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**SUBJECT NAME: INFORMATION SYSTEM  
AND DATA PROCESSING**

## **QUESTION #1:**

What are systems? Explain in detail. Take a daily life example of system (any organization or company) and explain its component one by one in detail.

## **ANSWER:**

### **system**

A system is a collection of elements or components that are organized for a common purpose. The word sometimes describes the organization or plan itself (and is similar in meaning to *method*, as in "I have my own little system") and sometimes describes the parts in the system (as in "computer system").

A computer system consists of hardware components that have been carefully chosen so that they work well together and software components or programs that run in the computer.

The main software component is itself an operating system that manages and provides services to other programs that can be run in the computer.

A filing system is a group of files organized with a plan (for example, alphabetical by customer).

All of nature and the universe can be said to be a system. We've coined a word, *ecosystem*, for the systems on Earth that affect life systems.

The term can be very useful because so many things can be described as systems. It can also be very unuseful when a more specific term is needed.

### **example of system**

#### **Apple:**

Apple information systems can be listed as follows:

- Office Automation System
- Transaction Processing System
- Knowledge Work Systems

- Hardware and Software Entire PC industry is struggling to make differentiation on their products. Apple has approached the PC industry with very competitive differentiation strategy. Apple develops extremely competitive hardware as well as software. Company makes specific hardware decisions in order to enhance the value of software. Rather than OS, Apple creates the good core software call iLife. It focuses on entertainment and creativity.
- iTunes and Digital Asset Management iTunes can be identified as one of most strategic element of Apple Inc. Apple is a digital asset management organization and it announced in 2009 about their event for credit card account information of more than 100 million customers through iTunes. They have become one of largest digital retailer
- Apple's retail strategy Several companies were failed to develop their own retail stores. Once the Apple identifies the importance of handling own retail sector, they invested in developing retail chain for the company. Location design plays an important part in retail business. Apple has implemented perfect retail business which has ability to achieve customer satisfaction
- Information System As explained above, information system can make significant impact for any organization in today's business world. When discuss about Apple information technology, they keep their secret because they want to protect their competitive position of the industry. Due to following services, Apple was able to achieve competitive advantage through loyal customer base (Apple Information Systems , 2016). Apple Information Systems , 2016 iCloud is one of competitive feature from Apple products and it allows users to back up the data through multiple Apple product online. If the product was stolen or misplaced, iCloud allows customers to locate any iDevice which connected to internet. It increases the customer values and helps company to differentiate their products from the competitors.

### **Supplier Information Database**

Supplier Information Database Source: Apple Information Systems , Supplier Information Database is a tool to find best supplier for Apple products. Through this systems, customers can register with their SID and find information about the Apple products as they wanted. Apple Inc. has achieved the competitive advantage through their information technology innovations.

**Question#2:**

What is Management information system? Take an example of MIS of any organization and elaborate in your own words.

**Answer:**

A management information system (MIS) is a computer system consisting of hardware and software that serves as the backbone of an organization's operations. An MIS gathers data from multiple online systems, analyzes the information, and reports data to aid in management decision-making.

MIS is also the study of how such systems work.

**Improved Decision-Making**

The purpose of an MIS is improved decision-making, by providing up-to-date, accurate data on a variety of organizational assets, including:

- Financials
- Inventory
- Personnel
- Project timelines
- Manufacturing
- Real estate
- Marketing
- Raw materials
- R&D

The MIS collects the data, stores it, and makes it accessible to managers who want to analyze the data by running reports.

**Example:****World Bank:****Financial Management Information Systems (FMIS)**

Financial Management Information Systems (FMIS) support the automation and integration of public financial management processes including budget formulation, execution (e.g. commitment control, cash/debt management,

treasury operations), accounting, and reporting. FMIS solutions can significantly improve the efficiency and equity of government operations, and offer a great potential for increasing participation, transparency and accountability. Whenever FMIS and other PFM information systems (for example, e-procurement, payroll, debt management) are linked with a central data warehouse (DW) to record and report all daily financial transactions, offering reliable consolidated platforms can be referred to as integrated FMIS (or IFMIS). The World Bank is a leading provider of financing and technical assistance for FMIS development.

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### **FMIS DATA MAPPER**

The FMIS Data Mapper provides quick access to 150 Bank-funded FMIS projects in 82 countries in Google Maps. Detailed information about the Bank-funded FMIS projects can be found in the FMIS Database [XLS]. FMIS Database was originally developed as a basis for the first FMIS Study (FMIS: 25 Years of World Bank Experience on What Works and What Doesn't) published in April 2011 (available in nine languages) to share the developments and lessons learned in World Bank Funded projects.

### **FMIS WORLD MAP**

The FMIS World Map presents basic information about 194 FMIS solutions in 198 economies worldwide using Google Maps. Detailed information about these FMIS platforms and government practices related to publishing open budget data can be found in the FMIS & OBD Database [XLS]. This database was developed as a part of the World Bank study (FMIS & Open Budget Data: Do Governments Report on Where the Money Goes?) released in September 2013 (available in nine languages) to present good practices and guidelines for publishing reliable open budget data from FMIS.

### **PFM Systems and e-Services**

In collaboration with the 2016 World Development Report team, another global dataset was developed to present the trends in modernization and integration of public financial management (PFM) systems and online services (e-Services) in

198 economies worldwide. Basic information on core government systems and online services can be found in the PFM Systems and e-Services Database [XLS].

## **STATUS OF FMIS PROJECTS**

The World Bank Group has leading edge knowledge and substantial global experience to assist in the development or modernization of treasury systems and the establishment of integrated Public Financial Management (PFM) frameworks. Since 1984, the World Bank has financed 150 projects (108 completed + 39 active + 3 pipeline) in 82 countries totaling over 4.930 billion USD for the design and implementation of FMIS solutions. The total amount of funds spent or allocated for FMIS projects is around 5.952 billion USD, including the borrower co-financing.

