INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS

Week 2

August 28

IF YOU CANNOT CONNECT TO ENTROPY OR CLASS WEB SITE

- Check your wireless network

- You must be on hawkwifi, not seahawkguest

WHAT SHOULD YOU DO THIS WEEK?

- Today
  - Complete Mini Quiz on Syllabus
  - Register in Poll Everywhere

- Tuesday
  - Read Chapter 3 / Appendix C
  - Class Discussion Question #1

- Next Thursday
  - Mini Quiz on Chapter 1
  - Start on Project 2

CHAPTER THREE

Databases

Data - Facts

TYPES OF DATA

Data	Represented by
Alphanumeric data	Numbers, letters, and other characters
Image data	Graphic images and pictures
Audio data	Sound, noise, or tones
Video data	Moving images or pictures

DATABASES

- **Database:** organized collection of data.

- **Database management system** (DBMS): provides means for creating, maintaining, and using databases.

BENEFITS OF DATABASES

ACCURACY

- Less duplicate data

- More accurate data

BENEFITS OF DATABASES

QUERIES

- Ability to ask questions (and save)

- Easy to sort

- Easy to build user friendly input & output screens

SPREADSHEETS VS. DATABASES

Spreadsheets Issues

- Unnecessary duplication

- Inconsistent data

- Difficulty in data retrieval and search

- Poor data integrity

- Errors

➢ Good for analyzing and displaying information visually

Database Issues

○ Requires more planning and designing

➢ Good for storing and organizing information

REDUCING DUPLICATE DATA

Manager			**Employee**			
Bill	1	Manager of Sales	Fred	2	Clerk	$23,000
Bill	1	Manager of Sales	Betty	3	Order Taker	$19,000
Bill	1	Manager of Sales	George	4	Secretary	$20,000
Rose	5	President	Sam	6	Vice Pres.	$45,000
Rose	5	President	Judy	7	Treasurer	$39,000

If Bill's title changes,
how many rows in Excel would have to change?

CREATE TWO TABLES AND LINK THEM TO ELIMINATE DUPLICATES

The records of each entity must somehow be linked:

Manager (many)

Bill	1	Manager of Sales
Rose	5	President

(one)

