**FUNDAMENTAL OF E-COMMERCE**

**UNIT-3**

**BBA- N (606)**

**Credit & Debit Cards, Charge Cards, Smart Cards, RuPay Cards, E-Wallets**

**CREDIT CARDS**

A credit card is a payment card issued to users (cardholders) to enable the cardholder to pay a merchant for goods and services based on the cardholder’s promise to the card issuer to pay them for the amounts so paid plus the other agreed charges. The card issuer (usually a bank) creates a revolving account and grants a line of credit to the cardholder, from which the cardholder can borrow money for payment to a merchant or as a cash advance. In other words, credit cards combine payment services with extensions of credit. Complex fee structures in the credit card industry may limit customers’ ability to comparison shop, help ensure that the industry is not price-competitive and help maximize industry profits. Because of this, legislatures have regulated credit card fees.

A credit card is different from a charge card, where it requires the balance to be repaid in full each month. In contrast, credit cards allow the consumers a continuing balance of debt, subject to interest being charged. A credit card also differs from a cash card, which can be used like currency by the owner of the card. A credit card differs from a charge card also in that a credit card typically involves a third-party entity that pays the seller and is reimbursed by the buyer, whereas a charge card simply defers payment by the buyer until a later date.

**How credit cards work?**

When you apply for a credit card, you apply to borrow money from the card issuer, usually a bank or building society. The issuer then looks at your credit history to consider your application – and if you have a low credit score you could be refused credit, or perhaps given a less attractive deal on interest rate.

If you have a good credit rating, then you will be accepted and the bank will set a credit limit, which is the maximum amount you can spend on the card. The card company will send you a statement every month, detailing any transactions on your card, plus the amount owing. It also provides details on the minimum payment you need to make (this depends on how much you have your balance) and the payment due date.

**DEBIT CARDS**

**What is a ‘Debit Card’?**

A debit card is a payment card that deducts money directly from a consumer’s checking account to pay for a purchase. Debit cards eliminate the need to carry cash or physical checks to make purchases. In addition, debit cards, also called check cards, offer the convenience of credit cards and many of the same consumer protections when issued by major payment processors like Visa or MasterCard.

Unlike credit cards, they do not allow the user to go into debt, except perhaps for small negative balances that might be incurred if the account holder has signed up for overdraft coverage. However, debit cards usually have daily purchase limits, meaning it may not be possible to make an especially large purchase with a debit card.

**How a Debit Card Works?**

When you use your debit card, the merchant will place a hold on your account for the amount of money of your transaction. Your bank may show you the pending transactions on your account. These are the holds put in by the merchants. The merchants then complete the transaction by submitting their transactions and then the money is taken from your account and shows up in your cleared transactions. Some merchants may take longer to file the transactions, and you may have a transaction listed as pending for a few days.

If you use your debit card at a hotel or for a car rental, the company may put a larger hold on the account to cover extra costs that you may accrue.

It is important to be aware of this so that you do not run into a situation in which your card may be declined because of the hold. Be sure to have additional money in your account if you use it for a hotel or a car rental.

**CHARGE CARDS**

A charge card is a card that provides a payment method enabling the cardholder to make purchases which are paid for by the card issuer, to whom the cardholder becomes indebted. The cardholder is obligated to repay the debt to the card issuer in full by the due date, usually on a monthly basis, or be subject to late fees and restrictions on further card use. It can also be a smart card.

Though the terms charge card and credit card are sometimes used interchangeably, they are distinct protocols of financial transactions. Credit cards are revolving credit instruments that do not need to be paid in full every month. There is no late fee payable so long as the minimum payment is made at specified intervals (usually every thirty days). The balance of the account accrues interest, which may be backdated to the date of initial purchase. Charge cards are typically issued without spending limits, but credit cards usually have a specified credit limit that the cardholder may not exceed.

