CSE 121
Elba Garza
Winter 2023

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#3005 829
Announcements, Reminders

• **Creative Project 0** due last night! How did it go?
• **Programming Assignment 0** released; Due January 17th

• **Just joined CSE 121?** Resubmission policy is your friend!
  See more in syllabus.
Last Time

• Types & Simple Expressions
  • \texttt{int, double, String, boolean}
    • Mixing Types $\rightarrow$ 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 and 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
```

```java
// 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 ;)

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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

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