



## Digital identity

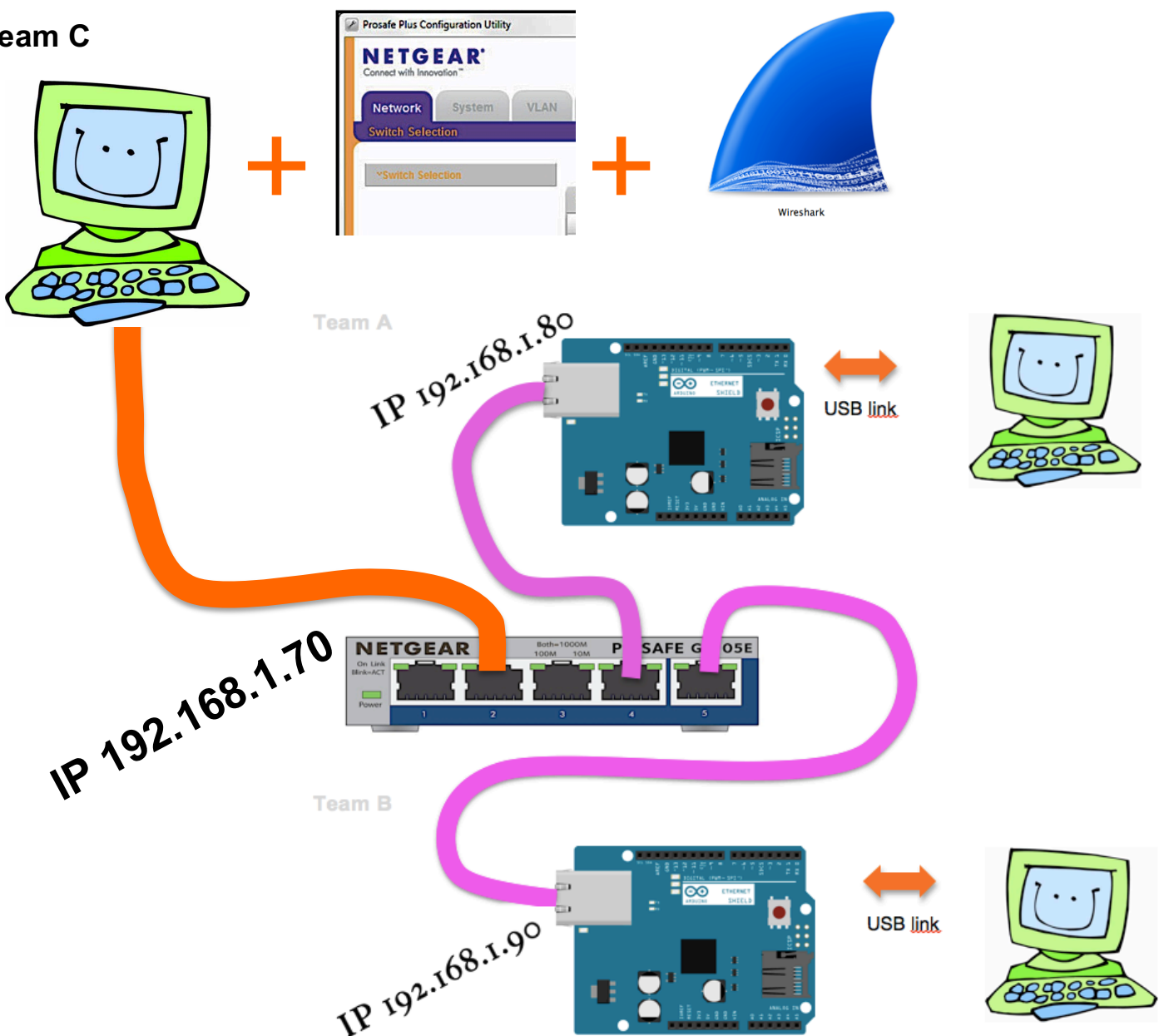
### IP Port Mirroring Workshop

In 2018, Is there a Safe Way to Transmit by network your Confidential Data ?

