

Forum:[Hack Forums](#)

Thread: [Want to impress your friends? Learn binary here.](#)

Terry A. Davis - November 16, 2012, 5:47 pm

[Vandal's](#) request.

Hey hack fourms I am back with another tutorial this one is pretty good I will be showing you how to write out words and letters in binary.
Well lets begin.

1st off your gonna need a pen and paper, then what I want you to do is write out "128 64 32 16 8 4 2 1" as the picture shows below:

Spoiler ([Click to View](#))

[img]http://imgbin.org/images/10380.jpg[/img]

After which we will start with "A" and that is "65" in unicode decimal.

Spoiler ([Click to View](#))

[img]http://imgbin.org/images/10381.jpg[/img]

Now that we have got that, we need to "turn on" the following numbers to get our total of 65 you have to get an exact number you can't subtract here is "A"

Spoiler ([Click to View](#))

[img]http://imgbin.org/images/10383.jpg[/img]

Code 65 = A

66 = B

67 = C

68 = D

69 = E

70 = F

71 = G

72 = H

73 = I

74 = J

75 = K

76 = L

77 = M

78 = N

79 = O

80 = P

81 = Q

82 = R

83 = S

84 = T

85 = U
86 = V
87 = W
88 = X
89 = Y
90 = Z
91 = a
92 = b
93 = c
94 = d
95 = e
96 = f
97 = g
98 = h
99 = i
100 = j
101 = k
102 = l
103 = m
104 = n
105 = o
106 = p
107 = q
108 = r
109 = s
110 = t
111 = u
112 = v
113 = w
114 = x
115 = y
116 = z

There you go, if you got 65 from turning on $64 + 1 = 65$ then that is A in binary.

If you want a video walk though:

Spoiler ([Click to View](#))

[Video: <http://www.youtube.com/watch?v=wcZ4LMBBcPA>]

If it wasn't clear enough or any problem like that let me know and I will be more than happy to help

Bit of a challenge: Get your hackforums name and post it here

Vandal - November 16, 2012, 6:10 pm

Thanks for this Perfect Cell <3 I got my name (I think) Vandal:01010110 01100001 01101110
01100100 01100001 01101100

My Work:

Code Vandal

V=86

a=91

n=104

d=94
a=91
l=102

128 64 32 16 8 4 2 1
0 1 0 1 0 1 1 0

128 64 32 16 8 4 2 1
0 1 1 0 0 0 0 1

128 64 32 16 8 4 2 1
0 1 1 0 1 1 1 0

128 64 32 16 8 4 2 1
0 1 1 0 0 1 0 0

128 64 32 16 8 4 2 1
0 1 1 0 0 0 0 1

128 64 32 16 8 4 2 1
0 1 1 0 1 1 0 0

Did it in notepad because I am too lazy to get some paper :P

It will take me a while to do long things since this 6 letter word took me like 20 minutes. Thanks for the tutorial though

Flowaley - November 16, 2012, 6:16 pm

That's actually pretty cool, it worked for me. Thanks for the tut.

Eternal. - November 16, 2012, 6:17 pm

Pretty nice man, thanks for sharing this.

srikanthmay3 - November 16, 2012, 7:42 pm

One of the simplest and best tutorials I've seen on this site. Thanks a lot.

PhobicHD - November 16, 2012, 10:35 pm

Im always astounded with the number of things I dont realize people dont know. This is definately something useful. Good tutorial but if you don't mine me though I would like to elaborate a little bit more.

Move to new thread here :

<https://hackforums.net/showthread.php?tid=3027200>

Terry A. Davis - November 16, 2012, 10:53 pm

(Nov 16, 2012 11:35 PM)PhobicHD Wrote: [\[CITE\]](#) Im always astounded with the number of things I dont realize people dont know. This is definately something useful. Good tutorial but if you don't mine me though I would like to elaborate a little bit more.

Bits are pieces of information with two possible values. These can be thought of as true and false or 1 and 0 in the case of binary or even high and low. Bits are the basis of storing digital information(computers are digital as opposed to analog).

Now we group bits together into bytes. Bytes are just 8 bits next to each other (notice how each letter in the tutorial is 8 0s or 1s long?).

