So that each path that may be generate on particular condition is traced to uncover any possible errors.

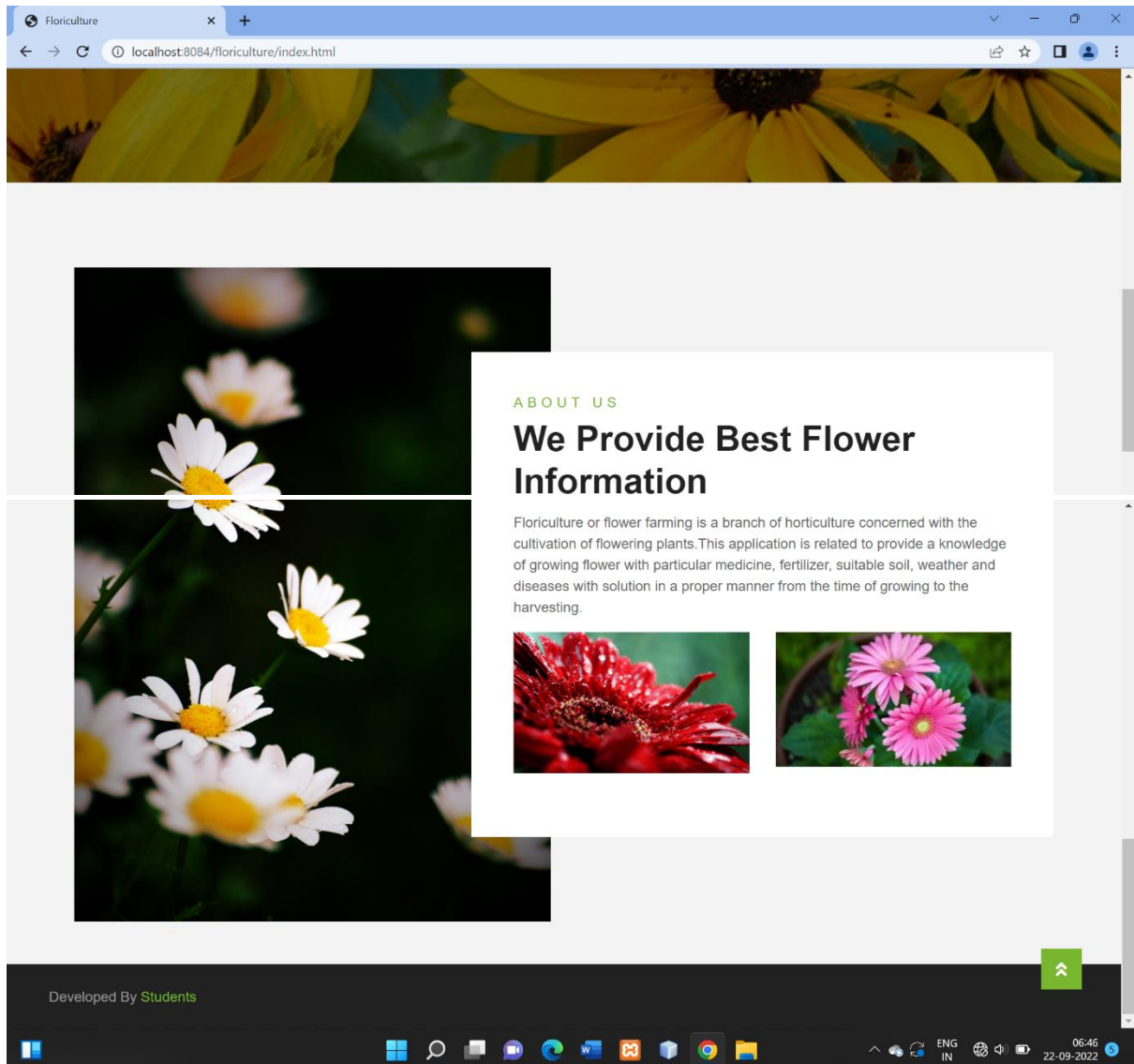
9.6 DATA FLOW TESTING

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.

