**BUSINESS REQUIREMENTS**

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| Date | 26 october 2023 |
| Team ID | NM2023TMID01005 |
| Project name | Food Tracking System |

TSK-45974 BUSINESS REQUIREMENTS FUNCTIONAL REQUIREMENTS

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| **FR NO** | **Functional requirements** | **Subrequirement** |
| FR-1 | User Registration and Authentication | Users, including farmers, distributors, retailers, and consumers, should be able to register and authenticate their identities to access the system. |
| FR-2 | Food Item Registration | Stakeholders (e.g., farmers, distributors) must have the capability to register food items, providing details like product type, quantity, and source. |
| FR-3 | Unique Identifiers | Assign a unique identifier (e.g., QR code) to each food item for easy traceability and verification. |
| FR-4 | Data Input and Verification | Enable authorized users to update and verify data at various stages of the food supply chain to ensure data accuracy and authenticity. |
| FR-5 | Consumer Interface | Develop a user-friendly interface (web or mobile app) for consumers to access food item information by scanning unique identifiers or searching for product details. |
| FR-6 | Blockchain Integration | Create and deploy smart contracts on the Ethereum blockchain for secure and immutable data storage. |
| FR-7 | Traceability and History | Allow users to trace the history of each food item, including its origin, processing, and transportation details. |

NON FUCTIONAL REQUIREMENTS

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| **NFR NO** | **Non-Functional requirements** | **Subrequirement** |
| NFR-1 | Security | Data stored on the blockchain should be highly secure, with encryption and access controls to protect sensitive information. It should also comply with data privacy regulations (e.g., GDPR). |
| NFR-2 | Scalability | The system should be capable of handling a growing volume of food items, users, and data as the user base expands without compromising performance. |
| NFR-3 | Usability | The user interfaces, both for consumers and stakeholders, should be user-friendly and accessible on various devices and platforms, ensuring a smooth user experience. |
| NFR-4 | Performance | The system must perform efficiently, with minimal latency, to provide real-time or near-real-time access to food item information for consumers and stakeholders. |
| NFR-5 | Reliability | The system should have a high level of availability to ensure stakeholders can access it when needed, with minimal downtime. It should also provide data redundancy and backup capabilities. |
| NFR-6 | Compliance | The system should comply with relevant food safety and traceability regulations and standards to assure stakeholders of its adherence to industry requirement. |
| NFR-7 | Interoperability | The system should be able to integrate with other existing databases, applications, and systems used in the food industry, allowing for a seamless exchange of information and data. |