Abstract

 Access control management is an essential component of the data center security to ensure that only authorized individuals at allowed visiting times can access data center facilities. Currently, the Data Center Management Division (DCMD) is implementing a paper-based registration process for managing access. With the current process, there are challenges such as maintaining an organized and easily searchable records of the date and time persons have entered the data center. The objective of this project is to streamline the access control registration and management by digitalizing the process of requesting and approving access pass, registering data center visitor information, recording visits, and leasing access cards. Using the Unified Software Development Process, the web-based Access Control Management System was conceptualized and constructed. In the inception phase, the requirements were gathered through correspondence and interviews with the end-user. In the elaboration phase, the requirements were refined in coordination with the end-user. The use case suite and feature set, along with the project proposal was presented to the end-user. Then, in the construction phase, with iterative implementation, the system was built using PHP and MySQL with the Laravel framework, extending the functionalities with third-party packages and solutions. Lastly, in the transition phase, the system was deployed to a test cloud server. System functional testing was performed manually using the test case suite. The system was presented to the end-users for their feedback and usability testing. Security testing was also performed using the open-source ZAP software and Qualys SSL Labs. It is concluded that the Access Control Management System is ready for Access Control Management … xi use of the DCMD, with confidence that the functionalities satisfies the client's requirements, there is a low risk for cybersecurity attacks, and that the users will have a positive experience in using the system.

 Keywords: Access Control; Laravel