

CULTIVÓ

A
Mini Project Report
Submitted in partial fulfilment of the Requirements
for the award of the Degree of

BACHELOR OF ENGINEERING

IN

INFORMATION TECHNOLOGY

By

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ACCREDITED BY NAAC WITH 'A++' GRADE.
(Affiliated to Osmania University and Approved by AICTE)

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VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
(AFFILIATED TO OSMANIA UNIVERSITY) HYDERABAD - 500 030

Department of Information Technology



DECLARATION BY CANDIDATE

We, <**SHAMAKKAGARI BHARATH REDDY**>, <**MALIGIREDDY CHANDRA KIRAN REDDY**>, <**MAHANKALI CHARAN RAJ**>, bearing hall ticket number, <1602-20-737-007>,<1602-20-737-008>,<1602-20-737-009> hereby declare that the project report entitled <“**CULTIVÓ**”> Department of Information Technology, Vasavi College of Engineering, Hyderabad, is submitted in partial fulfilment of the requirement for the award of the degree of **Bachelor of Engineering in Information Technology**

This is a record of Bonafide work carried out by me and the results embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

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BONAFIDE CERTIFICATE

This is to certify that the project entitled "**CULTIVÓ**" being submitted by **BHARATH REDDY, CHANDRA KIRAN REDDY, CHARAN RAJ** bearing **1602-20-737-007, 1602-20-737-008, 1602-20-737-009**, in partial fulfilment of the requirements for the completion of MINI PROJECT of Bachelor of Engineering in Information Technology is a record of bonafide work carried out by them under my guidance.

Internal Guide
C. Sireesha

External Examiner

Dr. K Ram Mohan Rao
Professor & HOD,
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INTRODUCTION

a. Overview

The Main Objective of this Mini Project is to develop a website for farmers in local languages, in which instructions and information are provided to the farmers about seasonal and suitable crops, seeds, farming tools & instruments etc.

b. Features

- i. User will be able to get all relevant information on specific subjects about Farming and Agriculture around his village/block/district/state.
- ii. Farmers and Consumers can register, and information will be delivered in the form of SMS and audio/video in the language he or she understands.

c. Scope

In an effort to help our farmers, the Government needs a website for the farmers in local languages. It should have instructions and information about seasonal and suitable crops, seeds, farming tools & instruments etc.

Now-a-days information is everywhere but language has become a major barrier. So, we tried to overcome that barrier in our website as we tried to put every information that we thought is useful and translated it to almost all regional languages

Technology

a. Software Requirements

- Windows 7 & newer or MacOS 11 & newer
- Applications Required Pre-Installed: VS-Code, Xampp
- Runtime Environment: Safari or Chrome

