1) PAYMENTS – Life line of Business: To payment is the transport of wealth from to contracting part in other. To payment becomes usually in the exchange and for the benefit of goods, the services or the two, or for it achieves to legal obligation.

One of the most important aspects of beginning of any enterprise are that the process of payment it should, it is very smooth and easy to handle. For This keeps good the all types of enterprises, included to her in direct connection of enterprise that is known as electronic trade.

In the modern world, the common ways of payment from to individual include the money, the control, the debit, the credit, or the transport of banks, and in the trade such payments precedes often from to tariff or to result in a receipt. Nevertheless, does not exist arbitrary limit in the form that to payment receive also thus in the complex transactions does not between the enterprises, the payments receive the form of reserves or to other to complexes regulations.

In the law, to payer it is the contracting part that makes to payment while beneficiary of payment it is the contracting part that receives the payment.

It is the beginning and the end of enterprising circle of accountancy list-leaves and the source of operational Energy of organism. It is the function of management to ensure that sufficient cash is available to meet the needs of the enterprise. Healthy to
financier flows is the bases for to economically healthy enterprise. Almost the all transactions that are recorded include to flow of meters or in the enterprise or from the enterprise (to payment). To financier flows that plow produced by certain transactions plows not direct, but they will be realised in a later stage, example thanks to stock that is bought with the credit.

2) Current payment System: To system of payment is to mechanism that allows in the economic obligations in order to it satisfies that is:

   Seriously
   Certainly
   Effectively
   [Esposito]

a) Cash Payments: They cash is fixed legal as anyone means of exchange that is immediately negotiable and without restrictions. It includes the currencies, the bank you notice, the checks, the postal orders, the deposits of savings bank and the deposits of banks. Essential requirement is that it should she is immediately available legal ace to offer consequently, the loans in the employees, the stamps and the deposits of constant period they cannot considered as ‘cash’ for reasons of balance-sheets of accountancy since they being in the transformation before available as cash because cash is the liquid assets, it is the most easily misused. Consequently, each enterprise should have to effective internal system for control of accountancy cash into smaller enterprises, to householder or the director practices usually the personal control in the all transactions of meters. Into
bigger enterprises, nevertheless, it is impossible individual for to practice, the individual control consequently, the system of her accountant enterprise should be drawn for it beyond includes the sufficient cash of control from the financier flows. The drawing of this system of accountancy should include the totals of control in the various points against what the precision of line of elements can be examined.

The healthy system of control of accountancy should meet the following requirements: Employee duties and functions must be separated to ensure that those persons who receive, pay out or handle cash in any way are not involved in the recording function. This prevents a person from misappropriating funds and concealing the fact by forging entries in the accounting books. The functions of the employees must be divided in such a way that, an error by one employee will be revealed by another employee. This means that the collusion of a least two Employees is necessary if funds are to be embezzled receipts. Of cash must be recorded in such a way that the actual cash received can be checked against an independent daily record. Therefore, a source document must be prepared as soon as cash is received. The source document should show the amount, the date of receipt, the reason for the receipt and, where applicable, the person who made the payment. Examples of this type of accounting source document are receipts, cash sales slips, invoices and control and audit rolls used in cash registers. all cash received must be banked daily and no payments should be made from the receipts. This ensures that cash is safe overnight and bank deposit slips serve as a control total for cash received.
The all payments apart from the insignificant payments should become with CHEQUE. The CHEQUE should signed jointly and supported from suitably checked and permitted document of source that is useful ace the proof of payment. Clock of employees that handles the cheque it should they are separated from those of employees that record the transactions.

**b) Bank Payment.** A bank, she is to economic organization from to government that grants authorisation. Initial her services activities include the benefit of economic in the customers enriching to her investors. To lot of economic activities were allowed with the by way of Time. For example the banks are important institutions in the financial markets and to offer the economic services capital as the investment. In certain countries such as Germany, the banks of were main historical important stakes in the industrialist companies while in other countries ace the United States the banks I prohibit from the property of not economic enterprises. In France, the assurance of banks is prevailed, since the dwells banks to offer the actuarial services Governmental. The level of regulation of banking industry you vary widely, with the countries as Iceland, that there are the relatively light regulation of banking sector and countries such as China having a wide variety of regulations but no systematic process that can be followed typical of a communist system.

**i) Payment by check.** A check or control it is to negotiable body the guidance of economic body in order to it overwhelms to makes specific sum of makes specific currency from to clarified assessment of requirement kept in the name of constructors of/depositor with that body. And the
constructor and the beneficiary of payment may be individual or legal persons.

The check had to her origin in the ancient banking system, what the bankers would publish the commands. AT request to their customers; in order to, it pays the money in the determined beneficiaries of payment. To such to order was reported as a account of exchange. The uses of accounts of exchange facilitated the trade with the obliteration of need for the tradesmen to bring big quantities of currency in the goods and services of markets. A drawing it is to account of exchange that is not payable afterwards from the demand of beneficiary payment.

A cheque is an order to transfer funds from the payer’s bank account to the payee’s bank account. Most small banks do not process cheques themselves. Instead they send them either to a correspondent bank, with which they have an arrangement, or to the Fed which also provides that service. Both charge a fee. A cheque drawn on a bank outside the area of the local clearing house generally involves the use of the Fed’s clearing facilities. Until recently, consumers used cheques more often than any other retail payment instrument in the United States other than cash. Cheques are very convenient payment instruments. Consumers can use them at the point of sale, for bill payments, and for person-to-person transactions.

To check includes the names of payer and beneficiary payment, to number of assessment, the sum of check, and his name of paying economic body. Line MICR point of for
check allows in the big reader/the equipment to process the check. Before the economic check of process of bodies, they code the sum of check in the magnetic ink in the most minimum point of check.

