# Module 3: Portfolio Milestone

# Project Plan: Environment Variables, Scope Processes, and Organizational Systems

For my Portfolio Project, I am designing and implementing a Project Management API in Python supported by a lightweight blockchain-style ledger. This document defines environmental variables, scope processes, and organizational systems to establish a foundation for execution.  
  
Environmental variables for the project include internal and external factors that may affect deliverables. Internally, I will rely on my skills with Python, Flask/FastAPI, and cryptographic hashing to create an append-only ledger. Time and resource constraints, such as balancing coursework and development tools, will also play a role. Externally, considerations include security standards for blockchain-style storage, API integrations, and the evolving best practices around decentralized applications.   
  
The scope processes begin with the creation of a Work Breakdown Structure. The WBS defines deliverables such as back end API design, blockchain ledger module development, documentation, risk and compliance review, and proof of concept testing. By dividing the project into Initiation, Planning, Execution, Testing, and Closing phases, the WBS ensures that each aspect of the project remains documentable and measurable.

A diagram of blockchain api

AI-generated content may be incorrect.

In the initiation phase, we will be identifying the stakeholders and objective of the project as well as gather requirements. In planning phase, we will generate a project charter documentation and design a preliminary architecture sketch. In execution phase we will develop blockchain ledger module and back end API all the while identifying that the project is risk/objectively compliant. In testing phase, we will conduct API testing and ledger verification making sure the integration and data storage works as intended. Lastly, in the closing phase, we will conduct a proof of concept demo gathering feedback from the stakeholders.   
  
Organizational systems provide governance and support for the project. For this academic project, I will serve as the primary project manager and developer, while my professor functions as sponsor and evaluator. GitHub will be used for version control, Lucidchart for system and WBS diagrams, and Canvas/GitHub as the submission repository.   
  
By integrating environmental variables, scope processes, and organizational systems into a structured plan, this project establishes a clear work breakdown structure for the design and implementation of the blockchain-backed Project Management API. WBS serves as a roadmap for deliverables, ensuring alignment with objectives and supporting project monitoring and evaluation.

## References

Project Management Institute. (2021). A guide to the project management body of knowledge (PMBOK® Guide) (7th ed.). Project Management Institute.

Lucid Software. (n.d.). Get started with Lucidchart. Lucidchart. <https://www.lucidchart.com>

Nakamoto, S. (2008). *Bitcoin: A peer-to-peer electronic cash system.* https://bitcoin.org/bitcoin.pdf