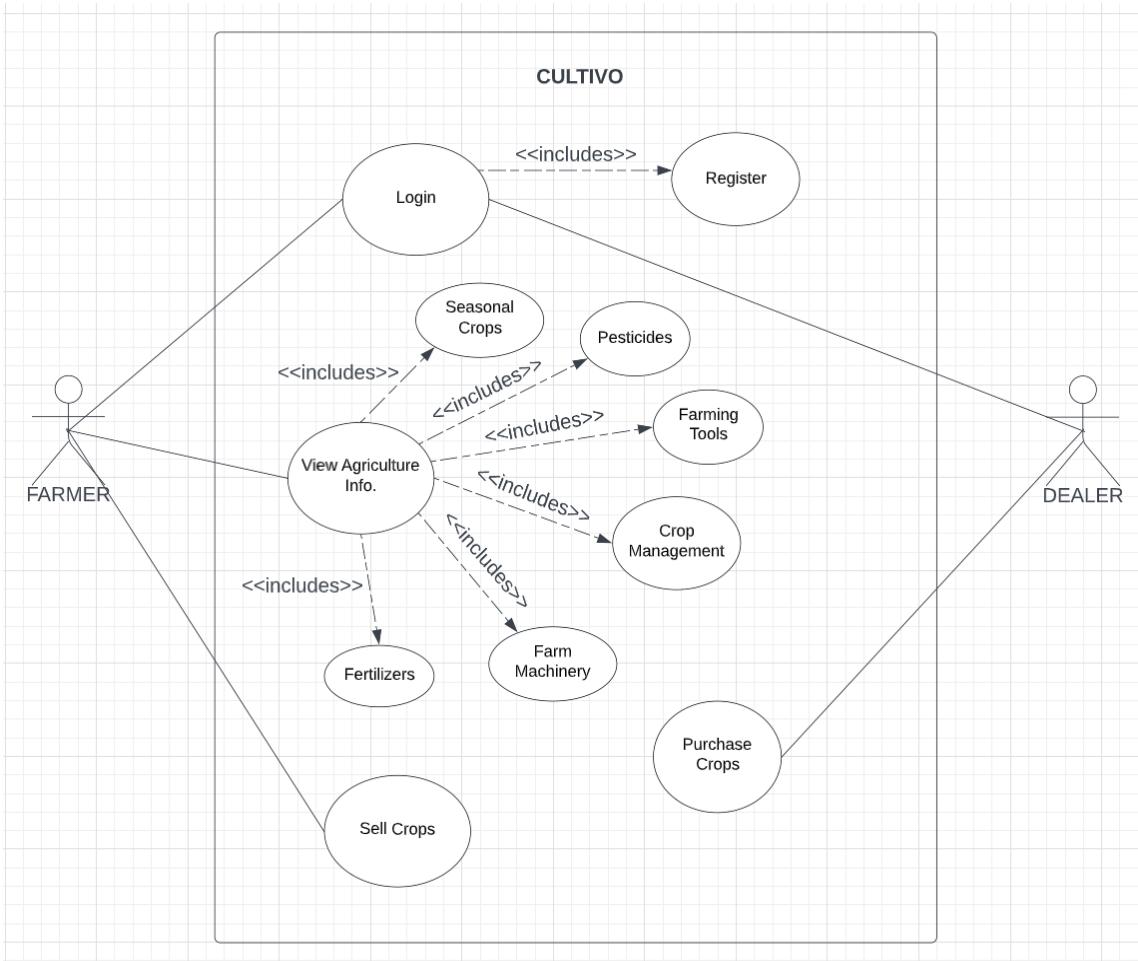
b. Hardware Requirements

- x86 64-bit CPU Processor
- 4GB RAM
- 5 GB of free disk space

PROPOSED WORK

a. Design:

Use-Case Diagram:



b. Implementation:

Module-wise Code:

i. Main.py:

```
from flask import
Flask, render_template, request, redirect

import mysql.connector

app=Flask(__name__)
```

```
conn=mysql.connector.connect(host="localhost",use
r="root",password="",database="db")

cursor=conn.cursor()

@app.route('/')

def home():

    return render_template('Home.html')

@app.route('/register')

def register():

    return render_template('register.html')

@app.route('/news')

def news():

    return render_template('news.html')

@app.route('/logout')

def logout():

    return redirect('/')

@app.route('/explore')

def explore():

    return render_template('Explore.html')

@app.route('/login_validation', methods=['POST'])

def login_validation():

    email=request.form.get('email')

    password=request.form.get('password')

    cursor.execute("""SELECT * FROM `users` WHERE
`email` LIKE '{}' AND `password` LIKE '{}'"""
                   .format(email,password))
```

```

        users=cursor.fetchall()

        if len(users)>0:

            return redirect('/explore')

        else:

            return redirect('/')

@app.route('/add_user',methods=['POST'])

def add_user():

    name=request.form.get('uname')

    mobileno=request.form.get('umobile')

    email=request.form.get('uemail')

    password=request.form.get('upassword')

    cursor.execute("""INSERT INTO `users`  

(`name`, `umobile`, `email`, `password`) VALUES  

('{}', '{}', '{}', '{}')""".format(name,mobileno,email,password))

    conn.commit()

    return "User registered successfully"

if __name__=="__main__":
    app.run(debug=True)

```

ii. **Home.html:**

```

<!DOCTYPE html>

<html lang="en">

<head>

    <link rel="stylesheet" type="text/css"
href="{{ url_for('static', filename='css/Home.css') }}>

</head>

```

```
<body>

    <!-- <div class="WebContainer"> -->

        <button onclick="topFunction()" id="myBtn"
title="Go to top">&#8593</button>

        <div class="main">

            <div class="navbar">

                <div class="icon">

                    <h2 class="logo">Cultivó</h2>

                </div>

                <div class="menu">

                    <ul>

                        <li><a href="#main">HOME</a></li>

                            <li><a href="/news"
target="_blank">NEWS</a></li>

                            <!-- <li><a href="textchatbot" target="_blank"></a></li> -->

                        <li><a href="#about">ABOUT</a></li>

                        <li><a href="#contact">CONTACT</a></li>

                            <!-- <li><a href="textchatbot" target="_blank">CHAT</a></li>

                        <li><a href="chatbot"
target="_blank">VOICE CHAT</a></li> -->

                    </ul>

                </div>

                <div class = "search"
id="google_translate_element">

                </div>

            </div>

        </div>

    </div>
```

```
<script type="text/javascript">

    function
googleTranslateElementInit() {

    new
google.translate.TranslateElement(
    {pageLanguage: 'en'},

'google_translate_element'

) ;

}

</script>

<script type="text/javascript"

src="https://translate.google.com/translate_a/element.js?cb=googleTranslateElementInit">

</script>

</div>

<div class="content">

<h1><p>A Farmer-
friendly</p><span>Website</span> <br><p> Regional
Languages</p></h1><br>

<button class="cn"><a
href="/explore">Explore</a></button>

<form class="form" method="post"
action="/login_validation">

<h2>Sign In</h2>

<input type="email"
class="form-control" name="email"
placeholder="Enter Email">

<input type="password"
class="form-control" name="password"
placeholder="Enter Password">
```

```
        <button type="submit"
    class="bttnn btn-primary btn-block btn-lg"
    value="Login"><a>Login</a></button>

            <p class="link">Don't have an
account<br>

            <a href="/register">Sign-
up</a> here</a></p>

        </form>

    </div>

    </div>

    </div>

<!-- <div id="crops">

    <a href="cbmain.js"></a>

</div> -->

<div class="container1" id="about">

        <h4 style="color:rgb(5, 5, 5); font-
size:2.13em; font-family: fantasy;">About</h4>

        <p>Farming has been the backbone of our
country. More than 42 percent in India are
employed directly or farming related activities.
Empowering our farmers will effectively help our
economy. This will have instructions and
information about seasonal and suitable crops,
seeds, farming tools & instruments etc.</p>

    </div>

</div>

<div class="bg-img" id="contact">
```

```
        <form action="/action_page.php"
class="container">

            <h1>Contact</h1>

            <label for="name"><b>Name</b></label>

            <input type="text" placeholder="Enter
name" name="name" required>

            <label for="mobile number"><b>Mobile
Number</b></label>

            <input type="text" placeholder="Enter
Mobile number" name="mobile number" required>

            <label for="sug"><b>Queries</b></label>

            <input type="text" placeholder="Enter
queries" name="sug" required>

            <button type="submit"
class="btn">Submit</button>

        </form>

    </div>

    <script>

        // Get the button

        let mybutton =
document.getElementById("myBtn");

        // When the user scrolls down 20px from
        // the top of the document, show the button

        window.onscroll = function()
{scrollFunction()};

        function scrollFunction() {

            if (document.body.scrollTop > 20 ||

document.documentElement.scrollTop > 20) {

                mybutton.style.display = "block";
            } else {