Financial institutions clear and settle cheques in different ways depending on whether the cheques are “on-us” cheques or inter bank cheques. On-us cheques do not require inter bank clearing or settlement. Inter bank cheques can clear and settle through direct presentment, a correspondent bank, a clearing house, or other interme diaries such as the Federal Reserve Banks.

**The checks contain are generally speaking:**
- Place of issue
- Number checks
- Date publication
- Beneficiary payment
- Sum currency
- Signature Drawer

**Alternative solutions of checks**
- Transport cables
- Direct debit
- Direct credit ;ACH in the USA
- In direct connection card payment
- Third person online services payment
- Cash (at the counter)
- POS payments

**ii) Payment through Credit Transfer.** Accountant transport or advanced attitude the terms that are used by the colleges
and the universities for the process the credit in student for the educational experience or the lines of courses that are undertaken into other body.

The “advanced attitude” is used also in order to it you describe the pleases of student granted credit, in discrimination with to regulate entering line of courses that begins the current of study in the beginning.

iii) Payments through Clearing House. Automated clearing house is an electronic for network economic transaction in the United States. ACH processes big volumes of transactions of credit and debits in batch. ACH credit transfers include direct deposit payroll and vendor payments. ACH direct debit transfers include consumer payments on insurance premiums, mortgage loans, and other kinds of bills. Debit transfers also include new applications such as the Point-of-Purchase check conversion pilot program sponsored by NACHA-The Electronic Payments Association. Both the government and the commercial sectors use ACH payments. Businesses are also increasingly using ACH to collect from customer's online, rather than accepting credit or debit cards. The rules and the regulations that control network ACH are established NACHA and the federal reserves. In 2002, this network processed transactions to AT estimate 8,05 billion of ACH with to total estimates of trillions $21.7 The Federal Reserve Banks are collectively the nation's largest automated clearing house operator and in 2005 processed 60% of commercial inter bank ACH transactions. The Electronic Payments Network the only private sector ACH
Operator in the U.S., processed the remaining 40%. FedACH is the Federal Reserve’s centralized application software used to process ACH transactions. EPN and the Reserve Banks rely on each other for the processing of some transactions when either party to the transaction is not their customer. These inter operator transactions are settled by the Reserve Banks.

**Process ACH**

To receiving transaction ACH begins with that allows a author in order to it distributes debit ACH or the credit in a assessment. To receiver is to holder of assessment that grants the approval. Accounts are identified by the bank’s Routing Number and the account number within that bank in accordingly with the rules and regulations ACH, not economic body cannot publish to transaction ACH to assessment without previous approval from the receiving. Proportionally with transaction ACH, the author should receive written approval verbal (Tel.), or electronic of by the receiving. Written authorization constitutes a signed form giving consent on the amount, date, or even frequency of the transaction. Verbal authorization needs to be either audio recorded or the Originator must send a receipt of the transaction details before or on the transaction date. An electronic authorization must include a customer reading the terms of the agreement and typing or selecting some form “agrees with” the statement.

Once authorization is acquired, the Originator then creates an ACH entry to be given to an Originating
Depository Financial Institution which can be any financial institution that does ACH origination. This ACH entry is then sent to an ACH Operator that passes it on to the Receiving Depository Financial Institution where the Receiver's account is issued either a debit or credit.

The RDFI may nevertheless, reject transaction ACH and return him in the ODFI if, example thanks to, the assessment had the insufficient capital or to holder of assessment showed that the transaction was unauthorized. To RDFI there are to certain interval Time in what it executes the returns that oscillate from 2 until 60 days from the receipt of transaction ACH. Nevertheless, the majority of returned transactions are completed in 24 hours by the midnight of day that the RDFI receives the transaction.

Common questions

For Payments ACH were around some Time now, but to their persons get used precisely, specifically with the ARC, POPULAR, and codes RCK SEC, where the initial body they were to natural control. To problem is presented when publishes to holder of assessment to payment of attitudes in natural a control not knowing that the control was presented ace entry ACH.

Time frame differences can cause loss towards an RDFI when returned ACH entries are subject to the Electronic Funds Transfer Act. An example is for the ARC and POP SEC Codes, where an RDFI has only 60 days from the date of settlement to return an unauthorized debit, and the consumer has 60 days upon notification to dispute a
transaction in his statement under Regulation E. The consumer can receive notification via a statement 30 days after settlement. With these time frames, it is possible that the 60-day period allowed for ACH return would expire even before the consumer's 60-day protection would expire, leaving the RDFI open to loss.

To other problem your examine the conformity where the tradesman that is presented with to control publishes to entry ACH with the ARC or pop codes SEC. Nevertheless, the tradesman fails then it is arranged with the handling of natural control and it presents the natural for control the payment also. This you cause one double-debit against to consuming assessment.

**Use of system of payment ACH**

- Transactions debit cards
- Direct deposit of payroll, Social Security and other government payments, and tax refunds
- Direct debit payment consumption fees account such as mortgages, loans, usefulnesses, safety premiums, rents, and anyone to regulate payment
- Business-to-business payments
- Electronic trade payments
- Federal, state, and local tax payments
- Ministry Finances bank administrative departments they sell this the service in enterprise and government customers

**iv) Wire Transfer services:** Transport of cables or accountant transport it is to method the individual money from to or body
in other. To transport of cables can become from to banking account into other banking account or via a transport of cash in an office of cash

**His process**

The cable of bank transports often the most expedient method for the capital between the banking accounts. To transport of cables of banks is influenced as follows:

1. Wish persons for make transport it approaches bank and it gives in bank to order you transport certain pecuniary sum. Code it WENT and BIC is bank given also thus knows where the money it should be sent.

