

# Character Datatypes

MAD 202



# Character Data Types

- Character string (string) types are used to represent text
- Strings are:
  - Ordered sequences of zero or more characters
  - Length can be fixed or varying
  - Is Case sensitive
  - In SQL statements strings are surrounded by **single quotes**
  - The length of a string is an integer between 0 and length



# Character Data Types

- CHAR
  - (also called CHARACTER)
  - When specifying you provide a width – the number of characters long the character string can be

CHAR(50)

Allows a character string of up to 50 characters.

- *Any excess characters are truncated from the right.*
- *Fixes length strings are sorted and manipulated faster than variable length*



# Character Data Types

- VARCHAR
  - Varying character requires a width
  - Only uses as much storage space as is required by the object or up to the set amount.
- VARCHAR(50)



# When to use string or numeric

- Are you going to perform arithmetic calculations on the values?
- For example:
  - US Postal codes are all digits – 90210. Would you ever add them? No – this is a good place to use a set sized character (they will always be 5 characters in length)
  - Telephone numbers – 555 555 5555. All numbers (try not to save spaces or special characters – we need them, computers don't. We can format results when we get it back). No – this is another good place to store a set sized character (they will be 10 characters in length)



# DBMS Character String Types

- Access – text, memo
- SQL Server – char, varchar, text, nchar, nvarchar, ntext
- MySQL – char, varchar, national char, national varchar, tinytext, text, mediumtext, longtext

