


2

# Digital Payments and its Security



– **Alok Raj**

Security Engineer Intern, XenonStack, Mohali, Punjab

 <https://orcid.org/0000-0003-0350-8662>  [alokraj1789@gmail.com](mailto:alokraj1789@gmail.com)



– **Nitin Jain**

Professor, Apex Institute of Technology, Chandigarh University

 <https://orcid.org/0000-0002-0561-2976>  [nitinjain15@rediffmail.com](mailto:nitinjain15@rediffmail.com)

– **Surendra Singh Chauhan**

Research Scholar, Pratap University, Jaipur, India

 <https://orcid.org/0000-0002-8804-9057>  [surendrahitesh1983@gmail.com](mailto:surendrahitesh1983@gmail.com)

**W**hat are the different payment methods that we have today? The most commonly used payment method since a long time is cash. But in the past two decades, many more options have emerged but the most common and widely used of them is digital payments that includes using bank cards at PoS terminals and payments using digital platform by using a mobile or a laptop.

## ARTICLE HISTORY

### Paper Nomenclature:

Argument Based Credentials (ABC)

**Paper Code:** CYBNMV2N2FEB2020ABC2

**Submission Online:** 08-Feb-2020

**Manuscript Acknowledged:** 09-Feb-2020

**Originality Check:** 13-Feb-2020

**Originality Test Ratio:** 0% (Urkund)

**Peer Reviewers Comment:** 14-Feb-2020

**Blind Reviewers Remarks:** 17-Feb-2020

**Author Revert:** 19-Feb-2020

**Camera-Ready-Copy:** 22-Feb-2020

**Editorial Board Citation:** 28-Feb-2020

**Published Online First:** 13-May-2020

## Keywords

- Digital Payments
- Debit Card
- Credit Card
- OTP
- ATM

## Introduction

In today's world, we are seeing an increase in the number of digital payments. Whether it's good or bad, it is up to us to decide? But, let's see that what are the different digital payment methods that are present in India. We will also take a look into what are their benefits and drawbacks. So, let's get started.

What do you mean by a digital transaction? A digital transaction is a seamless system where the transactions are carried out without the need of any physical cash. A digital transaction can be carried out in many different ways. Whether a

user wants to send money or receive money via digital payment methods, there is one common criteria that the user should have an existing bank account and the user should have sufficient balance available in their bank accounts to make payments or to receive payments.

A digital payment system has three components for carrying out any digital financial services:

1. A digital transaction platform i.e. a digital platform that supports digital payments.
2. The customers that will be using that platform to send money and the retailers that will use that platform to receive money.
3. A device (mobile phone or laptops) to make digital transaction via the platform.

Now, let's have a look at different types of digital payment methods that we have in India.

## Bank Cards

Banks cards are among the most widely used payment methods. They have dominated the digital payments for about a decade. Today's bank cards come with various features and benefits that include cashback, reward points, discounts at selected merchants and outlets, domestic and international Lounge Access, and several others. Banks are also introducing several security features in bank cards that we will be discussing later. Different bank cards are issued by the banks according to the needs and requirements of their customers.

Some of the card payment companies are:

- VISA (includes, VISA Electron)



- MasterCard (includes, MasterPass, Maestro and Cirrus)



- American Express



- Discover (includes, Diners Club International)



- JCB (Japan Credit Bureau)



- CB (Carte Bleue)



- UnionPay



- RuPay



Banks basically provide three types of cards:

- Debit Card
- Credit Card
- Prepaid Card (also includes Forex Cards and Gift Cards)

### Debit Card

Debit card is the most basic card of all of three. It is issued by the bank as soon as you open an account. Debit cards are linked to the customer's account and they can use debit cards to withdraw money from ATMs, make online payments and make payments at Point-of-Sale (POS) by swiping the card. Debit cards come with two variants: 'For Domestic use Only' and 'International Debit Card'. The cards that are for Domestic use only can only be used to make payments in India. Debit cards can be used at ATMs to check account balance, getting information about last transactions, and carrying out other financial and non-financial transactions.

