CSE 121: Sickness Edition!

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Autumn 2022
Announcements, Reminders

• **Creative Project 0** due last night! How did it go?
• **Programming Assignment 0** released; Due October 11th

• **Reminder**: Course website + Ed for all; not using Canvas
• **Be respectful**: In lectures, arrive & leave on time
Last Time

• Types & Simple Expressions
  • int, double, String, boolean
    • Mixing Types ➔ convert, or risk data loss!
  • Operators
    • For String & numericals
    • Boolean Operators
• Precedence/ P MMDAS
Plan for Today

• Variables & Strings
  • Declaration & Initialization
  • Manipulation
  • Strings & chars
  • String Methods

• Evermore Practice
  • Work with folks around you!
  • TAs will be wandering around 😊
Variables

Containers that **store** values of a specific data type.

To create a variable:

1. **Declaration**: Specify a data type (e.g. int, double, or String) and a name/label
2. **Initialization**: Store a value into it

```java
int version; // declare
version = 5; // initialize

// declare AND initialize
int version = 5;
```
Variables

They’re made to be manipulated, modified, re-used!

```java
int myFavoriteNumber = 27;
int doubleFV = myFavoriteNumber * 2;
myFavoriteNumber = myFavoriteNumber + 3;
myFavoriteNumber = doubleFV;
```
Work on Variables Problems

• Ed lesson linked from the course calendar
• Work with the folks around you!
• TAs will be walking around to help
Strings

• String = sequence of characters treated as one, yet be indexed to individual parts
• Zero-based indexing

• Side note: new data type! char, represents a single character, thus use single quotes ;)

\[\text{f o o b a r}\]

0 1 2 3 4 5
String Methods

- Methods used to manipulate/extract information from Strings
  
  Usage: `<string variable>}.${method}(<parameters>)`

- Examples:
  - `length()`: returns number of characters in `String`
  - `charAt(int)`: returns char at a specific index (int) of `String`
  - `indexOf(char/String)`: returns int index position of char/String
  - `equals(String)`: returns boolean whether Strings fully match or not
  - `contains(String)`: returns boolean whether `String` fully present or not

- **Note**: Methods do **not** modify the `String` variable they’re called upon. Rather, you receive information!
Work on String Problems

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