

## A REVIEW ON SECURITY OF DIGITAL WALLET SYSTEM USING PATTERN RECOGNITION SYSTEM

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**ABSTRACT:-** A digital wallet refers to an electronic device that allows an individual to make electronic transactions. A client-side digital wallet requires minimal setup & is relatively easy to use. Once software is installed, user begins by entering all pertinent information. To make it convenient for individual dealers to put in two factor authentication by performing as an intermediary, wallets have performed a necessity of gap function. A new customer accepting digital commerce in India on internet primarily would be transacting on an average to a low quality telecommunication networks without a great deal of experience in dealing with online firms or with agents looking at customer services in issues related to payments.

**Keyword:-** Digital wallet, client, customer, telecommunication

### [1] INTRODUCTION

A digital wallet refers to an electronic device that allows an individual to make electronic transactions. An individual's bank account could also be linked to digital wallet. They might also have their driver's license, health card, loyalty card(s) & other ID documents stored on phone. credentials could be passed to a merchant's terminal wirelessly via near field communication (NFC).

Growingly digital more & more are being made not just for basic financial matter but to also justify holder's credentials. For example, a digital-wallet could potentially verify age of buyer to store while purchasing alcohol.

### [2] Payments for goods & services purchased online

One client-side clone wallet desire maximum setup and is closely simple to use One software is instated user begins by entering all pertinent information. digital wallet is now set up. Digital wallet software has capacity to automatically enter user information in online form. Beyond offender most digital wallets on time when software observe a form in which it could filler out; if one chooses to fill out form automatically, user would be prompted for a password. This keeps unauthorized users away from viewing personal information stored on a particular computer.



Fig 1 digital wallets

if a particular e-commerce site has a peculiar checkout system, digital wallet may fail to properly recognize form's fields. This problem has been eliminated by sites and wallet software that use Electronic Commerce Modeling Language (ECML) technology. Cooperate e-commerce pitcher who associate both digital wallet technology and ECML in cult Microsoft, Discover, IBM, Omaha Steaks and Dell Computers.

### Application of digital wallets

Consumers are not required to fill out order forms on each site when they purchase an item because information has already been stored & is automatically updated & entered into order area across commercial sites when using a digital wallet.

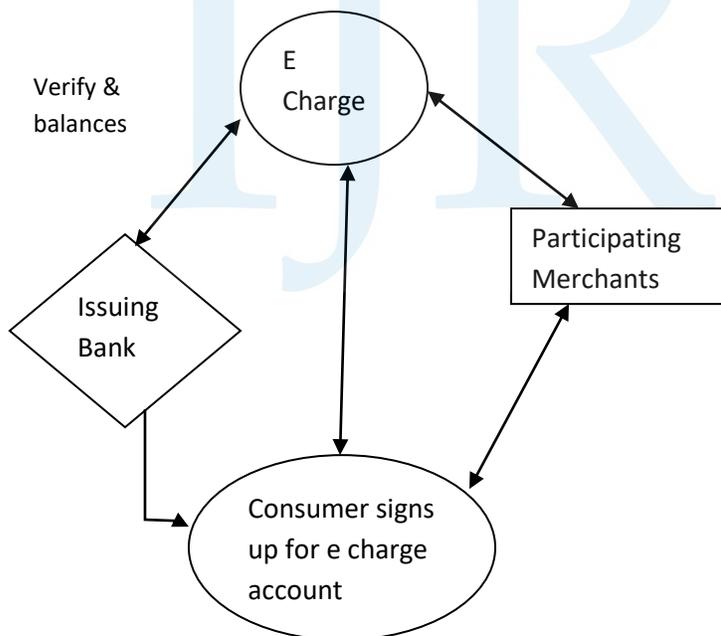


Fig 2 Application E Wallet

Client also profit when using digital wallets because their information is encrypted or protected by a private software code; retailer benefit by receiving protection against fraud.