### Credit Card

Like debit card, credit cards are also issued by the banks. To obtain credit card, a customer must submit the documents that are required for its approval. The main difference between debit card and credit card is that while using credit card, a customer can use a credit card to make payments beyond the amount that is present in his bank account. But there is a limit to the amount that can be used by each card and this limit is known as the credit limit. The credit limit depends on the customer's financial status and is decided by the bank. There is a time limit within which the customer has to make the payment to his credit card account which is known as due date and this can also include interest charges that has to be paid to the bank. The interest charges depend on the bank's policies and are often not charged if payment is made before the

due date. Cash withdrawal via credit cards is charged and thus credit card is not suitable for cash withdrawals, but while making digital payments credit cards have an edge over debit cards and they provide much more benefits, offers and features as compared to debit cards.

### Prepaid Card

Prepaid cards are pre-loaded cards that are provided by the banks. It can be used for limited transactions as some prepaid cards like the Gift Cards can be loaded only once and after the amount on the card is used, the card can't be loaded or used again. Prepaid Cards like Forex Cards can be loaded with different currencies and can loaded multiple times but they are designed to make cash and digital transactions outside India including payments at POS. The cash withdrawal charges in international currencies outside India is the lowest in Forex Cards as the currency conversion charges for Forex cards is low as compared to debit and credit cards. Prepaid cards like Gift Cards can be used for online payments and at POS but most of the Prepaid Cards don't offer cash withdrawal facility.

### Usage of Bank Cards

- **Withdrawing money from an ATM** – To withdraw money from an ATM (Automated Teller Machine or, Automatic Teller Machine), the customer needs to insert their credit or debit card and go through the interface. PIN (Personal Identification Number) is a 4-digit or 6-digit (6-digit pin is used by some banks now-a-days) number that is used as a security measure by the banks to authenticate and authorize a transaction. PIN can be set by the customer. There is a maximum amount of money that can withdraw from an ATM in a day and this maximum limit is set by the bank.

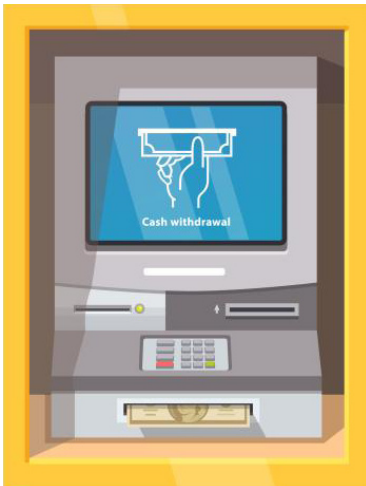


Fig:-ABC-2.2 (Image Credit: [Designed by Iconicbestiary](#))

- **Shopping at POS (Point-of-Sale)** – Debit, credit and prepaid cards can be used at major retail stores and shops via POS devices to make payments. To make payment at a POS, follow these steps:
  - The customer gives the card to the cashier at the store.
  - The merchant swipes (for older cards), inserts or waves (for newer cards) the cards in the PoS machine.
  - The merchant types reference number and the amount of purchase.
  - The merchant then asks the customer to enter the PIN of the card.
  - The amount of purchase is directly debited from the user's account linked with the bank card (except for prepaid cards).
  - The PoS machine prints out two copies of the receipt. One is the Merchant's copy and other is the Customer's copy. The customer needs to sign the Merchant's copy of the receipt, if needed. The merchant hands over the Customer's Copy to the customer and keeps the Merchant's copy with him.
  - Thus, the transaction is completed.



Customer making payment through payment terminal at counter in Cafe

Fig:-ABC-2.3 (Image Credit: [Designed by Peoplecreations](#))

- **Online Payments** – Debit, credit and prepaid cards can also be used to make online payments on various online shopping websites such as Amazon, Flipkart, Myntra, etc., adding money on payment applications such as Paytm, Freecharge, Mobikwik, etc. To make online payments, follow these steps:
  - Navigate to the payment page on the website.
  - There will be various payment options present. Select the Credit Card, Debit Card or Prepaid Card option as desired and then choose the card variant (mastercard, VISA, etc., if asked).
  - The customer will then be asked to enter the card details. Enter the 16-digit card number (except for American Express Card), card expiry date, Name of the Card and CVV or CVV2 number. In some cases like IRCTC website, the payment page asks for the Card Number, Card Expiry Date, Name on Card and ATM PIN along with a CAPTCHA to authorize the transaction.
    - The customer will then be redirected to the payment portal. At the payment portal, the customer will be asked to authorize the transaction via OTP (One-Time Password) or static password. OTP is the most commonly used and more secure way to authorize the transaction.
    - After the customer enters the correct OTP, the authentication is complete and the transaction is completed. The customer is then redirected to the website.