```

```

        mybutton.style.display = "none";
    }

}

function topFunction() {
    document.body.scrollTop = 0;
    document.documentElement.scrollTop = 0;
}

</script>

</body>
</html>

```

iii. Explore.html:

```

<!DOCTYPE html>

<html lang="en">

<head>

    <link rel="stylesheet" href="{{ url_for('static', filename='css/Explore.css') }}>

</head>

<body>

    <div class="content">

        <div class="split left">

            <div class="centered">

                <!-- <div id="left pnl" > -->

                <div class="top">

                    <!-- <h1 class="h1 heading_icon_agri_horti" style="padding: 0px 0px 5px 5px !important;">Agriculture Corner</h1> -->

```

```
</div>

<div class= "container">

    <h2 class="h1" style="color:rgb(246, 242, 242);">Agriculture Corner </h2>

    <p>&nbsp;</p>

    <p>&nbsp;</p>

    <div class="box">

        <a href="FM.html">Farm
Machinery</a>

        <!-- <div class="popup"
onclick="myFunction () ">Farm Machinery

            <span class="popuptext"
id="myPopup"><button class="cn"><a
href="Home.html">Tractor</a></button><br>Seeder<br>Combine</span>

        </div> -->

    </div>

    <div class="box">

        <a href="">Crop
Management</a>

        <!-- <div class="popup"
onclick="myFunction () ">Crop Management

            <span class="popuptext"
id="myPopup"><button class="cn"><a
href="Home.html">Tractor</a></button><br>Seeder<br>Combine</span>

        </div> -->

    </div>

    <div class="box">

        <a href="">Farm Tools</a>
```

```
<!-- <div class="popup"
onclick="myFunction () ">Farm Tools


```

```
</div>

</div>

<div class="box1">

    <div class="split right">

        <div class="container1">

            <h2 class="h1">Click on a State to
            navigate </h2>

            <div class="centered">

                <div class="middle">

                    <table style="width: 100%; height:
                    434px; clear: both; margin: 0; padding: 0;">
                    border="0">

                        <tbody>

                            <tr>

                                <td>

                                    <!-- <div
                                    class="transition"> -->

                                        <!-- <p align="right"
                                        style="padding: 0px 0px 0px 50px"> -->

                                            <map name="Map"
                                                id="Map1">

                                                <area href="State.html?id=1" target="_blank"
                                                    alt="TELANGANA" shape="poly"
                                                    coords="158,382,159,366,160,351,159,340,166,331,1
                                                    77,320,190,323,201,324,202,338,210,339,217,342,22
                                                    2,353,224,361,219,371,210,372,200,373,193,377,188

                                            </map>
                                        </div>
                                    <!-- /div -->
                                </td>
                            </tr>
                        </tbody>
                    </table>
                </div>
            </div>
        </div>
    </div>
</div>
```

```
,382,182,385,168,389,163,384">
</map>

<!-- </p> -->

</td>

</tr>

</tbody>

</table>

</div>

<script>

// When the user clicks on <div>, open the popup

function myFunction() {

    var popup = document.getElementById("myPopup");

    popup.classList.toggle("show");

}

</script>

</body>
```

```
</html>
```

