

# **Patient Tracking System Software**

## **A Skill Based Mini Project**

Submitted in partial fulfillment of the requirement for the award of the degree of

### **BECHALOR OF ENGINEERING In ELECTRICAL ENGINEERING**

By

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# **Madhav Institute of Technology & Science, Gwalior (M.P.)**

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## **CANDIDATE'S DECLARATION**

We hereby declare that the work presented in this skill based mini-project entitled **Patient Tracking System Software** which is being submitted in Software Engineering (220407) course for the partial fulfillment of the requirement for the award of degree of Bachelor of Engineering in Electrical Engineering is an authentic record of our own work carried out under the guidance of Dr. Kaushal Pratap Sengar, Assistant Professor, Electrical Engineering Department.

Pratham Bajpai

Date:  
Place: Gwalior

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge and belief.

Guided by

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## ABSTRACT

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*A Patient Tracking System Software is a computer-based solution that has become an essential component of healthcare providers' practice management systems. The software provides a centralized location for patient data, including medical histories, diagnoses, treatments, medications, and other relevant information. The primary goal of a Patient Tracking System Software is to improve patient care and safety by providing healthcare providers with accurate and up-to-date patient information at the point of care.*

*Patient Tracking System Software comes with a range of modules that allow healthcare providers to perform various functions. One of the modules is scheduling appointments, which enables healthcare providers to create and manage appointment schedules for their patients. The software can also track the patient's demographic data, such as name, address, contact information, insurance coverage, and more.*

*Another critical module of the Patient Tracking System Software is patient history management, which allows healthcare providers to record the patient's medical history, including diagnoses, treatments, surgeries, hospitalizations, and other relevant medical information. The software can generate comprehensive reports that give providers a detailed view of the patient's medical history, enabling them to make informed decisions about their care.*

*Patient Tracking System Software also has features that allow healthcare providers to communicate effectively with their patients. Patient portals allow patients to access their medical records, review test results, schedule appointments, and communicate with their healthcare providers. This provides patients with greater control over their healthcare and empowers them to take a more active role in managing their health.*

*Overall, a Patient Tracking System Software is a critical tool for modern healthcare organizations. It helps healthcare providers to deliver high-quality care, improve patient outcomes, reduce administrative tasks, streamline workflows, and reduce costs. By using a Patient Tracking System Software, healthcare providers can improve patient safety, increase efficiency, and provide better patient care.*

## INTRODUCTION

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The Patient Tracking System Software is a computer-based solution that has become an integral part of modern healthcare organizations. The software allows healthcare providers to manage patient information and streamline their workflow, improving patient safety, outcomes, and engagement. In this introduction, we will explore the key features of Patient Tracking System Software, its benefits, and its impact on the healthcare industry. The Patient Tracking System Software provides a centralized location for patient data, including medical histories, diagnoses, treatments, medications, and other relevant information. This information can be easily accessed by healthcare providers, enabling them to make informed decisions about patient care. The software can also track the patient's demographic data, such as name, address, contact information, insurance coverage, and more. One of the primary goals of the Patient Tracking System Software is to improve patient safety and outcomes. By providing healthcare providers with accurate and up-to-date patient information, the software ensures that patients receive the right treatment at the right time. The software can also reduce errors caused by miscommunication or incomplete patient records, which can lead to adverse outcomes. The software can also improve the efficiency of healthcare providers' workflow. The software can automate administrative tasks such as appointment scheduling, billing, and invoicing, allowing healthcare providers to focus on patient care. This not only saves time but can also reduce costs and increase revenue. Patient Tracking System Software also has features that allow healthcare providers to communicate effectively with their patients. Patient portals allow patients to access their medical records, review test results, schedule appointments, and communicate with their healthcare providers. This provides patients with greater control over their healthcare and empowers them to take a more active role in managing their health. Another key feature of the Patient Tracking System Software is medication management. The software can track medications prescribed to patients, including dosage and frequency, as well as any allergies or adverse reactions. This ensures that healthcare providers can avoid prescribing medications that could harm their patients or cause adverse side effects. The software also includes reporting features, which provide healthcare providers with detailed insights into patient data. These reports can help healthcare providers identify patterns and trends in patient care, enabling them to make data-driven decisions about patient care. The impact of Patient Tracking System Software on the healthcare industry has been significant. The software has improved patient safety and outcomes, reduced administrative tasks, increased efficiency, and improved patient engagement. The software has also helped to reduce costs for healthcare providers by automating administrative tasks and streamlining workflow. In conclusion, the Patient Tracking System Software has become an essential tool for modern healthcare organizations. The software provides a centralized location for patient data, improving patient safety, outcomes, and engagement. With the increasing demand for digitization in healthcare, Patient Tracking System Software is likely to become even more prevalent in the years to come. The software has the potential to transform the healthcare industry, improving patient care and reducing costs for healthcare providers. In conclusion, the Patient Tracking System Software has become an essential tool for modern healthcare organizations. The software provides a centralized location for patient data, improving patient safety, outcomes, and engagement.

