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Module 6.2 Assignment

In the case study, “Strangler Fig Pattern at Blackboard Learn (2011),” the online educational content company Blackboard Learn greatly increased developer productivity by using a strangler fig pattern.

A strangler fig pattern is a way to gradually shift from a monolithic code base to a series of microservices. It involves moving small pieces of code over to new modules piece by piece until the old monolith is “strangled” out of existence as if by a vine. In the case of Blackboard Learn, they decoupled specific modules from the monolith and allowed developers to access them through fixed APIs. They called these decoupled APIs Building Blocks.

Before implementing the pattern, the monolith was very disorganized and complicated. There was a ton of technical debt, errors, and long lead times for feedback and deployment, to the point where developers were essentially afraid to commit code. The number of lines of code was consistently growing, while the number of commits was sharply declining. This meant that deployments were becoming ever bigger and more error-prone.

After implementing the pattern, the number of commits increased exponentially because the developers felt more comfortable, safe, and independent in their coding and deployment. The number of lines of code in the monolith decreased of course, as they began to be moved into the modules.

Lessons learned:

* Monoliths are hard to maintain over time, especially for large companies or projects, as code becomes outdated and the code becomes ever longer and more complex.
* The difficulties and technical debt associated with monoliths lead to fear or poor morale on the part of developers. This leads to fewer commits, which is dangerous.
* The problem of monoliths doesn’t have to be solved overnight, but can be solved gradually using the strangler fig pattern. Even with small changes, it won’t take long to see both quantitative (lines and code and number of commits) and qualitative (developer morale) improvements.