You will be the Team C and you will use a manageable Switch to try sniffing communication over a network between two computers [Team A and Team B].

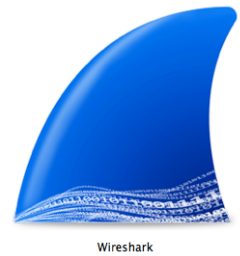
Two teams [A & B] will try to safely transmit to and receive data from each other.

#### Team C

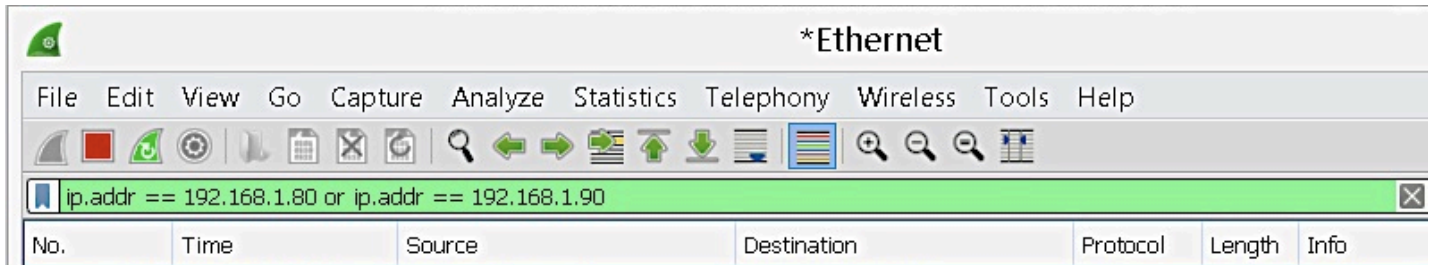


### Team C Step 1 :

Connect your computer to the port 2 of the switch  
Open the Wireshark software.



- Select the Ethernet input [Capture/Input/Ethernet/start]
- Add a filter rule to research any packet from Team A [192.168.1.80] or Team B [192.168.1.90]



- Launch Wireshark analysis

### Team C Step 2 :

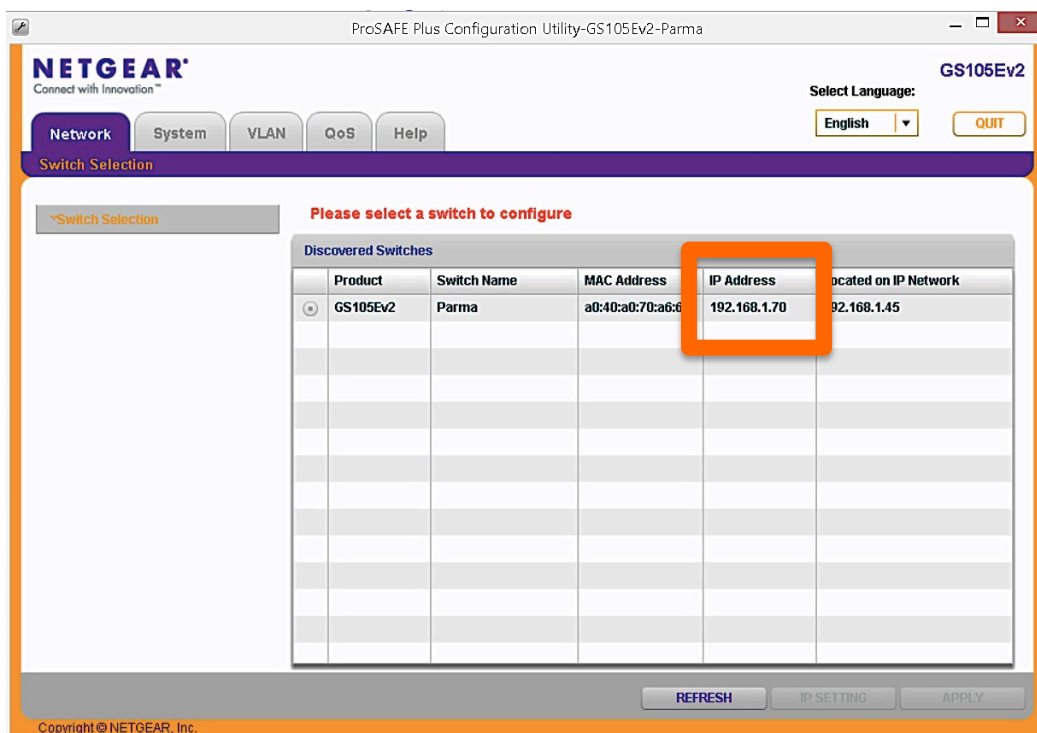
Are you able to capture any UDP packet from Team A or Team B ?

