

# Object Oriented Caesar Cipher

Fields

# CaesarCipher: Fields

```
public class CaesarCipher {  
    private String alphabet;  
    private String shiftedAlphabet;  
    public CaesarCipher(int key) {  
        alphabet = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";  
        shiftedAlphabet = alphabet.substring(key) +  
            alphabet.substring(0,key);  
    }  
    .....  
}
```

# What Does This Mean?

- Every CaesarCipher has its own copy
  - Can make different objects, different values

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "QRS..."

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "MNO..."

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "HIJ..."

# What Does This Mean?

- Every CaesarCipher has its own copy
  - Can make different objects, different values
- Call method on object: use fields in that object

message: FIRST LEGION ATTACK EAST FLANK

CaesarCipher	
alphabet	“ABC...”
shiftedAlpha	“QRS... ”

**.encrypt(message)**

# What Does This Mean?

- Every CaesarCipher has its own copy
  - Can make different objects, different values
- Call method on object: use fields in that object

VYHIJ BUWYED QJJQSA UQIJ VBQDA

CaesarCipher	
alphabet	“ABC...”
shiftedAlpha	“QRS...”

# What Does This Mean?

- Every CaesarCipher has its own copy
  - Can make different objects, different values
- Call method on object: use fields in that object

message: FIRST LEGION ATTACK EAST FLANK

CaesarCipher	
alphabet	“ABC...”
shiftedAlpha	“QRS...”

CaesarCipher	
alphabet	“ABC...”
shiftedAlpha	“MNO...”



# What Does This Mean?

- Every CaesarCipher has its own copy
  - Can make different objects, different values
- Call method on object: use fields in that object

RUDEF XQSUAZ MFFMOW QMEF RXMZW

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "QRS..."

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "MNO..."

# What Does This Mean?

- Every CaesarCipher has its own copy
  - Can make different objects, different values
- Call method on object: use fields in that object

message: FIRST LEGION ATTACK EAST FLANK

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "QRS..."

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "MNO..."

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "HIJ..."

**.encrypt(message)**



# What Does This Mean?

- Every CaesarCipher has its own copy
  - Can make different objects, different values
- Call method on object: use fields in that object

MPYZA SLNPVU HAAHJR LHZA MSHUR

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "QRS..."

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "MNO..."

CaesarCipher  
alphabet "ABC..."  
shiftedAlpha "HIJ..."

# Summary of Class Concepts

- Class = Noun
- Method = verb



# Summary of Class Concepts

- Class = Noun
- Method = verb
- Field = noun
  - Noun: Things that a class has
  - Adjectives describe properties

