

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2025

(21) Application No.202511064369 A
(43) Publication Date : 25/07/2025

(54) Title of the invention : A MERN-BASED ROLE-ORIENTED HOSPITAL MANAGEMENT AND APPOINTMENT SCHEDULING SYSTEM

(51) International classification :G16H0040200000, H04L0009400000, H04L0009320000, G06Q0010109300, G06Q0010063100
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY
Address of Applicant :19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Gautam Buddha Nagar -----
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
1)SEKH SAMIM
Address of Applicant :NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY, 19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Gautam Buddha Nagar -----
2)KARTIKA SINGH
Address of Applicant :NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY, 19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Gautam Buddha Nagar -----
3)GARIMA JAIN
Address of Applicant :NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY, 19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Gautam Buddha Nagar -----

(57) Abstract :
Disclosed herein is a MERN-based role-oriented hospital management and appointment scheduling system (100) comprises a MongoDB-based database layer (102) configured to store, retrieve, and manage structured and semi-structured healthcare-related data. The system also includes an Express.js backend service (104) structured as a RESTful API layer for processing client requests, implementing business logic, and mediating database operations. The system also includes a React.js frontend user interface framework (106) configured to dynamically render role-specific dashboards and interactive components. The system also includes a Node.js runtime environment (108) facilitating asynchronous server-side operations. The system also includes a JWT (JSON Web Token) authentication and authorization unit (110) designed to enable stateless, encrypted, and tamper-resistant user session management.

No. of Pages : 30 No. of Claims : 10