How does a network Switch works ?

### Team C Step 3 :

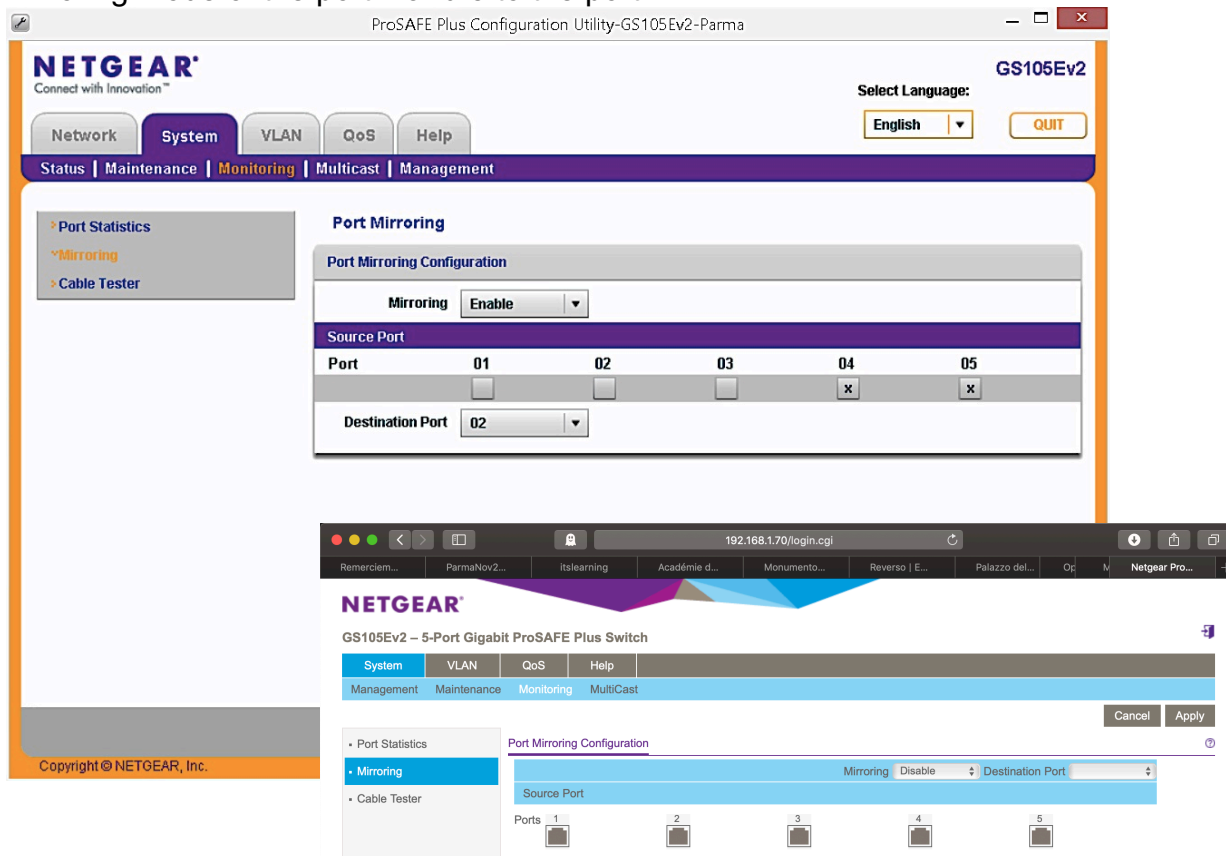
Open the ProSafe Utility software

- Select the Switch on the address 192.168.1.70 [password : *password*]