Fig:-ABC-2.4 A person using laptop computer, holding bank card and doing online payment

Courtesy: (Image Credit: [Designed by Katemangostar](#))

## How to ensure safety while using Bank Cards

- Do not share your card information like card number, expiry date, CVV number and ATM PIN with anyone over the phone or internet, irrespective of whether you know them or not. While contacting phone banking service of the bank, the bank system asks for card number and ATM PIN or Customer ID for user verification if the customer wants to validate without using the TIN (Telephone Identification Number) or the customer is calling from some number other than the number registered with the bank, then you can enter the details while recorded system audio asks you to do. Once you start talking to the Bank Representative do not share any card information. You can share your card number, if in case you want to block your card (card lost or stolen). Nowadays, we can block a card via Net-banking also.
- Do not share your card details or personal information on a telephone call where the caller claims to be a bank representative. If you want to verify any details or get any information, you must contact the nearest branch or call the bank's phone banking service.
- While making payments on PoS terminals at merchant location or service providers like restaurant, hotels, etc., do not hand over your card to any employee. Ask them to bring the PoS terminal device to make the payment or go to the payment counter to make payment via your bank card.
  - Always check the amount on the PoS terminal before entering your PIN.
  - Always check the receipt and the bill to verify that the exact

payment was carried out i.e. exact amount was deducted.

- While using credit card, always keep the transaction receipt for comparing the transactions mentioned in the card statement that you receive at your billing date. Most customers throw away or destroy the transaction receipt and do not match the transactions mentioned in their card statement.
  - While using debit card, before throwing away your transaction receipt check your account statement and verify the amount of your transaction.
  - Do not throw away your transaction receipt once you have verified the transaction. Tear it before throwing as it contains the last 4-digits (first 6-digits also in some cases) of your card, your name and some other information. The transaction receipt for cash withdrawal at ATM machines contains some more information in some cases such as remaining account balance and few digits of account number. If dumpster divers get your transaction receipt, they can retrieve all of your card details and can conduct unauthorized purchases especially over the internet.
  - While using the bank card at ATM, make sure that no one is watching your finger movements as you type your PIN. There can be someone watching over you from behind or from sides. Also, cover your hand with the other to ensure that no cameras within the premises can easily capture your PIN number. There can also be very small hidden cameras above the number pad or hidden cameras pointing at the number pad of the ATM which could have been setup by some persons with wrong motives.
- Always remember your PIN and try to remember your card number so in case of card theft or loss you can report to your card issuing bank immediately via phone banking and block your card (or, hotlist your card) immediately. This will freeze your card temporarily and prevent any unauthorized transaction until you retrieve your card or your card gets replaced.
  - Do not write your card details along with the PIN anywhere i.e. on paper, on your computer, on your mobile phone as a contact or as a note, or on a notepad or diary that you carry with you daily. If your computer or mobile gets hacked or someone gets access to it (sees your diary, mobile, uses your computer or mobile) while you are having coffee or busy talking, etc., then there is a possibility that an unauthorized transaction can happen.
  - Do not write your PIN on a piece of paper or the back side of your card and keep it your wallet. If someone gets your wallet, then he will have both your card and your PIN. So, he can easily withdraw money or make transactions. Try to keep your wallet and your bank card in two different wallets or in two different pockets.
  - While making an online payment over the internet, check for the security. It is discussed later in this post.
  - While downloading banking apps always download the app directly from the bank's website and let it redirect you to Google Play Store or the Apple Store. Do not download banking apps via links that you receive via emails or SMS. Always keep your banking apps updated.
  - Periodically, check for bank statements and credit card



statements for any unauthorized or suspicious transactions. If there is an unauthorized or suspicious transaction, report to the bank immediately and get your card replaced.