The user of the charge card has to pay the balance of their account at the end of each month and the charge card company, unlike a credit card, does not charge interest. A charge card company’s main source of revenue is the merchant fee, which is a percentage of the transaction value which typically ranges between 1 and 4%, plus an interchange or minimum fee.

**SMART CARDS**

A smart card is a device with the dimensions of a credit card that uses a small microchip to store and process data. In many cases, smart cards have replaced old magnetic cards because they can handle more information and provide more functionality. Smart cards are now in use in many industries, including retail, transit systems and security services.

Smart cards can be contact, contactless, or both. They can provide personal identification, authentication, data storage, and application processing.

Smart cards may provide strong security authentication for single sign-on (SSO) within organizations.

**The most common smart card applications are**:

* Credit cards
* Electronic cash
* Computer security systems
* Wireless communication
* Loyalty systems (like frequent flyer points)
* Banking
* Satellite TV
* Government identification

**RUPAY CARDS**

**What is it?**

RuPay is a combination of two words – Rupee and Payment. RuPay Card is an Indian version of credit/debit card. It is very similar to international cards such as Visa/Master.

**Who initiated it?**

National Payments Corporation of India (NPCI) initiated the launch of RuPay card in India. It was done with the intention of integration of payment systems in the country. It has also tied up with Discover Financial Services firm for promoting this.

**How will it work?**

RuPay debit cards are similar any other debit cards that you might hold now. You can access them in the 1.45 lakh ATMs and 8.75 lakh POS terminals across the country. It will also be accepted on 10,000 e-commerce websites. All major public sector banks, including SBI, have started issuing these cards to all their customers. The card also comes with a high end technology chip named EMV (Europay, Master Card and Visa) especially for high end transactions. It also has an embedded micro processor circuit with information about the card holder.

**What are the Benefits of RuPay card?**

Lower transaction cost – International transactions lead to higher transaction costs. Such costs can be reduced by using RuPay card since processing will be done within the country. Also, transactions will be faster.

Sms alerts – Users will get alerts for every transaction made through this card.

Reduced processing fees – Processing fees for RuPay card compared with regular debit/credit cards will be considerably lower.

**E-WALLETS**

**Definition**: E-wallet is a type of electronic card which is used for transactions made online through a computer or a smartphone. Its utility is same as a credit or debit card. An E-wallet needs to be linked with the individual’s bank account to make payments.

**Descriptions:** E-wallet is a type of pre-paid account in which a user can store his/her money for any future online transaction. An E-wallet is protected with a password. With the help of an E-wallet, one can make payments for groceries, online purchases, and flight tickets, among others.

E-wallet has mainly two components, software and information. The software component stores personal information and provides security and encryption of the data. The information component is a database of details provided by the user which includes their name, shipping address, payment method, amount to be paid, credit or debit card details, etc.

For setting up an E-wallet account, the user needs to install the software on his/her device, and enter the relevant information required. After shopping online, the E-wallet automatically fills in the user’s information on the payment form. To activate the E-wallet, the user needs to enter his password.

Once the online payment is made, the consumer is not required to fill the order form on any other website as the information gets stored in the database and is updated automatically.

**How does it work?**

E-wallet has mainly two components, software and information.

Software component stores personal information and provides security and encryption of the data whereas information component is a database of details provided by the user which includes their name, shipping address, payment method, amount to be paid, credit or debit card details, etc.

# e-Banking

Electronic banking has many names like e banking, virtual banking, online banking, or internet banking. It is simply the use of electronic and telecommunications network for delivering various banking products and services. Through e-banking, a customer can access his account and conduct many transactions using his computer or mobile phone.

### ****Types of e-banking****

**Level 1**: This is the basic level of service that banks offer through their websites. Through this service, the bank offers information about its products and services to customers. Further, some banks may receive and reply to queries through e-mail too.

**Level 2**: In this level, banks allow their customers to submit instructions or applications for different services, check their account balance, etc. However, banks do not permit their customers to do any fund-based transactions on their accounts.