2. Sending bank it transmits to message, via sure system, receiving bank, that ask that this payment effect accordingly with directives where they instructions given.

3. The message also includes settlement instructions. The actual transfer is not instantaneous: funds may take several hours or even days to move from the sender's account to the receiver's account.

4. ACH one the banks it sees included should it keeps reciprocal assessment with other, or payment it should be sent in a bank with such assessment, corresponding bank, for further profit in last one recipient.

Banks collect payment for the service from the sender as well as from the recipient. The sending bank typically collects a fee separate from the funds being transferred,
while the receiving bank and intermediate banks through which the transfer travels deduct fees from the money being transferred so that the recipient receives less than when the sender sent.

Bank-to-bank wire transfer is considered the safest international payment method. Each account holder must have a proven identity. Charge back is unlikely, although wires can be recalled. Information contained in wires is transmitted securely through encrypted communications methods. The price of bank wire transfers varies greatly, depending on the bank and its location; in some countries, the fee associated with the service can be costly.

Wire transfers done through cash offices are essentially anonymous and are designed for transfer between persons who trust each other. It is unsafe to send money by wire to an unknown person to collect at a cash office the receiver of the money may, after collecting it, simply disappear.

International transfers involving the United States are subject to monitoring by the Office of Foreign Assets Control which monitors information provided in the text of the wire to ascertain whether money is being transferred to terrorist organizations or countries or entities under sanction by the United States government. If a financial institution suspects that funds are being sent from or to one of these entities, it must block the transfer and freeze the funds.

IBAN wire transfers are not completely free of vulnerabilities. Every intermediate bank that handles a wire
transaction can take a fee directly out of the wire payload without the account holders knowledge or consent. There is no legislation or technical means to protect customers from this practice. If bank S is the sending bank and bank R is the receiving bank and bank I1, I2, and I3 are intermediary banks, the client may only have a contract with bank S and/or R, but banks I1, I2, and I3 can take money from the wire without any direct arrangement with the client. Clients are sometimes taken by surprise when less money arrives at bank R. Contrast this with cheques, the amount transferred is guaranteed in full, and fees if there are can be charged only at endpoint banks.

c) Payment through payment cards: The term card of payment it covers to line of different cards that can be presented from holder of card in order to they make to payment.

Types

[[o]] Credit card
[[o]] debit card
[[o]] Card of expenses
[[o]] Card of store-estimates
[[o]] Card of fleet
[[o]] Other

Capital Characteristically to card of payment is supported by the of assessment of exploitation that belongs in to holder of card, or that offers the credit in to holder of card. The cards of payment can be categorized in the types depending on how this assessment is regulated. The different types of cards of payment are described in the sequence of departments.
Credit Card

To credit card is part of system of payments that is named to after the small plastic card that is distributed in the users of system. Is to card permitting his to holder in order to it buys the goods and the services that resides in the promise of to holder to pay for these goods and services. The Publishing of card grants to line of credit in to consumer from which to user can borrow money for payment in a tradesman or as progress of cash into user.

To credit card is to different from card of expenses, where card of expenses requires the for balance is paid completely each month. On the contrary, the credit cards allow in the consumers for 'revolve' their balance, with cost to debit the interest. Most credit cards plows published by the local banks or the credit unions, and they are the form and the size that is clarified by 7810 model ISO/IEC As identity-1. Until This is fixed 85,60 × 53,98 km. in the size.

Debit card

To Debit card it is to plastic card that provides an alternative method of payment in cash AT production of markets. Functional, it can be called electronic check, and the capital is withdrawn immediately from or the banking account, or from to remainder balance in the card. In certain you marry, the card exclusively for the uses in the Internet, and thus do not exist non-natural card.

The uses of debit cards there are become widespread in a lot of countries and you have overtaken the check, and in certain transactions of meters of you marry from the volume. like credit cards, the debit cards are used widely for the purchases of
telephones and Internet and unlike credit cards the funds are transferred from the bearer's bank account instead of having the bearer to pay back on a later date.

Debit cards can also allow for instant withdrawal of cash, acting as the ATM card for withdrawing cash and as a cheque guarantee card. Merchants can also offer "cash back"/"cash out" facilities to customers, where a customer can withdraw cash along with their purchase.

**Card of expenses**

A card of expenses is to way one very short-term loan for to market. There am is similar with to credit card, apart from that the convention with the publisher of cards requires that to holder of card should not each month pay the expenses that become in completes-there are one “minimum payment” except from the does not complete balance. Since it does not exist does not loan, does not exist no-noficial interest. To partial payment does not lead to strict recent wage of (AT least 5% of balance) and the likely restriction of future transactions and to danger of likely cancellation of card.

**Stored-value Card:** To card of store-estimates is reported in the monetary estimates in a card not in a externally recorded assessment and it differs from the prepaid cards where the money it is in the deposit in the publisher similar with to debit card. To important difference stored between the cards of estimates and the prepaid debit cards is that the prepaid debit cards they are usually published in the name of individual holders of assessment, while the stored cards of estimates are usually anonymous.
The term stored-value card means the funds and or data are physically stored on the card. With prepaid cards the data is maintained on computers affiliated with the card issuer. The value associated with the card can be accessed using a magnetic stripe embedded in the card, on which the card number is encoded; using radio-frequency identification or by entering a code number, printed on the card, into a telephone or other numeric keypad.

**Card of fleet**

A fleet card is used as a payment card most commonly for gasoline, diesel and other fuels at gas stations. The cards of fleet can also be used in order to for they pay the maintenance and the expenses of vehicles AT the crisis of to householder or the director of fleet. The uses of card of fleet eliminate also the need for the transport of meters, increasing in consequence the level of safety that becomes perceivable from the drivers of fleet. The expulsion of cash renders him also to easier it deters the false transactions from the appearance with expenses of householders or director of fleet.

