Announcements

- Due date:
  - Monday, March 17, before 11pm
    - Lab 13 (extra credit)
    - Lab 14 (required)
    - Project 3B

Announcements

- Quiz 9, question 10
  "An XSL sheet must contain a reference to the XML file."
  - The answer should be *False*.
    - Each XSL stylesheet can be used by many XML files. The XSL stylesheet is specified in the XML file, not the other way around.
  - Your corrected scores are now in Gradebook as of 10am.
- Thanks for telling me about it!

Announcement

- Trying to open some of your Project 3A's,
  - The TA's get "Error: unrecognized database form"
- When you open a database, many files are opened (structure, data files for each table, query, form, report).
- You can't copy a database unless everything has been saved. Safest to close it first.

Announcement

- DA will have office hours on Monday
  - MGH 430 from 1:30 - 4:30pm

Today's Agenda

- Course wrap-up (5 minutes)
- Lecture evaluations (20 minutes)
- Reflection Paper (10 minutes)
- Project 3B hints & solutions (optional)

Fluency

Fluency has been a huge amount of work ... have you learned anything???

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Goals of FIT100

FIT100 is designed to …

* Make you better computer users today
* Prepare you to learn more IT as you need it throughout your life
* Upgrade your thinking, making you a better reasoner, problem solver, trouble-shooter, etc.

How have we done?

The Topic List ...

We covered the following topics

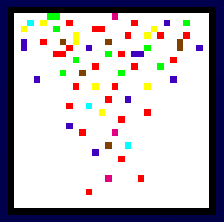
* Importance of vocabulary: abstraction
* Learning an app on your own: click/blaze
* Basics of the Internet, domains, TCP/IP, ...
* HTML programming: tags, tags, tags
* Structuring information, queries, Google
* Truth or Fiction? Bogus Web Page
* Debugging guidelines … how to do it

The Topic List ...

* Digital representation -- using bits
* Computer basics and Silicon technology
* Algorithms—sorting with CDs
* Programming ideas—Mad Libs
* Building a GUI in HTML/JavaScript
* Functions—biggest idea in software
* Iteration—looping over & over & over &
* Animation, making things happen

The Topic List ...

* Problem solving, PERT charts, examples
* JavaScript summary
  - loops, prefetching, animation, mouseOver, functions, ...



New

Emoticons

:-) ;-) :-(=8-O

Adding a smile to
Adding a wink to
Adding a frown to
Makes

Memory Bank

a convenient table of all the computations I can never remember

Tue Feb 17 17:18:33 2004

Celsius to Fahrenheit	Celsius: Fahrenheit:
Fahrenheit to Celsius	Fahrenheit: Celsius:
Body Mass Index ◉English ○Metric	Height: Weight: BMI:
Electronic Coin Flip	Flip Outcome: Totals: H 0 T 0
Pick A Random Number From 1 To 10	Pick Outcome from the range:

IMPORTANT LINKS

References ... Cambridge Dictionary Thesaurus
Classes ... Fluency Class Periodic Table Countries for Geography

I'm 619255113 seconds old. What *am* I doing with my life?

The Topic List …

* Digital Media, colorizing, binary, MP3,
* Database basics, operations on tables
* Logical Databases—views and queries
* DB design chalk talk—Student Athletes
* Netiquette, viruses, worms, email
* Privacy —opt-in/opt-out, you decide
* Encryption—hiding secrets from everyone
* Do computers think? Turing tests
* … and today the wrap-up

Fluency Topics

Fluency topics can be classified as

* Skills
* Concepts
* Capabilities

Skills

Skills are the ability to use computers today to solve your problems

- You have learned new applications … sFTP, Photoshop, Excel, Access, …
- Better yet, you've learned how to learn applications: "Click Around," "Blaze Away"
- You should be an aggressive, confident user
- Could you learn your next application on your own?

Concepts

Concepts are the foundation of future learning … you should be ready

- You know how the Internet's TCP/IP works (postcards), how a computer works (F/E cycle), how JavaScript makes animations
- And privacy, netiquette, writing queries, …
- We don't know what the next technology will be, but it will look familiar to you because you'll see ideas you know

"Popularized" technology should be understandable

Capabilities

The most ambitious goal of this class is to expand your thinking

- Reasoning, debugging, finding information, designing pages or databases, problem solving, research, expecting unexpected,…
- It's not easy to learn these things … was debugging ever fun???
- All capabilities will be used beyond IT!

