

A Review on Various Payment and Billing Techniques

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ABSTRACT

Organizations have been compelled to change the manner in which they lead business to react to the ongoing changes occurring both at the worldwide, provincial and at the national dimension. The motivation behind this examination was to explore through an overview the electronic billing and payment framework. The premise of the issue in regards to electronic billing and payment framework that the exploration examine planned to investigate was talked about dependent on two research destinations; to set up the advantages acknowledged with the dispatch electronic billing and payment, and to survey difficulties in the execution of electronic billing and payment.

Keywords : Electronic Billing, Payment System, E-Billing, Online Payment

I. INTRODUCTION

E-billing and e-payment frameworks are a piece of e-business. Electronic Business (e-business) might be characterized comprehensively as any business procedure that depends on a robotized data framework. Electronic business techniques empower organizations to connect their inner and outside information preparing frameworks all the more efficient and adaptable to work all the more intimately with providers and accomplices and to better fulfill the requirements and desires for their clients. Today, this is for the most part accomplished utilizing web-based innovations and portable applications.

Organizations have been compelled to change the manner in which they direct business so as to react to the ongoing changes occurring both at the worldwide, territorial and at the national dimension. This is unavoidable as organizations that rush to receive to

change are well on the way to get by in future. As it states, "On the off chance that you don't care for change, you will like superfluity even less" Some of the progressions saw in various establishments program, rebuilding, cost-cutting, expansion and the adjustment of Information and Communication Technologies (ICTs).

In Information and Communication Technology, the progressions are quick. The fast changes in payment frameworks are making a wide exhibit of new business openings and difficulties. One of the open doors is electronic billing (e-billing) and electronic payment (e-payment). The business needs of KPLC clients are changing as purchasers grasp new advances. The Company has left on a huge extension process through the Rural Electrification Program subsidized incompletely by improvement accomplices, for example, IMF and World Bank. The extra number of shoppers has made requirements in

the KPLC organize prompting power outages and a drop in the nature of administration.

With the progression in innovation, there are different new advances or frameworks that outcome in the smart billing and stock administration of the obtained things to spare the time required for the billing and furthermore stock or stock administration [1] [2]. The bill is created naturally when the user distinguishes item tag and the data put away with the tag. The data can be the item name and the expense of the item. The stock administration should be possible by creating and interfacing the product with these innovations. At the point when the user peruses data from the label, it shows the expense and amount of the item which is being acquired by the client. After checkout, the bought things are deducted from the fundamental database server which deals with the stock and amount. These new advances are as a rule exceptionally valuable in today's life by diminishing the heaps of endeavours and human work. There are numerous such advancements like Barcode, QR Code, RFID, OCR. The innovations utilized in current billing framework. In this investigation, we talk about the different existing system for smart or e-billing.

II. Review of Literature

A. Scanner Tag

Scanner tag is otherwise called the Auto ID (Automatic Identification). It was designed in the mid-1970s. The scanner tag was made to help huge retail locations and markets process their merchandise. The standardized identification innovation is very effective for the administration and data refreshing in the PCs [1]. Standardized tag is one of the recognizable business models. It is utilized for examining the things at grocery store for checkouts [2]. The standardized tag peruser is utilized to distinguish the tag on things and recognizes the item and related data. Scanner tag result in a visual

portrayal of the information which is filtered and deciphered for data. Scanner tag is littler, lighter and more affordable. The standardized identification must be in the immediate viewable pathway to be perused by scanner tag scanner. Scanner tag have no perused/compose capacities thus they can't contain data for example, item expiry date and so on. The scanner tags can be effectively repeated and produced those outcomes in less security. In the event that the scanner tag is tore, harmed there's no real way to examine the item.

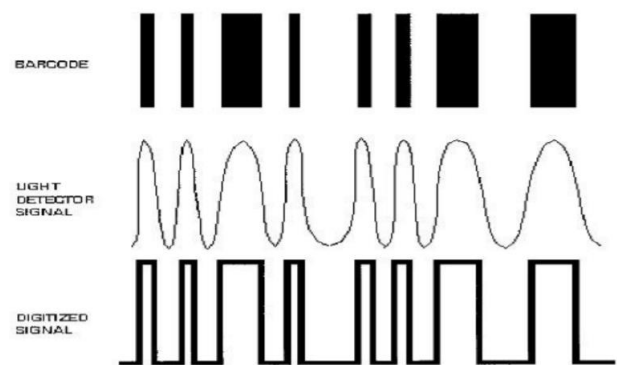


Fig (1). Barcode

The standardized tag based information gathering framework can be regularly included any of the segments like Barcode scanner; scanner tag based portable PC, standardized tag printers, scanner tag name, standardized tag information accumulation programming and so on. The PC looks into the cost in an ace database (the cost of an item isn't in the standardized tag!), subtracts it from the store stock, and ascertains the change. The product additionally makes reports with respect to stock dimensions, demonstrates what items are the most and least famous, makes statistic provides details regarding singular items and clients, and tracks substantially more. The way to the entire framework is exact revealing of the item bought. Clerks are innately questionable and moderate. Barcoding is not one or the other. Standardized identification benefits in information exactness, consistency and effectiveness. Standardized identification is utilized in Retail Operations, Receiving and dispatching Operations,

resource the executives, producing tasks, Office and Customer Service Applications and Warehousing and so forth. Standardized identifications are estimated by the width of the thin bar and are recorded in mils, or 1/1000 inch. A 15 Mil standardized identification, for example, has a restricted bar that is 15/1000 inches wide. Further, "calm zones," or clear spaces to one side and right of standardized identification images, are incorporated to safeguard the scanner tag can be perused.