iv. News.html:

```
<html lang="en">

<head>

    <meta charset="UTF-8">

    <!-- <meta http-equiv="X-UA-Compatible"
content="IE=edge">

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

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

</head>

<body>

    <header>

        <h1 class="heading-1"></h1>

        <div class="sub-heading">

            <p class="importent"></p>

        </div>

    </header>

    <div class="main">

        <div class="home">

            <div class="left">

                <a href="https://www.thehindu.com/sci-
tech/agriculture/in-dry-unreliable-weather-

            </div>

        </div>

    </div>

</body>
```

```
indian-farmers-restore-arid-
land/article66127897.ece"> 

<h2 class="heading-2">
    In dry, unreliable weather, Indian
    farmers restore arid land
</h2>
</a>

</div>

<div class="right">
    <h3 class="heading-3">latest news</h3>
    <div class="lists">
        <marquee direction="up"
height="468px">
            <div class="list">
                
                <a
                    href="https://swarajyamag.com/infrastructure/punj
ab-farmer-activists-protest-against-land-
acquisition-for-delhi-amritsar-katra-
expressway"><p>Punjab: Farmer Activists Protest
Against Land Acquisition For Delhi - Amritsar -
Katra Expressway</p></a>
            </div>
    </div>
</div>
```

```
<div class="list">

    <a href="https://swarajyamag.com/infrastructure/punjab-farmer-activists-protest-against-land-acquisition-for-delhi-amritsar-katra-expressway"><p>Punjab: Farmer Activists Protest Against Land Acquisition For Delhi - Amritsar - Katra Expressway</p></a>

</div>
```

```
<div class="list">

    <a href="https://swarajyamag.com/infrastructure/punjab-farmer-activists-protest-against-land-acquisition-for-delhi-amritsar-katra-expressway"><p>Punjab: Farmer Activists Protest Against Land Acquisition For Delhi - Amritsar - Katra Expressway</p></a>

</div>

<div class="list">

    <a href="https://swarajyamag.com/infrastructure/punjab-farmer-activists-protest-against-land-acquisition-for-delhi-amritsar-katra-expressway"><p>Punjab: Farmer Activists Protest Against Land Acquisition For Delhi - Amritsar - Katra Expressway</p></a>

</div>
```

```
        </marquee>

        </div>

        </div>

        </div>

        </div>

        </div>

        </div>

        </div>

        </body>

        </html>
```

v. State.html:

```
<!DOCTYPE html>

<html lang="en">

<head>

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" type="text/css" href="{{ url_for('static', filename='css/State.css') }}>

</head>

<body>

<div class ="container">
```

```
  
  
<!-- <div class="transbox"> -->  
  
<div class="content" >  
  
<div class="img">  
  
<h2>Crops Of Telangana</h2>  
  
<p>  
  
    Telangana state has considered  
    agriculture as its primary goal to improve farmer  
    community wellness, educate on latest technical  
    farming knowledge, train framers to boost the  
    agricultural production and productivity.  
  
</p>  
  
</div>  
  
<p>&nbsp;</p>  
  
<div class="table">  
  
<table>  
  
<tr>  
  
<th>S.No.</th>  
  
<th>Climate Zone</th>  
  
<th>Kharif Season Crop</th>  
  
<th>Rabi Season Crop</th>  
  
</tr>  
  
<tr>  
  
<td>1</td>  
  
<td>Northern Telangana Zone</td>  
  
<td>Rice, Cotton, Maize, Soybean,  
Red gram</td>
```

```
<td>Rice, Maize, Jowar</td>

</tr>

<tr>

<td>2</td>

<td>Central Telangana Zone</td>

<td>Rice, Cotton, Maize</td>

<td>Rice, Maize</td>

</tr>

<tr>

<td>3</td>

<td>Southern Telangana Zone</td>

<td>Rice, Cotton, Maize</td>

<td>Rice, Maize</td>

</tr>

</table>

</div>

<p>&nbsp;</p>

<div >

<h3>Rice</h3>

<p>&nbsp;</p>

<p>

Telangana is in the rice bowl of South India, and RICE is cultivated in about 44 lakh acres. In the
```

recent past, climatic changes have greatly influenced the amount rainfall, due to which the area

cultivated with RICE has decreased.

</p>

</div>

<div >

<p> </p>

<p> </p>

<p> </p>

<p> </p>

<p> </p>

<p> </p>

<p> </p>

<h3>Maize</h3>

<p> </p>

<p>

Maize (Corn) is the second major cultivated crop in the state of Telangana in around 14 lakh acres producing annually 16 Lakh tonnes. It is used for human food and animal feed; it is also now widely used in corn starch industry, baby corn production etc.

