CSE 121

Elba Garza

Winter 2023

Join at
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#3005 829

PAUL G. ALLEN SCHOOL
OF COMPUTER SCIENCE & ENGINEERING

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
  - int, double, String, boolean
    - Mixing Types ➔ convert, or risk data loss!
  - Operators
    - For String & numericals
    - Boolean Operators
  - Precedence/ P$_e$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 <u>store</u> 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

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


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

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Variables
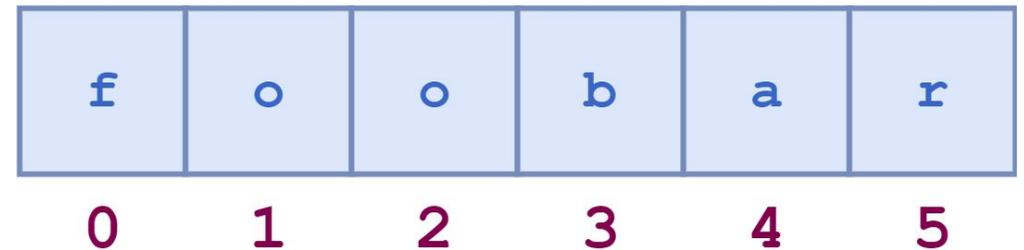
They're made to be manipulated, modified, re-used!

```
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 💣

f	o	o	b	a	r
0	1	2	3	4	5

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

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 <u>fully</u> match or not 👷
  - `contains(String)`: returns boolean whether `String` <u>fully</u> present or not 👷

- **Note**: Methods do <u>not</u> modify the `String` variable they're called upon. Rather, you receive information!

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