- Always check if there is any discrepancy between the actual transaction and the SMS with the transaction details that you receive on your registered mobile number as soon as you do any transaction.
- When you receive your bank card at your home ensure that the mail is completely sealed and there is no damage on it. After opening the card, sign immediately at the back of your card. In case, the mail seal is broken or damaged, return the mail and don't receive it.
- Change your default card PIN immediately and keep changing your PIN frequently (once in every 3 months).
- When disposing your bank card after replacement or up-gradation of your card, make sure to cut your bank card diagonally before disposing it. If you're closing your account and the bank asks you to return your card, make sure that your card is properly disposed.
- Always keep an eye on the vendor at the cash counter while making PoS transactions and make sure that he swipes the card and make the transaction in your presence.
- Before using the ATM make sure that there is no strange object present near or around the insertion panel of the card.
- Before leaving the ATM make sure that the transaction has been completed and the green light is blinking at the point where you inserted the card and 'Please Insert Your Card' message is displayed at the screen.

- Do not respond to e-mails that asks your personal or financial or card information. Banks never asks for such information. Also, don't click on any links in emails that asks you to login or change your password urgently.
- If possible, make any online transaction from your computer while using the "Incognito Mode" or "Private Window" mode of your web browser & log out or sign out of the website after completing the online transaction and close the browser window. To open any other website, start the browser again. If you are not using the Incognito Mode, then make sure to delete the browser cookies after signing out and then close the browser and then reopen to do any other task. Do not browse the web or open any other tab or other browser while making online payments or accessing Internet Banking.
- Don't ask help from strangers or let strangers assist you at the ATM. They could trick you or it might be a trap. Don't even trust staff members or security guards without completely verifying their identity. It could be a fraudster.

### Different Modes of payment at PoS Terminal

- Using chip-based Debit, Credit or Prepaid Card



Fig:-ABC-2.5: Different Modes of payment

(Image Credit: [Designed by Molostock / Freepik](#))

- Using contact-less Debit, Credit or Prepaid Card



If the bank card is a contact-less Debit, Credit or Prepaid Card, then this image will be present on the bank card.



(Image Credit Left: [Designed by Freepik](#) | Image Credit Right: [Designed by Freepik](#))

- Using smart-watch



POS Smartwatch Payment

Fig:-2.1 (Image Credit: [Designed by Iconicbestiary](#))

- Using mobile phones (Samsung Pay, Apple Pay or Google Pay)



Fig:-2.2 (Image Credit: [Designed by fanjianhua / Freepik](#))



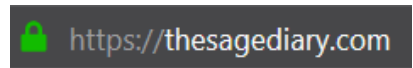
### How to Know if a website is safe for making Online Payments?

To make sure that any website is safe for making Online Payments, check for the following:

- Make sure that a padlock symbol is displayed in the URL



- Make sure the website is running on https



- Make sure that one of the following logos (especially PCI DSS, except in Bank's Payment Page) is present on the payment page where you enter your OTP, Password or Card Details.



Some other logos listed below, and many others may also be present on the payment page but any one from the above ones must be present.