</p>

</div>

<!-- </div> -->

</div>

```
        </div>

    </div>

</body>

</html>
```

vi. **Register.html:**

```
<!DOCTYPE html>

<html lang="en">

<head>

    <title>Sign-Up</title>

    <link rel="stylesheet" type="text/css"
 href="css/Signup.css">

</head>

<body>

    <div class="registration-form">

        <h1>Register</h1>

        <form class="form" method="post"
 action="/add_user">

            <p>Full Name</p>

            <input type="text" class="form-
control" name="uname" placeholder="Enter Name">

            <p>Mobile Number</p>

            <input type="text" class="form-
control" name="umobile" placeholder="Enter
Number">

            <p>Email</p>

            <input type="email" class="form-
control" name="uemail" placeholder="Enter Email">

            <p>Password</p>
```

```
<input type="password" class="form-control" name="upassword" placeholder=" Enter Password">

    <button type="submit" >Sign in</button>

</form>

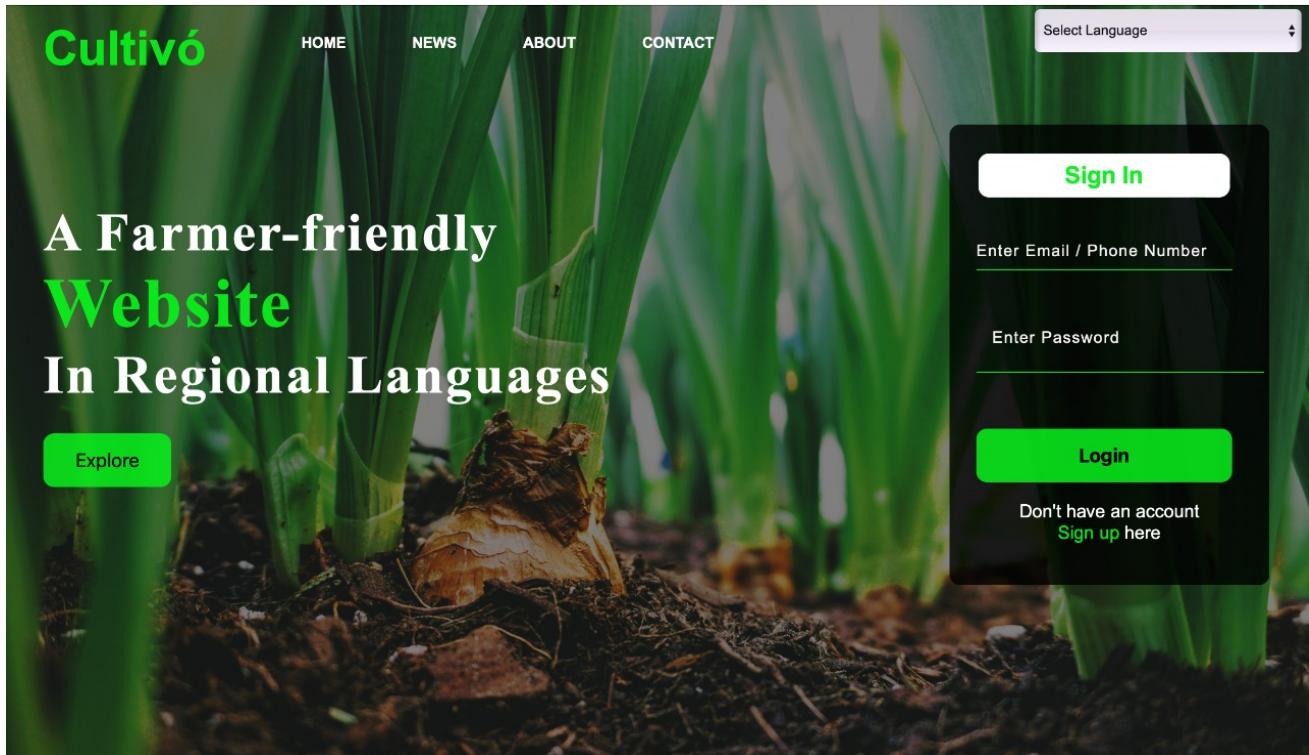
</div>

</body>

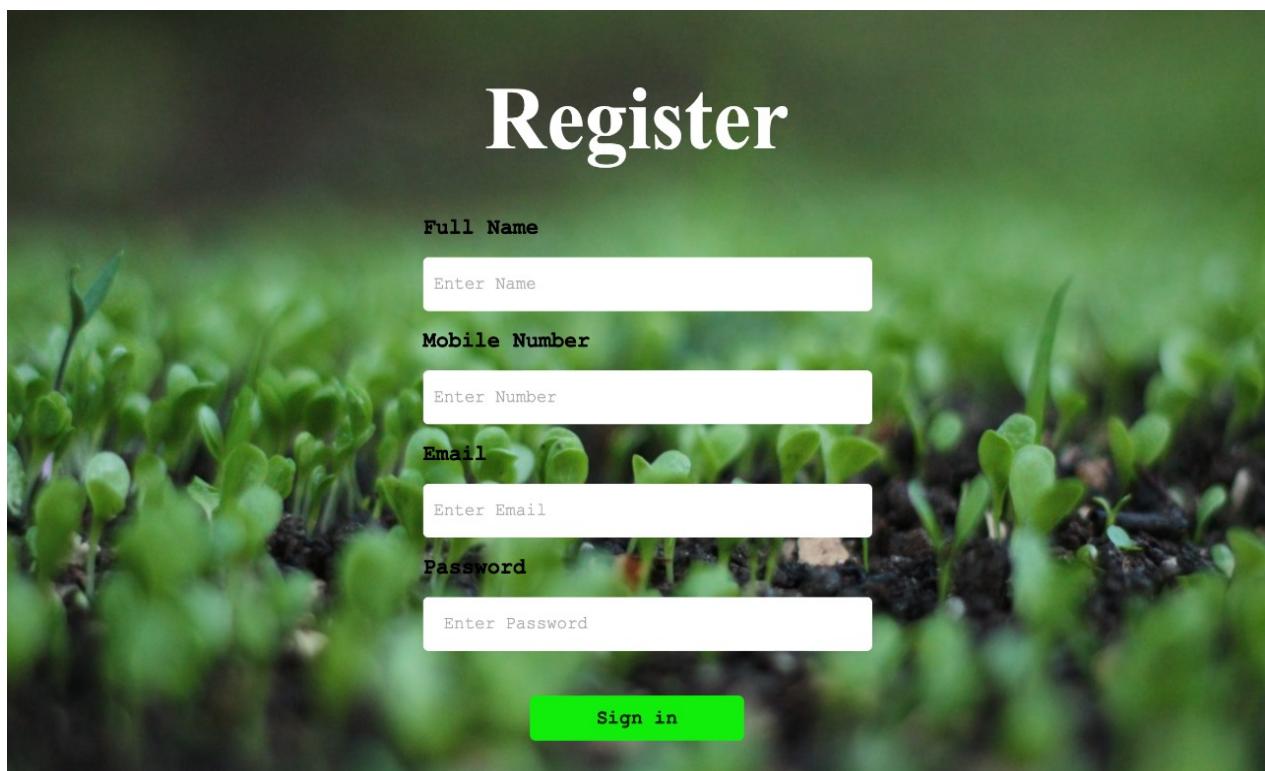
</html>
```