By surviving FIT100, you've become a better student!

Majors at UW

Where to go from here…

Majors	Dept.	Focus
Computer Science and Engineering	CSE	- Programming - Animation - Etc.
Informatics	iSchool	- Networking - Human-Computer Interaction - Web Design (organizing information, user needs)
DXarts	Art	- Web Design (visual)
Technical Communication	TC	- Web Design (content) - Documentation for software

FIT Pioneers

Our experience in this class will make FIT100 better for UW students, and students across the world

When you do something clever because of FIT100, tell us:

daclem@u.washington.edu
snyder@cs.washington.edu

And now the evaluation

We'll do course evaluation …

- It's voluntary, but I hope you do it
- Two forms, white and yellow
- Use #2 pencil to bubble in results
- I need a volunteer to collect evals
- In 20 minutes we will do the 4th reflection paper

I will leave … and come back in 20 minutes

Reflection Paper 4

- You have ten minutes
- When you are done
  - Pick up reflection paper 3
    - If you haven't already!
  - Wait for Project 3B discussion (optional)

Hints and Solutions

PROJECT 3B (OPTIONAL)

Project 3B Part 1

- Queries
  - Pay attention to language in questions 1-10.
    - If it asks for a "list", you do *not* need *count* or *avg* or *group by*
    - If it asks for the "number of _____"
      - Click the Σ (Greek *sigma*, or sum)
      - For **COUNT**, uncheck all the "Show" checkboxes or you will get a list

Project 3B Part 1

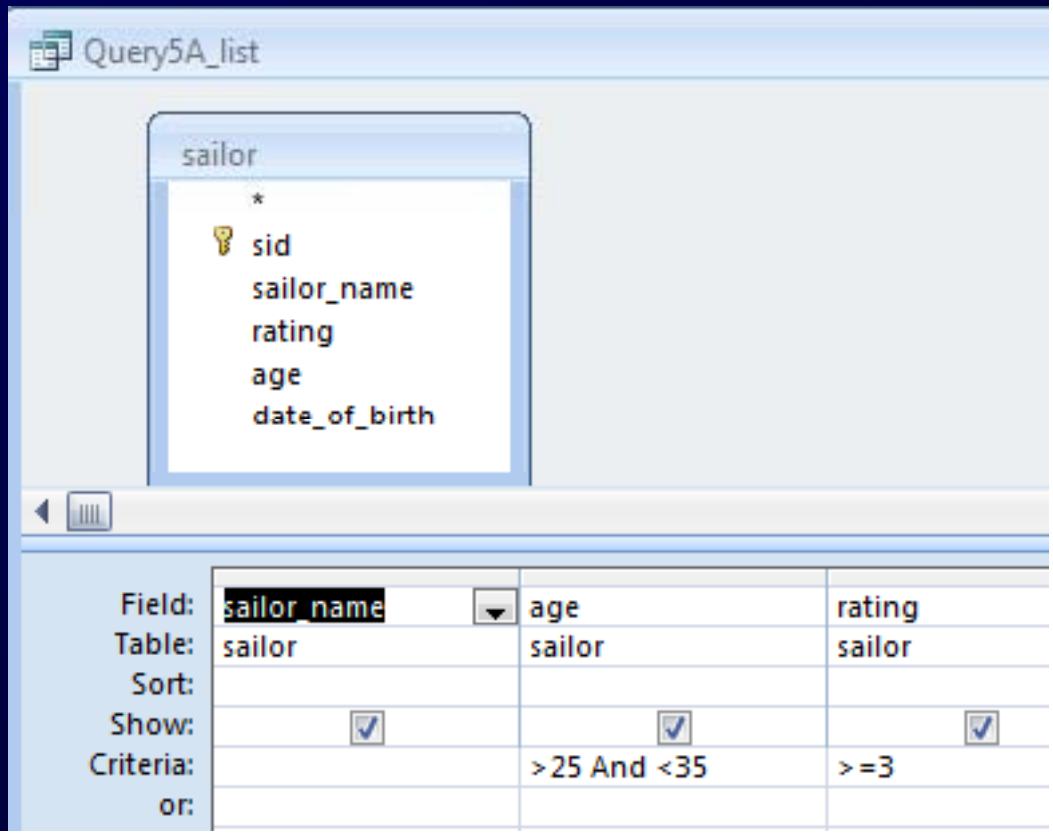
- Query 5
  - How many sailors are between 25 and 35 years old and have a rating of 3 or greater?