10.SNAPSHOTS

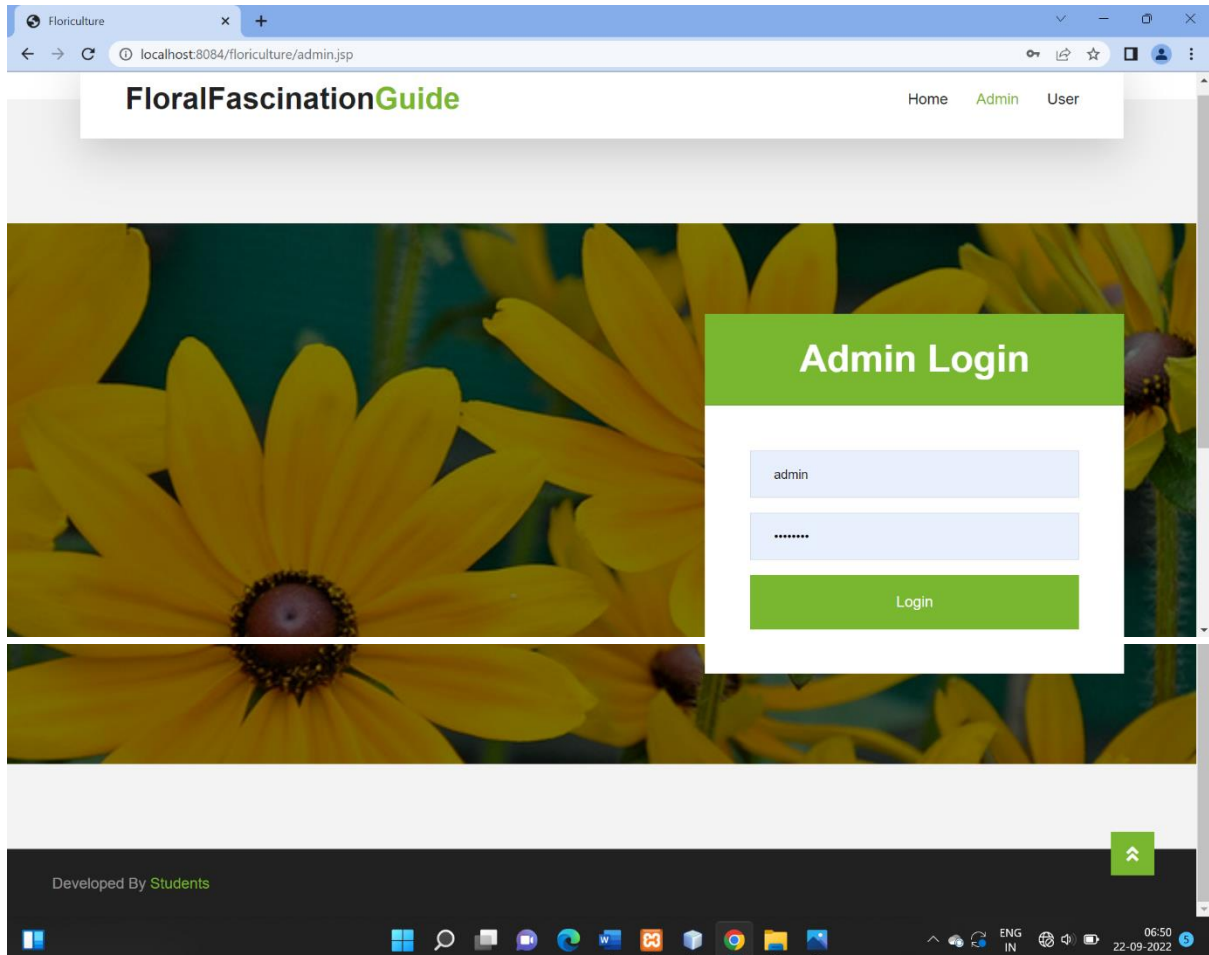
10.1 HOME PAGE:














10.2 ADMIN

10.2.1 ADMIN LOGIN:



10.2.2 ADMIN(ADD FLOWERS):

The screenshot displays the 'Floriculture' web application interface. The top navigation bar includes the title 'FloralFascinationGuide' and several menu items: 'Add Flowers', 'Add Fertilizer', 'Add Diseases', 'Add Updates', 'User Requests', and 'Logout'. The main content area is divided into two sections. On the left is the 'Add Flower' form, which contains input fields for Name, Scientific Name, Photo (with a 'Choose File' button), Soil, Diseases, Growth Duration, Uses, and Fertilizers Needed. On the right is the 'Flower list' table, which displays a list of flowers with their names, scientific names, photos, and edit/delete icons.

Name	Scientific Name	Photo	
Rose	Rosa		 
Marigold	Tagetes		 
jasmine	Jasminum		 

Weather:
None

Temperature:
Enter Temperature

How To Grow:
how to grow flower

ADD

Developed By Students


10.2.3 ADMIN(FLOWERS LIST):

FloralFascinationGuide

Add Flowers Add Fertilizer Add Diseases Add Updates User Requests Logout

Flower list

Name	Photo	Soil & Growth	Weather & Temperature	Disease & Fertilizer	How to Grow	Uses
				Diseases: powdery mildew, downy mildew, anthracnose, canker diseases, rust, root rots, gray mold, oomycete		

Rose(Rosa)		Soil: Loam	Weather: Winter	spot and leaf spot diseases such as black spot and cercosporin leaf spot.	Growth: 7 months	Temperature: 60-70 deg F	Fertilizers: Nitrogen, Phosphorus, Potassium, iron, calcium and magnesium	Roses like to grow in good, fertile, well-drained soil with moisture retention capacity. A soil mixture should also contain 1-part farmyard manure & 1 part bio-compost.	Ornamental use, Medicinal use, Gods gift for decoration, Culinary purposes, Cosmetics, Perfumes and Scented products
------------	---	---------------	--------------------	---	---------------------	-----------------------------	--	--	--

Developed By Students

10.2.4 ADMIN(ADD PRICE):

FloralFascinationGuide Add Flowers Add Fertilizer Add Diseases Add Updates User Requests Logout

Add Price

Date:

Price:

Area:

ADD

Flower Price

Name	Scientific Name	Photo
Rose	Rosa	
Date	Price	Area
2022-08-12	100	Shimoga

Developed By Students

10.2.5 ADMIN (ADD FERTILIZERS):

FloralFascinationGuide Add Flowers Add Fertilizer Add Diseases Add Updates User Requests Logout

Add Fertilizer

Name:

Chemical Combination:

Use to:

Direction To Use:

ADD

Fertilizer list

Name	Combination	Use to	Directions
Erwon Marigold Growth Booster organic fertilizer	Nitrogen, phosphorus, potassium, Polyfeed, Potassium Nitrate and	Marigold	Recommended Dose of Fertilizer (RDF) is 90: 90:75kg NPK/ha. 75% RDF is applied through fertigation. Water Soluble Fertilizers such as Polyfeed (19:19:19), Potassium Nitrate (13:0:45) and Urea (46% N) can be used.

Developed By Students

10.2.6 ADMIN (ADD DISEASES):

The screenshot displays the 'FloralFascinationGuide' web application. The navigation bar includes links for 'Add Flowers', 'Add Fertilizer', 'Add Disease' (highlighted), 'Add Updates', 'User Requests', and 'Logout'. The main content area features two panels: 'Add Disease' and 'Diseases list'.