RESULT

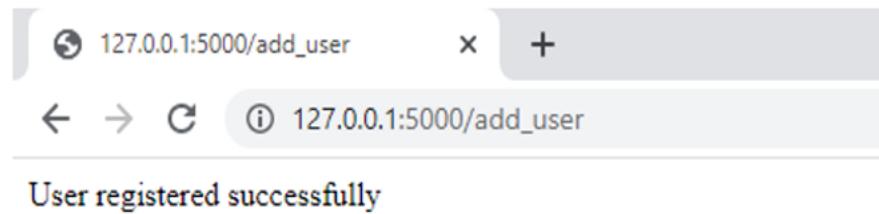
After running the code, first a webpage is displayed:



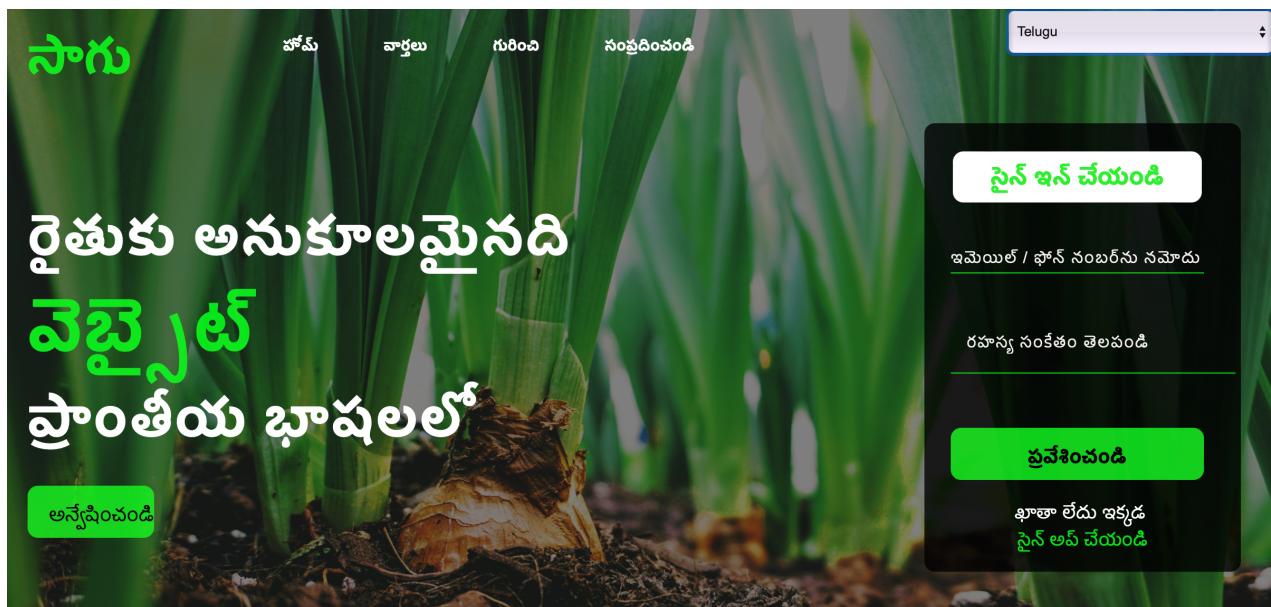
Then there is a login and signup. If someone is new to website, then there is signup page opened when clicked on Signup.



Now After registering, user can login from home page.



Now user can also change the language of the website by just selecting the language.



Now clicking on the news tab, we get :



LATEST NEWS

 [Punjab: Farmer Activists Protest Against Land Acquisition For Delhi - Amritsar - Katra Expressway](#)

