

## Solution — Task 1: FizzBuzz

```
1 public class Main {
2     public static void main(String[] args) {
3         for (int i = 1; i <= 100; i++) {
4             if (i % 3 == 0 && i % 5 == 0) {
5                 System.out.println("FizzBuzz");
6             } else if (i % 3 == 0) {
7                 System.out.println("Fizz");
8             } else if (i % 5 == 0) {
9                 System.out.println("Buzz");
10            } else {
11                System.out.println(i);
12            }
13        }
14    }
15 }
```

Listing 1: FizzBuzz

## Solution — Task 2: Approximate pi

```
1 public class Main {
2     public static void main(String[] args) {
3         int n = 10000;
4         double sum = 0.0;
5
6         for (int i = 0; i < n; i++) {
7             double term = 1.0 / (2 * i + 1);    // 1/1, 1/3, 1/5,
8             ...
9             if (i % 2 == 0) {
10                 sum += term;                    // + - + - ...
11             } else {
12                 sum -= term;
13             }
14         }
15
16         double piApproximation = 4 * sum;
17         System.out.println("Approximation of pi: " +
18             piApproximation);
19     }
20 }
```

Listing 2: Leibniz approximation of  $\pi$