



# Week 2 Discussion

Wednesday, 1/15/20



# Reminders

PA 2 due Tuesday, January 21 11:59pm

# Today's agenda

**Quiz 1**

**PA 2 Overview**

Hourglass

Hawaiian Words

Recursion

File IO

Command Line Arguments

# Useful Classes in Java for IO

- File (`import java.io.File`)
  - allows you to open a file and do various file operations (e.g. check to see if it's a directory, hidden, etc, or rename it)
- Scanner (`import java.util.Scanner`)
  - a text scanner that allows you parse text from various input sources such as a File or InputStream like stdin
- PrintWriter (`import java.io.PrintWriter`)
  - allows you to print data more easily to various output sources such as a File or OutputStream like stdout

# Hourglass

```
[cs8bwi20] cs8bwi20ta12@ieng6-202.ucsd.edu:/home/linux/ieng6/cs8b
[cs8bwi20ta12@ieng6-202]:~:103$ java Hourglass 5
*****
 ***
  *
 ***
*****
[cs8bwi20ta12@ieng6-202]:~:104$ █
```

# Hourglass

- Requires one command line argument
  - width of the hourglass
- Using recursion, print the hourglass shape to the console
- Printing both the top and bottom will be done in one method
- **No additional methods are allowed**

# Argument Validation

You need to check the command line arguments in this order:

- If length of arguments is 0
- If length of arguments is greater than the required amount (1)
- Parse the width and make sure it is valid
  - Must be odd and  $\geq 1$

Use the `String` constants that we have provided to print! See the write up for the specific messages that you need to print in each error case.

# Aloha!

Say it as: Ah-loh-hah



# Hawaiian words

Hawaiian words can be difficult to pronounce.

Humuhumunukunukuapua'a sounds like someone has fallen asleep on the keyboard.

The language is actually simple:

- 5 vowels
- 7 consonants



# Vowels

Vowels	
a	sounds like <b>ah</b> . eg. Austin - ah-stin
e	sounds like <b>eh</b> . eg. egg - eh-gg
i	sounds like <b>ee</b> . eg. bee
o	sounds like <b>oh</b> . eg. obey - oh bay
u	sounds like <b>oo</b> . eg. mood - m oo d

# Vowels group

Vowel Groups	
ai	sounds like <b>eye</b> . eg. Ice
ae	sounds like <b>eye</b> . eg. Ice
ao	sounds like <b>ow</b> . eg. How
au	sounds like <b>ow</b> . eg. How
ei	sounds like <b>ay</b> . eg. Hay
eu	sounds like <b>eh-oh</b>
iu	sounds like <b>ew</b> . eg. Chew
oi	sounds like <b>oy</b> . eg. Soy
ou	sounds like <b>ow</b> . eg. How
ui	sounds like <b>ooey</b> . eg. Gooney

# Consonants

- w, p, k, h, l, m, n
- Pronounced like the English versions.

Example Words and correct output	
Word	Correct Output
aloha	Ah-loh-hah
Kakahiaka	Kah-kah-hee-ah-kah
Mahalo	Mah-hah-loh
E komo mai	Eh koh-moh meye
maui	Mow-ee
kane	Kah-neh
humuhumunukunukuapua'a	Hoo-moo-hoo-moo-noo-koo-noo-koo-ah-poo-ah'ah

# Pronounce.java

- Files that contain all the methods to convert hawaiian words into phonetic version.
- Many constants are provided, **do not** modify them.
- We recommend you to code the methods following the order of the write up.