### Team C Step 3 :

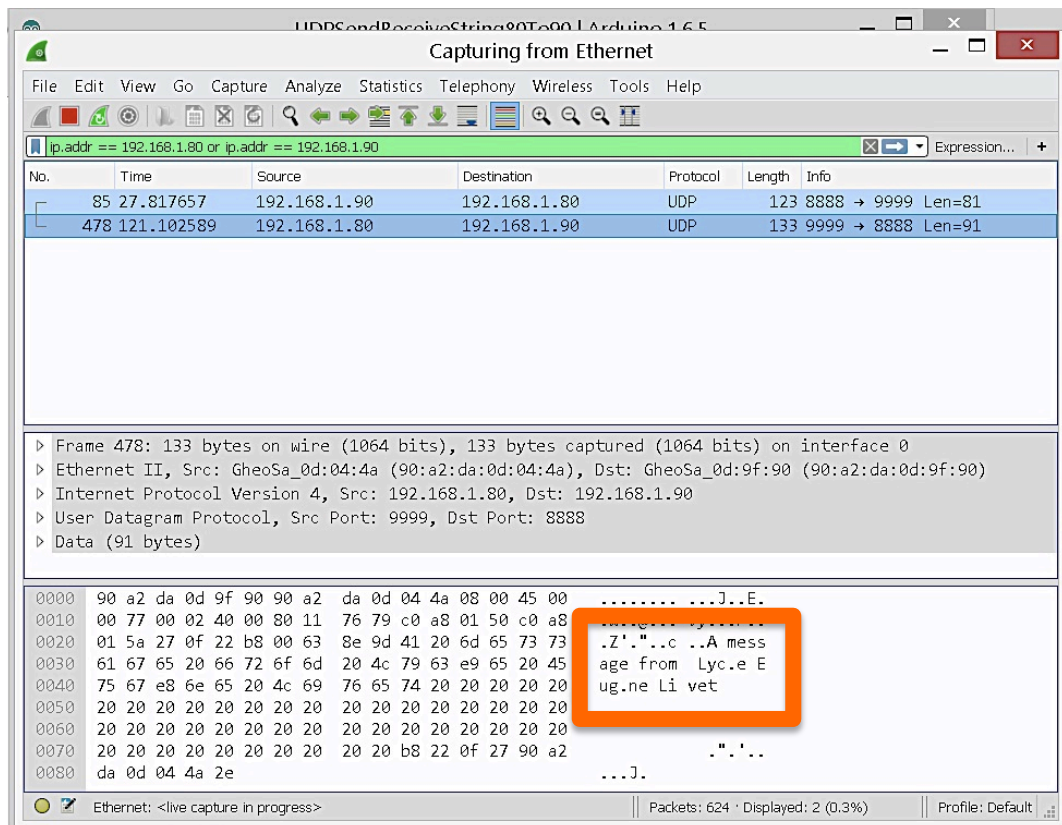
Enable the Mirroring mode of the port 4 and 5 to the port 2



### Team C Step 4 :

Launch again a Wireshark analysis :

You should be able to read UDP packet from Team A or team B.



## However team A and team B can cipher their messages.

In that case you will only be able to read that :

The image shows a Wireshark packet capture window titled '\*Ethernet'. The filter bar shows 'ip.addr == 192.168.1.80 or ip.addr == 192.168.1.90'. The packet list shows a single packet (No. 3448) at time 1361.504822, from source 192.168.1.90 to destination 192.168.1.80, using UDP protocol, length 123, and info '8888 → 9999 Len=81'. The packet details pane shows the frame structure: Ethernet II, Internet Protocol Version 4, User Datagram Protocol, and Data (81 bytes). The data field is expanded to show hexadecimal and ASCII representations. The ASCII part is highlighted with an orange box and contains the following text:

