Java Puzzlers

From the book **Java Puzzlers**
by Joshua Bloch and Neal Gafter

Oddity

- The following method tests whether its argument is odd:

-
  ```
  public static boolean isOdd(int i) {
      return i % 2 == 1;
  }
  ```
- Does it work?

- It gives the correct answer for ¾ of the integers

Making change

-
  ```
  public class Change {
      public static void main(String[] args) {
          System.out.println(2.00 - 1.10);
      }
  }
  ```

-
  ```
  0.8999999999999999
  ```

Long Division

-
  ```
  public class LongDivision {
      public static void main(String[] args) {
          final long MICROS_PER_DAY = 24 * 60 * 60 * 1000 * 1000;
          final long MILLIS_PER_DAY = 24 * 60 * 60 * 1000;
          System.out.println(MICROS_PER_DAY / MILLIS_PER_DAY);
      }
  }
  ```

- 5

Addition

```
public class Addition {
    public static void main(String[] args) {
        System.out.println(12345 + 54321);
    }
}
```

- 17777

Tweedledum

- Declare variables x and i such that

  ```
  x += i;
  ```

  is legal, but

  ```
  x = x + i;
  ```

  is not legal

-
  ```
  short x = 0;
  int i = 123456;
  ```

Tweedledee

- Declare variables x and i such that

  ```
      x = x + i;
  ```

  is legal, but

  ```
     x += i;
  ```

  is not legal

-
  ```
  Object x = "Hello ";
  String i = "world!";
  ```

+=

-
  ```
  public class PlusEquals {
      public static void main(String[] args) {
          int i = 2;
          i += 3.75;
          System.out.println(i);
      }
  }
  ```

- 5

Last Laugh

```
public class LastLaugh {
    public static void main(String[] args) {
        System.out.print("H" + "a");
        System.out.print('H' + 'a');
    }
}
```

- Ha169

Indecision

-
  ```
  public class Indecisive {
      public static void main(String[] args) {
          System.out.println(decision());
      }

      static boolean decision() {
          try {
              return true;
          }
          finally {
              return false;
          }
      }
  }
  ```

- false

HelloGoodbye

-
  ```
  public class HelloGoodbye {
      public static void main(String[] args) {
          try {
              System.out.println("Hello world!");
              System.exit(0);
          }
          finally {
              System.out.println("Goodbye world!");
          }
      }
  }
  ```

- Hello world!

The reluctant constructor

```
public class Reluctant {
    private Reluctant internalInstance = new Reluctant();

    public Reluctant() throws Exception {
        throw new Exception("I'm not coming out!");
    }
    public static void main(String[] args) {
        try {
            Reluctant b = new Reluctant();
            System.out.println("Surprise!");
        }
        catch (Exception e) {
            System.out.println("I told you so.");
        }
    }
}
```

```
Exception in thread "main" java.lang.StackOverflowError
```

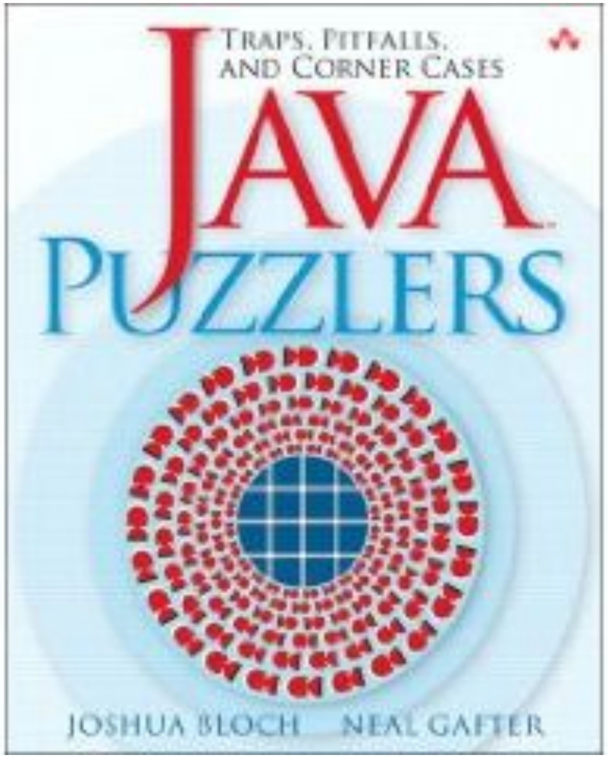
Hello again

-
  ```
  public class Null {
      public static void main(String[] args) {
          ((Null)null).greet();
      }

      public static void greet() {
          System.out.println("Hello world!");
      }
  }
  ```

- Hello world!

The End


Traps, Pitfalls, and Corner Cases
Java Puzzlers
Joshua Bloch
Neal Gafter