### References

- <https://www.oxfordlearnersdictionaries.com/definition/english/credit-card>
- [https://en.wikipedia.org/wiki/Debit\\_card](https://en.wikipedia.org/wiki/Debit_card)
- [https://books.google.cz/books?id=sP6ADwAAQBAJ&pg=PT990&lpg=PT990&dq=%22your+card+your+name+and%22&source=bl&ots=BF1r7gRV0z&sig=ACfU3U1dDI07KRmfSKi6lkzhISDSIVYIFA&hl=cs&sa=X&ved=2ahUKEwixiaCT8M7nAhUEwCQBHuirD\\_kQ6AEwAAnoE-CAsQAQ](https://books.google.cz/books?id=sP6ADwAAQBAJ&pg=PT990&lpg=PT990&dq=%22your+card+your+name+and%22&source=bl&ots=BF1r7gRV0z&sig=ACfU3U1dDI07KRmfSKi6lkzhISDSIVYIFA&hl=cs&sa=X&ved=2ahUKEwixiaCT8M7nAhUEwCQBHuirD_kQ6AEwAAnoE-CAsQAQ)
- <https://www.bankwest-sd.bank/personal/cards-atm-check-credits-and-gift/>
- <https://www.bcard.bg/en/clients/products>
- <https://www.creditsesame.com/blog/credit-cards/should-i-use-my-debit-card-or-credit-card/>
- <https://www.money-rates.com/personal-finance/credit-card-vs-debit-card.htm>
- <https://www.mycreditunion.gov/life-events/checking-credit-cards/credit-cards/debit-credit-prepaid>
- <https://www.missionlane.com/card/lcard-cardholder-agreement>
- <https://www.mecuananywhere.com/comparing-cards-credit-cash-debit/>
- <https://www.cardratings.com/creditcardblog/2011/09/is-the-new-duo-card-a-good-deal.html>
- [https://books.google.de/books?id=41mD1w\\_4kpkC&pg=PA190&lpg=PA190&dq=%22card+is+used+the+card%22&source=bl&ots=jQwKiOKp1f&sig=ACfU3U0ZYHp-2-3xV0wQscTpF3Gwo2f7jNw&hl=de&sa=X&ved=2ahUKEwJNkYWT8M7nAhXSpYsKHdFLDOMQ6AEwAHOECAoQAQ](https://books.google.de/books?id=41mD1w_4kpkC&pg=PA190&lpg=PA190&dq=%22card+is+used+the+card%22&source=bl&ots=jQwKiOKp1f&sig=ACfU3U0ZYHp-2-3xV0wQscTpF3Gwo2f7jNw&hl=de&sa=X&ved=2ahUKEwJNkYWT8M7nAhXSpYsKHdFLDOMQ6AEwAHOECAoQAQ)
- <https://www.ssbpgh.com/ssb-news/what-is-the-difference-between-a-credit-card-and-a-debit-card-3264>
- [https://books.google.com/books?id=7uc-DAAAQBAJ&pg=PA110&lpg=PA110&dq=%22card+like+debit+card+credit%22&source=bl&ots=4qAD\\_ka7rD&sig=ACfU3U2ccpBjv9vcnXGv5ne8uKzvZ8mfcaA&hl=en&sa=X&ved=2ahUKEwi6ocuT8M7nAhVZpN0KHQa5B14Q6AEwAXoECAoQAQ](https://books.google.com/books?id=7uc-DAAAQBAJ&pg=PA110&lpg=PA110&dq=%22card+like+debit+card+credit%22&source=bl&ots=4qAD_ka7rD&sig=ACfU3U2ccpBjv9vcnXGv5ne8uKzvZ8mfcaA&hl=en&sa=X&ved=2ahUKEwi6ocuT8M7nAhVZpN0KHQa5B14Q6AEwAXoECAoQAQ)
- <https://www.paypal-community.com/t5/My-Money/Can-t-link-my-credit-card/td-p/1922660>
- [https://danskebank.dk/PDF/PRISERVILKAAR-FAKTAARK/ERHVERV/Kort/Card-conditions-Mastercard-Corporate-Virtual-\(pdf\).pdf](https://danskebank.dk/PDF/PRISERVILKAAR-FAKTAARK/ERHVERV/Kort/Card-conditions-Mastercard-Corporate-Virtual-(pdf).pdf)
- [https://www.qantaspoints.com/about/faq/-/faq/225\\_HOW\\_DO\\_I\\_CHANGE\\_MY\\_NAME\\_ON\\_MEMBERSHIP](https://www.qantaspoints.com/about/faq/-/faq/225_HOW_DO_I_CHANGE_MY_NAME_ON_MEMBERSHIP)
- <https://www.commercebank.com/sharedcontent/PDFs/make-purchases-abroad.pdf>