Project 3B Part 1

- Query 5
  - How many sailors are between 25 and 35 years old and have a rating of 3 or greater?
    - What fields are needed?
    - Which rows?
    - How do you get how many?
  - Start with listing the sailors

Project 3B Part 1

- Query 5
  - List sailors who are between 25 and 35 years old and have a rating of 3 or greater.
    - Make sure all the criteria are on the Criteria line, which adds in AND for all
    - Check all boxes to show all columns



Project 3B Part 1

- Query 5
  - List sailors who are between 25 and 35 years old and have a rating of 3 or greater.
    - We see two rows or records

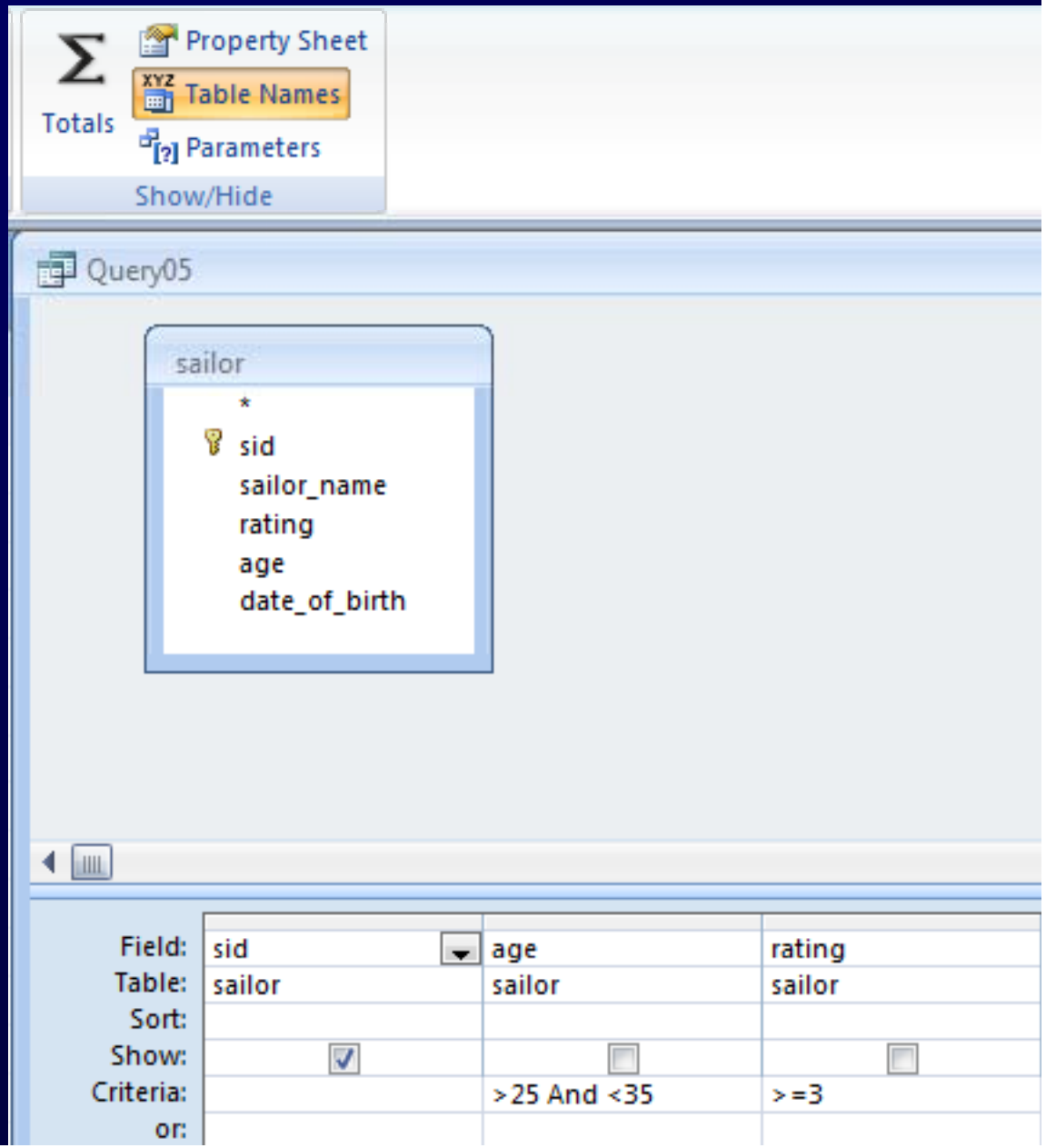
Query5A_list

sailor_name	age	rating
Andy	$25.50	8
Amy	$25.50	3
*		

Project 3B Part 1

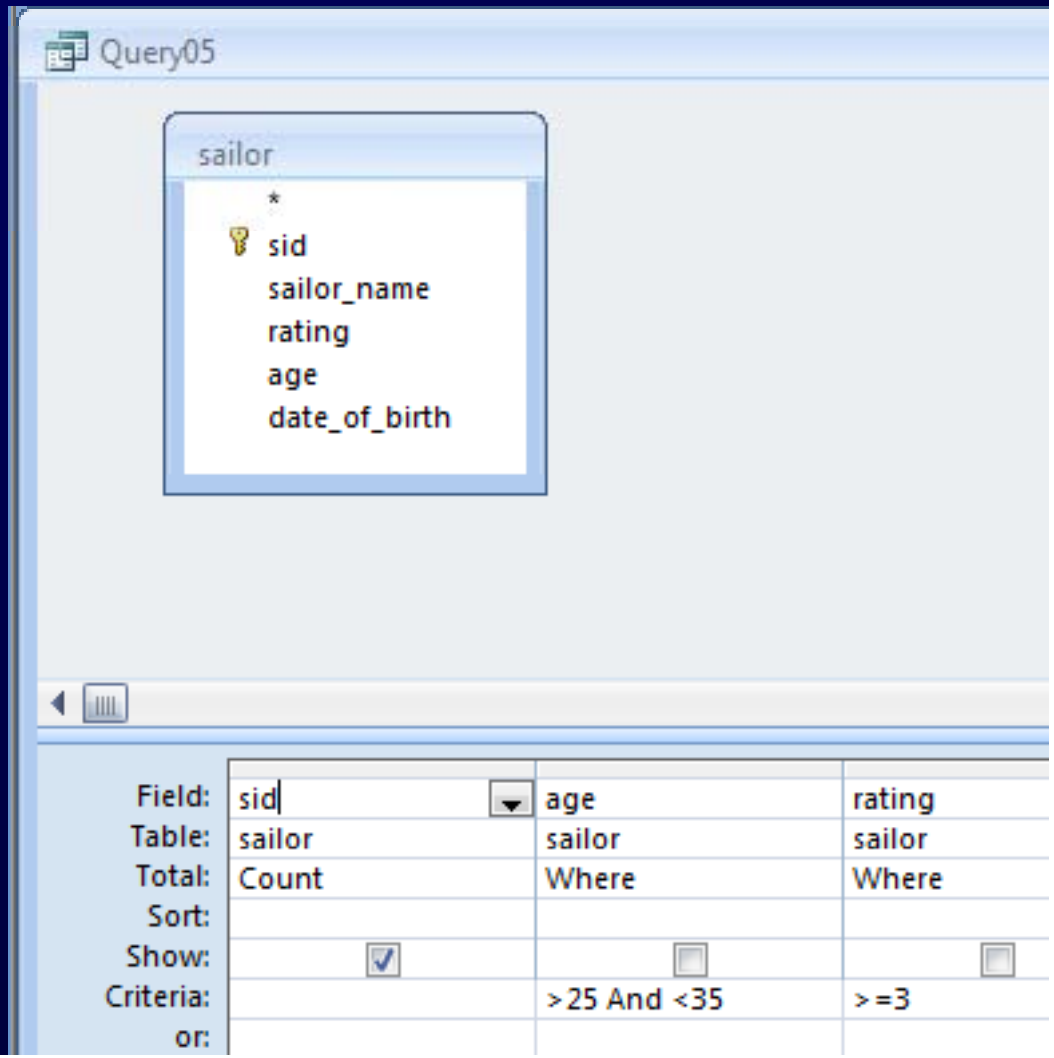
- Query 5
  - How many sailors are between 25 and 35 years old and have a rating of 3 or greater?
  - Now count the sailors
    - Remove the column for sailor names
      - Not needed
    - Remove the checks below age and rating
      - Don't show those columns
    - Add the sid column
      - sid is the column you will count