Bytes can hold 256 values or 2^8 ($2*2*2*2*2*2*2*2$). As Perfect cell described they use the place values 1, 2, 4, 8, 16, 32, 64, 128 or 2^0 , 2^1 , 2^2 , ect, 2^7 . Notice how we are doubling the amount each time?

Binary can be thought of as a base two number system. Just as in our base 10 number system (1) is 10^0 and (10) is 10^1 and (100) is 10^2 in binary (001) is 2^0 , (0010 or two in words) is 2^1 and (00100 or four in words) is 2^2 .

Now there is something called hexadecimal and something called octal as well. Hexidecimal is a base 16 number system (0, 1, 2, 3, 4, 5, 6, 7, 8, 9 , A or ten, B or eleven, C, D , E , F) so 17 in hexadecimal is 11. Now just as 2^8 is 256 or one byte, 16^2 is 256 or one byte which means as binary is 8 { 0s or 1s } per byte hexadecimal is 2 { 0s to Fs } per byte.

Octal is just a base 8 number system. Since $8^3 = 256$ or a byte there are 3 { 0s to 7s } per byte.

So 63 in a base ten number system is 0011 in binary and 3F in hexadecimal and 077 in octal.

With these ideas we could also express a byte in base 4 since 4^4 is 256. This is called quaternary i just googled it but ive never heard about it before. By the same concepts I should be able to write quaternary though. The place values should be 64 16 4 1 . So 63 should be (0333) Since ascii dictates as perfect cube said A = 65 then my name should be

BASE 10 or Decimal (normal numbers):
80 72 79 66 73 67 72 68

BASE 2 or Binary:
01010000 01001000 01001111 01000010 01001001 01000011 01001000 01000100

BASE 16 or Hexidecimal:
50 48 4f 42 49 43 48 44

BASE 8 or octal:
120 110 117 103 111 103 110 104

BASE 4 or Quaternary:
1100 1020 1033 1002 1021 1003 1020 1010

I hope that all makes sense.

ps. a kilobyte is not 1000 bytes its 1024 or 2^{10} . Same with mega giga and tera bytes. 1024 bytes = kilobyte ::: 1024 kilobytes = megabyte ::: 1024 megabytes = gigabyte ::: 1024 gigabyte = terabyteDUDE! This was meant to be a simple binary tut if you were going to do this do it in a new thread PLEASE

T?ny - November 16, 2012, 10:54 pm

I have no idea what you did..but sexy..

PhobicHD - November 16, 2012, 11:03 pm

Hahahahahahah sorry perfect cell you are right, I didn't originally mean to get so into it I just wanted to share some knowledge about memory and I got carried away..

Terry A. Davis - November 16, 2012, 11:09 pm

(Nov 17, 2012 12:03 AM)PhobicHD Wrote: [\[CITE\]](#) Hahahahahahah sorry perfect cell you are right, I didn't originally mean to get so into it I just wanted to share some knowledge about memory and I got carried away..

Yeah, I wanted to keep it simple and if people see that they might start to do it wrong, that is a higher level on what I showed them how to do it

PhobicHD - November 16, 2012, 11:15 pm

Oh that wouldn't be good. Would you like me to edit the post or something? Maybe I could just put it in a code box and add a warning about how it is more advanced?

Terry A. Davis - November 16, 2012, 11:24 pm

(Nov 17, 2012 12:15 AM)PhobicHD Wrote: [\[CITE\]](#) Oh that wouldn't be good. Would you like me to edit the post or something? Maybe I could just put it in a code box and add a warning about how it is more advanced?

Yeah or edit it out and make a new thread with it in

Frostbite™ - November 17, 2012, 9:41 pm

Easiest way to convert plain numbers to binary is with this:

Get your example number (note it will always start with a 1), such as:

101101000

Start of thinking of the number '1', and cross off the first number.

For each number afterwards, if it is a '0', double the number you are thinking of then cross the 0 of then move onto the next number.

If the next number is a '1', double the number you are thinking of and add '1', then move onto the next one.

By this, 101101000 is:

1 --> 2 --> 5 --> 11 --> 22 --> 45 --> 90 --> 180 --> 360

Hinshi - November 17, 2012, 9:43 pm

Great read Perfect Cell.

Binary is always great to know.

Zygote-bastard - November 17, 2012, 11:58 pm

I don't see how "65" is "A" in binary if binary is just zeros and ones. What am I missing here?