Strings

- A String is a class
- String constant
  - “The NC State Fair starts Friday!”
- All strings are constants! You cannot change them!
- Do not need “new” when creating a String

Strings (cont)

- How do you build a new string?
  - Initialize a string as empty
  - Use + (concatenation) to put strings together
  - Example:
    ```java
    String dayFairStarts = "";
    String month = "Oct";
    dayFairStarts = "Friday";
    dayFairStarts += ", " + month + " + 14 + ", " + 2005;
    ```
  - Has the string been modified?
What can you do with strings?

- Look at API
  - `int length()` – Returns length of string
- `String substring(int beginIndex)`
  - Returns substring from `beginIndex` to end of string
- `String substring(int beginIndex, int endIndex)`
  - Returns substring from `beginIndex` to `endIndex - 1`

Example

```java
String one = "ferriswheel";
String two = one.substring(5);
String three = one.substring(4, 6);
```

What are two and three?

Finding substrings in strings

- `int indexOf(String str)`
  - Returns first position of `str` in the string
  - First position in a string is 0
- `int indexOf(String str, int fromIndex)`
  - Returns first position of `str` starting at `fromIndex`

Example

```java
String one = "Cotton Candy";
String two = one.substring(indexOf("Can"), indexOf("Can") + 4);
```

What is two?
Write Reverse a String, Palindrome

- String Reverse(String s)
  - Returns the string in reverse
  - Hint: Build a new string that is the reverse

- Boolean Palindrome(String s)
  - Returns true if s is a palindrome
  - Hint: Use Reverse

Classwork Birthday

- Convert a String that represents a number to an int

Example:
```java
String numString = “87”;
int num =
Integer.parseInt(numString);
// num has int value 87
```

Classwork – Class Scores

- Find the mode of (44, 77, 88, 77, 35, 44)
- How?