

# Immune Banking System

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## ABSTRACT:

One of the main problems which our country is facing today is that of Black Money. Black money stands for unaccounted money which has put our nation's development on the back foot, hampered growth and is anti-poor. In order to eliminate black money completely, every transaction happening in our country has to be accounted. This can be achieved by a cashless society where every major transaction is accountable. But the main drawback of implementing this is the fear of security of your account details and fear of stealing your confidential information. Though, many methods such as SSL, PIN/TAN system have been implemented to protect the interests of online bankers, a substantial cost-effective secured solution for this impediment has not been achieved.

In the proposed system, I have indented to add a random customized QR code along with available password authentication and PIN system for online transactions. When the user uses his cashless card, the server sends a temporary QR code automatically to the registered mobile number of the user. This QR code generated with a UUID number sent to the mobile has to be scanned by the receiver using his mobile or a QR code reader. The back copy of the QR code is registered in the bank's server which generates and sends the QR Code. Now, all the transactions done are registered and accounted. Instead of securing the cashless transaction using the customer's signature, this system stores the QR code and since the back copy of this code is stored in the bank's server all transactions are accounted. As this system integrates your mobile, QR Code with an UUID number into the security web, the details about the transactions is more secure. By implementing this, a trio security for an account is achieved and at the same time every monetary transactions is registered.

The currently existing online banking and e-commerce system is functioned with the help of disciplined devices which work with the help of programmed codes. When a user uses his card for online transactions, he/she only receives an acknowledgement of the transaction. All these things function in an automated environment which is vulnerable for hacking. With our method, we also include the human conformation of the transaction along with the computer conformation which increases the security manifolds. Though, implementing this method on a larger scale in a country like India is difficult, this can at least be started in metropolitan cities where maximum online transactions happen and then be extended to other parts after making people aware of the technology used.



## 1. INTRODUCTION

The world is steadily moving towards the extensive use of plastic money or cashless transactions, especially in developed and developing countries. But the problem of corruption and black money is more prevalent in developing countries like India where a cashless society would erase the persisting problem. The reason why people in India hesitate to go completely towards a cashless society is because of lack of security of their transactions and account information. As all the processes and allied services of using credit cards and debit cards are built upon computer networks, the fear of hacking is a major drawback of taking this idea to the common man.

Some of the problems which our country is suffering because of using cash can be completely solved by moving into a secured cashless society. The problems of fake currency, hiding money in foreign banks, registering the property for undervalue, tax evaders can be solved using our proposed system. As every major transaction is accountable, the concept of cheating the government is completely negated.

The proposed system does not involve any sophisticated technologies. It's a user friendly cost effective way of securing your confidential account details and at the same time for accounting all major transactions

## 2. NEED FOR THIS SYSTEM

### 2.1 A Sample Implementation

The proposed system links the registered mobile phone of the customer with his monetary transactions. When the customer wishes to make a major transaction such as buying a house, then both the buyer and the seller must have their registered valid “e-money card” with them through which the entire process will be carried out. The customer who’s buying the property has to swipe the card on the “e-money” swipe machine. Following this, the bank server will send a temporary customized QR code to the registered mobile of the customer automatically from the server. The person who’s buying the property has to scan the QR code to his registered mobile and save it. Hence, the back copy of this exchange is stored in the e-money network. Then, after this the transaction is validated. Then within a time span the details about the entire transaction is updated on their individual account details

### 2.2 Technology Used and the Road Ahead

First of all, this system will need core banking facilities activated in all the banks enrolled for this “e-money” technology. By applying this idea, the banks will start playing an inclusive role in the growth of the economy. The “e-money” scheme will give its cards to its customers which are highly specific for every customer and will bear a number on it. This concept of “e-money” can also replace the current PAN scheme where every card holder is given a number specific to him which holds details of all major transactions through banks.