### **Question#3:**

Explain Marketing Information system and its types in detail. Note: You should make your answer understandable by taking a proper example.

### **Answer:**

The **Marketing Information System** refers to the systematic collection, analysis, interpretation, storage and dissemination of the market information, from both the internal and external sources, to the marketers on a regular, continuous basis.

The marketing information system distributes the relevant information to the marketers who can make the efficient decisions related to the marketing operations viz. Pricing, packaging, new product development, distribution, media, promotion, etc.

### **Types of Marketing Information system:**

#### **Internal Data**

Internal data consists of the information companies collect about their customers and prospective customers, typically as part of their internal operations. Marketing departments, for example, maintain information about the interest and leads they generate from prospective customers and how they are interacting with these contacts. They may capture information used for segmentation and targeting purposes, such as geographic location, gender, age, buying behaviors, and communication preferences. Information about Web site visitors, traffic, and other customer engagement activities can be another useful type of internal data. Additionally, sales teams capture and maintain information about who is buying the product, where buyers are located, buying patterns, and

behaviors. Sales and marketing teams may also maintain information about customer references, success stories, and how prospective customers are progressing toward becoming new clients.

Other parts of the organization capture also capture and maintain data that may be useful as marketing information. Accounting and billing departments track information about customers such as how much they spend with the organization, when they buy, and other payment details. Product managers and customer support organizations maintain information about customers implementing or using products, problems or issues they run into, and satisfaction levels with the company and products.

Historically, it was standard for each department to maintain these data in their own systems rather than in a common system or database that all parts of the organization could access. This presented challenges for marketers, who had a difficult time gaining access to complete, up-to-date internal data, since the information would need to be pulled out of the various systems and put into usable formats before they could conduct any sort of analysis.

## **Competitive Intelligence**

Competitive intelligence is marketing information that helps marketers and other members of an organization better understand their competitors and competitive market dynamics. Common types of competitive intelligence include the following:

- **Product information:** Who is making products that compete with your offerings? What features or capabilities make these products attractive to prospective customers? How do these features compare to yours? How are products packaged and offered to customers?
- **Market share and penetration:** Which companies in your competitive market sell the most products to your target market, and how much do they sell? Which organizations are considered the market leaders? How is market share evolving over time?
- **Pricing strategy:** What do competitors charge for their products? What pricing structure and strategies do they use? What special pricing or discounting do they offer? How does this affect your pricing and position relative to competitors?

- **Competitive positioning and messaging:** What are competitors saying about themselves? What are they saying to current and prospective clients or other stakeholders about your organization or products? How effective are their messages at generating interest in competitor products or diminishing interest in yours? What keywords are competitors dominating in search engines?
- **Win/loss analysis:** What proportion of new sales are you winning or losing? Why are people selecting your product over competitors'? Why are they selecting a competitor's offering instead of yours?

Companies tend to guard sensitive information closely, such as detailed information about product cost, pricing structure, and market share. In fact, there are market analysts who specialize in competitive intelligence because it can be so difficult to obtain. However, anyone in a marketing role should maintain a general level of awareness about competitors and what's happening in their market, and there are fairly easy ways to do this. Marketers can learn a lot directly from competitors, such as reading their Web sites, following them on social media, and monitoring press releases and other published content to understand what they are communicating to the market and to prospective customers. Information can also come from industry-focused newsletters, blogs, social media conversations, reports, conferences, and other forums that discuss new developments and key players in a product category or market.

## **Marketing Research**

Marketing research is a systematic process for identifying marketing opportunities and solving marketing problems, using customer insights derived from the collection and analysis of marketing information. Marketing research identifies the problem to be solved or the opportunity to be explored, as well as the information required to address research questions. It also involves processes for collecting the information, analyzing it, identifying insights, and reporting findings and recommendations to those who will take action based on the results.<sup>[3]</sup>

Marketing research may cover a full spectrum of topics related to customers, products, and market dynamics, and it can use a variety of research methods (which will be discussed later in this module). In general, marketing research requires some additional information beyond what marketers have at their



fingertips (like, say, internal data). Sometimes it is necessary to collect new primary data directly from target audiences, such as current or prospective customers. In other situations, marketing research uses secondary data captured previously by another organization. Marketing research may incorporate internal data and/or competitive intelligence in order to provide a more complete answer to a marketing problem or question.

#### **Question#4:**

Why Decision Making is an important factor to run an organization. Explain your answer with the help of a proper example.

#### **Answer:**

For your business to be successful, those in charge must create a secure and sure environment for clients and staff. To accomplish this, leaders need to be good decision makers and understand the importance of decision making in business.

#### **Factors:**

##### **1. You get to make better choices:**

Example:

- When you're an able decision maker from the get-go, you'll be much more likely to make better decisions.
- These decisions will always keep your businesses well-being in mind.

##### **2. It helps you with the big decision:**

Example:

- Often, as a leader within a business, big decision that could potentially impact the health of your organization need to be made.
- These hard decisions can affect the life of multiple employees, not to mention your own job security.

##### **3. You learn to understand the difference between what's rationale and what feels right:**

Example:

- A gut feeling can certainly be a key part of your final decision in business.
- However, it just can't be the only thing that drives a course of action.

##### **4. It saves you time and money:**

Example:

- When a business leader is a good decision-maker, they can save the company tremendously in time and money.

- A quick decision made by the organization's leading team causes the staff underneath them to work more efficiently.

#### **5. Your employees get more confident:**

Example:

- Show your employees that you are a good decision maker that you can lead them down the path to success.
- You'll see how confident they'll be in following you even through the darkest of times.