**BUSINESS REQUIREMENTS**

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| Date | 26 october 2023 |
| Team ID | NM2023TMID01019 |
| Project name | DRUG TRACEABILITY |

TSK-45974 BUSINESS REQUIREMENTS FUNCTIONAL REQUIREMENTS

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| **Fr No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration and Authentication: | Users must be able to register and authenticate their identities securely. Different user roles should be defined, such as pharmaceutical companies, distributors, regulators, and auditors |
| FR-2 | Smart  Contract Development: | Create a smart contract on the Ethereum blockchain to manage drug data. Implement functions for adding new drugs, updating drug information, transferring ownership, and querying drug details. |
| FR-3 | Data Entry and Management | Allow authorized users to input and manage drug information, including unique identifiers, drug names, manufacturers, batch numbers, production dates, and expiration dates. |
| FR-4 | Ownership Transfer | Enable authorized users to initiate ownership transfers of drugs, ensuring data integrity and auditability. |
| FR-5 | Data Encryption | Implement encryption mechanisms to protect sensitive drug data, ensuring confidentiality and integrity. |

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| BR-6 | Access Control: | Enforce access control measures to restrict access to the system and functions based on user roles and permissions. |
| BR-7 | Query Functionality: | Provide users with the ability to query drug information using various criteria, such as unique identifiers, batch numbers, or production dates. |
| BR-8 | Blockchain Event Logging: | Record significant events and transactions on the blockchain as events for transparency and auditability. |
| BR-9 | User Interface (Optional): | Develop a user-friendly web-based or mobile interface for users to interact with the smart contract. This interface should facilitate data entry and retrieval. |
| BR-10 | Compliance Reporting: | Generate compliance reports for regulatory authorities, detailing the traceability and authenticity of drugs within the supply chain. |

NON FUCTIONAL REQUIREMENTS

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| **NFR**  **no.** | **Non functional requirements** | **Sub Requirement (Story / Sub-Task)** |
| NFR-1 | Performance | Response Time: The system should provide quick response times for queries and transactions to ensure efficient tracking of drugs. |
| NFR-2 | **Scalability:** | The system must be scalable to accommodate a growing number of drugs and users without compromising performance. |
| NFR-3 | **Throughput:** | The system should be capable of handling a high volume of transactions simultaneously. |

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| NFR-4 | **Security:** | Data Encryption: Sensitive drug information must be encrypted to protect against unauthorized access or data breaches. |
| NFR-5 | **Access Control** | Access to the system and its functions must be strictly controlled based on user roles and permissions. |
| NFR-6 | **Authentication** | Strong user authentication mechanisms should be in place to verify the identity of users. |
| NRF-7 | **Auditability:** | Ensure that all actions within the system are logged and immutable, allowing for audit trails and accountability. |