import java.util.Arrays;

class Main {

public static void main(String[] args) {

int n = 20;

long[] memo = new long[100];

memo[0] = 0;

memo[1] = 1;

System.out.println(fibtabulation(n, memo));

System.out.println(Arrays.toString(Arrays.copyOf(memo, n + 1))); // Display only up to n

}

public static long fibtabulation(int n, long[] memo) {

if (memo.length > n) {

for (int i = 2; i <= n; i++) {

memo[i] = memo[i - 1] + memo[i - 2];

}

return memo[n];

} else {

System.out.println("Insufficient memory! Memo size: " + memo.length);

return -1;

}

}

}