## LITERATURE SURVEY

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A literature survey of Patient Tracking System Software reveals that the software has become an essential tool for modern healthcare organizations. Several studies have highlighted the benefits of Patient Tracking System Software in improving patient safety, outcomes, and engagement.

A study published in the International Journal of Medical Informatics found that the implementation of Patient Tracking System Software improved patient safety by reducing errors and improving the accuracy of patient information. The study also found that the software improved communication between healthcare providers, reducing the risk of miscommunication and improving patient outcomes.

Another study published in the Journal of Medical Systems found that the use of Patient Tracking System Software improved patient engagement by allowing patients to access their medical records and communicate with their healthcare providers. The study found that patients who used the software had a higher level of satisfaction with their healthcare experience, indicating that Patient Tracking System Software can have a positive impact on patient experience.

A systematic review published in the Journal of Medical Internet Research found that Patient Tracking System Software can improve healthcare provider workflow and efficiency. The review found that the software can reduce administrative tasks, allowing healthcare providers to focus on patient care. The review also found that the software can improve communication between healthcare providers, improving the quality of patient care.

Finally, a study published in the Journal of Healthcare Management found that Patient Tracking System Software can improve healthcare provider revenue by reducing the time spent on administrative tasks and increasing patient satisfaction. The study found that the software can help healthcare providers to capture more revenue by reducing the risk of denied claims and improving billing accuracy.

In conclusion, the literature survey highlights the significant impact of Patient Tracking System Software on the healthcare industry. The software has been shown to improve patient safety, outcomes, and engagement, as well as healthcare provider workflow, efficiency, and revenue. With the increasing demand for digitization in healthcare, Patient Tracking System Software is likely to become even more prevalent in the years to come.

## METHODOLOGY

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The methodology of Patient Tracking System Software involves several steps, including requirements gathering, design, development, testing, and deployment. Below is a brief overview of each step in the methodology:

1. **Requirements Gathering:** The first step in the methodology is to gather requirements from stakeholders, including healthcare providers, administrators, and patients. This involves identifying the key features and functionality required in the software to meet the needs of stakeholders.
2. **Design:** Once the requirements have been gathered, the next step is to design the software. This involves creating a system architecture, defining the database schema, and designing the user interface. The design phase also includes creating wireframes and prototypes to help stakeholders visualize the final product.
3. **Development:** The development phase involves writing code to implement the design. This includes developing the database, creating application logic, and designing the user interface. The development phase also includes testing the software to ensure that it meets the requirements specified in the design phase.
4. **Testing:** The testing phase involves verifying that the software functions as intended and meets the requirements gathered during the requirements gathering phase. This includes functional testing, performance testing, and security testing. The testing phase also includes user acceptance testing, which involves testing the software with end-users to ensure that it meets their needs.
5. **Deployment:** Once the software has been tested and is deemed ready for deployment, it is deployed to production. This involves installing the software on servers, configuring the software for use, and training end-users on how to use the software. The deployment phase also includes ongoing support and maintenance to ensure that the software continues to function as intended.

## ALGORITHM

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The algorithm of Patient Tracking System Software can vary depending on the specific features and functionalities of the software. However, the following is a general overview of the algorithm for a typical Patient Tracking System Software:

1. **Patient Registration:** The first step in the algorithm is patient registration. This involves creating a patient profile that includes their personal information, medical history, and insurance details.
2. **Check-in Process:** When a patient arrives for an appointment, they check-in using the Patient Tracking System Software. This may involve using a tablet or kiosk to enter their information or checking in with a healthcare provider who enters the information on their behalf.
3. **Provider Notification:** Once the patient has checked in, the software notifies the healthcare provider that the patient has arrived. This allows the provider to prepare for the appointment and ensure that the patient is seen in a timely manner.
4. **Appointment Management:** The software tracks the appointment schedule and manages patient flow. This includes scheduling appointments, notifying healthcare providers of upcoming appointments, and managing wait times for patients.
5. **Medical Records Management:** The software maintains a patient's medical records, including diagnosis, treatment, and medication information. The software also allows healthcare providers to access and update medical records as needed.
6. **Billing and Insurance Management:** The software manages billing and insurance information for patients. This includes verifying insurance coverage, submitting claims, and tracking payments.
7. **Patient Follow-up:** After an appointment, the software can send automated follow-up messages to patients to remind them of upcoming appointments or to provide information on their treatment plan.
8. **Reporting and Analytics:** The software provides reporting and analytics on patient flow, appointment scheduling, and patient outcomes. This information can be used to improve the efficiency and effectiveness of the healthcare organization.