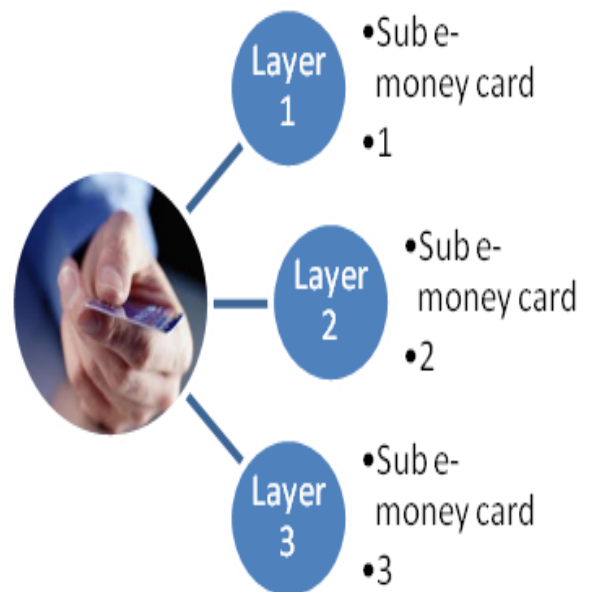
But, most of the hiding of money is in the hands of the business community. A large amount of money to our government through sales tax is denied by the business sector and hence the government is forced to leverage this difference on public utilities which again creates a dent in our economy. Also, getting a fake PAN card or dumping money in many bank accounts results in tax evasion and again creates a lot of Black money.

### 2.3 What this System can achieve?

This system makes the customer to have a unique e-money card with one account in any one of the enrolled banks. As this account remains to be his core account for all major transactions, the chances of cheating the government is limited. Both the buyer and seller needs to have his e-money card, a registered mobile number to activate his e-money system along with a core account in an enrolled bank.

For easing the business processes, we can have “Sub e-money” cards where every sub card will be branches of e-money cards and the root will be a single e-money card which have hold the details about all the transactions of the sub cards altogether. Again the specificity of the card is not disturbed as every sub cards act as links of the root e-money card. This idea will make business transactions of different dimensions of the same company and hence every company transaction is account again. Take for example, if a company has around 50 employees as finance managers. Then, all these 50 managers will have a sub e-money card which finally goes into a single e-money card of that company. All company transactions have to be made via these e-money cards and every items the company buys and sells is accounted.

With the help of this network of e-money cards, nearly all transactions happening in and out of the company can be tracked ensuring proper financial balance. The role and importance of the banks will increase by using e-money cards and hence all the banks must start working cohesively to ensure this system works with high efficiency. If this can be achieved then the true potential of immune banking system can be tapped and transparent documented financial proceedings of any company can also be achieved.



