

10 Assignment 3 - Review

Tuesday, October 13, 2020 2:01 PM

1. Predictor

STATE	Poll	Margin Of Error	Win Likelihood
Garden	49%	3%	33.33%
Empire	52%	2%	100.00%
Nutmeg	43%	8%	6.2%
Golden	51%	5%	59.9%
LoneStar	48%	4%	48.00%

2. USA Predictor

Useful for:

- Determining the electoral votes guaranteed, estimated, etc.
- Identifying swing states
- Deciding on ad spending

3. AdSense

10 Libraries: StdOut

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Libraries:

Standard Java Libraries

- **System**
System.out.print(), System.out.println(), System.exit(), System.out.printf()
- **Math**
Math.abs(), Math.max(), Math.min(), Math.sin(), Math.cos(), Math.tan()
Math.toRadians(), Math.toDegrees(), Math.exp(), Math.log(), Math.pow(),
Math.round(), Math.random(), Math.sqrt, Math.PI
- **StdOut**
StdOut.print(), StdOut.println(), StdOut.printf()
- **StdIn**
StdIn.isEmpty(), StdIn.readInt(), StdIn.readDouble(), StdIn.readString(),
...etc.

```
public class StdOut
```

```
void print(String s)           print s to standard output
void println(String s)       print s and a newline to standard output
void println()               print a newline to standard output
void printf(String format, ... ) print the arguments to standard output,
                               as specified by the format string format
```

StdOut.printf(<format string>, v1, v2, ...);

how to print?

what to print?

double x = Math.PI;

Value of PI = 3.14

StdOut.printf("Value of PI = %f\n", x)

%6.2f %0.2f, %0.2f

$$\begin{array}{r} 3.14 \\ \hline \end{array}$$

type	code	typical literal	sample format strings	converted string values for output
int	d	512	"%14d" "%-14d"	" 512" "512 "
double	f e	1595.1680010754388	"%14.2f" "%7f" "%14.4e"	" 1595.17" "1595.1680011" " 1.5952e+03"
String	s	"Hello, World"	"%14s" "%-14s" "%-14.5s"	" Hello, World" "Hello, World " "Hello "
boolean	b	true	"%b"	"true"

10 Libraries: StdIn

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```
public class StdIn
```

methods for reading individual tokens from standard input

<code>boolean isEmpty()</code>	<i>is standard input empty (or only whitespace)?</i>
<code>int readInt()</code>	<i>read a token, convert it to an int, and return it</i>
<code>double readDouble()</code>	<i>read a token, convert it to a double, and return it</i>
<code>boolean readBoolean()</code>	<i>read a token, convert it to a boolean, and return it</i>
<code>String readString()</code>	<i>read a token and return it as a String</i>

methods for reading characters from standard input

<code>boolean hasNextChar()</code>	<i>does standard input have any remaining characters?</i>
<code>char readChar()</code>	<i>read a character from standard input and return it</i>

methods for reading lines from standard input

<code>boolean hasNextLine()</code>	<i>does standard input have a next line?</i>
<code>String readLine()</code>	<i>read the rest of the line and return it as a String</i>

methods for reading the rest of standard input

<code>int[] readAllInts()</code>	<i>read all remaining tokens and return them as an int array</i>
<code>double[] readAllDoubles()</code>	<i>read all remaining tokens and return them as a double array</i>
<code>boolean[] readAllBooleans()</code>	<i>read all remaining tokens and return them as a boolean array</i>
<code>String[] readAllStrings()</code>	<i>read all remaining tokens and return them as a String array</i>
<code>String[] readAllLines()</code>	<i>read all remaining lines and return them as a String array</i>
<code>String readAll()</code>	<i>read the rest of the input and return it as a String</i>

1. Write a greeting program
2. Write a program to read in N numbers and compute their average