# COLLEGE CODE : 1138

## COLLEGE NAME :SJIET

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TECHNOLOGE-PROJECT NAME : STRUCTURAL HEALTH MONITORING

SUBMITTED BY

NAME :

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## Phase 5: structural health monitoring and project demonstration & documentation

Title: structural health monitoring

1. **- Abstract**

A concise overview of the project, including the objective, methods, technologies used (e.g., sensors, data acquisition systems), and expected outcomes related to monitoring the structural integrity of infrastructure

**Overview:**  
A brief introduction outlining the aim to monitor and maintain the structural integrity of infrastructures using SHM technologies.  
**Outcome:**  
Clear understanding of the project's purpose, relevance, and expected benefits.

**2. Project Demonstration**

* A live or recorded demonstration showing how the SHM system operates. This includes sensor deployment, data collection, processing, and analysis to assess structural performance in real-time or over time.

**Overview:**  
Live or simulated demonstration of the deployed SHM system, including sensors, data collection, and monitoring interface.  
**Outcome:**  
Stakeholders visually understand system capabilities and operational efficiency.

3. **Project Documentation**

* Comprehensive documentation covering:
  + Design and methodology
  + Sensor types and placement
  + Data acquisition and processing
  + Software or algorithms used
  + Maintenance procedures

**Overview:**  
A complete record of the project development lifecycle.  
**Documentation Sections:**

* System Design
* Hardware & Sensor Specifications
* Data Collection Methodology
* Software Tools Used
* Data Analysis Techniques
* Testing & Calibration Procedures  
  **Outcome:**  
  Ensures reproducibility, understanding, and maintenance support.

**4. Feedback and Final Adjustments**

* Collect feedback from stakeholders, supervisors, or users.
* Make final tweaks based on performance, usability, or accuracy of the SHM system.

**Overview:**  
Collection of reviews and suggestions from instructors, users, or domain experts.  
**Steps:**

* Review session
* Error/issue identification
* Modifications based on input  
  **Outcome:**  
  Enhanced reliability and performance of the SHM system.

### ****5.Final Project Report Submission****

* Submit a detailed final report that includes:
  + Objectives
  + Methodology
  + Results and analysis
  + Conclusions and recommendations

**Overview:**  
The culminating document that consolidates all aspects of the project.  
**Report Sections:**

* Introduction
* Methodology
* Results
* Discussion
* Conclusion
* References & Appendices  
  **Outcome:**  
  Professional and academic documentation suitable for evaluation or publication.

### ****6Project Handover and Future Works****

* + the complete system and documentation to the client or relevant authority.
  + Suggest possible future Handover improvements or scaling opportunities, such as:
    - Integration with IoT/cloud systems
    - Use of AI for predictive maintenance
    - Expansion to other structures or assets

**Overview:**  
Final transfer of the system and knowledge base to the relevant authority or client.  
**Handover Details:**

* System files
* Source code
* Sensor layout map
* Maintenance guide  
  **Outcome:**  
  Smooth transition and guidelines for future upgrades, scalability, or maintenance.

INCLUDE SCREENSHOTS OF SOURCE CODE AND WORKING FINAL PROJECT