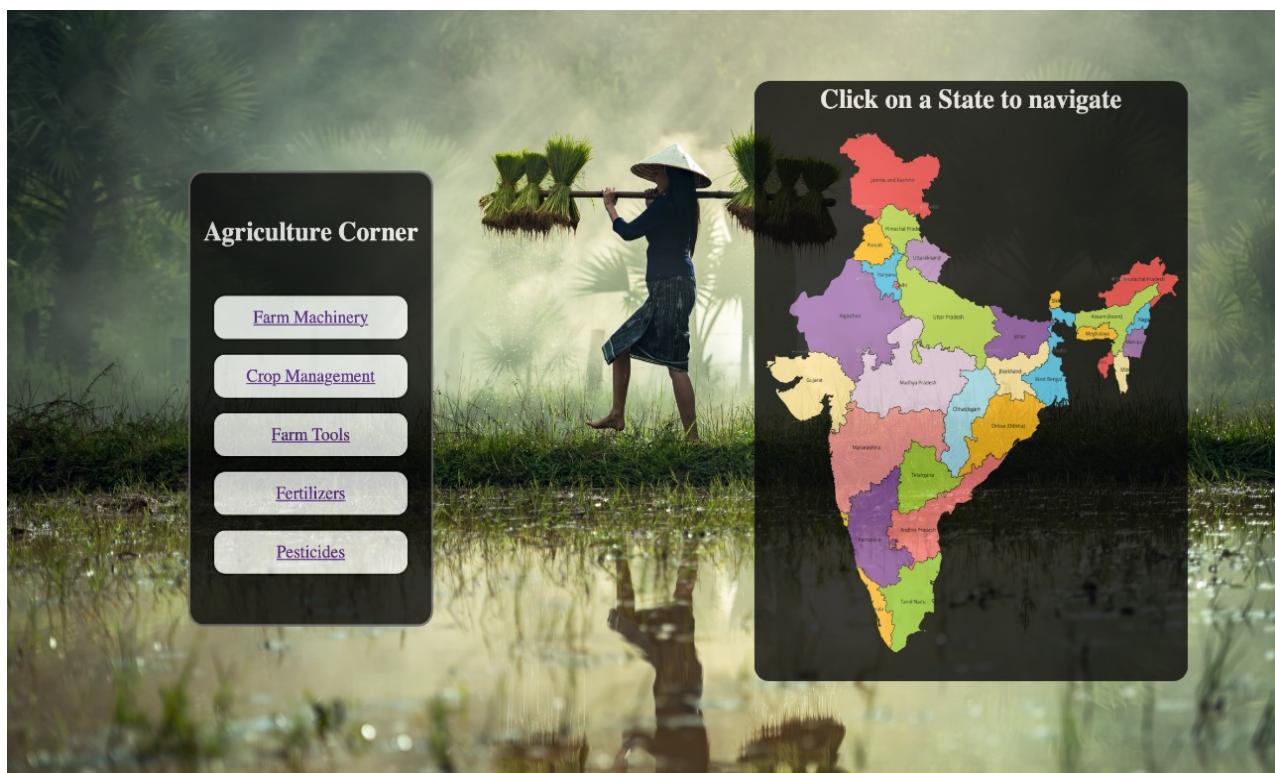
 [Punjab: Farmer Activists Protest Against Land Acquisition For Delhi - Amritsar - Katra Expressway](#)

 [Punjab: Farmer Activists Protest Against Land Acquisition For Delhi - Amritsar - Katra Expressway](#)

 [Punjab: Farmer Activists Protest Against Land Acquisition For Delhi - Amritsar - Katra Expressway](#)

In dry, unreliable weather, Indian farmers restore arid land

Now clicking on Explore, we get a lot of our main features:



Agriculture Corner

- [Farm Machinery](#)
- [Crop Management](#)
- [Farm Tools](#)
- [Fertilizers](#)
- [Pesticides](#)

Click on a State to navigate



Now Clicking on Telangana state on the India, we get information about Telangana's crops.

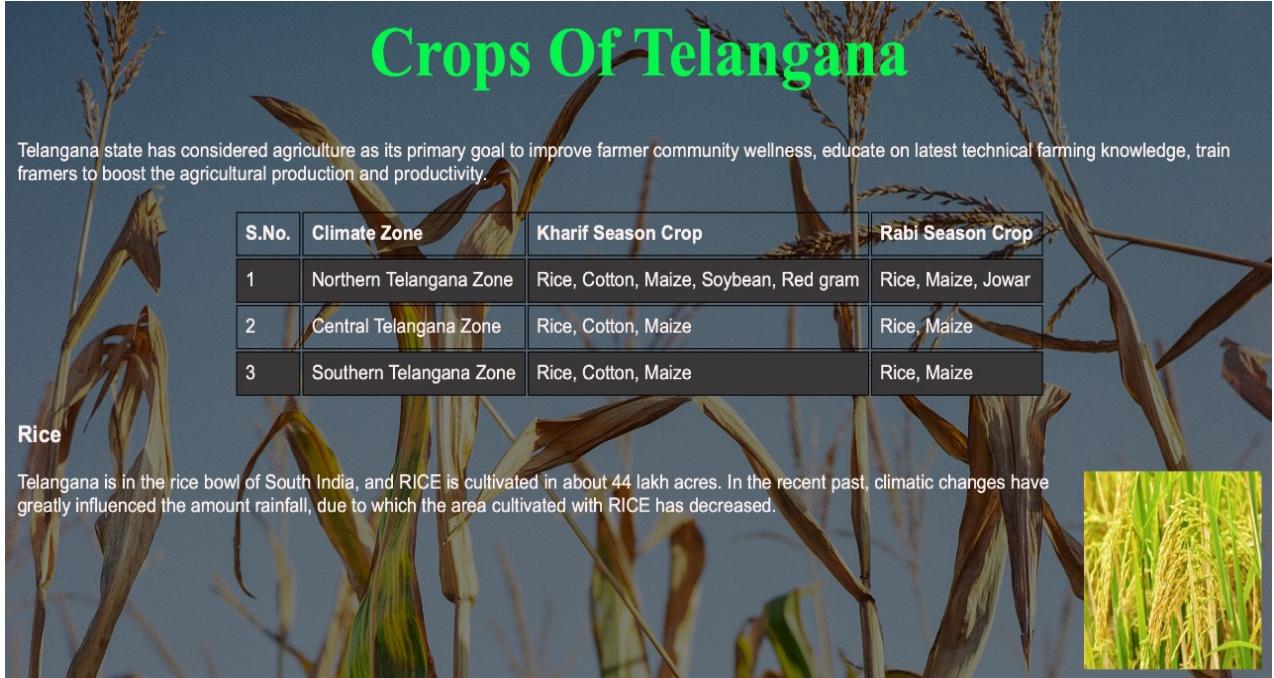
Crops Of Telangana

Telangana state has considered agriculture as its primary goal to improve farmer community wellness, educate on latest technical farming knowledge, train framers to boost the agricultural production and productivity.