- <https://www.educationfirstfcu.org/Resources/Learn/Financial-Education/Articles/Credit-Cards/Debit-or-Credit-Card-What-s-the-Difference>
- <https://www.quora.com/Why-are-only-selected-SBI-debit-cards-eligible-for-the-EMI-option-in-Amazon-and-Flipkart>
- <https://chargebacks911.com/visa-debit-chargeback/>
- <https://www.bettingsites.info/skrill/>
- <https://steorrajewels.com/returns/>
- <https://www.expat.com/en/guide/africa/ivory-coast/14059-opening-a-bank-account-in-ivory-coast.html>
- <https://support.onde.app/en/articles/3392416-company-panel-top-up-error>
- <https://anant-fresh-top-online-grocery.soft112.com/>
- <https://help.venmo.com/hc/en-us/articles/210413677-Adding-a-Credit-or-Debit-Card>
- <https://www.rte.ie/news/business/2012/02/289830-cash-or-card-the-pros-and-cons/?app=true>
- <https://www.ebay.com/help/buying/paying-items/paying-items-credit-debit-card?id=4038>
- <https://www.elements.org/personal/credit-cards/secured-visa/>
- <https://www.cvvnumber.com/>
- <https://www.thebalance.com/how-to-use-an-atm-315490>
- <https://get.brushfire.help/hc/en-us/articles/202851580-Why-was-my-card-declined->
- <https://www.nccconsumer.org/news-articles-eg/planning-a-trip-out-of-the-country-heres-what-you-need-to-know-about-using-your-credit-cards.html>
- <https://forums.moneysavingexpert.com/showthread.php?p=63802905>
- <https://www.mastercard.com.au/en-au/frequently-asked-questions.html>
- <https://calcitecu.com/debit-card-best-practices/>
- <https://www.bootsnall.com/articles/ikahns-top-ten-tips-for-traveling-in-morocco.html>
- [https://www.nibl.com.np/index.php?option=com\\_content&view=article&id=56:credit-card-faq&catid=16:card-center&Itemid=62](https://www.nibl.com.np/index.php?option=com_content&view=article&id=56:credit-card-faq&catid=16:card-center&Itemid=62)
- [https://de.slideshare.net/saurabh\\_cookie/financial-literacy-curriculum-debit-cards](https://de.slideshare.net/saurabh_cookie/financial-literacy-curriculum-debit-cards)
- <https://www.quora.com/Is-there-any-way-to-buy-stuff-without-a-credit-or-debit-card-and-with-a-bank-account>
- <https://books.google.com.au/books?id=4f4DAAAAMBAJ&pg=PA80&lpg=PA80&dq=%22your+bank+card+at+your%22&source=bl&ots=eQjb5Rc4dv&sig=ACfU3U2oof2F-vbVKrCBzJANXLovx61EGg&hl=en&sa=X&ved=2ahUKEwIu1qeU8M7nAhXtH7cAHZLOAOAQ6AEwAHOECAoQAQ>
- <https://www.bankofamerica.com/credit-cards/credit-card-payments-state-ments-faq/>
- <https://books.google.com/books?id=pArqtPYD18C&pg=PA49&lpg=PA49&dq=%22your+card+make+sure+to%22&source=bl&ots=i5wtPu8zL2&sig=ACfU3U2Jw1t0jtXRRQxvH5d-3gsgNJKGPw&hl=en&sa=X&ved=2ahUKEwip8omU8M7nAhV5KqYKHyz6B7AQ6AEwA3oECAoQAQ>
- <https://www.ebay.com.au/help/buying/paying-items/paying-items-credit-debit-card?id=4038>
- <https://www.bobfinancial.com/security-tips.jsp>
- <https://upgradedpoints.com/the-complete-guide-to-plastiq/>
- <https://www.businessinsider.com/best-rewards-credit-cards-for-paying-taxes>
- <https://books.google.com/books?id=MBdpDwAAQBAJ&pg=PA252&lpg=PA252&dq=%22your+card+make>

