

Android-based booking application for smart parking system

ABSTRACT

The Android parking slot booking application enables end users (drivers) to save time and money while avoiding parking lot congestion. Most of the parking lots operate on a manual parking system, in which vehicles enter the lot, obtain a ticket from a machine at the entrance gate, look for an available slot, pay for parking at a counter, and insert the paid ticket into a machine at the exit gate. These actions can be carried out using a mobile application. Numerous studies have analysed the methodologies employed in smart parking systems; however, the majority of research has not addressed mobile applications in detail. The purpose of this paper is to demonstrate how to construct a mobile application using Android Studio. The end user must register and log in to this programme, select a vacant slot to reserve, specify the period of his or her parking, and make a payment. The application was evaluated on a real device, and 28 end user participants evaluated the booking application and provided feedback and recommendations via a Google form. 85.7 percent of respondents believed that parking should be classified. Additionally, 100% of participants indicated that they preferred using an e-Wallet as a payment option. In terms of the booking application itself, 85.7 percent of participants said it was simple to use, while 14.3 percent said it was average.