Add Disease Form:

Name:

Photo: No file chosen

Solution:

Diseases list Table:

Name	Photo	Solution
Leaf Spot Disease		In most cases, infections can be tolerated. Remove fallen leaves and debris promptly. Many of the pathogens are favored by moisture, so avoid overhead sprinklers and irrigate early in the day so that the foliage dries more quickly. Generally, fungicide treatment is not warranted.

Developed By Students

77°F Mostly sunny 10:52 22-09-2022


10.2.7 ADIMN (ADD UPDATES):

The screenshot shows a web browser window with the URL `localhost:8084/floriculture/updates.jsp`. The page features a navigation bar with the following links: **FloralFascinationGuide**, [Add Flowers](#), [Add Fertilizer](#), [Add Diseases](#), [Add Updates](#) (highlighted in green), [User Requests](#), and [Logout](#).

The main content area has a background image of yellow flowers. It contains two primary sections:

- Add Updates:** A form with a green header. It includes a "Subject:" label with a text input field containing "Enter Subject", a "Description:" label with a text area containing "Enter Description", and a green "ADD" button at the bottom.
- News list:** A table with a green header. The table has two columns: "Subject" and "News". It contains one row of data.

The footer of the page displays "Developed By Students" and a green "Up" arrow button. The Windows taskbar at the bottom shows the system clock as 07:50 on 22-09-2022.

Subject	News
Flowers price	Flower price has been grown because of heavy rain.. 

10.2.8 ADMIN (USER REQUESTS):

The screenshot displays the 'User Requests' page of the 'FloralFascinationGuide' application. The page is divided into two main sections: 'Pending Queries' and 'Responded Queries'. Both sections contain a table with two columns: 'Subject' and 'Description'. The 'Subject' column lists 'Flowers price', and the 'Description' column lists 'How much is the rose price ?'. A green arrow icon is visible in the 'Description' column of both tables. The page is developed by 'Students' and is running on a Windows operating system, as indicated by the taskbar at the bottom.

