Strings Methods
Math class

indexOf
compareTo
parseInt

indexOf(String substr)

Returns the index within this string of the first occurrence of the specified substring.

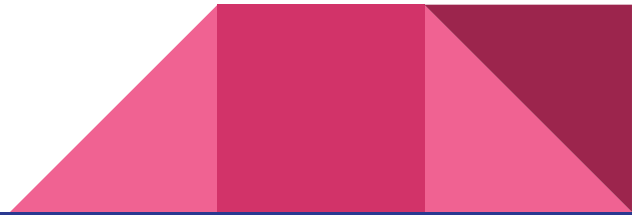
If the substring does not exists, then -1 is returned.

Example:

String myStr = "Hello all! It is a beautiful day!";

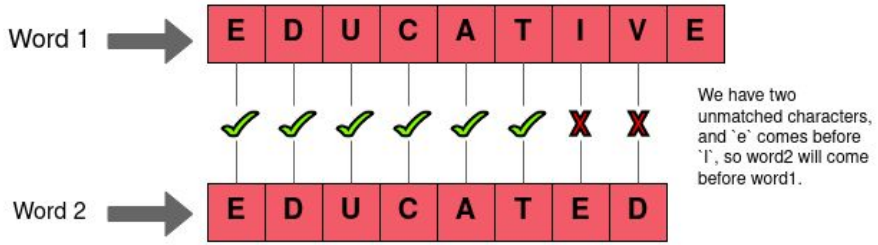
myStr.indexOf("all"); ⇒ 6

myStr.indexOf("sun"); ⇒ -1



CompareTo(String anotherStr)

Compares two strings lexicographically.



- **compareTo** returns 0 exactly when the **equals(String)** method would return true.
- If the strings we are comparing have different characters at one or more index positions:

  this.charAt(k) - anotherStr.charAt(k)

- If there is no index position at which they differ:

  this.length() - anotherStr.length()

compareTo(String anotherString) return values

str.compareTo(anotherStr)

0 => if **str** is equal to **anotherStr**

< 0 => if **str** is less than **anotherStr**

> 0 => if **str** is greater than **anotherStr**

Note: compareTo for strings uses ASCII codes. So "Zoo".compareTo("apple") will be negative, because uppercase letters come before lowercase in ASCII.

Practice

"Apple".compareTo("Banana")	=>	<0
"Banana".compareTo("Apple")	=>	>0
"Cat".compareTo("Cat")	=>	0
"Tiger".compareTo("lion")	=>	<0 (uppercase “T” < lowercase “l”)
"dog".compareTo("Dog")	=>	>0 (lowercase “d” > uppercase “D”)
"car".compareTo("carpet")	=>	<0 (-3 because "car" is shorter length 3 vs 6)
"testing".compareTo("test")	=>	>0 (3 because "testing" is longer 7 vs 4)

Good to know: String.valueOf()

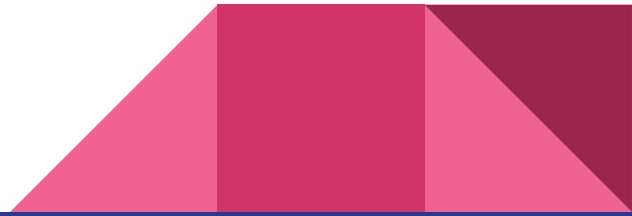
The **String.valueOf()** method converts int to String.

```
String.valueOf(3)   ==> "3"
```

parseInt(String str)

Parses the string argument as a signed decimal integer.

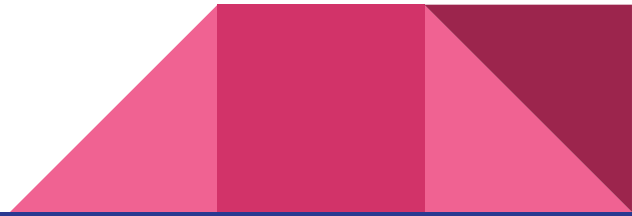
```
Integer.parseInt("454") ==> 454
```



Math Class

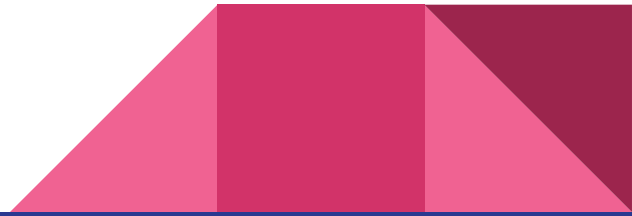
The Math class is defined in the java.lang package. We do not need to import this class. It is imported by default.

Methods in the Math class are static. We can call them using the class name without creating an object.



Some Math methods

Math.sqrt(x)
Math.pow(x,y)
Math.sin(x)
Math.cos(x)
Math.tan(x)
Math.asin(x)
Math.acos(x)
Math.atan(x)
Math.log(x)
Math.log10(x)
Math.round(x)
Math.abs(x)
Math.max(x,y)
Math.min(x,y)
Math.PI -> Value



Classwork Time!!!

Assignment posted on GoogleClassroom.