

Name: EDIRINVERERE OKPIKPI

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Students number: 3078829

Assignment: 1

1. Differences between data and information

Data

Data is raw fact. It simply as no meaning beyond its existence. Data is basically rubbish which one doesn't understand except through converting them to information. An example of data is random numbers (1483975).

Data is not organized that is why it is called data. Always scattered and random until it goes through data conversion and becomes information.

Observation and recording is done to obtain data

Data cannot be summarized.

Data is not easily understood.

Data is usually at the early stage and which can be a basis for further analysis

Information

Information is processed data one which can be understood by humans. An example of information is a telephone number (+1(204) 274-7453).

Information is organized, one of the most major characteristics of information.

Analysis is done to obtain information.

Information can be summarized.

Information is clear and easy to understand

Information is always at the final stage and is the result of the analysis.

Characteristics of information

- It is timely: information always gives you a precise time of events.
- It is accurate: information is always accurate, it must give u the correct and useful thing to use unless the data input was wrong then the information will be wrong because information works with the input of data.
- Must be useful: that is the main aim of information, to be useful. Information without use is just raw fact.
- Information must be whole: if information is not whole its simple data, that's why it is called information.

2. what are data entities?

Data entities are objects, places, people or generally anything one keeps information about.

Examples

- Books: keeping accounts for them, how many are available, how many have been sold etc.
- Farms: keeping accounts on the cattle, the goats, the fowls, how many containers of milk is produced daily.
- Phones: keeping information about them like how many types of phones are available, is it an apple product, Lenovo or Samsung.
- Patients in the hospital: information kept about them are how many patients need a certain medicine, how many are infected are infected with a certain type of disease etc.
- Football team players: keeping record on all of them based on their height, strength, stamina, speed etc.

What are attributes?

An attribute which is also known as **record** is an entity that information is kept about. In the table view an attribute is the row, the horizontal lines on the table. For example:

Type of car	Number of cars	Price	Engine	Max. speed
Maybach- Mercedes	20	\$150,000	V8	300 mph

In the above table the maybach is the entity, while the other fields in the table are the information about the entity.

what is an entity relationship diagram?

An entity relationship diagram is a diagram or representation of how data of different entities relate with one another. It may be one or more things the have in common to relate.

An example of an ERD from a hospital

MEDICINE		PATIENT	
NAME	Lipitor	NAME	John Nag
SERIAL #	205737	AGE	24
AMOUNT	Daily	SICKNESS	Heart problem

3. Database

NAME	DATE OF BIRTH	WEIGHT	GRADE
Johnson Janice	Aug 13, 1979	220lb	13
Jin xiao	Nov 16, 1980	130lb	11
Peter chow	Jan 26, 1976	160lb	10

Worker Id	Animals	Years of work
45	Zebras	3
	alligators	2½
56	Zebras	6
	Lions	1
89	Elephants	9
	Chimpanzees	1
	Lions	1

4. How Information Can Be A Competitive Advantage For An Organization

Information is a very powerful tool in every work one does. Information gives one a wider understanding about a particular thing, it gives insight into that which seems unclear. Information lets one fully understand the “properties” of thing in question, thus enabling the user to fully utilize that he or she is working with. This are some of the reasons why information can be a source of competitive advantage for organizations.

In the present world we live in, various organization now exist to provide some sort of service to the populace. However with the rapid increase in population worldwide a single organization cannot provide these services to all, this brings about establishment of thousands of other organization if not millions, providing the same kind of services. For a business organization to maximize profit she has to “out-do” her competitors, such an organization will always look to improve by carrying out research, observations survey and so much more just to obtain the information she needs to be ahead of her competitors.

Take for instance, survey. An organization that invest in industries to make income needs to gather information about the kind of industries to invest in that will “yield” the best results. If such an organization decides to carry out a survey on ten million people to know the wants in scale of preference of the people about the good or services that are being provided by the industries they are considering investing in the result of this survey will give the organization a clue of what the populace want hereby knowing the most “fruitful” industries to invest in. This piece of information in form of survey has given this organization an upper hand.

Furthermore, if one is to consider the pace at which the world is advancing in technology one would discover that breakthrough. Information has difference stages, I will like to call stage one; the primary stage, stage two; the secondary stage and lastly stage three; the beginning of the final. All organizations may have the information at the primary stage, some may now decide to go deeper, do some more research to get more information let us say about a technology and see how with this information gotten from the research they can bring an innovation that will gain the attention of the populace and “maximize” profit. Some organizations might stop there, some may proceed to the beginning of the final stage as we all know that no one can fully know about something that was discovered as an unknown thing still awaiting discovery. If this organizations now decide to find for information by careful observation and more research and this leads to successful results these firm will have an advantage over the others.

In addition, smart organizations drill themselves in receiving information from their source very early in order to outwit their competition and be the first to act on this information such information are usually one to help improve the service and gain more public attention.