- Query 5
  - How many sailors are between 25 and 35 years old and have a rating of 3 or greater?
  - Click Σ



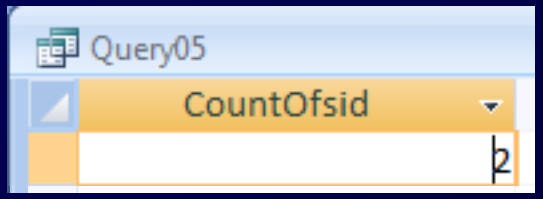
Project 3B Part 1

- Query 5
  - How many sailors are between 25 and 35 years old and have a rating of 3 or greater?
    - Total Row
      - Change to Count for sid
      - Change age and rating to Where



Project 3B Part 1

- Query 5
  - How many sailors are between 25 and 35 years old and have a rating of 3 or greater?
    - Count sid



Project 3B Part 2

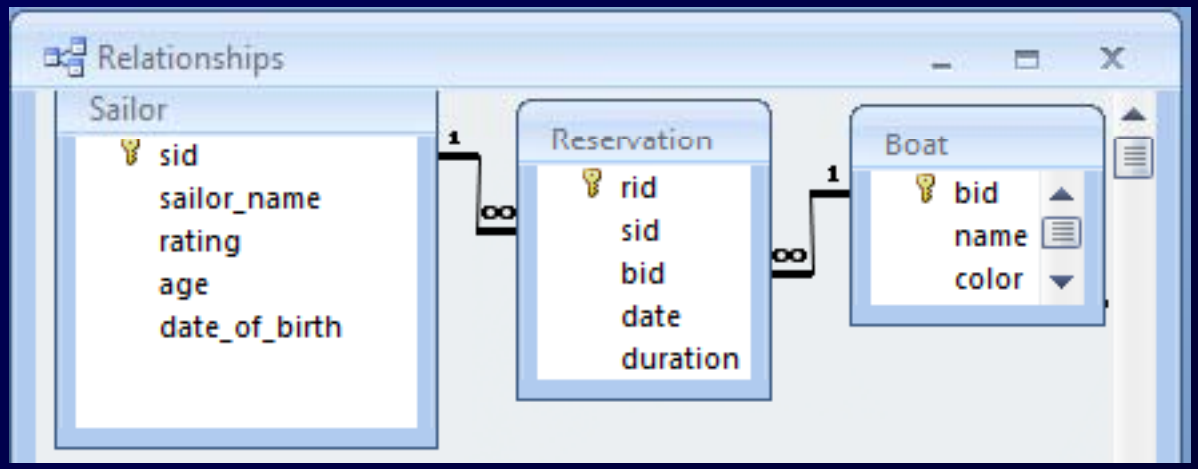
- Which attribute, or column, is not specified properly?
  1. Look closely at the results for Query 3. What looks wrong? (Hint: data type)
  2. Recall that databases never store anything that can be calculated.
  3. How would you change this column to keep it accurate, year after year after year—without annual, manual updates?
  4. Think about your personal algorithm for calculating this attribute for yourself or anyone else

Project 3B Part 2

- Which attribute, or column, is not specified properly?
  5. Do *NOT* remove the original column or it will mess up your earlier queries in Part 1!
  6. Instead, *ADD* the new column with its proper data type.
  7. You do *not* have to create an expression to calculate this value