**Level 3**: In the third level, banks allow their customers to operate their accounts for funds transfer, bill payments, and purchase and redeem securities, etc.

Most traditional banks offer e-banking services as an additional method of providing service. Further, many new banks deliver banking services primarily through the internet or other electronic delivery channels. Also, some banks are ‘internet only’ banks without any physical branch anywhere in the country.

**Therefore, banking websites are of two types:**

1. **Informational Websites**: These websites offer general information about the bank and its products and services to customers.
2. **Transactional Websites**: These websites allow customers to conduct transactions on the bank’s website. Further, these transactions can range from a simple retail account balance inquiry to a large business-to-business funds transfer. The following table lists some common retail and wholesale e-banking services offered by banks and financial institutions:



### Importance of e-banking

We will look at the importance of electronic banking for banks, individual customers, and businesses separately.

**Banks**

1. Lesser transaction costs: Electronic transactions are the cheapest modes of transaction
2. A reduced margin for human error: Since the information is relayed electronically, there is no room for human error
3. Lesser paperwork: Digital records reduce paperwork and make the process easier to handle. Also, it is environment-friendly.
4. Reduced fixed costs: A lesser need for branches which translates into a lower fixed cost.
5. More loyal customers: since e-banking services are customer-friendly, banks experience higher loyalty from its customers.

### Customers

1. Convenience: A customer can access his account and transact from anywhere 24x7x365.
2. Lower cost per transaction: Since the customer does not have to visit the branch for every transaction, it saves him both time and money.
3. No geographical barriers: In traditional banking systems, geographical distances could hamper certain banking transactions. However, with e-banking, geographical barriers are reduced.

**Businesses**

1. Account reviews: Business owners and designated staff members can access the accounts quickly using an online banking interface. This allows them to review the account activity and also ensure the smooth functioning of the account.
2. Better productivity: Electronic banking improves productivity. It allows the automation of regular monthly payments and a host of other features to enhance the productivity of the business.
3. Lower costs: Usually, costs in banking relationships are based on the resources utilized. If a certain business requires more assistance with wire transfers, deposits, etc., then the bank charges it higher fees. With online banking, these expenses are minimized.
4. Lesser errors: Electronic banking helps reduce errors in regular banking transactions. Bad handwriting, mistaken information, etc. can cause errors which can prove costly. Also, easy review of the account activity enhances the accuracy of financial transactions.
5. Reduced fraud: Electronic banking provides a digital footprint for all employees who have the right to modify banking activities. Therefore, the business has better visibility into its transactions making it difficult for any fraudsters to play mischief.

# MIS: Definition, Purpose, Objectives

An **Information System** is a system that gathers data and disseminates information with the sole purpose of providing information to its users.

The main object of an information system is to provide information to its users. Information systems vary according to the type of users who use the system.

A **Management Information System** is an information system that evaluates, analyzes, and processes an organization’s data to produce meaningful and useful information based on which the management can take right decisions to ensure future growth of the organization.

**Information Definition**

**According to Wikipedia −**

“Information can be recorded as signs, or transmitted as signals. Information is any kind of event that affects the state of a dynamic system that can interpret the information.

Conceptually, information is the message (utterance or expression) being conveyed. Therefore, in a general sense, information is “Knowledge communicated or received, concerning a particular fact or circumstance”. Information cannot be predicted and resolves uncertainty.”

### Information Vs Data

Data can be described as unprocessed facts and figures. Plain collected data as raw facts cannot help in decision-making. However, data is the raw material that is organized, structured, and interpreted to create useful information systems.

Data is defined as ‘groups of non-random symbols in the form of text, images, voice representing quantities, action and objects’.

Information is interpreted data; created from organized, structured, and processed data in a particular context.

### According to *****Davis and Olson***** −

“Information is a data that has been processed into a form that is meaningful to recipient and is of real or perceived value in the current or the prospective action or decision of recipient.”