FloralFascinationGuide

Add Flowers Add Fertilizer Add Diseases Add Updates User Requests Logout

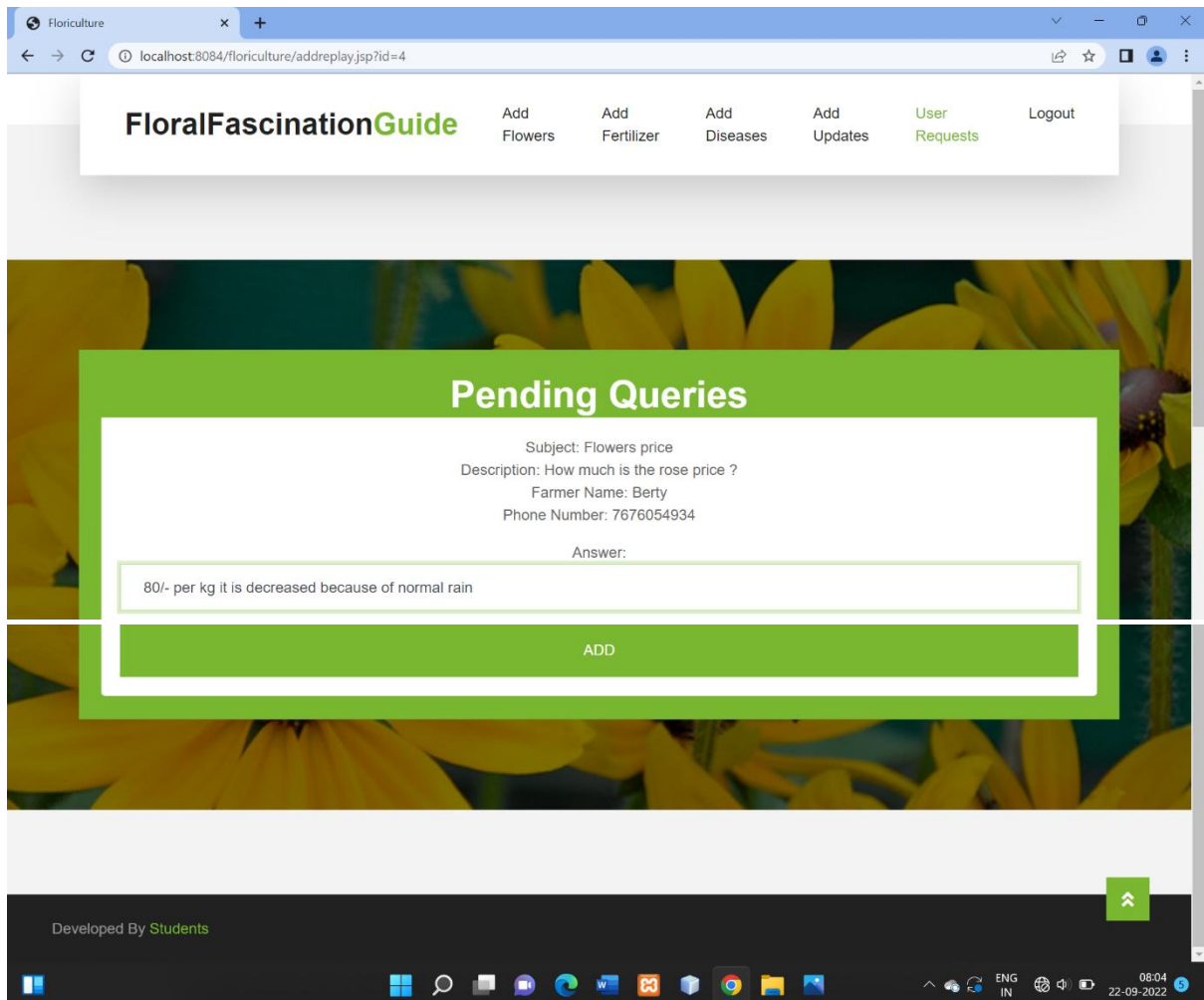
Pending Queries

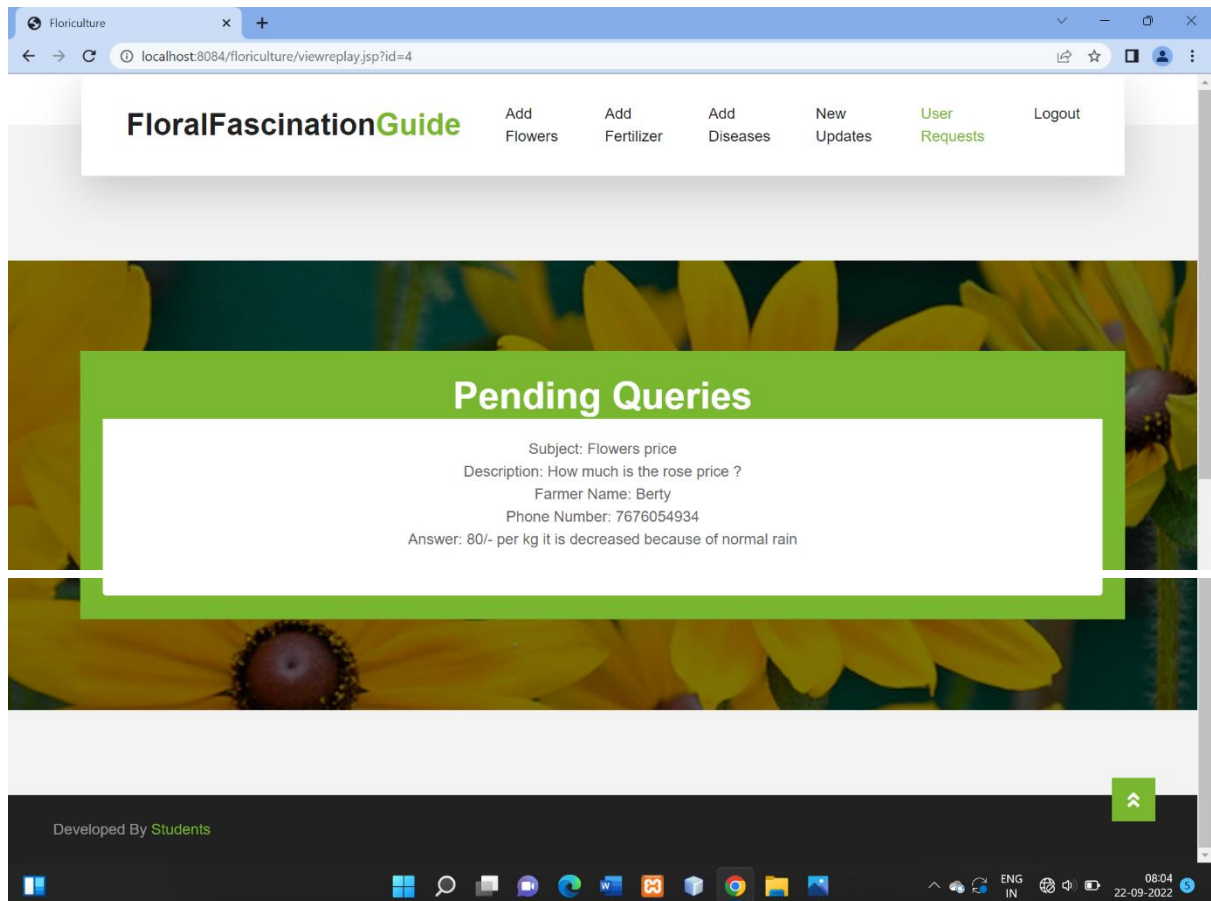
Subject	Description
Flowers price	How much is the rose price ?

Responded Queries

Subject	Description
Flowers price	How much is the rose price ?