The cards of fleet are owed unique in the suitable and comprehensive submission of report that accompanies to their uses. The cards of fleet allow in the householders/the directors of fleet in order to real they receive - Time reports and determined controls of markets with to their cards that help in order to remain informed for all relative with the enterprise expenses.

**Other**

Other types of cards of payment include:

- Card gifts
• Electronic wallet

**Cards of new technology**

1. Magnetic band
2. Strip signatures
3. Code safety cards

To magnetic card of bands is to type of card capable the elements with the modification of magnetism microscopic iron of magnetic molecules in a material area of magnetic in the card. The magnetic band, called sometimes the judge, it is read with the natural contact and afterwards from to head of reading. The magnetic cards of bands are usually used in the credit cards, the cards of identity, and the tickets of transports. They may also contain an RFID tag, a transponder device and/or a microchip mostly used for business premises access control or electronic payment.

International Various the organism for the models of standardization, ISO/IEC 7810, ISO/IEC 7811, ISO/IEC 7812, ISO/IEC 7813, ISO 8583, and ISO 4909, you determine the bodily attributes of card, included the size, the flexibility, the pleases of judge, magnetic characteristics, and forms of elements. They for provide also the models the economic cards, included the distribution of orders of to number of cards in the different card that publishes the bodies.

**Smart card**

To intelligent card, the card chip, or the card of completed circuits (ICC), is anyone pocket-sized card with the incorporated completed circuits that can process the elements. This is implies
that it can receive the import that is submitted in treatment - via the ICC applications - and is delivered ace production. Exist two wide categories ICCs. Immutable the cards of memory contain only the departments of storage of memory, and perhaps certain makes specific logics of safety. The cards of microprocessors contain the volatile departments of memory and microprocessors. The card is constituted from the plastic, ace generally speaking PVC, but certain times ABS. The card may incorporate to hologram in order to it avoids. For The utilisation of intelligent cards is also to form of powerful ratification of safety single sign-on in the big enterprises and the organisations.

**Card of proximity**

Proximity card is a generic name for contact less integrated circuit devices used for security access or payment systems. It can refer to the older 125 kHz devices or the newer 13.56 MHz contact less RFID cards, most commonly known as contact less smartcards.

The modern cards of proximity plows covered from model ISO/IEC 14443. Exist also relative models of ISO 15693. The cards of proximity plows supplied by the sonorous Energy transport and have to line of 0-3 inches in most you marry. To user will in position usually there am leaves the card in a wallet or to wallet. The price of cards is also low, usually US$2-$5, allowing in their in order to it is used in the applications as the cards of determination, keycards, the cards of payment and the public cards of price of passage.
d) Consumer preference in payment systems.

**Direct mobile pricing**

To consumer you use the mobile choice of pricing AT the duration of control in a electronic trade region-such as in direct connection lucky game region-for to make to payment. Then two-factor ratification including to PIN and one year of Access, the consuming mobile assessment is debited for the purchase. It is to genuine alternative method of payment that does not require the uses of credit of/ debit cards or subscription in a in direct connection solution of payment as wage the PAL, passing in consequence banks and enterprises of credit cards globally. This type of mobile method of payment, that is popular exceptionally I prevailed also in Asia, it provide the following profits:

1. **Safety** - Two-factor ratification and to danger administrative machine it prevents fraud.

2. **Facility** - Not one subscription and not one new mobile the software it is required.

3. **Easy** - It is precisely to other choice AT duration process controls.

4. **Fast** - The most transactions are completed in least from 10 seconds.

5. **Proven** - Digital 70% of all content that it is bought online in certain parts the you use Asia direct mobile method of pricing.
Mobile payments of Web

To consumer you use additional web page that is demonstrated or the applications downloaded and that is installed in the mobile telephone for they make to payment. It you use WAP as lurking technology and thus inherit the all advantages and the disadvantages WAP. Nevertheless, the utilization of known model of payment of Web gives to number of proven profits:

i) **Follow**-on sales where the mobile web payment can lead back to a store or to other goods the consumer may like. These pages have a URL and can be renders easy it revisits or the share with to their friends.

ii) **High to customer satisfaction** from fast and foreseeable payments.

iii) **Facility** - use from known total in directly connection of payment pages.

Nevertheless, unless the mobile assessment are debited immediately via operator a mobile of networks, the uses of credit of/debit card or subscription in in direct connection solution of payment as pay pal it is required still precisely as in a environment of computers of office.

The mobile methods of payment of Web are permitted now by various mobile operators of networks.

Real Various different mechanisms of payment can be used behind total reliable of web page.
Direct pricing of operators

To direct connection in the platform of pricing of operators requires the completion with the operator, but provide to number of profits:

i) Simplicity operators they have already pricing to their relation with consumers payment it is added in billion to their.

ii) Instant payments giving to higher satisfaction customers.

iii) Need answers presentation success and reasons for failure (no money for example).

iv) Safety in order to it protects details and the to consumer payment identity.

v) Better transformation percentages from single bang-buy and one need they does not any imported to further details payment.

vi) Decreased expenses support costs for merchants since customers will complain to the operator.

It there are nevertheless to disadvantage, the payout percentage will be much lower from what with to other suppliers of payment. Popular Examples from to supplier:

- 92% with wage the PAL
- 84 86% with Credit card
- 45 91,7% with Pricing operators in the USA, UK and different to smaller European countries, but usually roughly 60%

- However, there is in the world one exception to this rule, in UK it might give more payout percentage for a
merchant to bill through the Pay fort system than with a credit card.