### [3] E-COMMERCE

**E-commerce** site has been transaction of buying or selling online. Electronic commerce has been technologies like as electronic supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, & automated data collection systems. Last electronic commerce simply uses World Wide Web for at minutest one part of transaction's life cycle although it extra all use other technologies such as e-mail.

E-commerce businesses may employ some or all of following:

1. Online shopping web sites for retail sales direct to consumers
2. Business-to-business buying & selling
3. Gathering & using demographic data through web contacts & social media
4. Business-to-business (B2B) electronic data interchange

### [4] LITERATURE REVIEW

**Dr Hem Shweta Rathore** in 2016 adoption of digital wallet by consumers

In today-world, smartphone has become essential part of daily life. Due to technology, mobile users could nowadays use their smart phones to make money transaction or payment by using applications installed in phone. When smart phones could function as leather wallets, it is called "Digital Wallet" or widely known as Mobile Wallet. present study tries to study various factors that could affect a consumer's decision to adopt digital wallet as a mode of online payment. Apart from this, study also attempt to find out various risks & challenges faced by users of digital wallet.

**Mohammad Salah in 2014 E-Wallet System for Bangladesh an Electronic Payment System**

The purpose of this paper is to contribute to design of e-wallets for Bangladesh, an Electronic Payment System (ETS). E-wallets are calculated to replace obtainable physical wallet, within its notes, coins, plastic cards, ATM cards & loyalty cards etc. Now a day, challenges of payment transactions were initially underestimated. Business via internet & mobile telephony has so far been dominated by methods of payment systems in traditional business.

**Majid Taghiloo in 2010 Mobile based secure digital wallet for Peer to peer payment system**

E-commerce in today's conditions has highest dependence on network infrastructure of banking. However, when possibility of communicating with Banking network is not provided, business activities would suffer.

**Rajesh Krishna Balan Digital Wallet: Requirements & Challenges**

In this position paper, we describe requirements & challenges of deploying a nationwide digital wallet solution in Singapore. We discuss why Singapore is ready for a digital wallet & identify key challenges in building & deploying a digital wallet.

**[4] RESEARCH METHODOLOGY**

The aim of this research paper is to find various factors that affect customers in adopting digital wallet & to find various risks & challenges faced by users. In order to reach aim a structured questionnaire was sent to 150 smart phone users who also use digital wallet for online payment. respondents were categorized on basis of gender, age & occupation. Out of 150M people only 132 responded to questionnaire. This research used

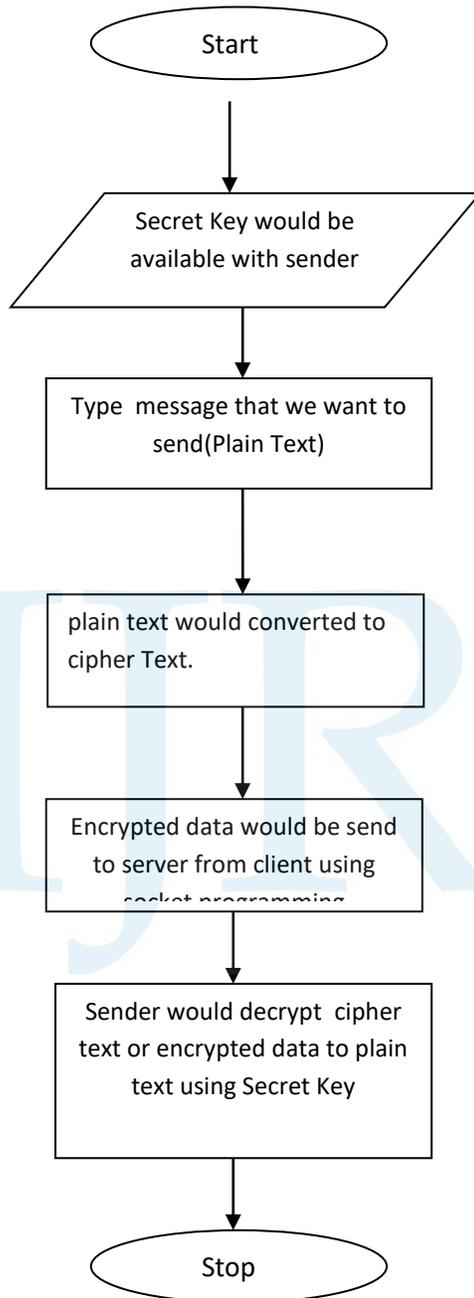
quantitative method ANOVA in order to get statistic result from respondents.

