

A Project Report

On

**“Mobile Application Modern Day Agriculture Tools”**

Batch Details

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# 1. INTRODUCTION

1. In today's digital age, agriculture is undergoing a transformative shift with the advent of a ground-breaking mobile application.
2. This innovative platform empowers farmers to revolutionize their practices by facilitating the hassle-free rental of tractors and other essential mechanizations.
3. By seamlessly connecting farmers with cost-effective mechanization services through their mobile phones, this technology promises to enhance efficiency and productivity in the farming sector.
4. In doing so, it not only eases the workload for our hardworking farmers but also plays a pivotal role in advancing and encouraging the noble profession of agriculture.

This application is the bridge to a brighter, more sustainable future for farming communities, fostering growth and prosperity in this vital industry

# 2.LITERATURE REVIEW

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| Sl. No. | PAPER TITLE | AUTHORS | OBSERVATION |
| 1. | **A MobileBased Farm**  **Machinery**  **Hiring System** | **Sanjay Misra ,**  **JohnBosco**  **Agbaegbu,**  **Adio Akinwale ,**  **Ravin Ahuja** | In this paper, The aim of this research work is to design a mobile application for distributing or leasing agricultural machineries to farmers using locations-based services.  The design also took into consideration the configuration of the various topologies and other factors that could enhance the flexibility of a mobile application of this nature. |
| 2. | **Design and**  **Development of Mobile App for Farmers** | **Krunal Bagaitkar,**  **Khoshant,**  **Anklesha Welekar,**  **Aman Yadav** | This paper explores how Mobile Apps of agricultural services have impacted the farmers in their farming activities and which more innovative agriculture services will provide through Mobile App. |
| 3. | **Tractor Hiring Application for**  **Farmers** | **Ashok Gulati and Ritika Juneja** | For a tractor hiring application for farmers, consider incorporating features like user-friendly interface, real-time availability tracking, transparent pricing, secure payment options, and a reliable rating system for both farmers and tractor owners. Ensure the app addresses the specific needs of farmers and provides a seamless and efficient way for them to connect with tractor owners. Regular user feedback and updates |
|  |  |  | will be essential for continuous improvement. |
| 4. | **Farm**  **Mechanization**  **in Indian**  **Agriculture with Focus on**  **Tractors** | **Ms. Shubhangi G. Mane, Dr.**  **Kulkarni R. V** | Farm mechanization in India, particularly tractors, has made significant progress, increasing farm power and replacing human and draught power.  India has become a major tractor producer, exporting around 900,000 units in 2019.  Inclusiveness is improving, with about 44% of small and marginal farmers using farm machinery. |

Table 2.1: List of research papers

# 3. OBJECTIVES

**Objectives of the Mobile Application for Farm Mechanization:**

1. **Facilitate Mechanization Access:** Enable farmers to easily access and hire tractors and machinery through a user-friendly mobile app.
2. **Reduce Manual Labor:** Alleviate the physical burden on farmers by providing efficient access to mechanized equipment for various agricultural tasks.
3. **Promote Agricultural Profession:** Encourage and sustain the farming profession by making it more efficient and attractive to new generations.
4. **Enhance Affordability:** Ensure that the hiring costs are nominal, making mechanization services financially accessible to a wide range of farmers.

# 4. METHODOLOGY

## 1. Visual Studio Code

Visual Studio Code (VS Code) is a free and open-source code editor developed by Microsoft. It is available for Windows, MacOS, and Linux and is designed to be lightweight, fast, and customizable. VS Code supports a wide range of programming languages and features built-in support for Git, debugging, and extensions.

## 2. Android Studio

Android Studio is an IDE used to develop applications for the Android operating system. It was developed by Google and is the official IDE for Android app development. Android Studio is based on Intellij IDEA, which is a popular Java IDE, and provides advanced tools for developing and testing Android apps.

