Quiz for Fundamentals of Programming

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This quiz will reinforce the concepts you are learning. By taking this quiz, you will become a stronger programmer.

✓	Go emphasizes ease of programming. If you use the short declaration operator, you do not need to specify the type. *	1/1
	True	✓
0	False	

In your own words, explain how computers work.

on off

Feedback

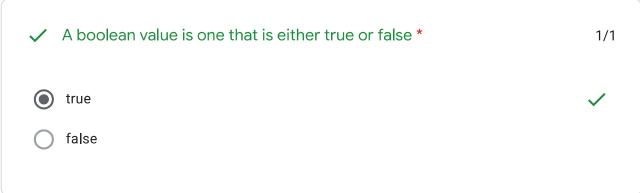
Computers run on electricity. Electricity has two discrete states: on & off. We can associate a coding scheme with the state of a circuit. For example, the porch light on Halloween in America: when it is "on" it means "come trick or treat", and when it is "off" it means "go away." If we had two porch lights, we could encode four messages:

on on = some message on off = some message off on = some message off off = some message

If we had 3 porch lights, we could encode 8 messages. The formula for figuring out how many messages can be encoded is 2 to the power of N where "N" is the number of porch lights. For instance, 2 to the power of 3, is 8.

Instead of writing "on off on on off", etcetera, we can have "1" represent "on" and "0" represent "off" and thus more easily write "1 0 1 1 0"

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assoc Hallo	outers run on electricity. Electricity has two discrete states: on & off. We can siate a coding scheme with the state of a circuit. For example, the porch light on ween in America: when it is "on" it means "come trick or treat", and when it is "off" it s "go away." If we had two porch lights, we could encode four messages:
on of off or	= some message f = some message n = some message f = some message
many	had 3 porch lights, we could encode 8 messages. The formula for figuring out how messages can be encoded is 2 to the power of N where "N" is the number of porch . For instance, 2 to the power of 3, is 8.
	ad of writing "on off on on off", etcetera, we can have "1" represent "on" and "0" sent "off" and thus more easily write "1 0 1 1 0"



If you have 5 porch lights, how many messages can you encode? *	1/1
O 8	
O 16	
32	✓
O 64	
O 128	
Feedback	
2 to the power of 5 is 32	
✓ The computer power symbol is cleverly a ZERO and a ONE. This is pret neat as ZERO represents OFF and ONE represents ON, which is exactly what a power symbol allows you to do - turn something ON and OFF. *	/
True	~
False	
✓ "Bit" is an abbreviation of "binary digit" *	1/1
True	✓
False	

!

/	ON & OFF, 1 & 0, Binary Digits, Bits, and Machine Language are all words used to refer to this idea that, within a computer, it's all nothing but a bunch of ZERO's and ONE's, or switches that are ON or OFF, it's all just a bunch of Binary Digits, or Bits, that's the language which computers speak, it's machine language. *	1/1
•) True	/
0	False	
/	circuits, switches, transistors, and even "gates" are all words used to refer to this thing within a computer that can either be ON or OFF. It's a circuit, it's a switch, it's a gate that can either be OPENED or CLOSED, it's a transistor - you will learn that people use all of those words to talk about this same thing, this ability of computers to store ON / OFF states. *	1/1
•	True •	/
0) False	
✓	The world's most popular text coding scheme today is *	1/1
0	ASCII	
•	UTF-8	/
0) JIS	
0	W Europe	

·101	Quiz for Fundamentals of Programming	
✓ 1000 bytes = *		1/1
1 TB		
1 GB		
1 MB		
1 KB		✓
✓ 1000 GB = *		1/1
		✓
O 1 GB		
1 MB		
number of transistors (aka which can be found on pro	wikipedia.org/wiki/Transistor_count and circuits, switches, "lightbulbs" in my porocessors today.	
7 billion		

!

✓ How many circuits (aka transistors, switches, "lightbulbs" in my porch analogy) did the Eniac computer have? *	1/1
O 160	
1,600	
16,000	✓
1,600,000	
✓ rune is an alias for int32 *	1/1
True	✓
○ False	
✓ byte is an alias for uint8 *	1/1
True	✓
○ False	
✓ If you use type int, then the compiler will choose whether int32 or int64 used. Another way to say this is that int has implementation-specific sizes. *	l is 1/1
True	✓
○ False	

As a rule of thumb, for numeric types, you should just use "int numbers (without decimals) and "float64" for real numbers (w decimals) *	
True	~
○ False	
A string is a sequence of bytes. *	1/1
True	✓
O False	
✓ Go source code is always UTF-8. *	1/1
True	✓
○ False	
Feedback	
https://blog.golang.org/strings#TOC_5.	

	ng is a sequence of bytes that represent Unicode code points d runes. *	, 1/1
True		✓
False		

What is a coding scheme?

on off

Feedback

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Instead of writing "on off on on off", etcetera, we can have "1" represent "on" and "0" represent "off" and thus more easily write "1 0 1 1 0"

✓ What is the number 42 in decimal? *	1/1
42	~
0 101010	
O 2A	
I skipped the numeral system video	
✓ What is the number 42 in binary? *	1/1
O 42	
101010	✓
O 2A	
I skipped the numeral system video	
✓ What is the number 42 in hex? *	1/1
O 42	
0 101010	
2A	✓
I skipped the numeral system video	

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