**PATTERN RECOGNITION**

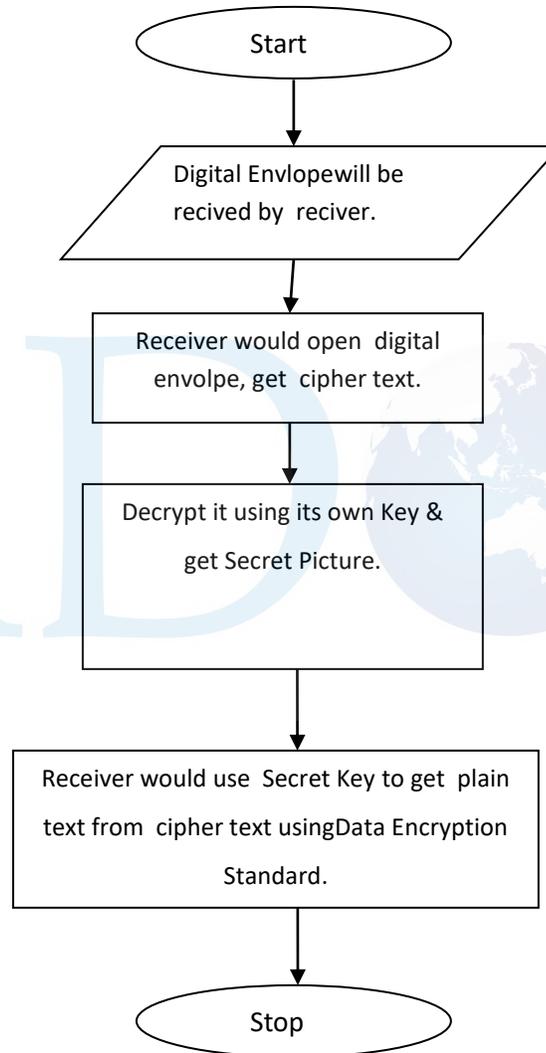
Pattern recognition is a branch of machine learning that focuses on recognition of patterns & regularities in data, although it is in some cases considered to be nearly synonymous with machine learning.

**Encryption Steps:-**

- Encryption of plaintext that is to be send by sender using encryption from secret Key which is actually sender's private key & thus generating cipher text using DES.
- Further, it would carry out procession secret Key which is receiver's public key & thus encrypting algorithm.
- A digital envelope is sent to receiver having cipher text & Key so encrypted.

**Flow Chart for Encryption Process**

- Digital envelope would be opened to get encrypted data & decrypt using its own private key.
- Cipher text would be changed using planet extusing secret key.
- Thus receiver would get plain text.

**Flow chart for decryption process****Decryption Steps:-**

The Decryption of message received from sender's side would occur as follow:

- Digital envelope would reach receiver's side.

**[5] SCOPE OF RESEARCH**

To make it convenient for individual dealers to put in two factor authentication by performing as an

intermediary, wallets have performed a necessity of gap function. A new customer accepting digital commerce in India on internet primarily would be transacting on an average to a low quality telecommunication networks without a great deal of experience in dealing with online firms or with agents looking at customer services in issues related to payments. There are situations where a great number of new digital commerce users shop from websites or using mobile applications about which they don't have much idea.

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