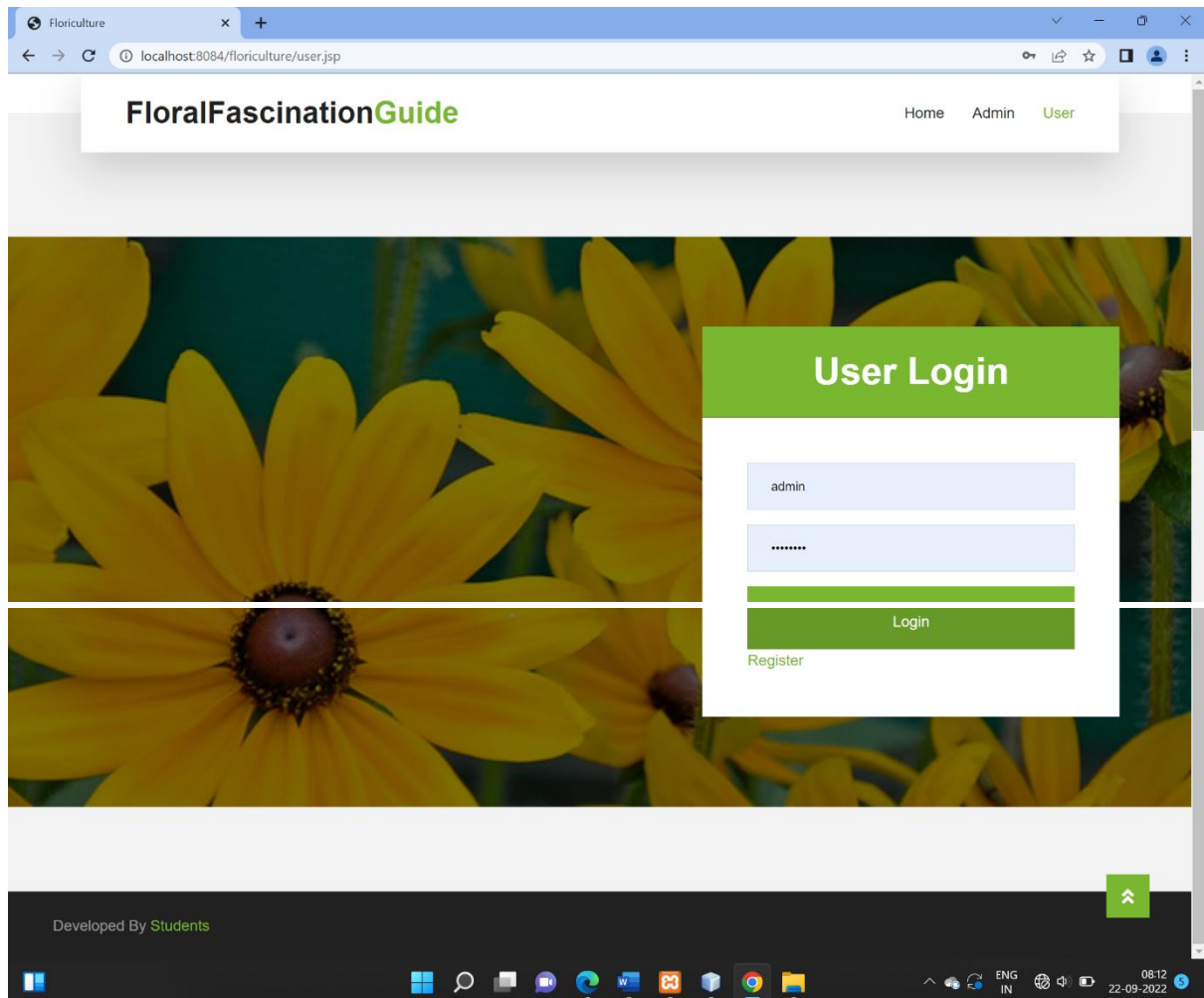
Developed By Students



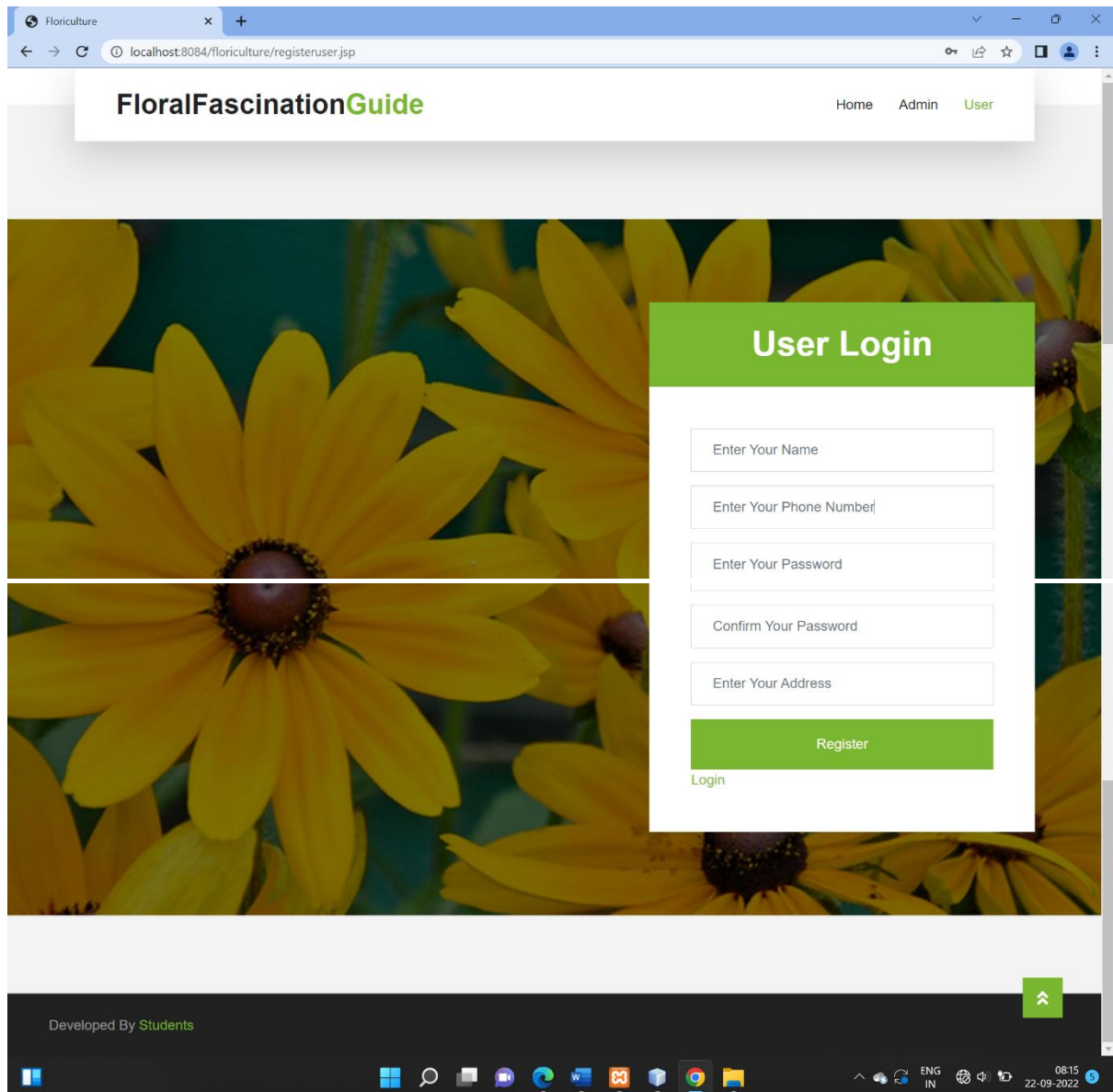


10.3 USER

10.3.1 USER (LOGIN):



10.3.2 USER (REGISTER):



The screenshot shows a web browser window with the URL `localhost:8084/floriculture/registeruser.jsp`. The page features a header with the logo "FloralFascinationGuide" and navigation links for "Home", "Admin", and "User". The main content area has a background image of yellow flowers. A white registration form is centered on the page, titled "User Login" in a green box. The form contains five input fields: "Enter Your Name", "Enter Your Phone Number", "Enter Your Password", "Confirm Your Password", and "Enter Your Address". Below these fields is a green "Register" button and a "Login" link. The footer of the page says "Developed By Students" and includes a green "Up" arrow button. The Windows taskbar at the bottom shows the time as 08:15 on 22-09-2022.

FloralFascinationGuide

Home Admin User

User Login

Enter Your Name

Enter Your Phone Number

Enter Your Password

Confirm Your Password

Enter Your Address

Register

Login


Developed By Students

08:15 22-09-2022

10.3.3 USER (VIEW FLOWERS):

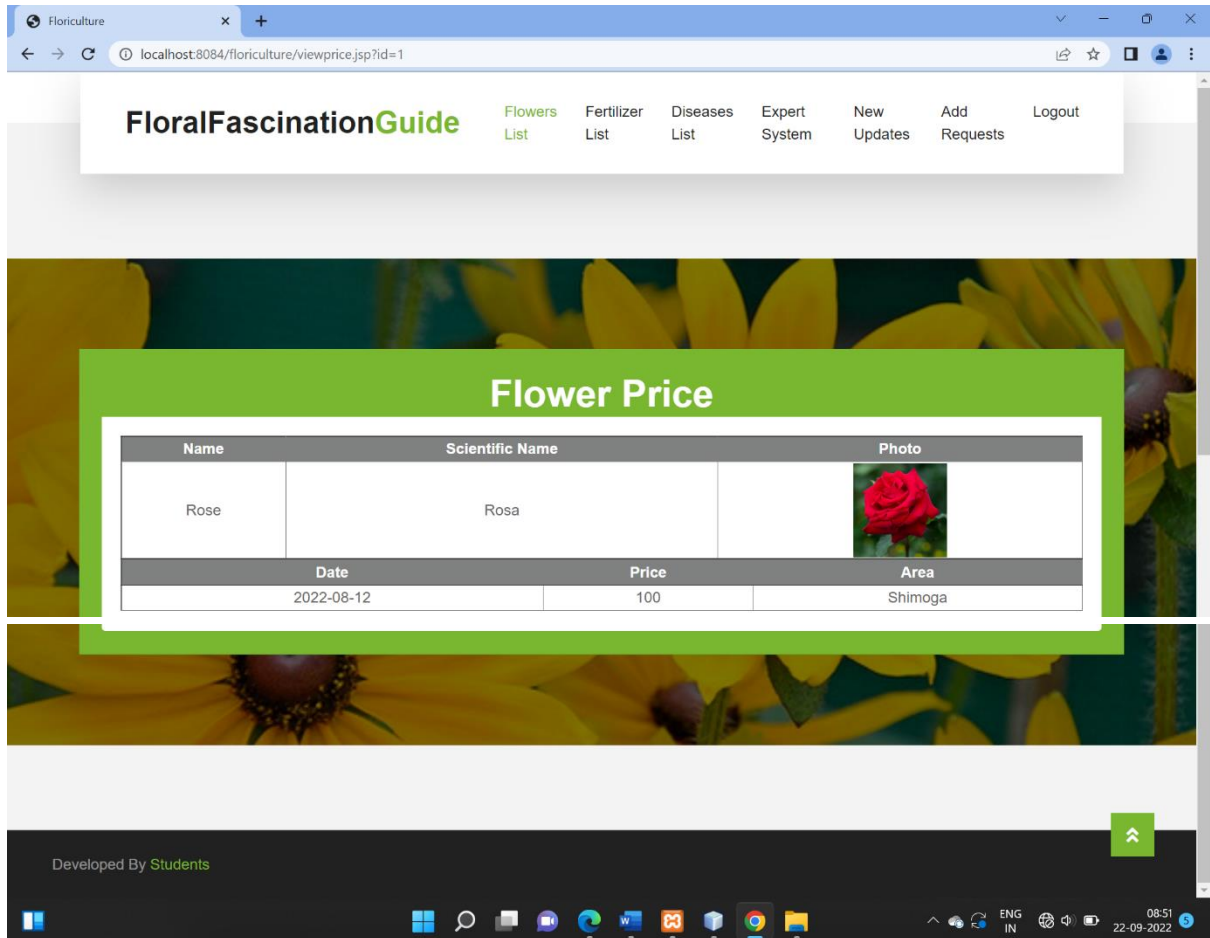
The screenshot shows a web browser window with the URL `localhost:8084/floriculture/userflower.jsp`. The page title is "FloralFascinationGuide". The navigation bar includes links for "Flowers List", "Fertilizer List", "Diseases List", "Expert System", "New Updates", "Add Requests", and "Logout".

