**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 20 May 2023 |
| Team ID | NM2023TMID12362 |
| Project Name | Industrial Workers Health and Safety System Based on Internet of Things |

**Functional Requirements:**

**Non-Functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| **FR No.**  **FR - 1** | **Functional requirement (epic)** | **Sub Requirement(Story/Sub-Task)** |
| **FR - 2** | Accuracy  Sensor | Accuracy: It is the level of exactness between the measured value and the true value.  Temperature sensors measure the amount of heat energy in a source, allowing them to detect temperature changes and convert these changes to data. |
| **FR - 3** | External Interfaces | FR-2 External Interfaces The external interface is the interface  that connects to the Internet or a Wide  Area Network (WAN). The external  interface must have an IP address to  operate correctly |
| **FR - 4** | Arduino | The temperature sensor in Arduino converts the surrounding temperature to voltage |

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| NFR-1 | Usability | Usability is a non-functional requirement, because in its essence it doesn't specify parts of the system functionality, only how that functionality is to be perceived by the user |

Following are the functional requirements of the proposed solution.

NFR - 1

Non-Functional Requirement

Description

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| --- | --- | --- |
| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | Audit Tracking | An audit trail is a step-by-step record by which accounting, trade details, or other financial data can be traced to their source |
| FR-2 | External Interfaces | The external interface is the interface that connects to the Internet or a Wide Area Network (WAN). The external interface must have an IP address to operate correctly |
| FR-3 | Data Management | Data management is the practice of collecting, organizing, protecting, and storing an organization's data so it can be analyzed for business decisions. As organizations create and consume data at unprecedented rates, data management solutions become essential for making sense of the vast quantities of data. |
| FR-4 | Legal and Regulatory Requirements | Legal and Regulatory Requirements means all laws, rules, standards and other regulatory requirements (including Shariah) relevant to a financial institution's activities in all jurisdictions in which the financial institution, or any of its branches or subsidiaries, conducts activities. |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| --- | --- | --- |
| NFR-2 | Security | security requirements describe functional behavior that enforces security. Functional requirements can be directly tested and observed |
| NFR-3 | Reliability | This type of non functional requirement is concerned with characteristics such as availability of the solution. |
| NFR-4 | Performance | Nonfunctional requirements are mostly quality-related requirements which include the areas of performance, availability, reliability, usability, flexibility, configurability, integration, maintainability, portability, and testability. |
| NFR-5 | Availability | Availability describes how likely the system is accessible to a user at a given point in time. |
| NFR-6 | Scalability | The system must be able to accommodate larger volumes (whether of users, throughput, data) over time |