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Applicability of virtual billing on smartphone based applications for paper waste reduction

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The reception of a printed bill has been in global use as the proof of a transaction. Originating as a handwritten bill, the transaction billing has evolved with the advent of printers and computers, and are now an indispensable part of Point – of – Sales systems (POS). However, with the rapid expansion of business entities as well as the increase of wants of consumers, conventional billing consumes large volumes of paper, even in an organizational basis. Most of the bills generated as such are immediately disposed after an initial inspection. Hence, the paper used for billing has a very short usable lifespan and the paper along with the ink become waste. With the rapid advent of the smartphone providing an internet connected handheld portable computational device for the public, proposition of an internet-based virtual billing system has become timely. Although previous studies have been carried out on implementing virtual billing systems, the potential of smartphone has not been utilized in the practical implementation of such systems. The overarching goal of this study is to reduce reliance on paper for billing work. This outcome of the study aims to develop a virtual or a paperless billing system, with interfaces for the storefront user and consumer user. This virtual bill will directly appear on the smartphone application, which uses an Android operating system. In addition to the reduction of paper usage, this approach will also help the customers keep track on the expenditure for a certain commodity per vendor over a particular time period without manually having to calculate the expenses. The outcomes of this research will evaluate the feasibility of practically implementing such a paperless billing system in the context of Sri Lankan business entities.

Keywords: Paperless transactions, Sustainability, Virtual billing