+sure+to%22&source=bl&ots=bbrl9Wfuzd&sig=ACfU3U0AAwllQ-T9C-EXkyUkKmmg6U\_5A&hl=en&sa=X&ved=2ahUKEwip8omU8M7nAhV5KqYKH Yz6B7AQ6AEwAhoECAKQAQ

- <https://ms-my.facebook.com/sowalhealthanddrug/posts/ imagine-attempting-to-use-your-debit-card-at-the-checkout-at-your-favorite-store/234880365537758/>
- <https://www.chaoscards.co.uk/payments-methods-187>
- <https://help.nexmo.com/hc/en-us/articles/204015003-Can-I-make-a-payment-using-a-credit-card->
- <https://babybossonline.com/pages/terms-conditions>
- <https://www.icicibank.com/managed-assets/docs/personal/cards/debit-cards/DebitCards-tc.pdf>
- <https://www.acorns.com/money-basics/difference-between-credit-card-debit-card/>
- <https://www.barclays.co.uk/help/cards/debit-card/debit-card-charges/>
- <https://www.impactbnd.com/blog/how-to-rank-higher-using-long-tail-keywords>
- <https://www.dignited.com/47774/what-you-can-do-when-your-debit-atm-card-is-stolen/>
- <https://www.fathom.pro/blog/2016/02/the-design-of-everyday-experiences/>
- [https://www.reddit.com/r/funkopop/comments/afhsif/koolkidtoys\\_help\\_please/](https://www.reddit.com/r/funkopop/comments/afhsif/koolkidtoys_help_please/)
- <https://blogginfotech.com/5-things-you-should-do-once-your-atm-card-gets-stolen/>
- [https://www.facebook.com/permalink.php?id=657329254736159&story\\_fbid=670108063458278](https://www.facebook.com/permalink.php?id=657329254736159&story_fbid=670108063458278)
- <https://www.thestudentroom.co.uk/showthread.php?t=3917051>
- <https://www.kotak.com/en/help-center/cards/debit-card/debit-card-and-pin/q6.html>
- <https://www.appgain.io/how-to-use-your-point-of-sale-in-marketing/>
- <https://www.linguee.com/french-english/translation/cryptogramme+de+carte+bancaire.html>
- <https://www.coursehero.com/file/p5blckm/p-159-Generally-most-of-the-information-in-your-credit-file-may-be-reported-for/>
- <https://interestingengineering.com/thieves-found-a-new-way-to-steal-your-card-data-via-atm-called-periscope>
- <https://www.hlb.com.my/en/personal-banking/debit-cards/debit-card/debit-card.html>
- <https://www.baldai1.lt/in-english.html>
- <https://seller.dhgate.com/news/media/i18588.html>
- <https://www.facebook.com/Jew-Rea-Online-2006999206210887/reviews/>
- <https://www.outlookindia.com/outlook-money/fixed-assets/these-eleven-charges-and-fees-can-spike-your-credit-card-bills-significantly-996>
- <https://www.fidelityrewards.com/credit/faqs.do>
- <https://books.google.com/books?id=0L3zq4D-PHIC&pg=PT333&pg=PT333&dq=%22card+statement+that+you+receive%22&source=bl&ots=zZoPTyI43&sig=ACfU3U1ZcWgfRHdj1hdSvL7k5qLnU0ypig&hl=en&sa=X&ved=2ahUKEwjOzJmZ8M7nAhWsGqYKHefzAbYQ6AEwAhoECAoQAQ>
- <https://www.sec.gov/Archives/edgar/data/1089695/000095012303007457/y87819e20vf.htm>
- <https://forum.lowyat.net/topic/3807843/all>
- <https://www.fidelity.com/cash-management/faqs-rewards-credit-cards>
- <https://www.yelp.com/tos/rewards>
- <https://books.google.nl/books?id=wNaDwAAQBAJ&pg=PA266&lpq=PA266&dq=%22making+digital+payments+credit+cards%22&source=bl&ots=gD73p6aYGE&sig=ACfU3U2al9vallHdqJh6djRnjin ceW0ISxQ&hl=en&sa=X&ved=2ahUKEwiBq6Oj8M7nAhWVsKQKHZDHAuAQ6AEwAhoECAoQAQ>
- <https://www.stillmanbank.com/consumer-news/atm-debit-card-security-precautions/>
- <https://www.dhanbank.com/atm-fraud-alert.aspx>
- <https://www.thedailystar.net/city/9-tips-avoid-atm-fraud-511960>
- <https://www.solidaritynow.org/wp-content/uploads/2016/12/CASH-leaflet-english-final.pdf>
- <https://www.hsbc.co.om/1/2/om/common/important-information-on-your-hsbc-credit-debit-card/>
- <https://www.jagoinvestor.com/2013/01/credit-card-myths.html>
- [https://www.aeoncredit.com.my/ul/1562139417122\\_20190701\\_faq\\_visa\\_cashout.pdf](https://www.aeoncredit.com.my/ul/1562139417122_20190701_faq_visa_cashout.pdf)
- <https://www.danskebank.dk/PDF/PRISER-VILKAAR-FAKTAARK/Kort/Card-Conditions-Visa-Dankort.pdf>
- <https://www.danskebank.dk/PDF/PRISER-VILKAAR-FAKTAARK/Homepage-UK/Privat/Cards/Card-Conditions-Visa-Dankort.pdf>
- <https://www.canada.ca/en/financial-consumer-agency/services/banking/using-debit.html>
- [https://www.bankdhofar.com/UploadedFiles/UserMedia/file/awareness/BankDhofar\\_ATM%20AwarenessBrochure\\_En.pdf](https://www.bankdhofar.com/UploadedFiles/UserMedia/file/awareness/BankDhofar_ATM%20AwarenessBrochure_En.pdf)
- <https://www.quora.com/Mistakenly-I-have-given-my-ATM-card-number-to-someone-online-Is-there-some-risk-in-it>
- <https://www.crediteurope.ro/en/Data-security>
- <https://shreyaamore17.github.io/banking.html>