B. QR Code

A QR code is Quick Response code. This code is a 2D standardized identification bringing about higher speed at disentangling substance. The Japanese company Denso-Wave made the QR code for following reason in 1994. QR Codes utilize a 2 dimensional network so as to store information. The more lines and sections the more information it holds. It underpins the mistake rectification. The code can be examined utilizing cell phone camera or QR peruser and QR code peruser programming. There are 4 diff dimension of mistake redress low mid-range quality high. The most elevated amount of mistake rectification can re-establish up to 30% of a degenerate document.



Fig(2). QR Code

At the point when QR code is checked it connects to plain content, picture, website pages and interactive media, maps areas or anything that can be gotten to over the web. QR code generator is required to make a QR code in which the required data is entered. A viable QR code ought to be created utilizing 40-80 characters and least of 2cm wide. The more characters result in the debased picture. QR code enables us to choose the activities we need the clients to take. The QR code is ISO standard, advertise demonstrated and totally quantifiable. QR codes enable the normal individual to decipher the QR code by examining and perused by a camera-prepared Smartphone when you've downloaded a scanner application [3].

C. OCR (Optical Character Recognition)

OCR is an innovation that empowers you to change over various kinds of archives, for example, checked paper reports, PDF records or pictures caught by an advanced camera into editable and accessible information. Albeit Optical Character Recognition (OCR) filtering innovation has expanded quickly throughout the years, there are constraints with respect to the source materials and character designing. Content from a source with a text dimension of under 12 will result in more mistakes. OCR additionally requires a spell checking editing and reformatting for the ideal format. There are numerous components that will influence the OCR, for example, shapes, little messages, hazy duplicates, scientific recipes, shaded paper, and written by hand message.

D. RFID

Presently days, radio recurrence ID innovation has picked up the position from lack of clarity to standard applications that outcomes in the speed of taking care of fabricated products and materials. RFID can distinguish the labels utilizing RFID peruser from

separation without the viewable pathway. RFID bolster the immense measure of one of a kind ids that helps in making the one of a kind labels for everything. It permits contactless identification of the items utilizing the radio recurrence. RFID label arrangement is less compelled as it doesn't require viewable pathway. It has most extreme and more grounded read go. RFID bolsters the read/compose memory capacity and it can hold substantial measure of information under a special identifier. The unfriendly conditions, for example, dust, substance, physical harm don't influence on RFID without a doubt. This innovation has three sections: a filtering reception apparatus, a handset with a decoder to translate the information and a transponder (RFID tag) pre-set with data. RFID labels can be perused at a quicker rate as they roughly can peruse 40 RFID labels at same time. RFID contain abnormal amounts of security; information can be encoded, secret key ensured or set to incorporate an "execute" highlight to evacuate information for all time [4].

The Tag or Transponder gets recognized by the Reader or Interrogator when it goes inside the receiving wire extend and the distinguished novel id is sent to the Computer or server.

III.Comparative Analysis

Sr No.	Paper Name	Author Name	Description
1.	The RFID based smart Shopping cart	Ms. Rupali Sawant, Kripa Krishnan, Shweta Bhokre, Priyanka Bhosale	In this paper they described about, replacing the ubiquitous Universal Product Code (UPC) bar code by smart labels, known as radio frequency identification (RFID) tag.
2.	Automated Shopping Trolley for Super Market Billing System	S. Sainath, K. Surender, V. Vikram Arvind	The Automated Shopping Trolley is a Smart Trolley which integrates a Raspberry Pie Embedded Chip with two Bar code Scanners and a Battery kit to allow users to self-checkout at Super Markets.
3.	RFID Based Smart Shopping and Billing	Zeeshan Ali, Reena Sonkusare	The developed system comprises of Cart location detection unit (CLDU), Server Communication unit (SCU), User Interface and display unit (UIDU) and Billing and Inventory management unit (BIMU).
4.	Smart Trolley in Mega Mall	J.S. Awati, S.B. Awati	Microcontroller based design, has acquired the status of most happening field in electronics. This is highly specialized field that has the power of integrating thousands of transistors on single silicon chip.

The payment of bill by remaining in long line is a monotonous factor when individuals need to buy items from shops. In spite of the fact that individuals can pay immediately utilizing electronic cash office,

they need to hang tight in the line for longer time. The thought which is proposed utilizing RFID innovation will conquer the issue and it gets the undertaking less demanding. The joined impacts of simple and adaptable usage, secure transmission of record data, and diminished debate offer the accompanying advantages for all. It will spare time, vitality and labor of Customer, Owner and provider. There are numerous advances which are right now being utilized for billing frameworks in general stores. The choice of the innovation relies on the execution, proficiency and QoS of the innovation in regards to specific undertaking and condition.

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