School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	10
Title of Experiment	Develop a Testing Framework/User Interface
Name of the candidate	**KUMARI HARSHITA**
Team Members	**NANDAVARDHAN R, MAHESH REDDY, KUMARI HARSHITA, BHANU PRAKASH**
Register Number	**RA21110280100**
Date of Experiment	

Mark Split Up

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

Staff Signature with date

Aim

To develop the testing framework and/or user interface framework for the “Your energy our solution”

Team Members:

S No	Register No	Name	Role
1	RA2111028010043	Nandavardhan	Rep
2	RA2111028010060	Harshita	Member
3	RA2111028010041	Bhanu Prakash	Member
4	RA2111028010056	Mahesh Reddy	Member

Executive Summary

Scope: The scope of testing for “Your energy Our solution”, is both functional and nonfunctional testing. This covers all modules of the project

Objective: The objective of testing is to ensure that the “Your energy Our solution” meets the required quality standards, performs as expected, and is reliable, efficient, and secure. The testing will also ensure that the system meets the needs of the end users and is user-friendly.

Approach: The approach to testing will be a combination of manual and automated testing methodologies. For functional testing, manual testing will be used to evaluate the user interface, test scenarios that require human interaction, and test cases that cannot be automated. Automated testing will be used to execute repetitive and critical path test cases. For non-functional testing, testing tools will be used to test the system's performance, security, and scalability. Test cases will be documented and managed using test management tools.

Overall, the testing process will follow a comprehensive test plan and ensure that it is reliable, efficient, and secure.

Test Plan

Scope of Testing

Functional Testing: The "Your energy Our solution" application should be tested for sensitivity and specificity, which is the ability of the algorithm to correct and identify power fluctuations and predict to some accuracy future power output. Also, user testing should be conducted with different types of energy sources and multiple weathers to evaluate the usability and effectiveness of the application. The application should be monitored for accuracy and improved upon based on user feedback and updates to the AI model.

Non-Functional Testing: Performance testing should be conducted to assess the application's ability to handle a large volume of user requests and analyze data in a timely manner. This can be done by running simulated power sources to simulate high-traffic scenarios and measuring response time, and resource utilization.

Security testing should be conducted to identify vulnerabilities in the application's security controls and ensure it is compliant with relevant security standards and regulations

Types of Testing, Methodology, Tools

Category	Methodology	Tools Required
Functional Requirements	Manual Testing	Word Template
Non-Functional Requirements	Automated Testing	Testing Frameworks, Security Testing Tools, Test Management Tools

Result:

Thus, the testing framework has been created for "Your energy our solution"