

# CS401 Lab 5: Recursion and Algorithm Implementation

## Part 1: Jacobsthal Sequence

### 1. Eclipse

```
Input non-negative integer
10
Recursive version:
0 1 1 3 5 11 21 43 85 171 341
Time taken to execute recursive version:5.0000milliseconds

Iterative version:
0 1 1 3 5 11 21 43 85 171 341
Time taken to execute iterative version:0.0000milliseconds
```

### 2. JAR

```
PS C:\Users\qube2\OneDrive - Illinois Institute of Technology\Documents\Fall 24\CS_401\1016\CS401-lab04_Seonghwan-Lim> java -jar Jacobsthal.jar
Input non-negative integer
10
Recursive version:
0 1 1 3 5 11 21 43 85 171 341
Time taken to execute recursive version:6.0000milliseconds

Iterative version:
0 1 1 3 5 11 21 43 85 171 341
Time taken to execute iterative version:0.0000milliseconds
```

## Part 2: Recursive Minimum Finder

### 1. Eclipse

```
-20
```

### 2. JAR

```
PS C:\Users\qube2\OneDrive - Illinois Institute of Technology\Documents\Fall 24\CS_401\1016\CS401-lab04_Seonghwan-Lim> java -jar Minimum.jar
-20
```