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# MAJOR- PROJECT REPORT ON

## **“*AGRODEC*”**

# BY

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***CERTIFICATE***



This is to certify that the Mini- Project report entitled

“*AGRODEC*”

Submitted by

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is a record of bonafide work carried out by them, under my guidance, in partial fulfilment of the requirement for the Final Year of Engineering (Computer) at M.I.T. School of Engineering, Pune under MIT Art, Design & Technology University.

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**ABSTRACT**

AGRODEC is an Innovative way for educating Farmers with respect to time and manpower. Providing an interface which help farmers in choosing the best for their Field. The proposed system of our mini-project titled, "AGRODEC- Agriculture Based Decisions" will make farmers understand about Crops. It avoids the difficulty for the farmers to travel long distances and get information regarding crops.

This system will take inputs like Type of Soil and ph of soil. By analyzing these inputs, it will generate a Terminal showing the Crops the farmers can grow this Season.

The AGRODEC takes into account the most important factor Farmer Suicidal as it has a key role in selecting this Project.

AGRODEC needs a lot of Research Work on the basis of Soil and the climate as well as the convenience of the farmer. It has great Front End and Back End techniques which makes this project Special enough.

**SURVEY FOR THE PROJECT**

* First, we have surveyed why farmers are committing suicide.

(Lack of knowledge)

* We have surveyed the crops in consultation with the Agriculture Department.
* We have also enquired about the problems faced by the problems.
* After surveying all this we have decided to plan such a project which will make a better future for the farmers.

|  |  |  |
| --- | --- | --- |
| **S.No** | **TITLE OF APPLICATION** | **LIMITATIONS** |
| 1. | Crop Farmers Application | * Not all major crops listed * All parameters not considered |
| 2. | CropInfo- India | * Logging In issues * Crop information insufficient |

**BLOCK DIAGRAM OF THE SYSTEM**

**INTRODUCTION**

This project helps the farmer to grow the correct crop, taking into account soil type, pH and rainfall change. This project will help all farmers who have no idea which crop will grow when the atmospheric change occurs.

This project will bring about the change that the farmer needs, which is a good guide to their fields. We plan to expand this software with more functionality such as Crop Details and provide the address of the Soil Test Centers to the farmer.

Last but not least, this project will put together all farmers and start supporting each other in possible ways. This will create a community of farmers that is very useful in today's world because they can collectively represent themselves and present their queries and problems to the Government.

**PROBLEM DEFINITION**

Create a Graphical User Interface which takes input from the user on soil pH, soil type, rainfall and analyses these inputs and suggests to the user how to maximize their income; which crop to grow in their fields.

**FEATURES OF PROJECT**

* Focuses on educating the users about the Crops.
* This project gives advice on which crop needs to be grown by the user.
* It mainly focuses on reduction of crop Failure due to lack of Knowledge.

**PLATFORM / TECHNOLOGY (FRONT END)**

Java is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Software Development Domain. I will list down some of the key advantages of learning Java Programming:

* **Object Oriented** − In Java, everything is an Object. Java can be easily extended since it is based on the Object model.
* **Platform Independent** − Unlike many other programming languages including C and C++, when Java is compiled, it is not compiled into platform specific machine, rather into platform independent byte code. This byte code is distributed over the web and interpreted by the Virtual Machine (JVM) on whichever platform it is being run on.
* **Simple** − Java is designed to be easy to learn. If you understand the basic concept of OOP Java, it would be easy to master.
* **Secure** − With Java's secure feature it enables to develop virus-free, tamper-free systems. Authentication techniques are based on public-key encryption.
* **Portable** − Being architecture-neutral and having no implementation dependent aspects of the specification makes Java portable. Compiler in Java is written in ANSI C with a clean portability boundary, which is a POSIX subset.
* **Robust** − Java makes an effort to eliminate error prone situations by emphasizing mainly on compile time error checking and runtime checking.

**PLATFORM / TECHNOLOGY (BACK END)**

SQL stands for Structured Query Language. SQL lets you access and manipulate databases. It became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987

SQL features are:

* **High Performance:** SQL provide high performance programming capability for highly transactional, heavy workload and high usage database system. SQL programming gives various ways to describe the data more analytically.
* **Availability**: SQL is compatible with databases like MS Access, Microsoft SQL Server, MySQL, Oracle Database, SAP HANA, SAP Adaptive Server, etc. All of these relational database management systems  support SQL and it is easy to create an application extension for procedural programming and various other functions which is additional features thus converting SQL into a powerful tool.
* **Open Source**: SQL is an open-source programming language for building relational database management system
* **Security**: It is very easy to provide permissions on tables, procedures, and views hence SQL give security to your data.
* **Scalability and Flexibility**: SQL provide Scalability and Flexibility. It is very easy to create new tables and previously created or not used tables can be dropped or deleted in a database.

**MODULE WISE EXPLANATION**

* LOGIN/ REGISTER MODULE

1. In this module, if the user is new to the application, then he/she can register with a username and password of his own choice.
2. If a user is not new to the application, then he/she can directly use his/her username and password to access his/her account.
3. After successful login, the user can use the application.

**FLOWCHART**

**OUTPUT:**

**CODE:**

**GLOSSARY**

* **CODE**
* Logic of the program in Python Language.
* **OUTPUT**
* Result of the Execution of Code.
* **MODULE WISE EXPLANATION**
* Brief explanation about what module is
* **SYSTEM DIAGRAM**
* The Flow of Program execution

**CONCLUSION**

We conclude that our project has successfully been completed and we have learnt certain things regarding React JS, Machine Learning with SQL database and wish to explore more features of this programming.

**FUTURE ENHANCEMENTS**

Our future enhancement would be creating an application on this program and making it available for the users for their real time issues. We wish to add an additional feature of providing testing care centre’s addresses to the farmer according to the locality. We also plan to expand this project with new techniques of farming information embedding it into system for crop and rainfall analysis.

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**SNAPSHOTS**

**SYNOPSIS SNAPSHOT**

**PROJECT TRACKER SNAPSHOT**