CSC116 – DISCUSSION 5

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LOGISTICS – PROJECT 1

- Project 1 → **Weather Calculator**
  - variables, constants, expressions
  - print statements via System.out
  - Scanner objects
  - Math class
  - equality, relational, and logical operators
  - conditional structures
  - debugging techniques, and
  - system testing (black-box testing)

LOGISTICS – PROJECT 1

- Deadline → June 4th, 11:45pm
- Late Deadline → -10 points → June 5th, 11:45pm

- Read requirements
- Design your program
- Implement your program (class constants are provided); and follow the Style Guidelines
- System test your program (starter file is provided)
- Submit your **WeatherCalculator.java** via Moodle

TOPICS

- Switch statements
  - switch
  - case
  - **break**
  - default
- Conditional expressions
  - result = someCondition ? value1 : value2;
- System testing for conditionals
- Strings
- Character operations
- Scanner with strings
  - next()
  - nextLine()

STRINGS

➤JAVA

```java
/**
 * Example that uses String objects
 * and String methods
 *
 * @author Jessica Young Schmidt
 */
public class StringExample {
    /**
     * Starts program.
     *
     * @param args command line arguments
     */
    public static void main(String[] args) {
        String question = "How are you?";
        String response = "I am fine. Thanks.";

        System.out.println(question.length());   // 12
        System.out.println(response.length());   // 18
        System.out.println(question.length()
            + response.length());                // 30

        String sub1 = question.substring(3, 7);
        System.out.println(sub1.toUpperCase());  // ARE

        String sub2 = response.substring(7);
        System.out.println(sub2.toLowerCase());  // ne. thanks.

    }
}
```

STRINGS

➤JAVA

```java
import java.util.Scanner;

public class ScannerExample {
    public static void main(String[] args) {
        Scanner console = new Scanner(System.in);

        System.out.print("Enter course: ");
        String course = console.next();
        System.out.println("You are currently taking " + course);

        System.out.print("Enter course: ");
        course = console.next();
        System.out.println("You are currently taking " + course);

        System.out.print("Enter course: ");
        course = console.next();
        System.out.println("You are currently taking " + course);
    }
}
```

➤TERMINAL

```
$ java -cp bin ScannerExample
Enter course: CSC116
You are currently taking CSC116
Enter course: E101
You are currently taking E101
Enter course: E115
You are currently taking E115
```

One token a time

STRINGS

➤JAVA

```java
import java.util.Scanner;

public class ScannerExample {
    public static void main(String[] args) {
        Scanner console = new Scanner(System.in);

        System.out.print("Enter course: ");
        String course = console.next();
        System.out.println("You are currently taking " + course);

        System.out.print("Enter course: ");
        course = console.next();
        System.out.println("You are currently taking " + course);

        System.out.print("Enter course: ");
        course = console.next();
        System.out.println("You are currently taking " + course);
    }
}
```

➤TERMINAL

```
$ java -cp bin ScannerExample
Enter course: CSC116 E101 E115
You are currently taking CSC116
Enter course: You are currently taking E101
Enter course: You are currently taking E115
```

All tokens in a single line

L A B 5

- Flavors.java
  - Prompts the user to enter a flavor represented by the String
    - "o" or "O" for Orange,
    - "c" or "C" for Cherry, and
    - "l" or "L" for Lime.
  - Use a **switch statement** to output
    - "Orange", "Cherry", "Lime", or "Invalid flavor" based on the letter.
  - Output "Invalid flavor" and exit the program if the String entered by the user does not have exactly one character.

LAB 5

- MovieTheater.java
  - Prompts the user for
    - the number of adult and child tickets to purchase
  - Prompts whether the movie showing is a matinee. (y / n)
    - anything that starts with “y” or “Y”, it is a matinee.
  - Adult tickets cost $12 and child tickets cost $10. There is a $3 discount for each matinee ticket.
  - Output "Invalid value" and exit the program if either number of tickets is less than 0.
  - Output the price of the tickets formatted as $xx.00