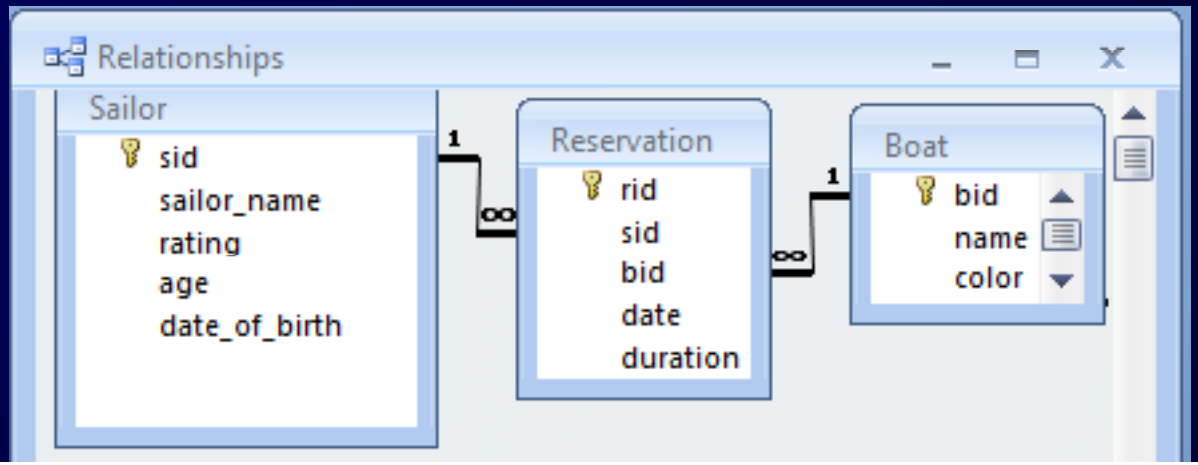
Project 3B Part 2

- Extending the database
  - ER means Entity-Relationship, like you see in Database Tools > Relationships in Access



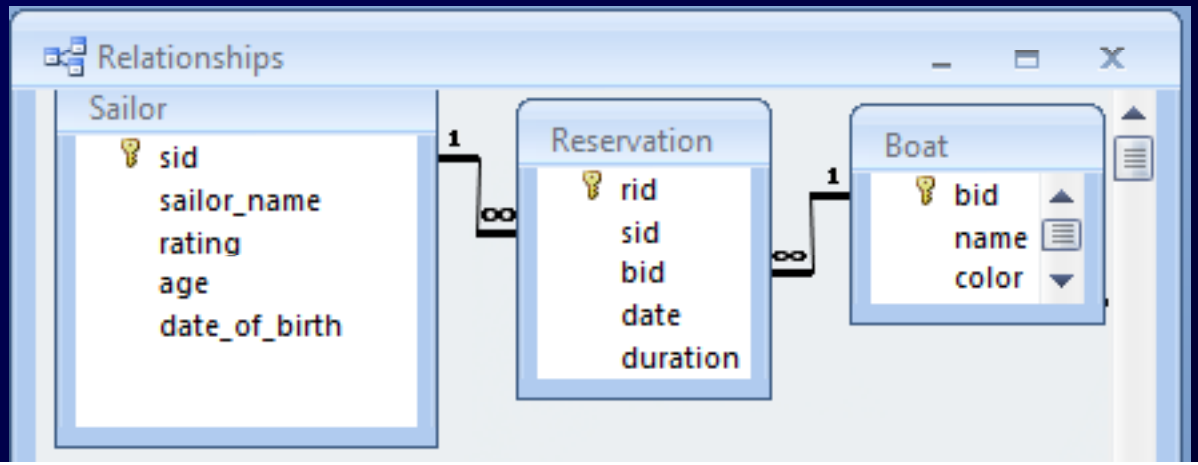
Project 3B Part 2

- Extending the database
  - Currently Sailor has rating
  - What else do we need in order to make sure a Sailor runs only boats he or she is qualified for?



Project 3B Part 2

- Extending the database
  - Currently Sailor has rating
  - Need to be able to compare Sailor.rating with a rating for the boat model



Project 3B Part 2

- Extending the database
  - How would we add a boat model rating?
  - Boat model is related to the boat table
    - If you store the boat model in the boat table, what happens?
      - Several boats have the same model
        - So you are repeating information (redundancy)
    - Solution: create a new boat model table
      - So you only have to store the information once

Project 3B Part 2

- Extending the database
  - The new boat model table has
    - MID
    - Model
    - Rating
  - How do you relate the boat model to the boat table?
    - Exchange keys (primary and foreign keys) between the Boat and Model tables

Project 3B Part 2

- Extending the database
  - The new boat model table has
    - MID
    - Model
    - Rating

Project 3B Part 2

- Extending the database
  - How do you relate the boat model to the boat table?
    - Exchange keys (primary and foreign keys) between the Boat and Model tables
      - Add MID to Boat table
      - Why not add BID to model table instead?
        - Because more than one BID would have to be added for each row in the Model table
        - Many boats have the same model

Project 3B Part 2

- Extending the database
  - Data types
    - Primary keys:
      - Autonumber so each new row has a new number: 1,2,3,4….
    - Foreign keys
      - Were autonumber in their own table
        - » Example, MID in the Model table
      - Number when it's a foreign key
        - » Because you don't want to add to the number
        - » You want the same number