Credit card

To simple mobile system of payment of Web can also include the a credit card flow of payment that allows in consumer for it imports to their details of cards in order to it makes the markets. This process is known but any entry of details in a mobile telephone is acquaintance in order to it decreases the rate of success payments.

In addition, if the payment vendor can automatically and securely identify customers then card details can be recalled for future purchases turning credit card payments into simple single click-to-buy giving higher conversion rates for additional purchases. In direct connection wallets.

In direct connection enterprises like Pay the the PAL, Payments of [Amazon] and Google control also it there are the mobile choices. Here it is the process:

First payment

- Lists users, it imports telephone to number his, to supplier it sends to him to SMS with PIN.
- To user it imports received PIN, where to number.
- To user it imports his information credit cards if it is essential.

Subsequent payments:

The user re enters his PIN to authentify.
The application of PIN is acquaintance in order to it lowers the rate of success for the payments. These systems can be incorporated with immediately or they can be combines itself with the operator and the payments with credit card via a unified mobile platform of payment of Web.

3) Requirements for payment systems

a) fraud Prevention: The prevention and the detection of fraud is important form of management of danger in the industry of credit cards. Fraud prevention describes measures to stop fraud occurring in the first place. When the prevention fails then the detection of fraud activates. The objective is to detect fraud quickly when it does occur and stop it as soon as possible. Nevertheless, the detection of fraud in the real Time is thus not easy, is not astonishing that to lot of systems of fraud have the serious restrictions. Confidential the detection of fraud of credit cards is and is not to lot of described in the public. Behavior the prevention and the detection of fraud include the follow-up of customers in order to they appreciate, they program, they detect and they avoid to danger. The cost of erroneously to customer for the false behavior is high. Consequently the false detection of fraud is to big disadvantage and it should it is avoided. The different techniques may be required for the different types of fraud.

False elements they are particularly sidelong because the distribution is not uniform and Many more transactions are legal from false. To small percentage all The transactions are false.

AT the criminality need of units of software:

- You precisely detect the fraud and early,
- You precisely provide the relative information in the analysts of fraud in Time,
- Possible you automate the processes where,
- Alone you are adapted in the altered drawings of fraud, and
- Alone you are adapted in the altered behavior of customers.

**TECHNIQUES FOR THE PREVENTION AND THE DETECTION OF FRAUD**

The possibility of utilization of system depends from the output, the reliability and to her scalability in The real world. To efficient algorithm of detection should find itself for each method of fraud. Also, each technique of detection of fraud you have to her restriction and tool cannot determine the all types of frauds. Total the cost of fraud includes the economic losses because the fraud and the cost of system of prevention and detection of fraud. Consequently the objective is used to efficient total system of prevention and detection of fraud that minimizes the cost of fraud.

Exist to lot of techniques that may be used for the prevention and the detection of fraud.

The techniques can be grouped in the following teams:
- Total Application of simple rules,
- Application EMV of level 2,
- Utilization of advanced protocols of safety, and
- For Utilization of brilliant tools the prevention and the detection of fraud.
i) SIMPLE TOTAL APPLICATION OF RULES

Based on the rule systems can be used in order to they determines the particular types of high to danger Transactions.

Online or to in real for approval Time to transaction are include application of certain simple rules of detection as example thanks to:

- **You control the A:** That the card there are not been reported as it is lost or stolen,

- **Rule B:** That to number of cards is ratified with the control of type for Kuhn the digit of control,

- **Rule G:** That CVV2 (for the REGARD) or CVC2 (for the main card) or code CID (for American explicit) are used as operation of safety,

- **Rule [D]:** There are orders that the emanating from the free electronic post services should be rejected,

- **Rule E:** International those orders should be checked specifically with more controls,

- **Rule F:** That to number of transactions with the same to number of cards from the same tradesman is not to bigger than to predetermined to number of transactions for the determined interval Time,

- **Rule G:** That more than one sessions from the different countries are activates in the same Time,

- **Rule H:** That to number of deposits exceeds to regulate activity of customers,
- **Rule I:** That the sum of deposit exceeds to regulate activity of customers,

- **Rule J:** That the card there is the valid dates of expiry,

- **Rule [K]:** That the transaction emanates from address IP, what it is not in black list IP.

  Certain rules, such as the rule A, G or it is satisfactory for the fall of transaction.

  To other, such as the rule F may require to manual revision. A more sophisticated rule based.

  The system can combine various simple rules of example thanks to, with the following way: IF [D]

  AND and AND the H reviews THEN

  It is important to said that based on the rule systems are supported in special total a of rules with aim to determines the false transactions. The effectiveness of system depends immediately from the knowledge and the experience of person that draws the rules.

  The fraud can be decreasing itself also with the utilization the negative and positive lists of customers.

  To example of negative list is to cases out that contain the all numbers of cards that they have produced chargeback in the past. To example of positive list is to cases out that contain the all numbers of cards for the entrusted customers.

**ii) APPLICATION EMV OF LEVEL 2**

  The chip or the intelligent cards provides the bases for to better safety of transactions of cards.
The cards additional chip has the possibility of supporting the future services in the sectors of electronic trade and domestic banking work as the drawings of faith and the electronic wallet. EMV is the abbreviation for Europe, MasterCard and Visa - the organizations of cards that have clarified joint model [3, 4, 5, 6].

Regard and main card. Applications EMV are VSDC and M/Chip respectively.

Exist to lot of advantages of immigration from magnetic in order to they ax the cards. Firstly,

The cards chip provide to higher safety against the magnetic band. Example thanks to, the fraud can be decreased considerably because the cards chip it is difficult they are forged by the magnetic cards of bands. EMV provide to higher safety through the uses of material, software and cryptographic processes. Also, in not direct connection faculty of chip allows to lower expenses of transaction.

