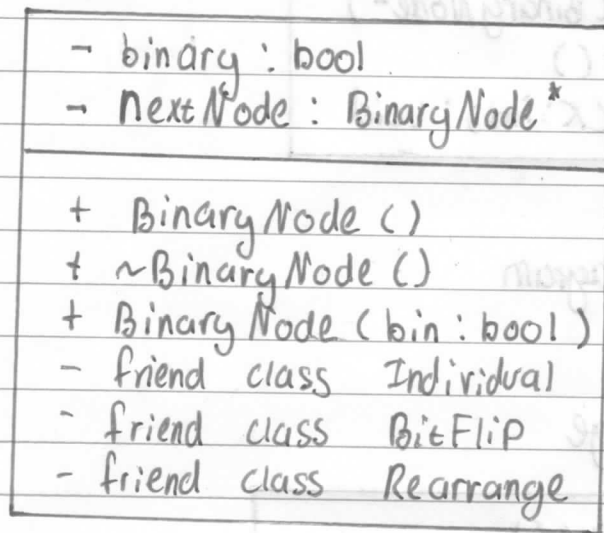


Assignment 6 Design

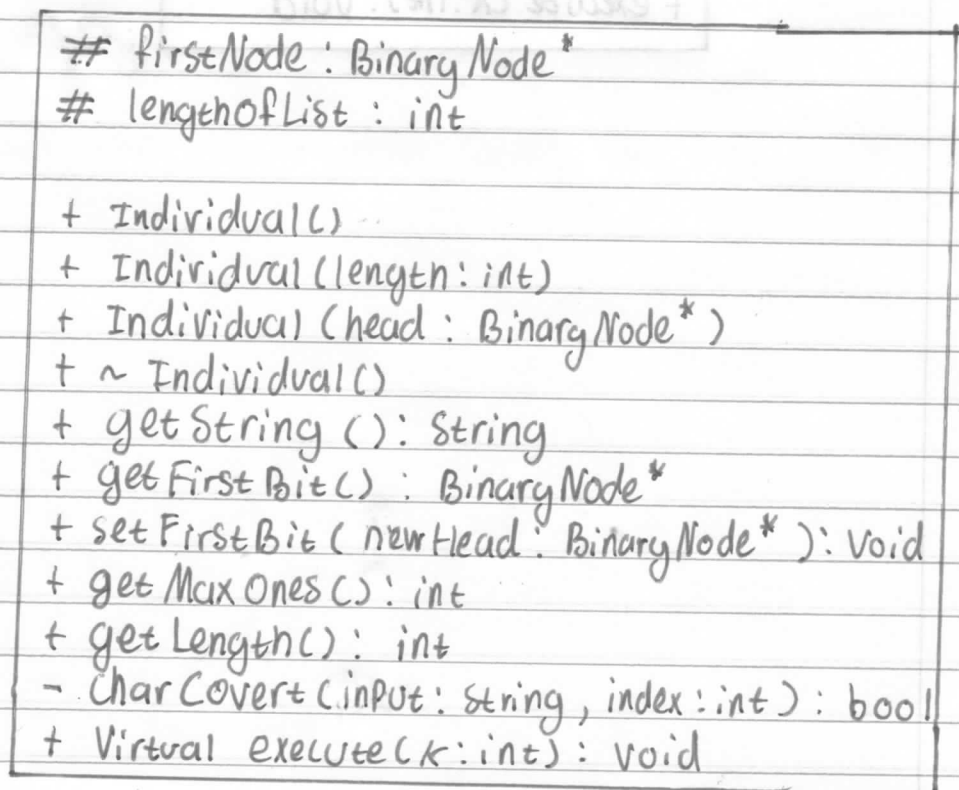
Binary Node UML Diagram

BinaryNode



Individual UML Diagram

Individual



BitFlip UML Diagram

BitFlip

```
+ BitFlip ()  
+ BitFlip (length: int)  
+ BitFlip (input: string)  
+ BitFlip (BinaryNode*)  
+ ~BitFlip ()  
+ execute (K: int): void
```

Rearrange UML Diagram

Rearrange

```
+ Rearrange ()  
+ Rearrange (length: int)  
+ Rearrange (input: string)  
+ Rearrange (BinaryNode*)  
+ ~Rearrange ()  
+ execute (K: int): void
```

Testing

Individual

- Each individual constructor needs to be tested
- getMaxOnes needs to be tested for large lengths and no length, length = 0
- getLength also requires some but minimal testing as it is only an accessor. Will be used to test the proper implementation of each constructor.
- getString needs to be tested using each different constructor to both test get string and each constructor.
- Destructor also requires testing to determine each node is deleted and can be done using a debugger.

Bitflip

- Execute needs testing with a wide variety of inputs, empty, all 0's, all 1's,
- The circular counting also requires rigorous testing.

Rearrange

- Execute needs testing especially if the input int is the length of the list, test large range of input ints

BinaryNode

- Has no functions so no testing required.