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Module 6.2

The study presents both an overview of Blackboard Learn (2011) and the challenges Blackboard faced when addressing an aging J2EE codebase that had been in operation since 1997. The system gradually increased in complexity which made it hard for developers to implement changes and incorporate new features and manage prolonged build processes. The issues slowed down productivity and made system improvements a lengthy and cumbersome process. Blackboard applied the "Strangler Fig Application Pattern" to manage these problems which enabled a safe system transition while avoiding simultaneous complete system replacement. They developed "Building Blocks" to divide the monolithic system into multiple self-contained modules. The system modules functioned through versioned APIs, which enabled individual system components to be updated and expanded without impacting other parts of the system. The approach provided several important advantages.

The system was divided into smaller components which made development more efficient and easier to manage. The incremental migration process reduced risks because changes were implemented in small steps instead of through one complete replacement. Multiple versioned APIs were deployed to enhance flexibility because they enabled service expansion and scaling across time. As teams gained independence this enabled them to develop at speed since they no longer faced constraints from the integrated system. Blackboard learned through its implementation of the Strangler Fig Pattern that step-by-step software modernization helps performance without replacing the entire system. Through this approach, Blackboard developed a more efficient, scalable, and adaptable platform without interfering with operational activities.

References:

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