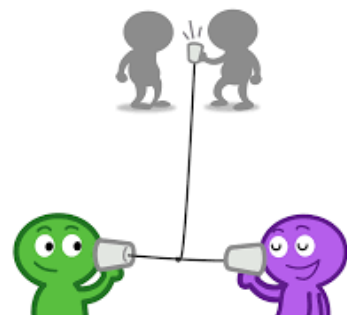
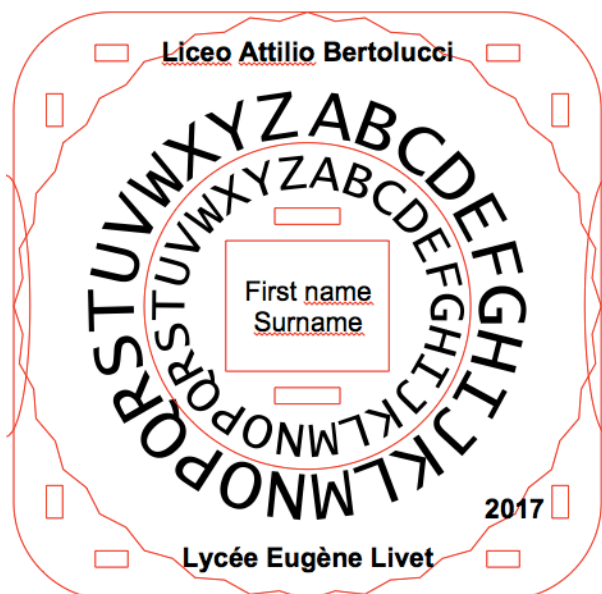
```

.....J.. .....E.
.m..@... v.....Z...
.P".'..Y .|E$qiww
eki$jvsq $Pmgis$E
xxmpms$F ivxspygg
m
    
```

