Java, with a side of Java, with extra Java.
(And an Eclipse Side Salad)

Computer Science 201
public class Example {

    public static void main(String[] args) {
        System.out.println("Starting up!");
        int i = 5;
        String x = "I am";
        for (int j = 0 ; j < 10 ; ++j) {
            System.out.println(i + j);
            if (i + j < 10) {
                System.out.println(x + " " + "less than ten!");
            } else {
                System.out.println(x + " " + ">= ten!");
            }
        }
    }
}

Curly braces!
Semicolons!
Types!
++
Wednesday, August 29, 12
Getting that code

http://www.cs.duke.edu/courses/fall12/compsci201/snarf

(Then this URL)

(Then hit Enter several times)
<table>
<thead>
<tr>
<th>Java</th>
<th>Matlab</th>
<th>Python</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>System.out.println(&quot;Foo&quot;);</code></td>
<td><code>disp('foo');</code></td>
<td><code>print 'foo'</code></td>
</tr>
<tr>
<td><code>int i = 5;</code></td>
<td><code>i = 5;</code></td>
<td><code>i = 5</code></td>
</tr>
<tr>
<td><code>String x = &quot;Green&quot;;</code></td>
<td><code>x = 'Green';</code></td>
<td><code>x = &quot;Green&quot;</code></td>
</tr>
</tbody>
</table>
| `if (a) {
   do something;
} else if (b) {
   do a thing;
} else {
   do whatever;
}` | `if a
   do something;
elseif b
   do a thing;
else
   do whatever;
endif` | `if a:
   do something
elif b:
   do a thing
else:
   do whatever` |
Circles Country is a country that contains several circular-shaped districts. Some districts may be situated inside other districts, but their borders do not intersect or touch. Qatam is a resident of Circles Country. When he travels between two locations, he always tries to cross the fewest number of district borders as possible because crossing borders is usually a laborious task.

You are given $n$ circles, each defined by an (integer) point $(x, y)$, and an (integer) radius $r$.

Qatam is currently at the point $(x_1, y_1)$ and needs to get to the point $(x_2, y_2)$. Neither point lies on a district border. Return the minimal number of district borders he must cross to get to his destination.
Java

int[] x = new int[5];
for (int i = 0; i < x.length; ++i) {
    x[i] += 2;
}

Matlab

x = zeros(1, 5);
for i=1:1:5
    x(i) = x(i) + 2;
end

Python

x = [0, 0, 0, 0, 0]
for i in range(len(x)):
    x[i] += 2
Demo Time!
# Java Data Types

## Primitives

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>boolean</td>
<td>T/F</td>
</tr>
<tr>
<td>char</td>
<td>‘a’ or ‘q’ or ‘$’</td>
</tr>
<tr>
<td>byte</td>
<td></td>
</tr>
<tr>
<td>short</td>
<td>≈ ± 2 billion</td>
</tr>
<tr>
<td>int</td>
<td>≈ ± 9 quintillion</td>
</tr>
<tr>
<td>long</td>
<td>≈ ± 9 quintillion</td>
</tr>
<tr>
<td>float</td>
<td>≈ 7 sig figs</td>
</tr>
<tr>
<td>double</td>
<td>≈ 16 sig. figs</td>
</tr>
</tbody>
</table>

## Objects

```java
public class CirclesCountry {
    // class body
}

public class Example {
    // class body
}
```