Welcome to ICS 111 Lab

Section 3 and 4

Week 5

Read through HW4 Assignment

Tuesday Outline

- Lab 3 Solutions Review
- Loops: for, while
- Enums
- HW4 Review
- Breakout Groups

Lab 3: Solutions

Loops: for

- Used when the number of iterations is known
- Parts of loop:
  - initialize variable int i=0;
  - Condition statement i<10
  - Incrementing i++

Working of a Loop in Java

Declaring & Intializing loop control variable

Checking condition

Incrementing loop control variable

```
for (int i +0: i<10 : i++) {

// Loop statements to be executed

}
```

Source: https://techvidvan.com/tutorials/java-for-loop/

Loops: while

- To be used when the number of iterations is unknown
- Usually needs some way to exit the loop (or else there is an infinite loop)

```
while (condition)
{
    statements
}
```

Enums:

- An enum (enumeration) is a constant value
- A special CLASS that represents a group of unchanging variables
- Can be declared as a separate CLASS or in class (see below):

```java
public class Main {
  enum Level {
    LOW,
    MEDIUM,
    HIGH
  }

  public static void main(String[] args) {
    Level myVar = Level.MEDIUM;
    System.out.println(myVar);
  }
}
```

- Source:http://tutorials.jenkov.com/java/enums.html
- Source: https://www.w3schools.com/java/java_enums.asp

Thursday Outline

- Strings and substring()
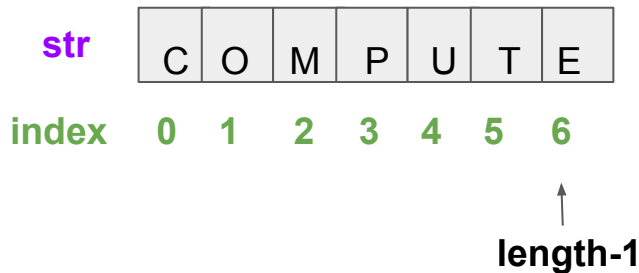
Strings and Indexes

- Strings :

  String str = "Compute";
  str.length() : returns length of string **str,** length is 7
  str.substring(3,6): returns values within the range, return "put"
  str.substring(3,str.length()-1): returns values within the range, return "put"

str	C	O	M	P	U	T	E
index	0	1	2	3	4	5	6

↑
length-1

NOTES:
1. Check substring() documentation in Javadocs
2. How can we use loops and strings?

Week 5: Resources

- HW 4:
  http://www2.hawaii.edu/~esb/2022spring.ics111/hw04.html

- Textbook PDF:
  http://bedford-computing.co.uk/learning/wp-content/uploads/2015/09/Java-for-Everyone-Late-Objects.pdf

- For Loops: https://techvidvan.com/tutorials/java-for-loop/
- Enums:
  - http://tutorials.jenkov.com/java/enums.html (with video)
  - https://www.w3schools.com/java/java_enums.asp