To comparison of magnetic band and solutions CHIP&PIN with regard to various.

The types of frauds of cards are presented in table 4.1. As can be seen, card-not-present fraud is not solved by using CHIP&PIN payment, as well as Internet fraud, Identity theft, and MOTO fraud. Due to the complexity of the chip, fraudsters will find it uneconomic to copy smart cards. Also, chargeback and the associated.

iii) UTILISATION OF ADVANCED PROTOCOLS OF SAFETY

Ensure the protocol of to layer of that receptions (SSL) it is used in order to it establishes to sure channel of communication
between two computers. The SSL you use the ratification based in asymmetric system cryptography based on the study of systems in the SSL it is used widely and there are allowed the increase of electronic trade. Nevertheless, the SSL was drawn general assure protocol of communication, not to protocol of payment and consequently to sure protocol of payment is required.

Easy the uses it is the most important for factor the customers. Certain efforts to create and apply to very low to danger system dominant that to sovereign solution of payment there are failed. For example, the sure electronic transaction protocol had as aim to provide the entrusted electronic transactions. Digital The DETERMINED certificates of you use in order to they ratify the identities of all contracting parts that participate in a market and cryptography the information of credit cards before send in entire the Internet. Nevertheless, YOU PLEASES failed in order to becomes sovereign protocol of payment because complex the extension.

Also, the following advanced protocols of safety: 3D SET TOTAL, 3D SET sure regards and MasterCard the sure application of payment (SPA) they are very important protocols in Electronic systems of payment. TOTAL their aim is to replace the protocols of and SSL that prograpevines the highest level of SSL of safety in relation with and to simpler extension YOU PLEASE in combination. 3D SET sure is to method of ratification with to view to it allows in the tradesmen, editors, the purchasers and the holders of card has determined in the world of for Internet in direct connection present payments of cards not. Afterwards from agrees with to transaction with to in direct connection tradesman, to holder
of card. The Search Engine of Web is re-orientated in central a to computer of editors of cards for the ratification of holders of card. After to holder of card of ratification. The Search Engine is re-orientated behind in the commercial power station to computer. The apply to sure compliant solution can minimize the false activity.

Consequently, acquiring the banks it is required for it supports 3D SET sure for their in their direct connection tradesmen.

iv) UTILISATION OF BRILLIANT TOOLS FOR THE PREVENTION OF FRAUD AND DETECTION

Possible Without brilliant tools it is not is decreased considerably the fraud in Electronic systems of payment. The important characteristics of elements of transactions of credit cards data are:

Big volumes of elements non-uniform distribution of false elements, and change Behaviors of customers and frauds. If also the output may be the problem, to better tools it is in position they function in the real Time. The processes of detection may be programmed in the separate units of software that are incorporated with in the electronic systems of payment that stop or AT least, expose the problems AT the duration of transaction.

For Brilliant tools the prevention and the detection of fraud they can be subdivided in those Techniques that focus on people are based on fuzzy logic to score personal files or matching individuals against known bad Lists. Focusing on transactions makes possible to proactively reduce fraud.
To example of brilliant tool is service of verification of addresses (AVS). AVS was developed in order to help tradesmen MOTO in order to it decreases the fraud. Numerical AVS checks the part of address of roads and information of code ZIPPER that is provided by to consumer against the information that is stored in the bases of dates of publisher and it returns to answer of equivalences of/bad combination. To serious for restriction AVS is that it functions only the addresses in some international region and is not very useful in the event transactions.

Marking systems of to danger they provide one from the most effective tools of prevention of fraud Available. They are based on statistical models which use the patterns derived from cardholder historical transactions as well as the current transaction attributes. Final The main difference from based on the rule systems is to calculation of result with the evaluation of various dozens of indicators of fraud.

Popular the nervous approach of networks is to very tool for the detection of fraud of credit cards. Nevertheless, because the lack of available total of elements they are certain times difficult it applies. Distributed dates-mining techniques that combines the multiple the models produces the effective detectors of fraud. Exist the following three units of software: Contact of for Web the addition and rules of configuration (WIAC), unit of Time of implementation (RM) and fraud that exposes unit (FRM). The all Access of units is a relational bases of dates. WIAC it is intended for the addition, the deletion and the modification of rules and for the altered parameters of configuration for already existing them. With such way FMS there are the possibility of producing, of
managing and of applying the rules under much often ace it is required. For Elements of readjustments RM the running transaction in the real Time. For FRM is intended the production of various reports, what may be printed in the screen, to printer, sent responsible as electronic post or SMS in the mobile telephones of persons, or as delivered with various forms are you case out pdf, HTML, CSV, XLS, and XML. FMS may be integrated with any transaction processing system by using Request and Response type of communication. An adequate textual message can be transferred to the merchant through a Response.

Relational database Web interface for adding and configuring rules

Unit of Time of implementation (RM)

Fraud that exposes unit (FRM)

RM includes various controls such as: holist control, velocity control, statistical Rules, Luhn formula control, and custom rules. Transactions come from different communication channels and various payment devices. Depending on the result of a control the corresponding decision must be made: to accept, reject or manually review the current transaction.