## 3. IMPLEMENTATION

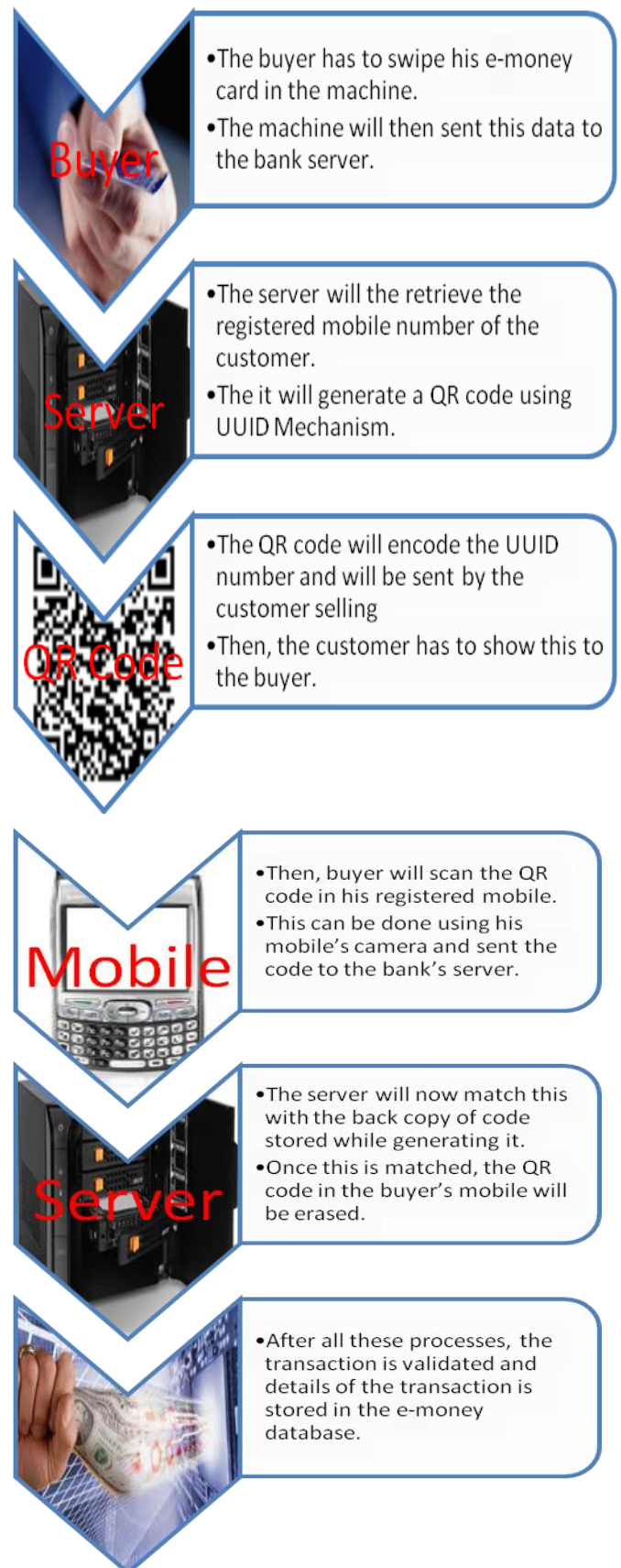
The implementation of our system broadly requires the following integration of technologies. First of all, the bank server which is going to handle the entire system must generate randomized temporary QR codes when the customer swipes his e-money card. The data to be encoded in the QR code will be a UUID (Universal Unique Identifier) number and a back copy of this number is stored in the e-money database. As the numbers are generated using the UUID mechanism, the numbers are practically unique hence security is enhanced even in these small number generating systems. The use of UUID’s also ensures that same random number repetition is reduced or even neglected. Following this, the received QR code of the seller has to be scanned by the buyer using his mobile camera. Once, this is done, the transaction is validated, the amount is deducted from the seller’s account and transferred electronically to the buyer’s account. After this process, the QR code received and scanned will be erased automatically which completes the exchange and also acts as an acknowledgement of completion of transaction.

In the current available system, the card holder has to sign after swiping his card, which acts as a security. But, in our system, this step will be replaced by the randomized temporary QR code which will register the exchange. As QR codes are easy to process and store, this method will also ensure the time lag is neglected. Also, scanning the QR code and registering it gives a more secured feeling for both the buyer and seller. The chances of duplicating and predicting the “to be generated” QR code is very less because the of the UUID barrier and as the code is temporary. All these

processes together will give us a nearly invulnerable banking system.

Besides the aspect of security, this system also has many allied advantages. By implementing this idea, the problem of fake currency will be solved. In a completely cashless society, all the money will be in electronic form and every major transaction will be made accountable. To implement this concept on a larger scale, we have to limit the cash carrying capacity of people so as to motivate them to use only e-money cards for major transactions. Any citizen will have a certain range of cash carrying capacity depending on his e-money balance. This method ensures that no money is left unaccounted or hidden from the eyes of the government. In the business sector, where major flaws in paying taxes occurs, this method will make the tax evaders pay their legal taxes as the tax deduction will be done in the banks when the transaction details are stored in the e-money database. This will boost the country's economy and as mentioned earlier the banks will start playing an inclusive role for the growth of our economy. On the whole, apart from security, this idea will also solve many problems dealing with currency and cash transactions.

A graphical representation of the entire process is described below. This representation will nearly depict the working of the immune banking system.



#### **4. CONCLUSION**

Thus, these are the various advantages of implementing the Immune Banking System. This system will offer many direct and indirect benefits and can solve numerous persisting problems of using cash in our country. It will also indirectly act as eco-friendly way of exchange as paper money made from cutting trees will be reduced largely. This system will also increase the money from taxes to our government as most of the tax evaders will be caught in this system. Henceforth, this system of banking will curb black money, corruption, fake currency, tax evaders and will make India closer towards her "Developed Status".

This idea will also bring to book, the people who have stashed the 1.4 trillion worth black money in foreign banks and harming our country's growth economically. Though, there is substantial evidence that money is dumped there, at least in order to save their accumulated money these traitors will be caught. Hope this idea will be implemented soon and solve many problems associated with cash and currency in our nation.

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