Employee
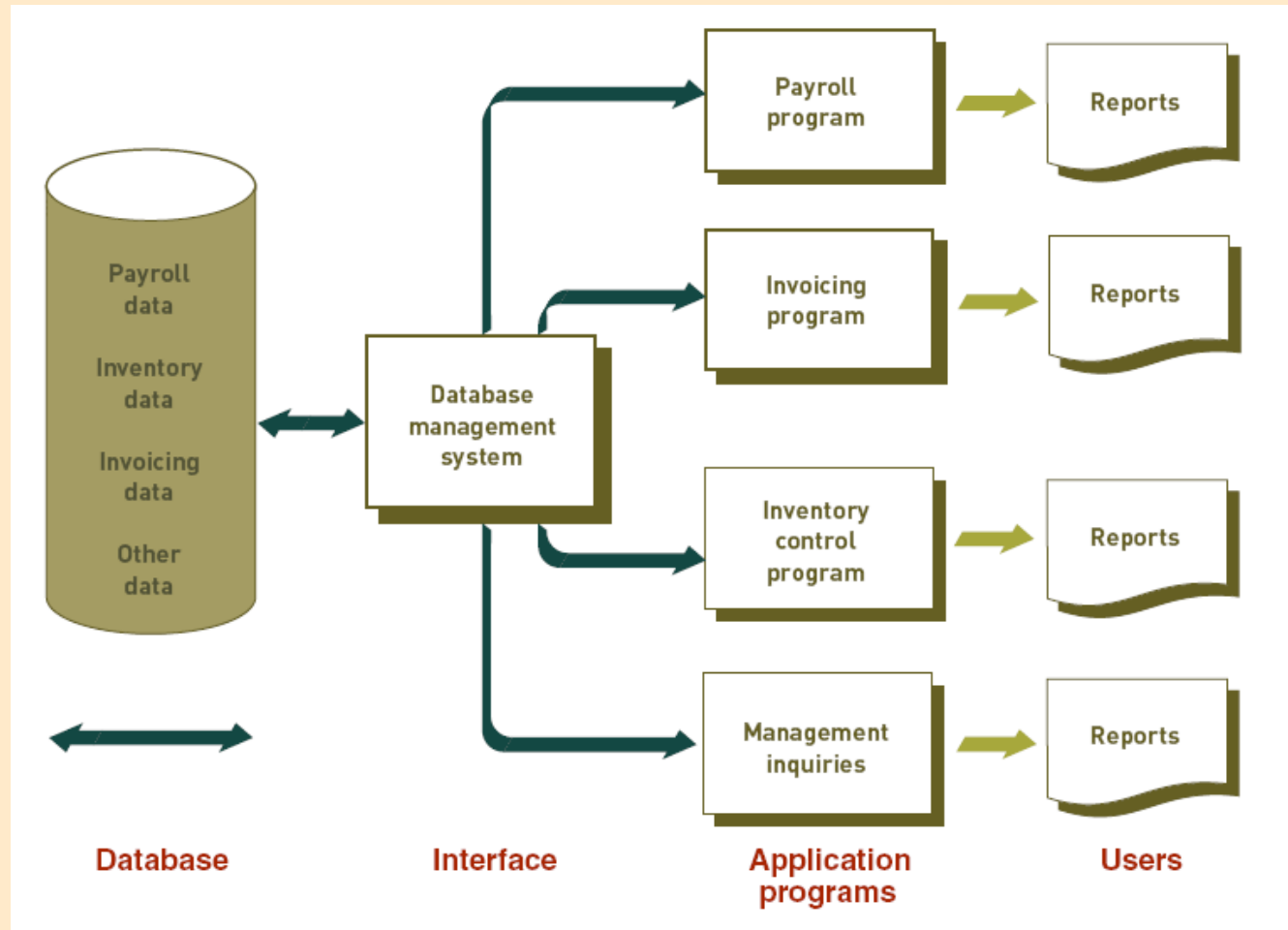
Fred	2	Clerk	$23,000
Betty	3	Order Taker	$19,000
George	4	Secretary	$20,000
Sam	6	Vice Pres.	$45,000
Judy	7	Treasurer	$39,000
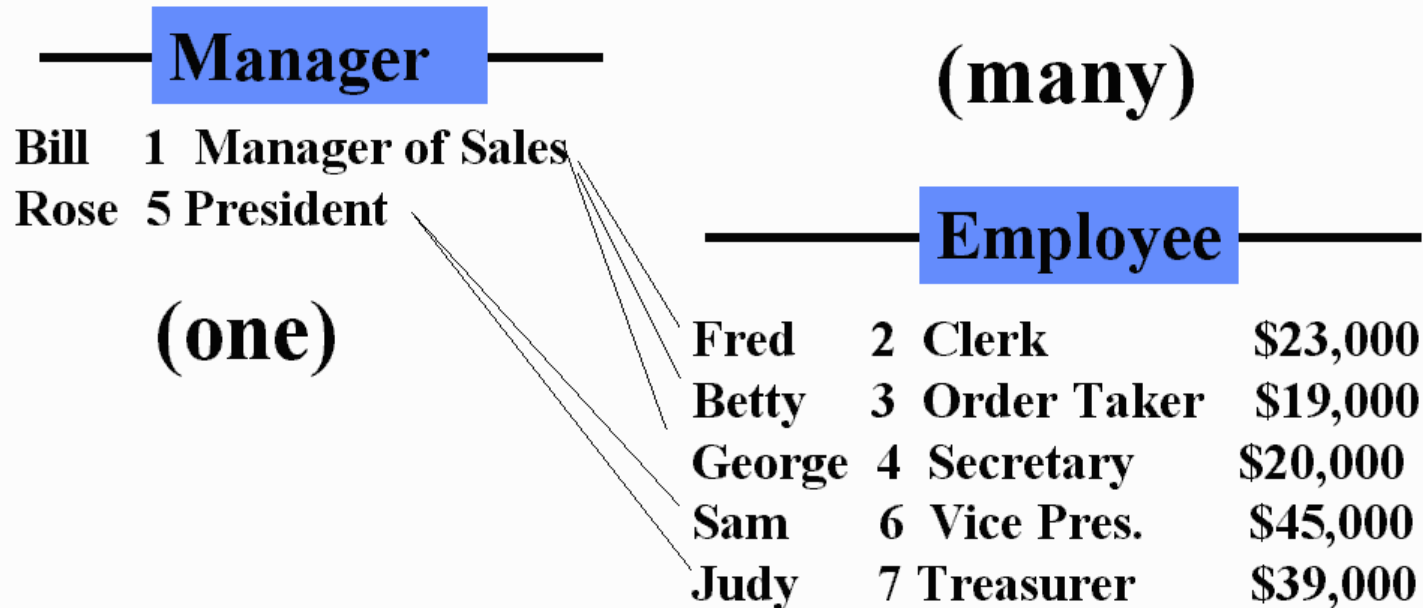
THUS

- **The fewer times we have to enter the same data, the less chance for errors**

- Consider your grades, how should UNCW store them?

- Excel?

DATABASE SYSTEM

How many times is an inventory part description entered into the above data management system?

DATABASES VERSUS SPREADSHEETS (IMPORTANT)

1. Row in a spreadsheet is called a record in a database

2. A column in a spreadsheet is called a field or attribute in a database

3. One sheet in a spreadsheet is called a table or entity in a database

4. All the worksheets make up a spreadsheet, while all the tables make up a database

ACCESS SOFTWARE

- Part of the MS Office Package

- Available in all computer labs on campus

- **If you have a MAC, recommend you work in lab**
  - **Help for MAC users – PDF on website or workbook**

CREATING A TABLE IN A DATABASE (SHEET)

- Fields / entities
  - Column Heading
  - Type and size (number, string)
    - Reduces input errors
  - Input Mask – Format (optional)
    - *###-###-#####*

ClubMembers	
Field Name	**Data Type**
FirstName	Short Text
LastName	Short Text
Email	Short Text
Office	Short Text
DateOfBirth	Date/Time
DuesRemaining	Currency

General Lookup

Field Size	50
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Text Align	General

DEFINE THE FIELD (COLUMN) TYPES / SIZES

Name	Type	Size	Input Mask?
First Name	Text	30	
Last Name	Text	50	
Email	Text	75	
Zip	Text	10	#####-####
Telephone	Text	12	###-###-####
Birth Date	Date		mm/dd/yy
Amount Due	Currency		

- Types:
  - Text
  - Numeric
    - Integer
    - Decimal
    - Currency
  - Date
  - Yes/No
  - Hyperlink

PRIMARY KEY

- A <mark>primary key is unique</mark>, no two records (rows) would have the same ID

- We need to define one column (or sometimes two columns) that contains the Primary Key

- Primary keys are used link to other tables
  - The same field (column)
  - Reduces duplicate data

- Some tables have 2 primary keys – called **Concatenated** Keys
  - (dues payments , who & date)