2 Classes and Methods I: Basics

2.1

(Nothing interesting to show.)

2.2

1. Omitting the semicolon on line 8 produces:

```
HitWall.java:8: ';' expected
    TrickMouse morte
                     ^
1 error
```

2. Adding an extra semicolon at the end of any of the lines has no effect. The program is still correct.

3. Changing `main` to `mian` does not cause an error in compilation. However, trying to run the program produces:

```
java.lang.NoSuchMethodError: main
Exception in thread "main"
```

4. Changing the `{` to `[` on line 3 produces:

```
HitWall.java:3: '{' expected
public class HitWall [
                     ^
1 error
```

   Changing the `{` to `[` on line 7 produces:

```
HitWall.java:7: ';' expected
  public static void main (String[] args) [
                                          ^
HitWall.java:10: <identifier> expected
    morte = new TrickMouse();
          ^
HitWall.java:11: <identifier> expected
    morte.hitWall();
                ^
HitWall.java:13: 'class' or 'interface' expected
}
^
HitWall.java:14: 'class' or 'interface' expected

^
HitWall.java:10: cannot resolve symbol
```

```
symbol  : class morte
location: class HitWall
    morte = new TrickMouse();
    ^
HitWall.java:11: cannot resolve symbol
symbol  : class hitWall
location: package morte
    morte.hitWall();
          ^
HitWall.java:7: missing method body, or declare abstract
  public static void main (String[] args) [
                      ^
8 errors
```

2.3

The following are not legal identifiers:

`2nd`	does not begin with a letter
`a<b`	contains the illegal character `<`
`1.2.3`	contains the illegal character . (period)
`right-hand`	contains the illegal character `-`
`last one`	contains the illegal character *blank*
`a.b.c`	contains the illegal character . (period)

2.4

```
1  import CSLib.*;
2
3  public class GoodbyeMorte {
4    //  Author: Dan Ries, December 25, 2000
5    //  Have Morte say goodbye.
6
7    public static void main (String[] args) {
8      TrickMouse morte;
9
10     morte = new TrickMouse();
11     morte.setTitle("I'm Morte");
12     morte.speak("Goodbye, world!");
13   }
14 }
```

2.5

The program:

```
1  import CSLib.*;
2
3  public class HelloMorte {
4    //  Author: Dan Ries, December 25, 2000
```

```
5     //  Have Morte say hello.
6
7     public static void main (String[] args) {
8       TrickMouse morte;
9
10      morte = new TrickMouse();
11      morte.setTitle("I'm Morte");
12      morte.speak("Hello, world!");
13      morte.speak("Goodbye, world!");
14    }
15  }
```

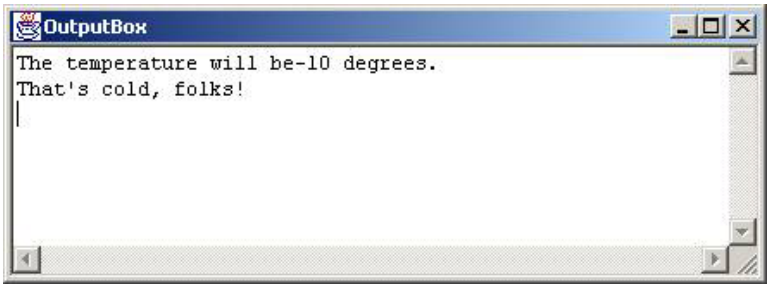
behaves just like `GoodbyeMorte`, since the "Goodbye" message overwrites the "Hello" message.

2.6

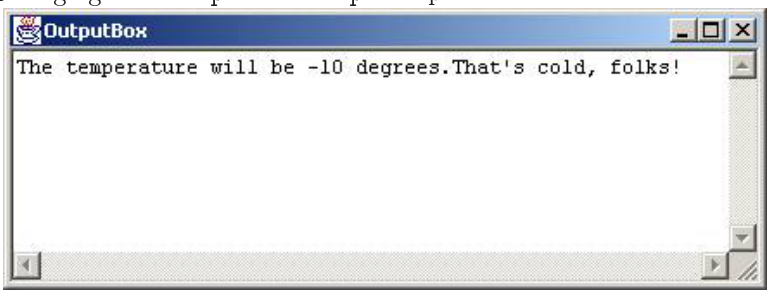
(Nothing interesting to show.)

2.7

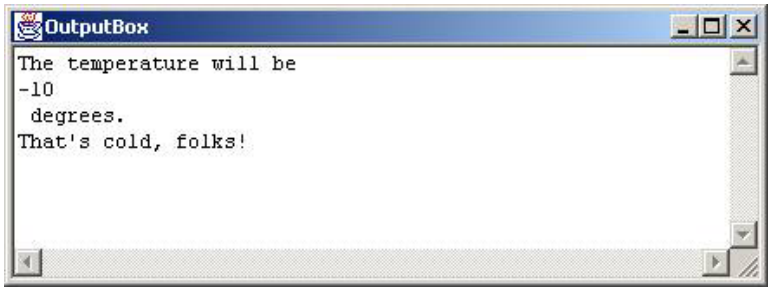
1. Changing the first `print` to `out.print("The temperature will be")` produces:



2. Changing the first `println` to `print` produces:



3. Changing all the `print`s to `println`s produces:



2.8

```
1  import CSLib.*;
2  import java.awt.*;
3
4  public class BigX {
5    // Draw a big X.
6    // Author: Chris Cross, November 3, 2001
7
8    public void drawIt () {
9      DrawingBox g;
10     g = new DrawingBox();
11     g.setDrawableSize(250, 300);
12     g.drawLine(0, 0, 250, 300);
13     g.drawLine(250, 0, 0, 300);
14   }
15 }
```

2.9

```
1  import CSLib.*;
2  import java.awt.*;
3
4  public class LargeOval {
5    // Draw a big oval.
6    // Author: E. Lips, November 3, 2001
7
8    public void drawIt () {
9      DrawingBox g;
10     g = new DrawingBox();
11     g.setDrawableSize(300, 500);
12     g.drawOval(0, 0, 300, 500);
13   }
14 }
```

2.10

```
1  import CSLib.*;
2  import java.awt.*;
```

```
3
4   public class Concentric {
5     // Draw concentric circles in red.
6     // Author: Ringo Red, August 3, 2001
7
8     public void drawThem () {
9       DrawingBox g;
10      g = new DrawingBox();
11      g.setDrawableSize(300, 300);
12      g.setColor(Color.red);
13      g.drawOval(110, 110, 80, 80);
14      g.drawOval(95, 95, 110, 110);
15      g.drawOval(80, 80, 140, 140);
16    }
17  }
```

2.11

The other colors predefined in `java.awt.Color` are `cyan`, `darkGray`, `gray`, `green`, `lightGray`, `magenta`, `orange`, `pink`, and `yellow`.