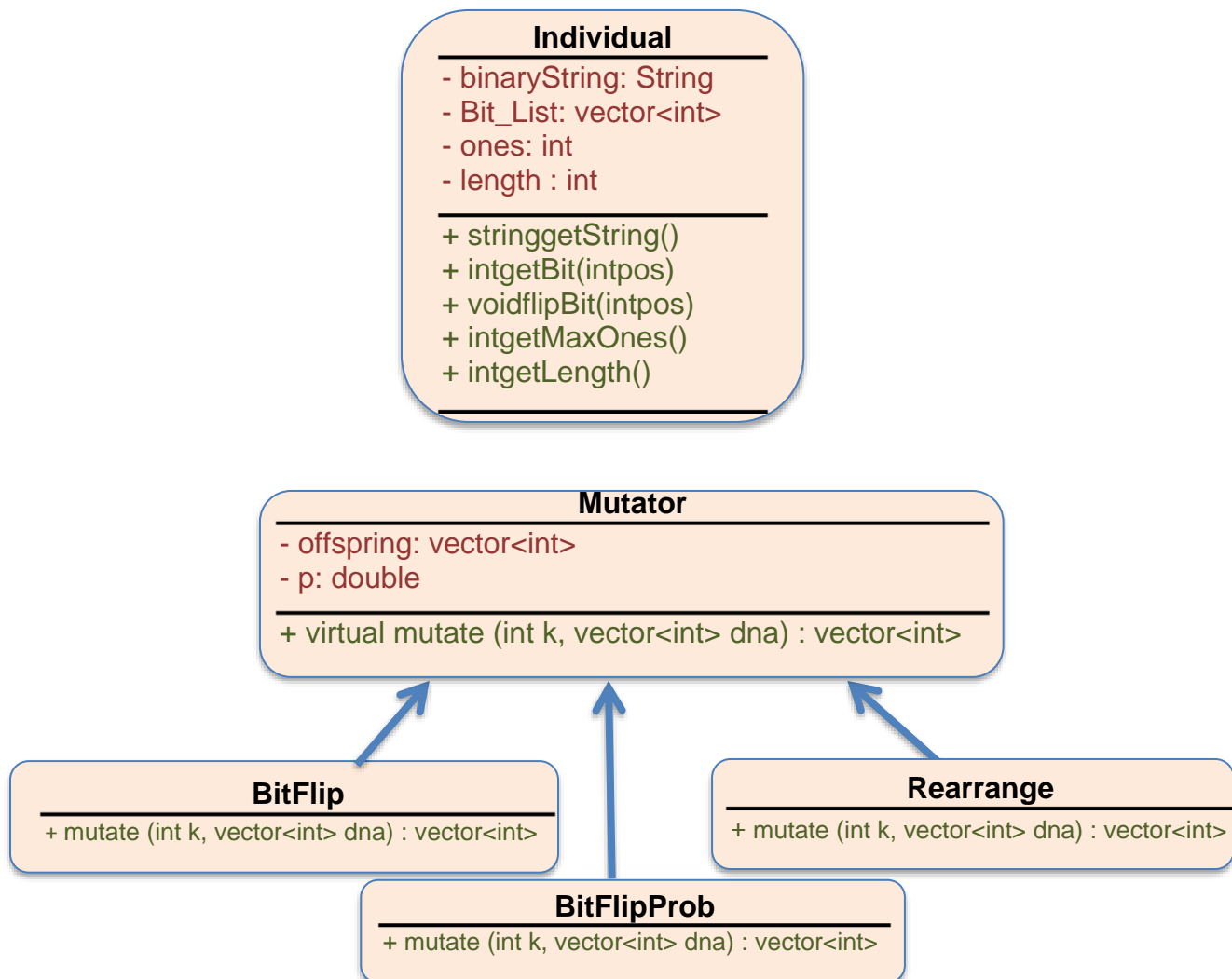


## ADDS - Practical 7: Polymorphism and Complexity

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### 1. DIAGRAM OF CENTRAL CLASSES:



## 2. EXPLANATION OF CORE FUNCTION:

### Individual:

```
string getString() - Basic get  
int getBit(intpos)  
void flipBit(intpos)  
int getMaxOnes()  
int getLength()
```

### Mutator:

```
mutate (int k, vector<int> dna) : vector<int>  
Call recursively the function using k as index to move and  
change the vector dna depending of the derivate class.
```

```
Individual* execute(Individual* indPtr, Mutator* mPtr, int k):
```

### Main:

The main function for this program, created a BitFlip, BitFlipProb and a Rearrange objects, Individual\* pointer, Mutator\* pointer and call the Individual\* execute (Individual\* indPtr, Mutator\* mPtr, int k) function.

**3. TESTING:** Following is a description of the test cases that will be used to test my program.

Given input	Rationale	I expect output
000000 2 0111 2	Test the example input giving in the practical.	010000 1110 3
001100 7 011100 3	Test the second example input giving in the practical.	101100 110001 2