Mini Project:

**Project Proposal:**

Each student or group will submit a project proposal outlining the problem statement, objectives, proposed solution, technologies to be used, and expected societal impact. The proposal should also include a timeline for project milestones.

Guidelines:

The mini project should be undertaken preferably by a group of 3 work

and implement the project.

Project Selection: Students will select a project with societal relevance, addressing a specific community need or problem. The project should be approved by the instructor and aligned with the course objectives.

Software Engineering Principles: Students will foll throughout the project, including requirements gathering, design, implementation,

testing, and documentation.

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**Development Environment Setup:** Students will set up a development environment for Python programming, including necessary libraries and tools for software development, version control, and project management.

**Implementation:** Students will implement the proposed solution using Python programming language, following industry design, and appropriate use of data structures and algorithms.

**Testing:** Students will conduct thorough testing of their software solution, including unit tests, integration tests, and system tests. Testing should cover both functional and non functional requirements, with clear documentation of test cases and results.

Documentation: Students will provide comprehensive documentation for their project, including user manuals, technical specifications, code comments, and any relevant diagrams or illustrations. Documentation should be clear, well to stakeholders

Presentation: Each student or group will deliver a final presentation showcasing their

project, highlighting the problem statement, solution approach, implementation detail

testing results, societal impact, and lessons learned. Presentations should be engaging,

professional, and demonstrate effective communication skills.