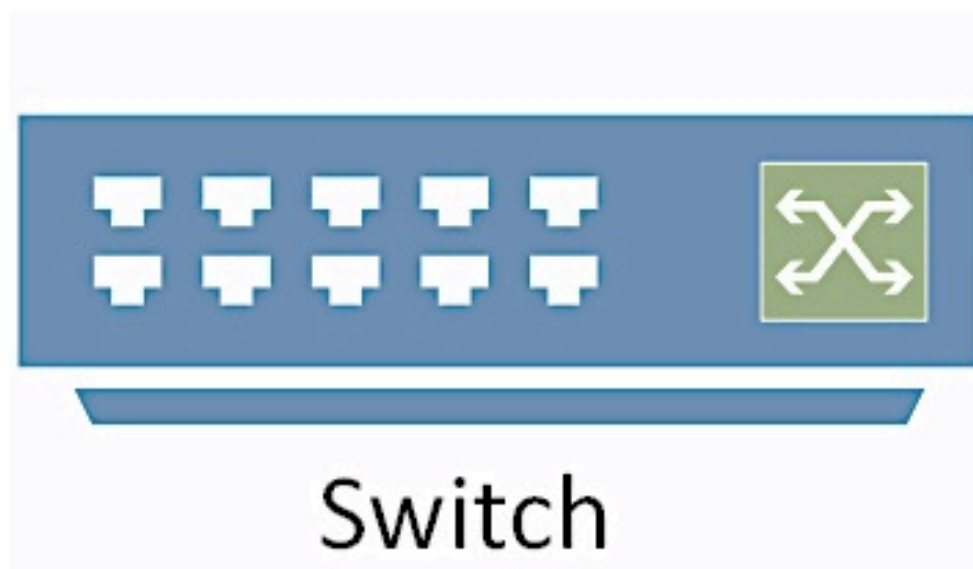
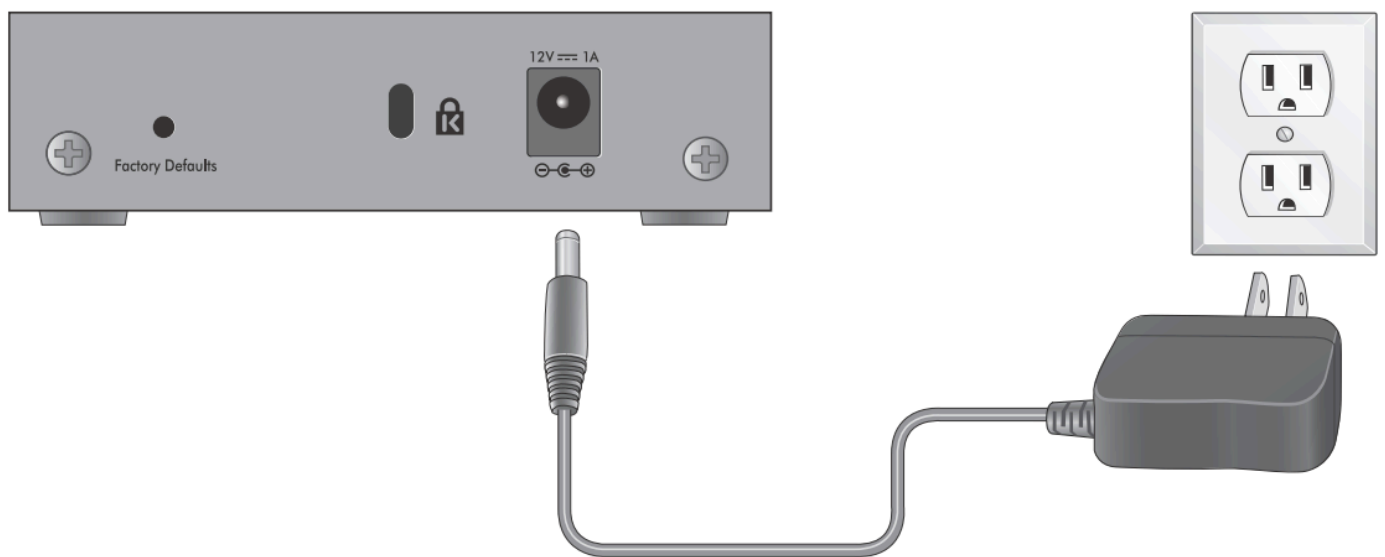
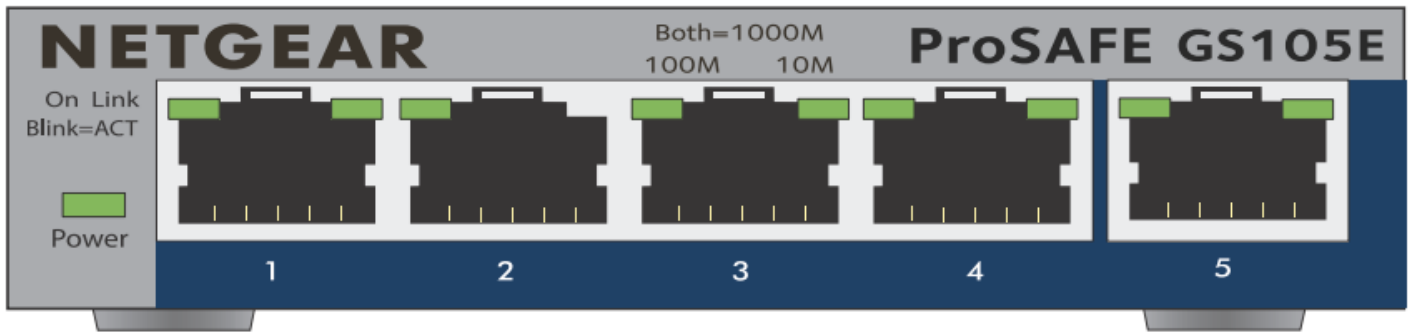
## Have in mind that it could be a simple Caesar encryption.

