Developing FourS 2.0: A Web Hosting Software that Uses Encrypted Quick Response Code to Reduce Violence in School

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In 2018 a total of 39 school shootings took place in the United States. An overwhelming percentage of these attacks were a result of the estimated 962,300 violent incidents in schools. The objective of this project is to create a security system that protects schools from violent acts by using QR code generation. The primary concept is to develop an access system, titled FourS (School Safety and Security System). This system will create encrypted QR codes, for both students and staff, that are required upon entering the building. These QR codes contain a randomly generated password that changes whenever an individual enters or exits the school and is voided once used. In July 2018, the United States Secret Service released “An Operational Guide for Preventing Targeted School Violence” to the public. This document introduces the use of a new threat assessment model, based on the knowledge that in 93% of the school shootings, the shooter showed behavioral warning signs recognized by fellow students or teachers prior to the incident. These warning signs would be used in FourS for a five-level flagging system. If students show warning signs, the flagging level would be adjusted accordingly. Higher warning levels increase the chance of having a bag check, as well as alert counselors in order to help the student. Using FourS, a large school of 2,500 students would be able to check in all of their students in less than fifteen minutes for the cost equivalent of two vending machines.