Flower list

Name	Photo	Soil and Growth	Weather & temperature	Diseases & Fertilizer	How To Grow	Uses
Rose(Rosa)		Soil: Loam Growth Duration: 7 months	Weather: Winter Temperature: 60-70 deg F	diseases: powdery mildew, downy mildew, anthracnose, canker diseases, rust, root rots, gray mold, ghost spot and leaf spot diseases such as black spot and cercosporin leaf spot. Fertilizers: Nitrogen, Phosphorus, Potassium, iron, calcium and magnesium	Roses like to grow in good, fertile, well-drained soil with moisture retention capacity. A soil mixture should also contain 1-part farmyard manure & 1 part bio-compost.	Ornamental use, Medicinal use, Gods gift for decoration, Culinary purposes, Cosmetics, Perfumes and Scented products


Developed By **Students**

10.3.4 USER (VIEW PRICE):



FloralFascinationGuide [Flowers List](#) [Fertilizer List](#) [Diseases List](#) [Expert System](#) [New Updates](#) [Add Requests](#) [Logout](#)

Flower Price

Name	Scientific Name	Photo
Rose	Rosa	

Date	Price	Area
2022-08-12	100	Shimoga

Developed By [Students](#)

10.3.4 USER (VIEW FERTILIZERS):

FloralFascinationGuide

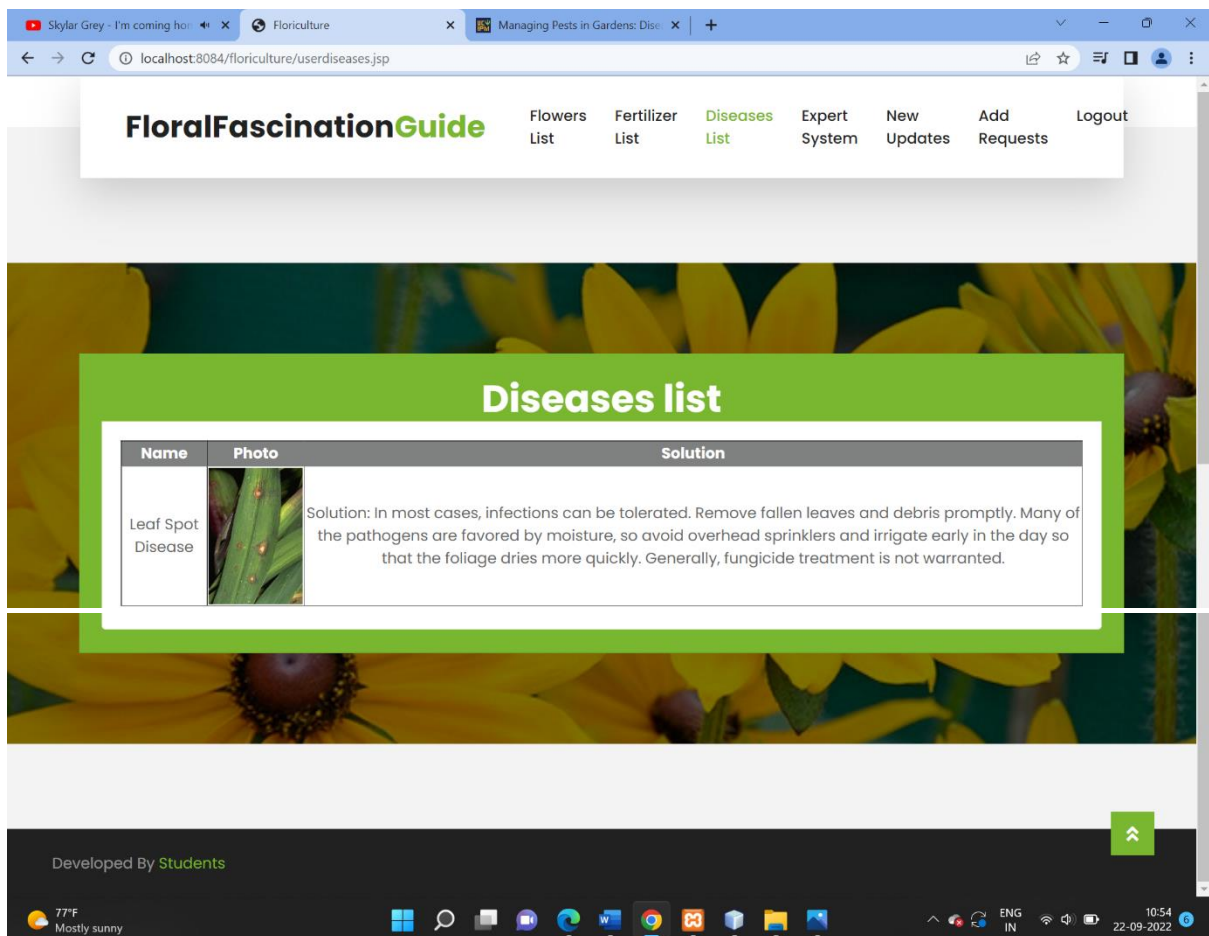
Flowers List Fertilizer List Diseases List Expert System New Updates Add Requests Logout

Fertilizer list

Name	Combination	Uses	Directions
Erwon Marigold Growth Booster organic fertilizer	Nitrogen, phosphorus, potassium, Polyfeed, Potassium Nitrate and	Marigold	Recommended Dose of Fertilizer (RDF) is 90: 90:75kg NPK/ha. 75% RDF is applied through fertigation. Water Soluble Fertilizers such as Polyfeed (19:19:19), Potassium Nitrate (13:0:45) and Urea (46% N) can be used.


Developed By Students

10.3.5 USER (VIEW DISEASES):



FloralFascinationGuide Flowers List Fertilizer List **Diseases List** Expert System New Updates Add Requests Logout

Diseases list

Name	Photo	Solution
Leaf Spot Disease		Solution: In most cases, infections can be tolerated. Remove fallen leaves and debris promptly. Many of the pathogens are favored by moisture, so avoid overhead sprinklers and irrigate early in the day so that the foliage dries more quickly. Generally, fungicide treatment is not warranted.

