

Basic Concepts and Definitions

Database: is an organized collection of logically related data

- It may be of any size and complexity.
- Contains data, information, or both

Data: facts concerning objects and events that could be recorded and stored on a computer media.

- Example: a salesperson storing customer name, address, and number.
 - These are examples of structured data whose most important data types are numeric, character, and dates.
- Another form of data is called unstructured data, or multimedia data.
 - Some examples would be gps info, tweets, document, photos, sound, video, etc.
- A more appropriate definition for data would be “a stored representation of objects and events that have meaning and importance in the user’s environment.”

Data vs information

- Information: is data that has been processed in such a way that the knowledge of the person who uses the data is increased.

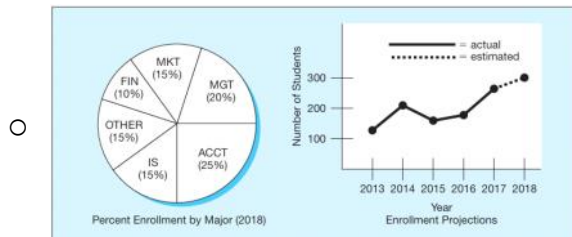
- | | |
|--------------------|-----------|
| Baker, Kenneth D. | 324917628 |
| Doyle, Joan E. | 476193248 |
| Finkle, Clive R. | 548429344 |
| Lewis, John C. | 551742186 |
| McFerran, Debra R. | 409723145 |

 - This would be considered data but not information since we don’t know what the numbers mean in context.

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Course:	MGT 500	Semester:	Spring 2018
	Business Policy		
Section:	2		
Name	ID	Major	GPA
Baker, Kenneth D.	324917628	MGT	2.9
Doyle, Joan E.	476193248	MKT	3.4
Finkle, Clive R.	548429344	PRM	2.8
Lewis, John C.	551742186	MGT	3.7
McFerran, Debra R.	409723145	IS	2.9
Sisneros, Michael	392416582	ACCT	3.3

- This would be considered information since you have context and an understanding of what the data means



■ Graphical information

Metadata: are data that describes the properties or characteristics of the features/attributes and the context of that data.

- Some examples of properties could be name, definition, length/size, and allowable values.
- Metadata describing context could be source of data, where data is stored, ownership, and usage
- "data about data"

TABLE 1-1 Example Metadata for Class Roster

Data Item			Metadata			
Name	Type	Length	Min	Max	Description	Source
Course	Alphanumeric	30			Course ID and name	Academic Unit
Section	Integer	1	1	9	Section number	Registrar
Semester	Alphanumeric	10			Semester and year	Registrar
Name	Alphanumeric	30			Student name	Student IS
ID	Integer	9			Student ID (SSN)	Student IS
Major	Alphanumeric	4			Student major	Student IS
GPA	Decimal	3	0.0	4.0	Student grade point average	Academic Unit

- Notice that metadata is simply information about the features in the database
- To retrieve info about the metadata is about the same as retrieving info about the data.
- Metadata is very important because it gives us context.