Complex Binary Mapping

How to *not* get confused

CSE

The goal of the lesson today is to learn a strategy to create complex binary mappings.

Recall that a mapping is a clear "matching" between items and names.

item	name
A	65_{10}
a	97_{10}

item	name
	11010_2
	10110_2

unit 1

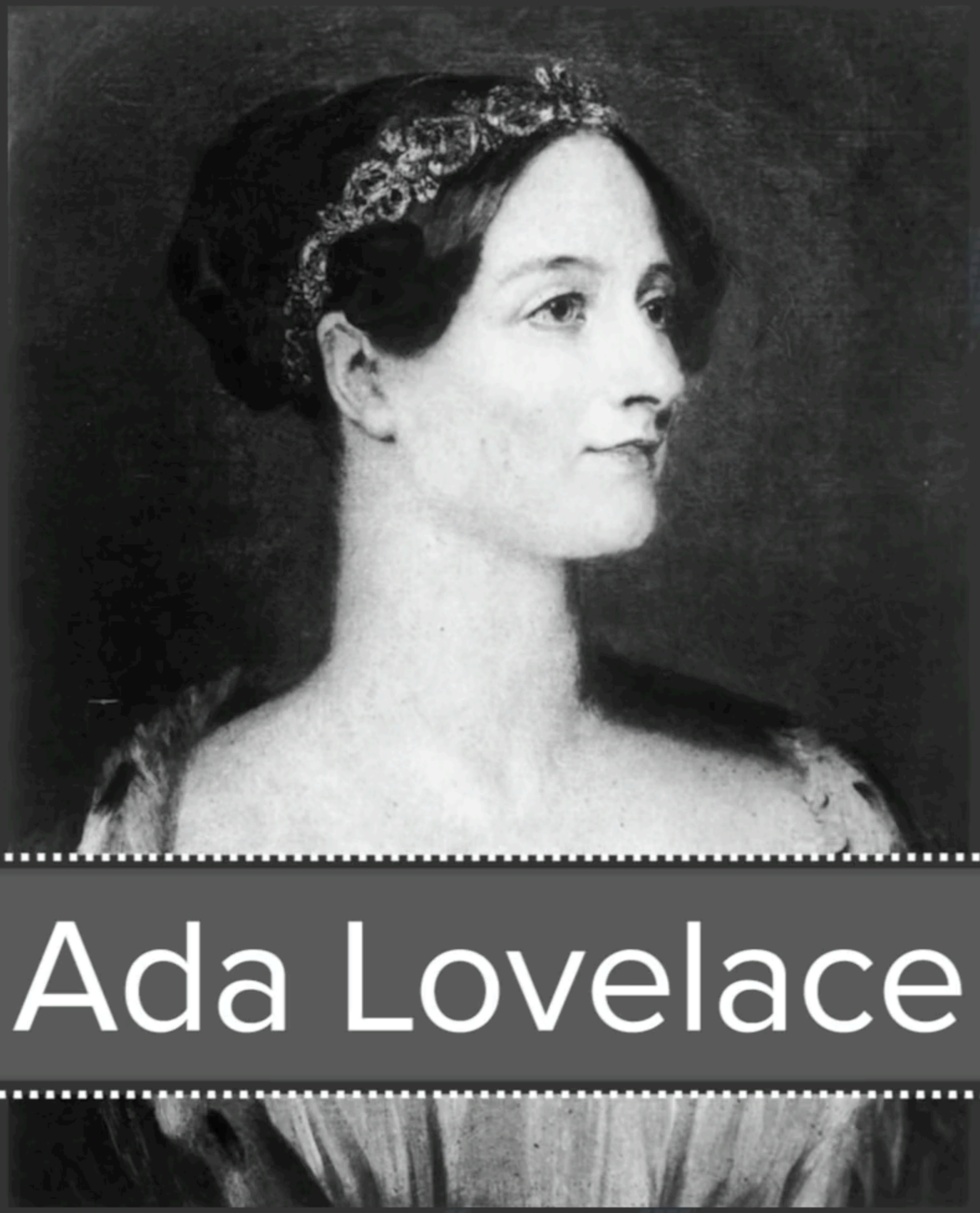
Task: Complete the following mapping

01:30

Item	Four-bit name
😀	0100_2
😃	0001_2
😄	
😁	
😆	
😅	
😂	
🤣	
🥲	
☺️	
😊	
😇	
🙂	
🙃	
😉	
😌	

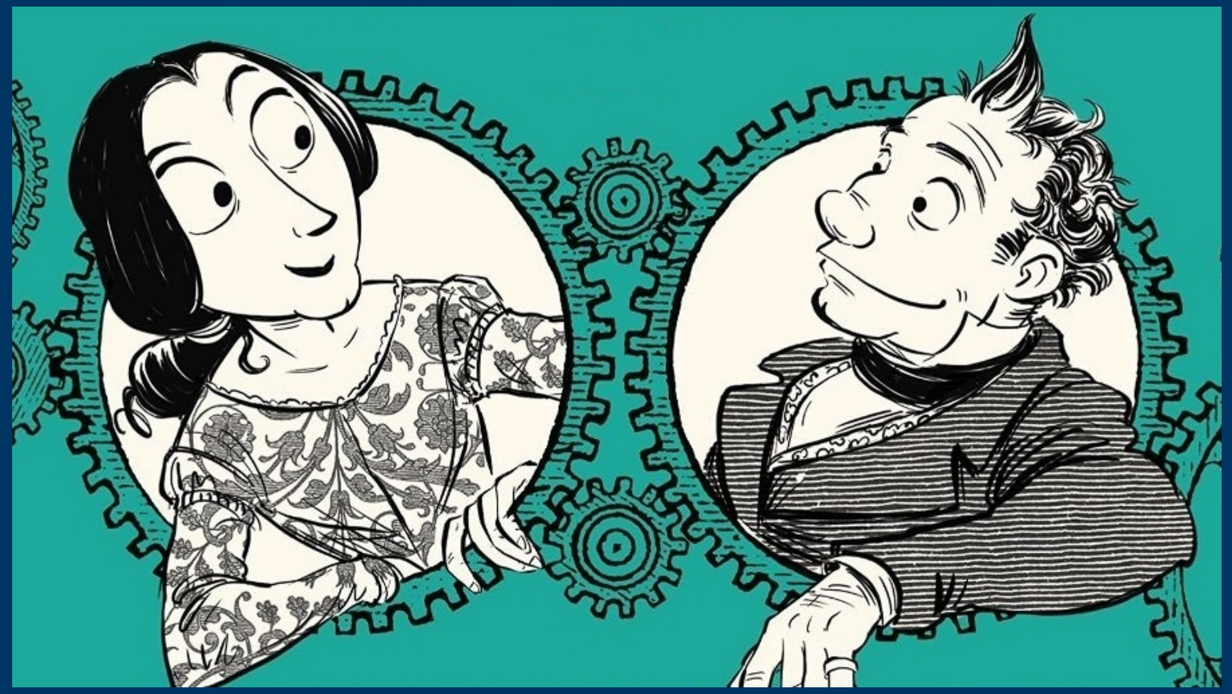
Ada Lovelace has a solution to the "problem"!

Who?



Ada Lovelace

Ada and Charles LOVED to communicate using *ciphers*.



Original Message	Corresponding Cipher Text
Hi user, This is an sample message, brought to you by IncludeHelp. Check out other section also IncludeHelp got a great collection. Regards, HB	KL XVHU, WKLV LV DQ VDPSOH PHVVDJH, EURXJKW WR BRX EB LQFOXGHKHOS. FKHFN RXW RWKHU VHFWLRQ DOVR LQFOXGHKHOS JRW D JUHDW FROOHFWLRQ. UHJDUGV. KE

Ciphers often require mappings!

(LETTER SUBSTITUTION RULE)

a → d	n → e
b → k	o → a
c → n	p → f
d → w	q → j
e → b	r → s
f → q	s → x
g → u	t → m
h → i	u → t
i → z	v → p
j → c	w → y
k → v	x → l
l → o	y → r
m → h	z → g

Ada's Solution was introduced in an assignment called "1. Assignment: The Naming Game/Adding in Binary" (11 February)

If you have not done that yet, DO THAT NOW!

If you're done with that, there is another assignment that is IMPORTANT TO COMPLETE NOW: "2. Assignment: Exploring QR Codes" (8 February)

If you have not done that yet, DO THAT NEXT!