Developed By **Students**

77°F Mostly sunny 10:54 22-09-2022

10.3.6 USER (EXPERT SYSTEM):

FloralFascinationGuide Flowers List Fertilizer List Diseases List **Expert system** New Updates Add Requests Logout

Expert System

Weather: Spring

Temperature: 60 to 75 deg F

soil: Well-drained, rich loamy soil with a pl

SEARCH

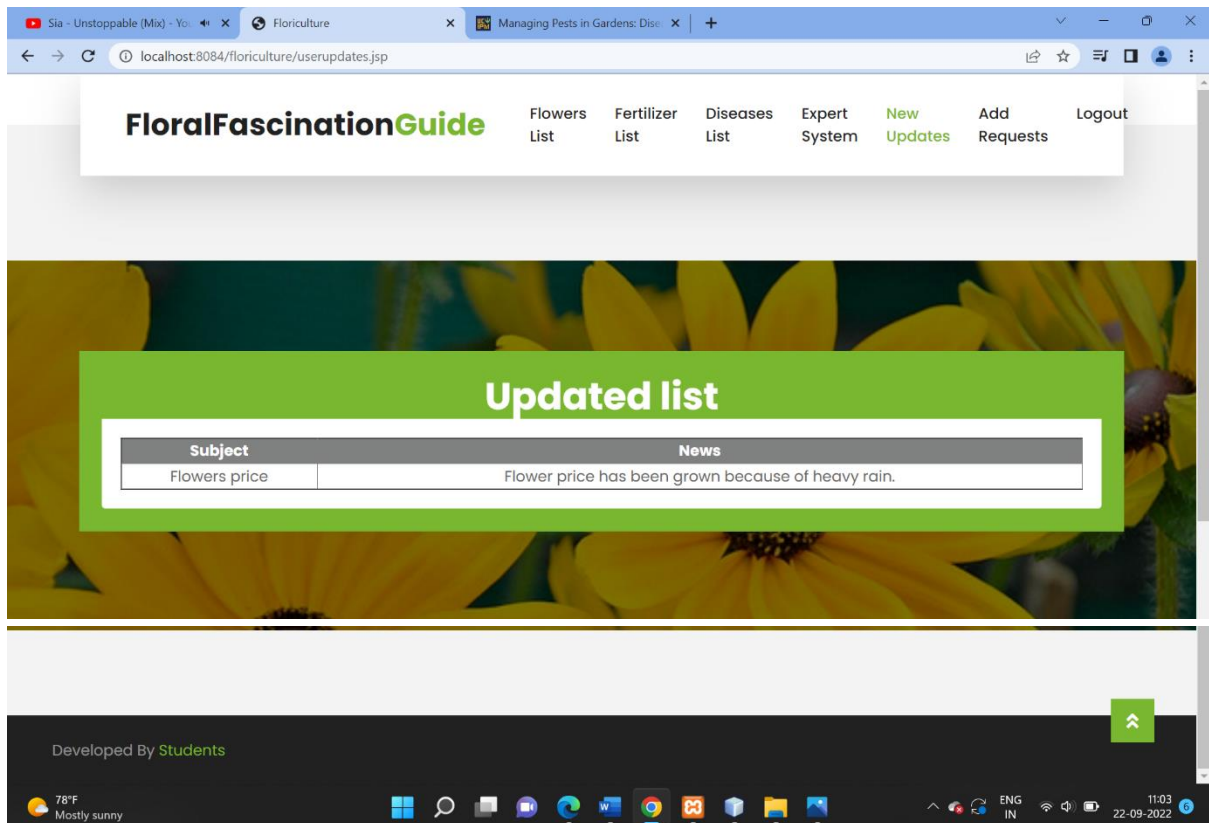
Expert System

flowers
jasmine

Developed By Students

77°F Mostly sunny 11:00 22-09-2022

10.3.7 USER (NEW UPDATES):



The screenshot displays a web browser window with the URL `localhost:8084/floriculture/userupdates.jsp`. The application header includes the logo **FloralFascinationGuide** and a navigation menu with links: [Flowers List](#), [Fertilizer List](#), [Diseases List](#), [Expert System](#), [New Updates](#) (highlighted in green), [Add Requests](#), and [Logout](#).

The main content area features a green banner with the text **Updated list**. Below this banner is a table with two columns: **Subject** and **News**.

Subject	News
Flowers price	Flower price has been grown because of heavy rain.

The footer of the application states "Developed By Students". The browser's taskbar at the bottom shows the system date and time as 11:03 on 22-09-2022, along with weather information (78°F, Mostly sunny) and various application icons.

10.3.8 USER (ADD REQUESTS):

The screenshot displays the 'FloralFascinationGuide' web application. The navigation bar includes links for 'Flowers List', 'Fertilizer List', 'Diseases List', 'Expert System', 'New Updates', 'Add Requests', and 'Logout'. The main content area features a background image of yellow flowers. On the left, the 'Ask Queries' form allows users to enter a subject and description, with an 'ADD' button. On the right, the 'Pending Queries' section shows a table with columns for 'Subject' and 'Description'. Below this, the 'Responded Queries' section shows a table with columns for 'Subject', 'Description', and a 'More' button (represented by a double arrow icon).

Ask Queries

Subject:

Description:

ADD

Pending Queries

Subject	Description
---------	-------------

Responded Queries

Subject	Description	
Flowers price	How much is the rose price ?	>>

Developed By **Students**

78°F Mostly sunny 11:06 22-09-2022

11. SYSTEM SECURITY

11.1 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 proper 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.

11.2 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:

11.3 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 is 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.

11.4 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

12. 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.

13. 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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