## Encoder

input\_file: stroutput\_file: str

+ Encoder(input, output): void

+ build\_lexicon(SaplingNode): Mapping

- encode(): void

- build\_frequency(filename): Heap

- build tree(heap: Heap): SaplingNode

## Decoder

input\_file: stroutput\_file: strlexicon: Mapping

+ Decoder(lexicon, input\_file, output\_file): void

+ Decoder(input\_file, output:file): void

- decode(): void

get\_lexicon(): Mappingwrite\_lexicon(): voidparse\_encoding(): void

- write(): void

TreeBuilder <<Static struct>>

+ saplings: Heap

+ build(): SaplingNode

## SaplingNode

key: stringvalue: int

left\_child: SaplingNoderight child: SaplingNode

+ SaplingNode(): void + get\_key(): string + get\_value(): int

+ get\_left\_child(): SaplingNode + get\_right\_child(): SaplingNode