Information processing beyond doubt is the dominant industry of the present century. **Following factors states few common factors that reflect on the needs and objectives of the information processing** −

* Increasing impact of information processing for organizational decision making.
* Dependency of services sector including banking, financial organization, health care, entertainment, tourism and travel, education and numerous others on information.
* Changing employment scene world over, shifting base from manual agricultural to machine-based manufacturing and other industry related jobs.
* Information revolution and the overall development scenario.
* Growth of IT industry and its strategic importance.
* Strong growth of information services fuelled by increasing competition and reduced product life cycle.
* Need for sustainable development and quality life.
* Improvement in communication and transportation brought in by use of information processing.
* Use of information processing in reduction of energy consumption, reduction in pollution and a better ecological balance in future.
* Use of information processing in land record managements, legal delivery system, educational institutions, natural resource planning, customer relation management and so on.

**In a nutshell** −

* Information is needed to survive in the modern competitive world.
* Information is needed to create strong information systems and keep these systems up to date.

### Implications of Information in Business

Information processing has transformed our society in numerous ways. From a business perspective, there has been a huge shift towards increasingly automated business processes and communication. Access to information and capability of information processing has helped in achieving greater efficiency in accounting and other business processes.

**A complete business information system, accomplishes the following functionalities** −

* Collection and storage of data.
* Transform these data into business information useful for decision making.
* Provide controls to safeguard data.
* Automate and streamline reporting.

**The following list summarizes the five main uses of information by businesses and other organizations −**

* **Planning**− At the planning stage, information is the most important ingredient in decision making. Information at planning stage includes that of business resources, assets, liabilities, plants and machineries, properties, suppliers, customers, competitors, market and market dynamics, fiscal policy changes of the Government, emerging technologies, etc.
* **Recording**− Business processing these days involves recording information about each transaction or event. This information collected, stored and updated regularly at the operational level.
* **Controlling**− A business need to set up an information filter, so that only filtered data is presented to the middle and top management. This ensures efficiency at the operational level and effectiveness at the tactical and strategic level.
* **Measuring**− A business measures its performance metrics by collecting and analyzing sales data, cost of manufacturing, and profit earned.
* **Decision-making**− MIS is primarily concerned with managerial decision-making, theory of organizational behavior, and underlying human behavior in organizational context. Decision-making information includes the socio-economic impact of competition, globalization, democratization, and the effects of all these factors on an organizational structure.

**In short, this multi-dimensional information evolves from the following logical foundations** −

* Operations research and management science
* Theory of organizational behavior
* Computer science −
	+ Data and file structure
	+ Data theory design and implementation
	+ Computer networking
	+ Expert systems and artificial intelligence
* Information theory

**Following factors arising as an outcome of information processing help speed up of business events and achieves greater efficiency −**

* Directly and immediate linkage to the system
* Faster communication of an order
* Electronic transfer of funds for faster payment
* Electronically solicited pricing (helps in determining the best price)

### MIS Need for Information Systems

Managers make decisions. Decision-making generally takes a four-fold path −

* Understanding the need for decision or the opportunity,
* Preparing alternative course of actions,
* Evaluating all alternative course of actions,
* Deciding the right path for implementation.

**MIS** is an information system that provides information in the form of standardized reports and displays for the managers. MIS is a broad class of information systems designed to provide information needed for effective decision making.

Data and information created from an accounting information system and the reports generated thereon are used to provide accurate, timely and relevant information needed for effective decision making by managers.

**Management information systems provide information to support management decision making, with the following goals −**

* Pre-specified and preplanned reporting to managers.
* Interactive and ad-hoc support for decision making.
* Critical information for top management.

**MIS is of vital importance to any organization, because −**

* It emphasizes on the management decision making, not only processing of data generated by business operations.
* It emphasizes on the systems framework that should be used for organizing information systems applications.