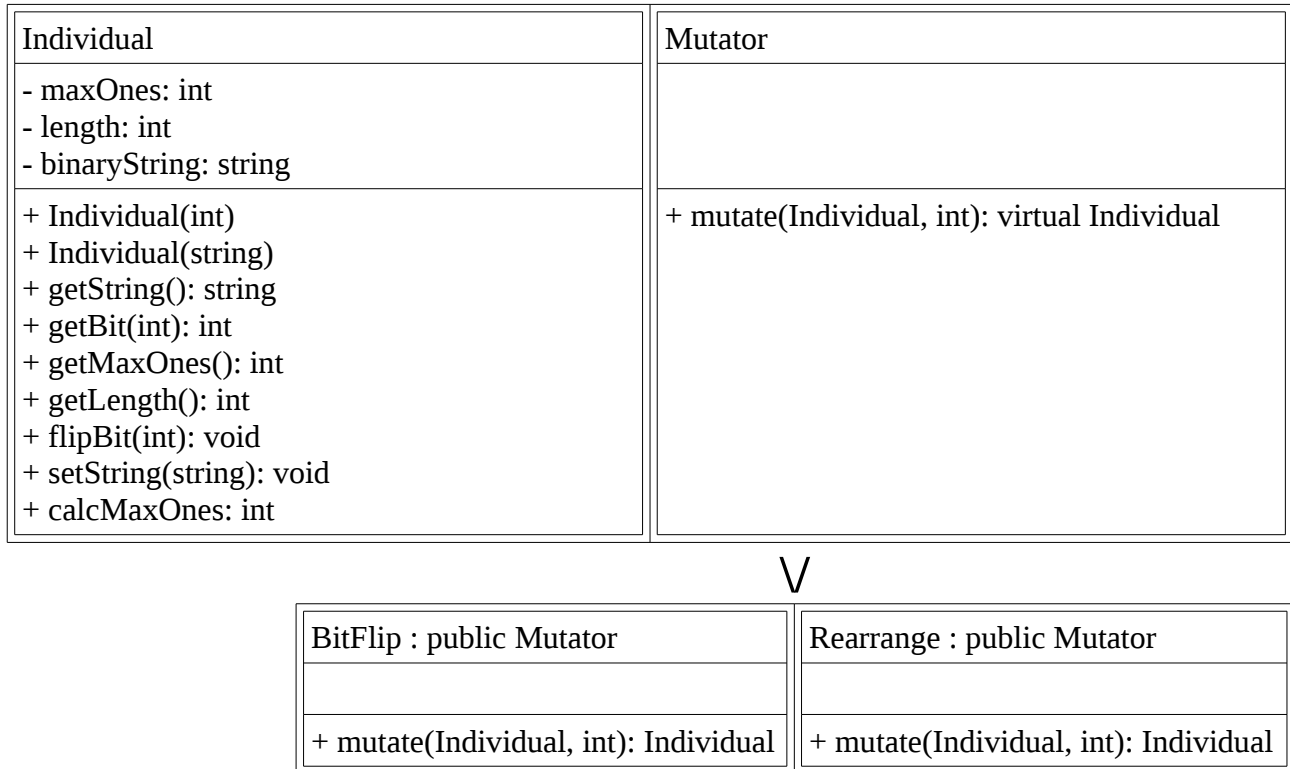


ADDS Prac 6 Design

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UML Diagram



Description

Individual

Creates a Individual with a string containing 1s and 0s. It can also flip a single bit between 0 and 1, and calculate an amount of consecutive 1 bits.

Mutator

The virtual parent class of BitFlip and Rearrange.

BitFlip

Creates an offspring based on the input object and number by flipping the input number index of the input object's binaryString.

Rearrange

Creates an offspring based on the input object and number by making the input index number of the input object's binaryString the start of the new binaryString and wrapping the old string around the new one.

Main

Takes an input of two numbers and two binary strings, then executes BitFlip on the first and Rearrange on the second.

Testing

Input: 1001001 4 1010011101 23

Expected Output: 1000001 1001110110 3

Input: 1110111 11 111111111 1

Expected Output: 1111111 111111111 9

Input: 000 5 00000 5

Expected Output: 010 00000 0