### Team C Step 4 :

So a wooden Caesar disk could be used to incipher all the data [try a shift of 4... :)]



# Documentation





# ASCII table

Dec	Hex	Oct	Chr	Dec	Hex	Oct	HTML	Chr	Dec	Hex	Oct	HTML	Chr	Dec	Hex	Oct	HTML	Chr
0	0	000	NULL	32	20	040	&#032;	Space	64	40	100	&#064;	@	96	60	140	&#096;	`
1	1	001	Start of Header	33	21	041	&#033;	!	65	41	101	&#065;	A	97	61	141	&#097;	a
2	2	002	Start of Text	34	22	042	&#034;	"	66	42	102	&#066;	B	98	62	142	&#098;	b
3	3	003	End of Text	35	23	043	&#035;	#	67	43	103	&#067;	C	99	63	143	&#099;	c
4	4	004	End of Transmission	36	24	044	&#036;	\$	68	44	104	&#068;	D	100	64	144	&#100;	d
5	5	005	Enquiry	37	25	045	&#037;	%	69	45	105	&#069;	E	101	65	145	&#101;	e
6	6	006	Acknowledgment	38	26	046	&#038;	&	70	46	106	&#070;	F	102	66	146	&#102;	f
7	7	007	Bell	39	27	047	&#039;	'	71	47	107	&#071;	G	103	67	147	&#103;	g
8	8	010	Backspace	40	28	050	&#040;	(	72	48	110	&#072;	H	104	68	150	&#104;	h
9	9	011	Horizontal Tab	41	29	051	&#041;	)	73	49	111	&#073;	I	105	69	151	&#105;	i
10	A	012	Line feed	42	2A	052	&#042;	*	74	4A	112	&#074;	J	106	6A	152	&#106;	j
11	B	013	Vertical Tab	43	2B	053	&#043;	+	75	4B	113	&#075;	K	107	6B	153	&#107;	k
12	C	014	Form feed	44	2C	054	&#044;	,	76	4C	114	&#076;	L	108	6C	154	&#108;	l
13	D	015	Carriage return	45	2D	055	&#045;	-	77	4D	115	&#077;	M	109	6D	155	&#109;	m
14	E	016	Shift Out	46	2E	056	&#046;	.	78	4E	116	&#078;	N	110	6E	156	&#110;	n
15	F	017	Shift In	47	2F	057	&#047;	/	79	4F	117	&#079;	O	111	6F	157	&#111;	o
16	10	020	Data Link Escape	48	30	060	&#048;	0	80	50	120	&#080;	P	112	70	160	&#112;	p
17	11	021	Device Control 1	49	31	061	&#049;	1	81	51	121	&#081;	Q	113	71	161	&#113;	q
18	12	022	Device Control 2	50	32	062	&#050;	2	82	52	122	&#082;	R	114	72	162	&#114;	r
19	13	023	Device Control 3	51	33	063	&#051;	3	83	53	123	&#083;	S	115	73	163	&#115;	s
20	14	024	Device Control 4	52	34	064	&#052;	4	84	54	124	&#084;	T	116	74	164	&#116;	t
21	15	025	Negative Ack.	53	35	065	&#053;	5	85	55	125	&#085;	U	117	75	165	&#117;	u
22	16	026	Synchronous idle	54	36	066	&#054;	6	86	56	126	&#086;	V	118	76	166	&#118;	v
23	17	027	End of Trans. Block	55	37	067	&#055;	7	87	57	127	&#087;	W	119	77	167	&#119;	w
24	18	030	Cancel	56	38	070	&#056;	8	88	58	130	&#088;	X	120	78	170	&#120;	x
25	19	031	End of Medium	57	39	071	&#057;	9	89	59	131	&#089;	Y	121	79	171	&#121;	y
26	1A	032	Substitute	58	3A	072	&#058;	:	90	5A	132	&#090;	Z	122	7A	172	&#122;	z
27	1B	033	Escape	59	3B	073	&#059;	;	91	5B	133	&#091;	[	123	7B	173	&#123;	{
28	1C	034	File Separator	60	3C	074	&#060;	<	92	5C	134	&#092;	\	124	7C	174	&#124;	
29	1D	035	Group Separator	61	3D	075	&#061;	=	93	5D	135	&#093;	]	125	7D	175	&#125;	}
30	1E	036	Record Separator	62	3E	076	&#062;	>	94	5E	136	&#094;	^	126	7E	176	&#126;	~
31	1F	037	Unit Separator	63	3F	077	&#063;	?	95	5F	137	&#095;	_	127	7F	177	&#127;	Del

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