

# Data Types

## Definitions

- **Type**
  - Collection of values
- **Simple Type**
  - No subparts
- **Aggregate Type**
- **Data Item**
  - A member of a type

# Data Type

- Collections of operations to manipulate the type
- For example:
  - An Integer is a member of the integer Data Type
  - Addition is an operation to manipulate the integer

# Abstract Data Type

- The realization of the data type as a software component
- Notice that it does not imply *how* the data type is implemented

# Data Structure

- The implementation for an Abstract Data Type
- Uses an interface to define the operations the Data Structure supports
- Use data hidden by encapsulation from the user

# What do we do?

- Structs
  - What's good about them?
  - What's bad about them?
- Is there a better choice?

# Classes

- What are classes?
- Why are they better than structs?
- How do you write a class?
- How do you find a class?

# Key Words

- class
- private:
- public:
- Constructors/Initializers
- Destructors/Finalizers
- Mutators
- Reporters