

## PROJECT DEVELOPMENT PHASE

### Debugging & Traceability

Topic	Creating Sponsored Post for Instagram
Team ID	NM2023TMID02308

Debugging and traceability are essential aspects of software development, including when working on a project like creating sponsored Instagram posts. Here's how you can approach debugging and traceability for this specific topic:

Logging	Implement a logging system in your code to record important events, errors, and debugging information. This helps you trace the execution flow and identify issues. Popular logging libraries, like logging in Python, can be very useful.
Error Handling	Make sure your code has robust error-handling mechanisms. Capture and log exceptions or errors that occur during the execution of your code. Include helpful error messages and stack traces to aid in debugging.
Testing	Write comprehensive unit tests for different parts of your code. This ensures that each component behaves as expected. Tools like unittest (Python), JUnit (Java), or Jest (JavaScript) can help with testing.

Debugging Tools	Familiarize yourself with debugging tools provided by your development environment or IDE (Integrated Development Environment). Debuggers allow you to step through code, set breakpoints, inspect variables, and understand the flow of your program.
Version Control	If you encounter issues or bugs, use your version control system to trace back to previous versions of your code where things were working. This helps identify when and how the issue was introduced.
Code Reviews	Conduct code reviews, either individually or with a team, to spot potential issues, discuss the code logic, and suggest improvements. A fresh set of eyes can often find problems that you might have missed.
Issue Tracking	Use an issue tracking system, such as JIRA, GitHub Issues, or Trello, to document and track bugs and feature requests. This allows you to prioritize and manage tasks related to debugging and improvements.
Documentation	Keep your code and project documentation up to date. Describe how each component works and its expected behavior. This helps you understand the

	codebase and trace issues back to their source.
Traceability Matrix	Create a traceability matrix that links requirements or features to the corresponding code components. This helps ensure that each feature is implemented correctly and makes it easier to identify the source of issues when they arise.
Isolation of Issues	When debugging, isolate the issue to a specific module or component. Temporarily remove or simplify unrelated parts of your code to focus on the problem area.