A combination of tools is always a better solution to any single to combination of tools is always to better solution in any single tool. The best Solution is to use layers of fraud protection. Sometimes it is not appropriate to automate everything in transaction processing including fraud detection. It is important to know that there may be a need to manually review a small percentage of orders. The risk of accepting an order is always balanced with the risk of loosing the customer.
ATM
POS
Internet
Kiosk
MOTO
Holist control
Control of speed
Statistical rules
Control of type Luhn
Customs legislation
Management of fraud
Accept,
Waste,
Revision
Decision

b) confidentiality: Confidentiality it you have been determined by the international organism for standardisation (ISO) in ISO-17799 Accessible as” ensuring that the information is only in those that are approved in order to they have Access “and there am is one from to corner stones of safety of information. For The confidentiality is one from the objectives of drawing to lot of cryptographic systems, that are realise into practice by the techniques of modern system cryptographies.

A payment system should be capable of maintaining public confidence by ensuring customer privacy. The need for confidentiality prescribes that data cannot be interpreted by anybody other than the sending or receiving parties. Confidentiality in this context means restriction of the knowledge about various pieces of information related to a transaction: the identity of the payer/payee, purchase content, amount, and so on. The
confidentiality of payment data is presently protected through a regime of data encryption.

SET provides confidentiality by employing both asymmetric and symmetric data encryption algorithms to protect financial information from eavesdroppers.

The confidentiality is reported also in moral a beginning that is connected with various professions. In the ethics, and with the law and alternative forms of legal disagreement the resolution as the mediation, certain types of communications between to person and one of these professionals is “privileged” and it cannot be discussed or be revealed in third person. In those competences in which the law takes measures for such confidentiality, exist usually penal clauses on his violation.

The confidentiality of information, that is imposed in a adaptation of classic “need-to-know” military men of beginning, shapes to corner stone of safety of information in the current companies. Bubble the called “of confidentiality” limits the flows of information, and with the positive and negative consequences.

c) Fault tolerance:

Fault-tolerance it is the property that allows the system in order to it you continue suitably in marries of failure certain from his components. If to her functioning quality is decreased by not means, the reduction is proportional to the severity of failure, as it is still compared with to naïvely-drawn system in a what and small failure it can causes the total interruption. The fault-tolerance is particularly to sought-after in high-availability or life-critical systems.
Fault-tolerance is not just a property of individual machines; it may also characterize the rules by which they interact. Example thanks to, Protocol of control of transmission it is drawn in order to it allows reliable double direction communication in the a packet-switched network, even in the presence of communications links which are imperfect or overloaded. It does this by requiring the endpoints of the communication to expect packet loss, duplication, reordering and corruption, so that these conditions do not damage data integrity, and only reduce throughput by a proportional amount.

An example of graceful degradation by design in an image with transparency. The leading two pictures are every the result of examination of complex picture in spectator that recognizes the transparency. The most minimum two pictures are the result in for spectator with not support the transparency. Because the mask of transparency is only rejected, the covering remains the picture in the left to winger there are aim to degrades cutely, as from this it is still important without his information of transparency.

Data formats may also be designed to degrade gracefully. HTML for example, is designed to be forward compatible, allowing new HTML entities to be ignored by Web browsers which do not understand them without causing the document to be unusable.

Recovery from errors in fault-tolerant systems can be characterized as either roll-forward or roll-back. When the system detects that it has made an error, roll-forward recovery takes the system state at that time and corrects it, to be able to move forward. Roll-back recovery reverts the system state back to some earlier, correct version, for example using checkpointing, and
moves forward from there. Roll-back recovery requires that the operations between the check point and the detected erroneous state can be made idempotent. Some systems make use of both roll-forward and roll-back recovery for different errors or different parts of one error.

In the frames individual the system, fault-tolerance can be achieved with the forecast of exceptional terms and the construction of for system phase them, and, for generally speaking, aiming alone-stabilization under the system you converge to without errors state. Nevertheless, if the consequences of interruption of system are devastating, or the cost enough reliable is very high, better solution can be used some form of doubling. In each it marries, if the consequence of interruption of system is devastating, the system should be in position uses the reintroduction in order to it falls behind in a sure way. Similar this is with the re-establishment of reduction of prices but can be human action if the persons are present in.

Requirements of tolerance of faults

The BASIC characteristics of tolerance of faults require:

i) Not one point failure

ii) Not one point to repair

iii) Isolation faults to the failing component

iv) Withholding faults in order to it deters distribution to her failure

v) Availability ways reintroduction

Moreover, you are mistaken the tolerant systems they are characterized from opinion and programmed interruptions of operation of services and not drawn interruptions of operation of
services. These are usually measured in the level of application and not precisely in level of material. To number of estimates is called availability and express itself as percentage.

The fault-tolerant systems are characteristic based on the significance of pleonasm.

**Fault-tolerance from to rejoinder**

The backup components examines to her first fundamental characteristic fault-tolerance with three ways:

- **Rejoinder**: Multiple Benefit same you marry the himself system or his sub system, directing the objectives or the demands all in parallel, and selecting right result basis of a quorum;

- **Pleonasm**: Benefit multiple same you marry same system and transformation in one from to remainder you marry in the event a failure. Diversity: Benefit his multiple different applications his same thing specification, and utilization to their as replicated systems for it phases the errors in it makes specific application.

The all applications Raid, unnecessary to order of independent disks, except from the Raid 0 are examples fault tolerant appliance of storage I have you use pleonasm of elements.

A lockstep the fault tolerant machine you use the replicated elements that function in parallel. Any moment, the all rejoinders of each element should be in the same state. The same imports are provided in every to rejoinder, and the same results are expected. The results of rejoinders are compared using him a circuit of voting. To machine with two rejoinders of each element is called Dual
Modular unnecessary (DMR). The circuit of voting can then only detect to bad combination and the re-establishment is supported in other methods. To machine with three rejoinders of each element is called Triple Modular pleonasm (TMR). The circuit of voting can determines who to rejoinder it is erroneous when it is observed two--to it votes. In this it marries, the circuit of voting can production the right result, and reject the erroneous publication. Afterwards by this, the internal situation of erroneous to rejoinder is supposed that she was different from this to other two, and the circuit of voting it can switch in a way DMR. This model can be applied in any bigger to number of rejoinders.

