**School of Computing**

**SRM IST, Kattankulathur – 603 203**

**Course Code: 18CSC206J**

**Course Name: Software Engineering and Project Management**

| | |
|---|---|
| **Experiment No** | 3 |
| **Title of Experiment** | System, Functional and Non-Functional Requirements of theProject |
| **Name of the candidate** | **KUMARI HARSHITA** |
| **Team Members** | **MAHESH REDDY , NANDAVARDHAN, HARSHITA, BHANU** |
| **Register Number** | **RA2111028010060** |
| **Date of Experiment** | **13-02-2023** |

**Mark Split Up**

| S.No | Description | Maximum Mark | Mark Obtained |
|---|---|---|---|
| 1 | Exercise | 5 | |
| 2 | Viva | 5 | |
| | **Total** | **10** | |

**Staff Signature with date**

**Aim**

To identify the system, functional and non-functional requirements for the project.

**Team Members:**

| Sl No | Register No | Name | Role |
|---|---|---|---|
| 1 | RA2111028010043 | NANDAVARDHAN R | Rep/Member |
| 2 | RA2111028010056 | MAHESH REDDY | Member |
| 3 | RA2111028010060 | KUMARI HARSHITA | Member |
| 4 | RA2111028010041 | BHANU PRAKASH | Member |

**Project Title: Your Energy Our Solution**

**System Requirements :**

**Server :** Fast internet connection greater than 50mbps, with at least 50 gb storage

**Client :**

- At least 3G or equivalent Wifi Connectivity
- 1 GHz or faster CPU
- At least 2 gb of RAM

**Functional Requirements :**

- **Data Collection :** Ability to collect real time data from multiple data sources, such wind turbines, solar panels, energy storage solutions etc.
- **Data Visualization :** Capability to visualize and plot all data points in a user friendly manner.
- **Predictive Analytics** : The software should be able to predict the future output of renewable energy systems based on historical data and current conditions.
- **Energy Management** : The software should allow users to monitor the energy consumption and production of individual renewable energy systems and provide recommendations for optimizing their performance.
- **Alarm and Alerts** : The software should have an alarm and alert system to notify users in case of any discrepancies or failures in the renewable energy systems.
- **User Management** : The software should have a user management system to manage access to the data and features based on user roles and permissions.

**Non-Functional Requirements**

- **Performance :** The system should be able to cope with real time data, and analyze large amounts of data with minimal latency and high accuracy.
- **Reliability :** The software should be reliable and have high availability, with built-in mechanisms for detecting and alerting about failures.

- **Usability :** The software should be easy to use and have a user-friendly interface, with clear and concise navigation, and understandable visualizations.
- **Security :** The software should be secure, with encryption for data storage and transmission, and multiple levels of access control.
- **Scalability :** The software should be scalable, with the ability to handle increasing amounts of data and users as the renewable energy systems grow.

**Result**:

Thus the requirements were identified and accordingly described.