

# SAT: Naming Conventions

Improve the code quality of the following programs:

1.

```
1 class Rover {
2     static final double WalkingSpeed = 3;
3     final String SerialNumber;
4     double MilesPerHour;
5
6     Rover(String NewSerialNumber) {
7         SerialNumber = NewSerialNumber;
8     }
9
10    void Drive() {
11        MilesPerHour = WalkingSpeed;
12    }
13    void Stop() {
14        MilesPerHour = 0;
15    }
16 }
```

2.

```
1 class Astronaut {
2     String name;
3     boolean retired;
4
5     Astronaut(String name) {
6         this.name = name;
7     }
8
9     String getFullName() {
10        return name;
11    }
12
13    void setFullName(String name) {
14        this.name = name;
15    }
16
17    boolean getRetired() {
18        return retired;
19    }
20
21    void setRetiredState(boolean retired) {
22        this.retired = retired;
23    }
24 }
```

3.

```
1 class Inventory {
2     List<Supply> sl = new ArrayList<>();
3     boolean isInStock(String n) {
4         Supply s = new Supply(n);
5         int l = 0;
6         int h = sl.size() - 1;
7         while (l <= h) {
8             int m = l + (h - 1) / 2;
9             int c = sl.get(m).compareTo(s);
10
11             if (c < 0) {
12                 l = m + 1;
13             } else if (c > 0) {
14                 h = m - 1;
15             } else {
16                 return true;
17             }
18         }
19         return false;
20     }
21 }
```

4.

```
1 class Logbook {
2     static final Path DIR = Paths.get("/var/log");
3     static final Path CSV = DIR.resolve("stats.csv");
4     static final String GLOB = "*.log";
5
6     void createStats() throws IOException {
7         try (DirectoryStream<Path> dirStr =
8             Files.newDirectoryStream(DIR, GLOB);
9             BufferedWriter bufW = Files.newBufferedWriter(CSV)) {
10            for (Path lFile : dirStr) {
11                String csvLn = String.format("%s,%d,%s",
12                    lFile,
13                    Files.size(lFile),
14                    Files.getLastModifiedTime(lFile));
15                bufW.write(csvLn);
16                bufW.newLine();
17            }
18        }
19    }
20 }
```