**Lockstep** the tolerant. machines of faults most easily become completely modern, with each gate of each to rejoinder that makes the same government owned passage in the same end of clock, and the clocks in the rejoinders that are precisely in the phase. Nevertheless, it is possible they build lockstep the systems without this requirement.

Bring the rejoinders in synchrony requires to their internal stored states the same thing. They initial can begin from to constant state as the state of reset. Alternative, the internal situation of Copy can be copied in a other Copy.

To variant DMR is pair-reserve Two replicated elements function in lockstep as to pair, with to circuit of voting that detects any bad combination between the processes and to their results to signal that shows that exists to error. To other to pair activates precisely the same way. To end circuit selects the production of to pair that does not certify that it is erroneous. The Pair-reserves
require four you copy despite three from TMR, but have been used commercial.

Point of not to repair

If to system trys to failure, should continues functioning without interruption AT the duration of process of to repair.

Isolation of faults in the failing component

When to failure is presented, the system should be in position isolate the failure in offending component. For this requires the addition of dedicated mechanisms of detection of failure that exists only the aim of isolation of faults.

The re-establishment by to term of faults requires the fault or the component. National the institution of models and technology NIST it categorizes the faults based on the locality, the reason, the duration and Effect.

Withholding of faults

Certain mechanisms of failure can force to system in order to fail they with the distribution of failure in the rest of system. To example of this type of failure is the “appliance of mission of signals of frauds” that legal can flood the communication in a system and causes the general interruption of system. The mechanisms that isolate to appliance of mission of signals of frauds or failing component for they protect the system required.

4) Properties of Payments

a) Small and Low Value Payments are financial transactions involving very small sums of money. Papal defines small and low value payments as a transaction of less than 12 USD, and it offers reduced fees for small and low value payment transactions.
problem that has prevented the emergence of feasible micro payment systems that allow payments of less than 1 USD is a need to keep costs for individual transactions low, which is impractical when transacting such small sums, even if the transaction fee is just a few cents.

Micro payments were initially devised as a way of allowing the sale of online content and were envisioned to involve small sums of only a few cents. These transactions would enable people to sell content on the Internet for small sums and would be an alternative to advertising revenue. During the late 1990s, there was a movement to create micro transaction standards, and the World Wide Web Consortium (W3C) worked on incorporating micro payments into HTML, even going as far as to suggest the embedding of payment-request information in HTTP error codes. The W3C has since stopped its efforts in this area, and micro payments have not become a widely used method of selling content over the internet.

b) Divisibility: Payments are one of the most important part of any business. Payment helps any businesses to run smoothly and in an efficient manner. And the divisibility here means that the payment can be divided in various denominations weather of large amount or in small amount. It is beneficial for all sorts of businesses, divisibility helps in making payment for any consideration.

Divisibility is required in operations of business to make payment transactions.

A payment if done in installments then divisibility of payment is used, so that payment can also be done in small units or in small
values. This is one of the important properties of payment, which is used by almost everybody in now-a-days in their business or in their personal life's.

c) **Transferability:** Transferability of payment can be understood in a way "which can be transferred from one person to another person".

Transferability can be used in any means weather it is related to transfer of payments, transfer of job transfer of buses from one to another etc. But here transfer of payment means transfer of money from one person to another so that a purchase and sale of any commodity or a product can take place.

Main aim of any payment is to fulfill the transaction of sale and purchase. If the transfer of payment does not take place then we can not say that the sale and purchase of any commodity and product had take place. To fulfill any transaction it is necessary to transfer payment from one person to another person. It helps in every body’s life weather in poor person life or in rich person’s life. It also helps businesses to run them smoothly and effectively.

d) **Offline Usability:** Another important aspect of payment is that its usability. It means that it is not used only online but it can also be done through offline. It simply means that if any person wants to give payment to some one, that person can give payment direct face to face or with the help of some other means, except online. If online payment mode is available then payment can be done through online mode, but if there is some technical problem then one can also use offline payment i.e. payment through face to face. It can be done through mobile, by reaching direct to the destination and by various means.
This is most feasible mode of payment so that consumers can trust on it easily without any hesitation in their mind.

This provides an alternative way for customers to process their checkouts. If a customer chooses an offline payment option, the status of their order will show up as "Pending," and you can simply wait for the customer’s confirmation email.

**Benefits:**

- You can increase your sales by giving your customers opportunities to make purchases through bank deposits, wire transfers or money transfers.
- You can easily explain all of your offline payment options to customers by providing a link to an article with all of the relevant details.

*e) Financial Status Transparency:* It also tells about the financial status of the customers, as the bank statement of any person can tell about the financial condition of any person. It also narrates the condition of the customer weather he is having a enough cash or not, and the most important part it plays that it shows the transparency of financial status of any person, i.e. that he/she is having a enough cash or not with him/her.

It is important to find out the transparency of financial status of any person, if it is not done than government will not be able to find out that which person has earn more and which person earn less, because it helps government to levy taxes on people according to their earnings.

Because it helps government to earn revenue from the people of their country.
f) Cost Efficiency: Payments also help in how the cost of any transactions can be minimize, and it also tells about the being effective without wasting time or effort or expense. If the resources are used in such a way so that the work done in a proper manner and in less cost. Cost efficiency is a concept of to minimize the cost of payments and the proper usage of the resources. It is in our hands to make cost efficient and totally depends on person that how he manages the cost of any transaction or payments, it all refers to the relative balance of effectively meeting reach and frequency goals at the lowest price.