CS 445

Rec 3

Agenda

1. General Announcements
2. Topics of This Week
    a. Set Operations (for Lab 2 context)
    b. Generics(<T>)
3. Working Session: Lab 2

General Announcements

1. Location/format of recitations & office hours are still up in the air...
    a. If given a choice, any preference between zoom and in-person?
    b. Will communicate the decisions later
2. Lecture notes shared on GitHub
3. Lab 2 & Project 2 are both up
    a. Lab 2 is due Jan 30th
    b. Project 2 is due Feb 3rd

Topics of This Week

1. **Set Operations**
    a. Union, Intersection, Difference, XOR
2. **Generics: one definition that applies to any data types**
    a. You will get a better understanding of <T> when doing project 2

Set Operations

Example

Set1 = {A, B, C, D}
Set2 = {B, C, D, E}

UNION
set1 + set2 = {A, B, C, D, E}

INTERSECT
set1 * set2 = {B, C, D}

DIFF
set1 - set2 = {A}, set2 - set1 = {E}

XOR
set1 xor set2 = (set1 + set2) - (set1 * set2)
= {A, E}
xor = union - intersection

Lab 2

union()
intersection()
difference()
xor()
doubleLength()
trimArray()
*contains()

Notes

- Hints on Union() and doubleLength() are given during lecture (see video directory)
- Helper function contains() to check the uniqueness of elements in a set
  - `static boolean contains(String elem, String[] set)`
- Recommended order:
  - doubleLength(), trimArray(), & contains() so that you could make use of loadSet()
  - Set operations