Abstract
The widely used keycard-based authentication system is easily compromised.

Project Description
What
Lockdown Security is a physical access control system that leverages smartphone to provide a secure and convenient authentication system.

Why
To provide enterprise level physical access control in secure, convenient, and pragmatic fashion than currently available systems.

Who
Business with physical access control systems that require greater security and access logging insights.

Process
Structured Analysis for concept to logical design; Agile iterative method for build to deployment.

Features
• 4cm communication range via NFC
• Inherent 2 factor authentication (2fa)
• Extensive access logging capability

Lessons Learned
• How to use GitHub repository to collaborate on software projects.
• Using JIRA to keep progress during the development cycle.

Technologies
• Server: MySQL, Flask, Python
• Android: Java, Kotlin, XML
• Communication: HTTP, NFC
• Process: JIRA SCRUM

Future Work
• Add Apple iPhone compatibility
• Improve security (rolling keycodes, SSL encryption)
• Develop low-cost integrated controllers for door readers