Exercise 2:

Interfaces

Exercise 4:

- ILOAD: Loads a local variable (like i) onto the stack. For example, ILOAD 1 loads the variable stored at index 1.

- IINC: Increments a local variable directly without using the stack. For instance, IINC 1 1 increases the value at index 1 by 1, like i++ in Java.

- GOTO: Jumps to a different part of the code unconditionally, often used for loops or skipping sections.

- ICONST_0 and ISTORE: Used to assign values like int i = 0. ICONST_0 pushes 0 to the stack, and ISTORE saves it to a variable.

- Loops: The loop condition (i <= n) is checked with ILOAD and IF_ICMPLE. IINC increments i, and GOTO loops back to the condition.

- Addition (sum += i): Loads sum and i with ILOAD, adds them with IADD, and stores the result back with ISTORE.

- Return: Loads the return value with ILOAD and returns it with IRETURN.

This is how Java bytecode handles common tasks like loops, increments, and returns in a simpler way.