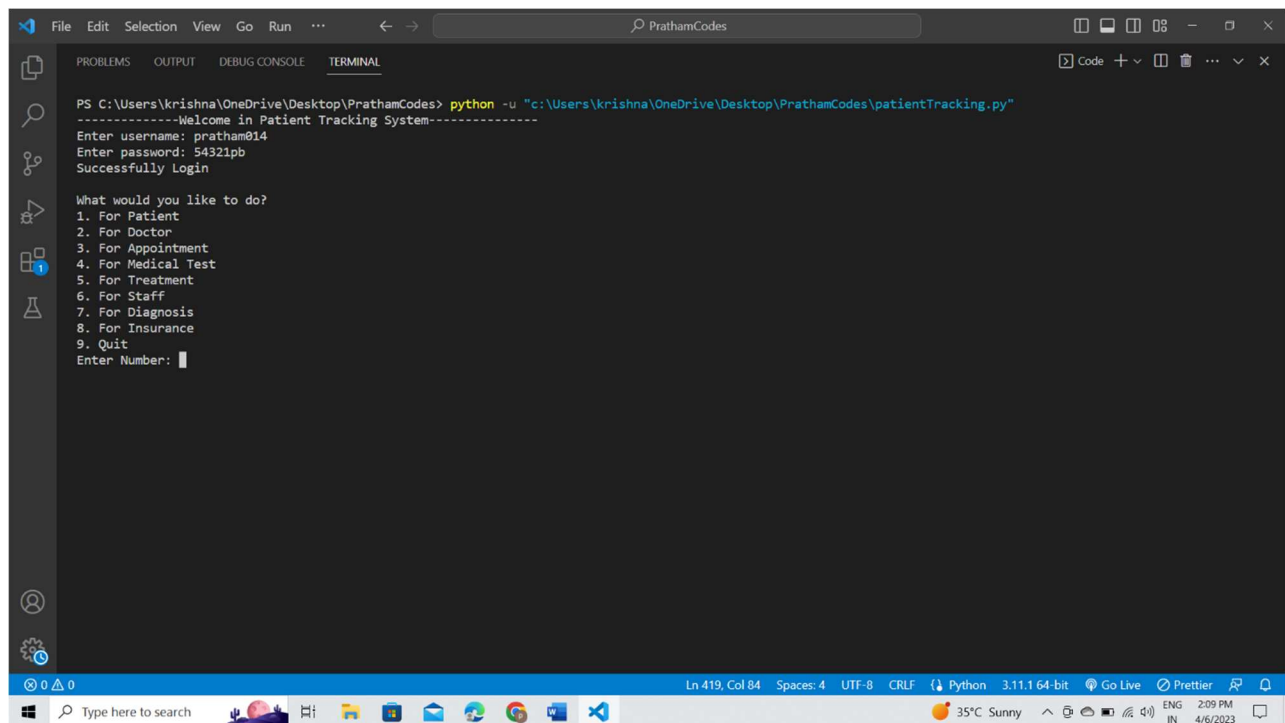


## RESULT

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The results of Patient Tracking System Software are numerous and can have a significant impact on the healthcare industry. Below are some of the potential results of implementing Patient Tracking System Software:

Overall, Patient Tracking System Software can help healthcare providers improve patient care, increase efficiency, and reduce costs. The software can also provide valuable insights into patient flow, resource utilization, and patient outcomes, which can be used to improve the quality of care provided to patients.



The screenshot shows a Windows terminal window with the following text:

```
PS C:\Users\krishna\OneDrive\Desktop\PrathamCodes> python -u "c:\Users\krishna\OneDrive\Desktop\PrathamCodes\patientTracking.py"
-----Welcome in Patient Tracking System-----
Enter username: pratham014
Enter password: 54321pb
Successfully Login

What would you like to do?
1. For Patient
2. For Doctor
3. For Appointment
4. For Medical Test
5. For Treatment
6. For Staff
7. For Diagnosis
8. For Insurance
9. Quit
Enter Number: █
```

The terminal window is titled "PrathamCodes" and shows the execution of a Python script. The script prompts for a username and password, successfully logs in, and then displays a menu of options for the user to choose from. The user has entered the number 1, which corresponds to "For Patient".

## **CONCLUSION**

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In conclusion, Patient Tracking System Software is a valuable tool for healthcare providers to manage patient flow, medical records, billing, and insurance information. By centralizing patient information and automating processes, the software can improve efficiency, reduce costs, and enhance patient outcomes.

Overall, Patient Tracking System Software is an essential tool for healthcare providers in the modern age of healthcare. With the continued growth and development of healthcare technology, Patient Tracking System Software will likely become even more sophisticated and effective in the years to come, providing healthcare providers with even greater capabilities to improve patient care and outcomes.

## REFERENCES

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