## 3. Languages • HTML

HTML (Hypertext Markup Language) is the standard markup language used to create web

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| pages. It is a set of markup tags and attributes that are used to describe the structure and | |
| content of a web document. HTML is the backbone of web development and is used to | |
| create the basic structure of a web page, including headings, paragraphs, images, links, and | |
| other elements. |  |

## • CSS

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| CSS (Cascading Style Sheets) is a styling language used to describe the presentation of | |
| HTML (or XML) documents. It allows developers to separate the content of a web page | |
| from its presentation, making it easier to create visually appealing and responsive web | |
| pages. |  |

CSS works by applying styles to HTML elements, using selectors to target specific

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| elements on a page. Styles can be applied to a single element, a group of elements, or the |
| entire page. Styles can include properties such as font size, color, background color, |

borders, padding, margins, and more.

## 4. Frameworks • Node.js

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| Node.js is an open-source, cross-platform JavaScript runtime environment that allows | |
| developers to execute JavaScript code outside of a web browser. It is built on top of the | |
| V8 JavaScript engine, which is also used by Google Chrome. |  |
| Node.js is often used for building server-side applications, such as web servers, APIs, | |
| and command-line tools. It provides a rich set of libraries and modules that can be used | |

to build powerful and scalable applications. Node.js also has a large and active community of developers who contribute to its development and maintenance.

## • Capacitor.js

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| Capacitor is a cross-platform runtime and set of APIs for building web applications that | |
| run natively on iOS, Android, and the web. It is built on top of modern web technologies | |
| such as HTML, CSS, and JavaScript and allows developers to create native apps using | |
| their existing web development skills. |  |

# 5. TIMELINE OF THE PROJECT/ PROJECT EXECUTION PLAN

**Brainstorming and title selection: 28-09-2023 to 07-102023.**

**Literature survey: 08-10-2023 to 20-10-2023.**

**Data collection: 13-10-2023 to 25-10-2023.**

**Data segregation: 25-09-2023 to 30-10-2023.**

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# 6. OUTCOMES

Expected Outcomes of the Mobile Application for Farm Mechanization:

1. **Increased Mechanization:** More farmers will access and utilize mechanized equipment, reducing their reliance on manual labor.
2. **Higher Agricultural Efficiency:** Improved access to tractors and machinery will lead to increased efficiency, resulting in higher crop yields and reduced labor costs.
3. **Economic Empowerment:** Farmers' income is likely to rise as mechanization helps optimize resources and increase agricultural productivity.
4. **Sustainable Agriculture:** The project's success will contribute to more sustainable and modernized agricultural practices, ultimately benefitting the entire agricultural ecosystem.

# 8. CONCLUSION

* **Modernizing Agriculture:** The introduction of this mobile application represents a significant step towards modernizing agriculture.
* **Minimizing Manual Labor:** The app reduces the need for manual labor, thereby enhancing productivity and relieving the physical burden on farmers.
* **Encouraging Farming Profession:** This innovation aligns with the broader goal of revitalizing and encouraging the farming profession, making it more appealing to current and future generations.
* **Agricultural Sustainability:** The mobile app plays a pivotal role in the journey towards agricultural sustainability by contributing to economic empowerment, efficiency, and the well-being of farming communities.

# 9.REFERENCES

* **A Mobile-Based Farm Machinery Hiring System**: [(PDF) A MobileBased Farm Machinery Hiring System (researchgate.net)](https://www.researchgate.net/publication/351836838_A_Mobile-Based_Farm_Machinery_Hiring_System)
* **Design and Development of Mobile App for Farmers:** [Best International Journal, Peer Reviewed Journal, Indexed Journal, ijtsrd.com h](https://www.ijtsrd.com/)ttps://www.ijtsrd. com/papers/ijtsrd2 3095.pdf
* **Tractor Hiring Application for Farmers:** [IRJET- International Research Journal of Engineering and Technology](https://www.irjet.net/)
* **Farm Mechanization in Indian Agriculture with Focus on**

**Tractors:**