**Alok Raj** is an IT Enthusiast, who is passionate about exploring all the latest technologies from research perspective. He has deep interest and understanding of information security and data privacy, especially network security and cryptography. He is IRCA Certified ISO/IEC 27001:2013 Lead Auditor as well as C|EH, CPISI and HCNA certified. He is constantly transforming himself to improve his performance and evolving constantly and responding quickly and intuitively to the changing market dynamics.

✉ alokraj1789@gmail.com



**Nitin Jain** is working as Professor in Apex Institute of Technology, Chandigarh University. He has more than 17 years of vast experience and depth knowledge of teaching at undergraduate and postgraduate level. His areas of research include Ubiquitous Computing, Network Security, and Information Security. He has published more than 10 research papers in National and International Journals and Conferences.

✉ nitinjain15@rediffmail.com



**Suredra Singh Chauhan** is working as a Research Scholar at Pratap University, Jaipur. He has 10 years of teaching experience and 2 years of corporate experience with Nokia Siemens Networks. He is working in the field cryptography and security from the past 8 years. He has published 8 research papers in International and National Conferences and Journals.

✉ surendrahitesh1983@gmail.com

### Annexure I

Submission Date	Submission Id	Word Count	Character Count
13-Feb-2020	D63856373 (Urkund)	2875	24618

**Urkund Analysis Result**

**Analysed Document:** Digital Payments and Its Security.docx (D63856373)  
**Submitted:** 2/13/2020 4:48:00 PM  
**Submitted By:** scholastic.seed@gmail.com  
**Significance:** 0 %

Sources included in the report:  
Instances where selected sources appear: 0

*Note: The Cybernomics had used the urkund plagiarism [http://www.orkund.com] tool to check the originality.*



### Reviewers Comment

**Review 1:** As we passage into a cashless economy, there is continuously going to be interrogations high over the security in digital expenditures.

**Review 2:** The Mobile apps are one of the most practical smartphone features ever to exist. Apps are so user-friendly that many companies that had previously operated solely via website.

**Review 3:** In my opinion: Privacy is an essential part of day to day living, especially if you are living in a world where everything you do can be tracked by a simple few key presses.



### Editorial Excerpt

The article has 0% of plagiarism which is accepted percentage for publication the security measures are called as two-factor authentication that greatly decreases the risk of fraudulent activity during digital payments. Expenditures are completed using payment tools. Cash, for example, is a payment gadget. So too are checks. Though, arithmetical payments are not one utensil but rather an umbrella term applied to a range of different apparatuses used in unalike ways, under the group of “**Argument Based Credentials (ABC)**”.

### Acknowledgement

Author is highly in debted to Scholastic Seed Inc & editorial team of Cybernomics, For making the write-up in the shape of an article.

### Disclaimer

All views expressed in this paper are my/our own. Some of the content is taken from open source websites & some are copyright free for the purpose of disseminating knowledge. Those some We/I had mentioned above in the references section and acknowledged/cited as when and where required. The author/s has cited their joint own work mostly, Tables/Data from other referenced sources in this particular paper with the narrative & endorsement has been presented within quotes and reference at the bottom of the article accordingly & appropriately. Finally some of the contents which are taken or overlapped from open source websites for the knowledge purpose. Those some of i/we had mentioned above in the references section.



Alok Raj, Nitin Jain & Surendra Singh Chauhan  
“Digital Payments and its Security”  
Volume-2, Issue-2, Feb 2020.  
([www.cybernomics.in](http://www.cybernomics.in))

Frequency: Monthly, Published: 2020  
Conflict of Interest: Author of a Paper had no conflict neither financially nor academically.