S.No.	Climate Zone	Kharif Season Crop	Rabi Season Crop
1	Northern Telangana Zone	Rice, Cotton, Maize, Soybean, Red gram	Rice, Maize, Jowar
2	Central Telangana Zone	Rice, Cotton, Maize	Rice, Maize
3	Southern Telangana Zone	Rice, Cotton, Maize	Rice, Maize

Rice

Telangana is in the rice bowl of South India, and RICE is cultivated in about 44 lakh acres. In the recent past, climatic changes have greatly influenced the amount rainfall, due to which the area cultivated with RICE has decreased.



Then Coming back and clicking on Crop Management, we get :

Crop Management

Soil Preparation

The soil is loosened and tilted before the seeds are sown. Ploughs are used for the purpose. If the soil contains big lumps, they are broken with the help of a hoe. This process aerates the soil so that the roots breathe easily. The nutrients and minerals get properly mixed with the soil and come at the top. Thus, the fertility of the soil increases and is fit for plantation.

Sowing Of Seeds

Addition Of Manures And Fertilizers

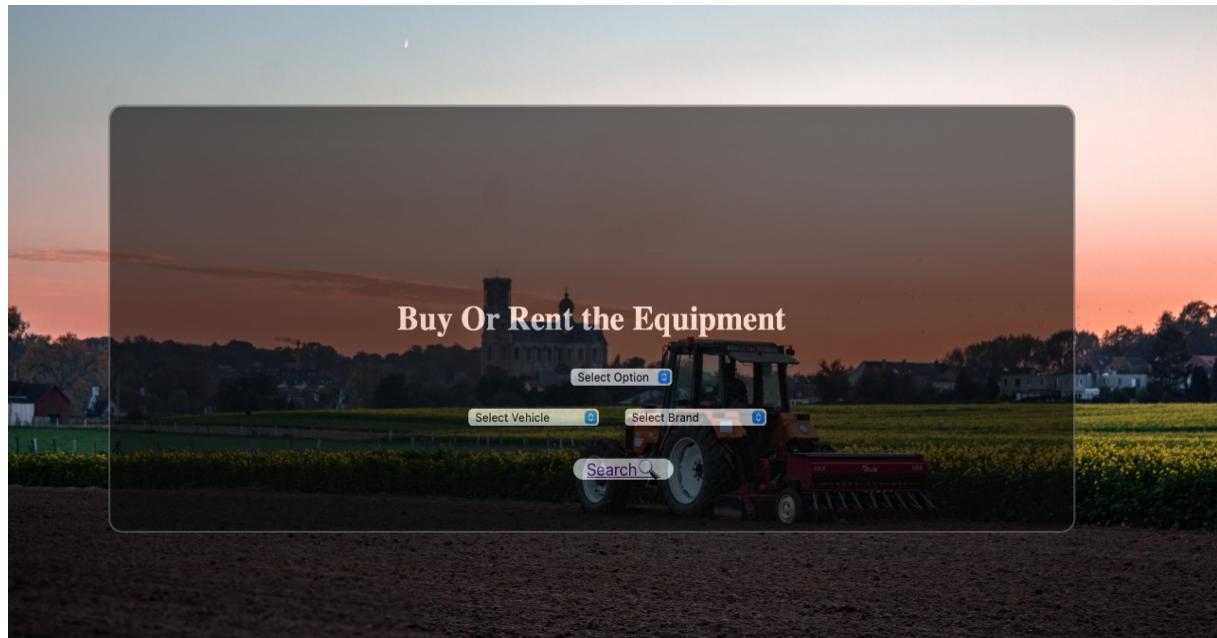
Irrigation

Protection from Weeds

Harvesting

Storage

Clicking on Farm Machinery, we get :



Here, Users can get rent farm tools and machinery and can also give them for rent.

OUTCOMES

- > We learned Languages like HTML and also explored different kinds of libraries and modules in Flask and got to know their implementation and working.
- > We have learnt how to build a website using HTML CSS and Flask.
- > We have also got to know about modules like sql.connector and various components present in those modules.
- > We have implemented GUI using HTML CSS and Backend using Xampp. By doing so, we have learnt so much about building a Website and error handling while doing so.

CONCLUSION

By end of this project, we were able to build a language friendly website for farmers and created an environment where farmers can sell their harvest and to search for other requirements like natural alternatives for Chemical pesticides

FUTURE SCOPE

- To include information about Crops in District/Regional level
- To build an AI which can identify a crop disease based on image posted user. And to suggest natural and chemical pesticides in eradicating the same.
- To develop a mobile application for the same website
- To suggest the nearest farmer to the users based on their present location to buy the required goods.