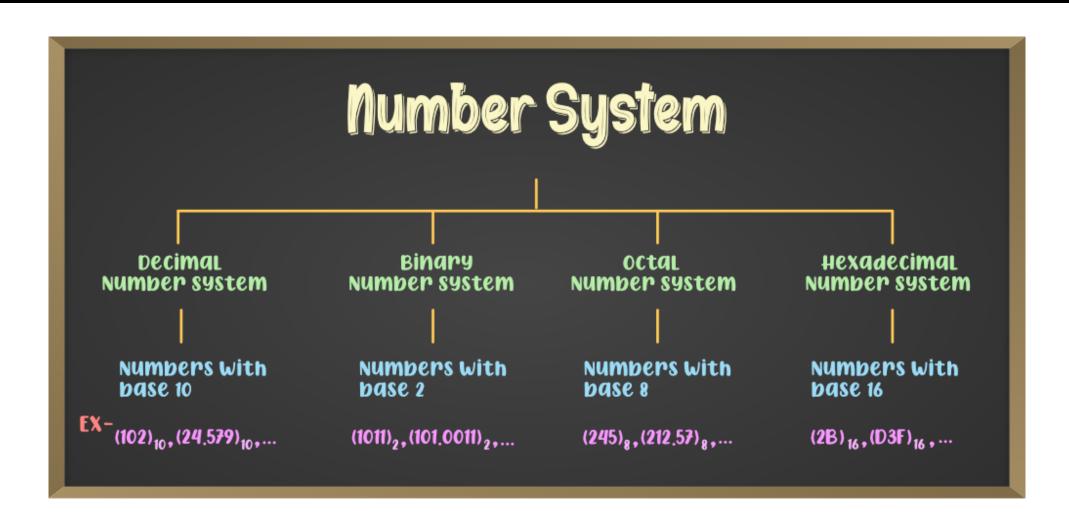
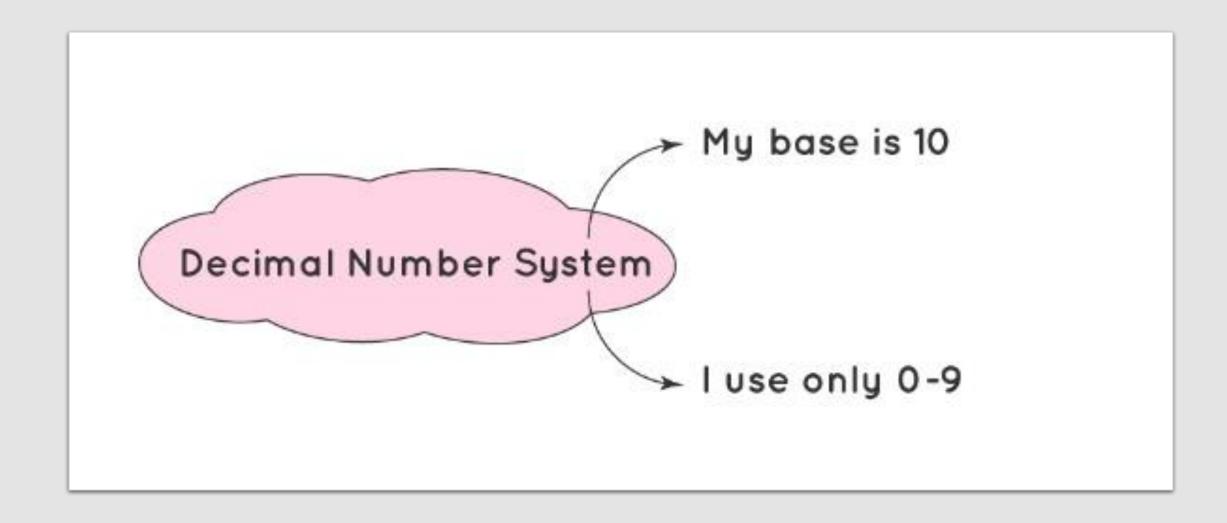


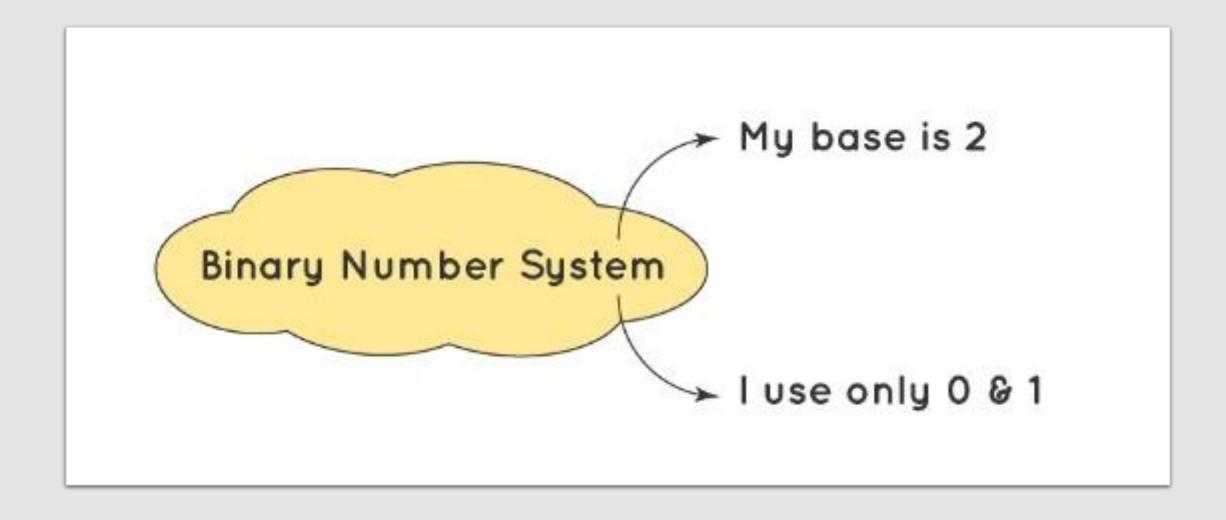
Understand the decimal, binary, octal and hexadecimal number systems.



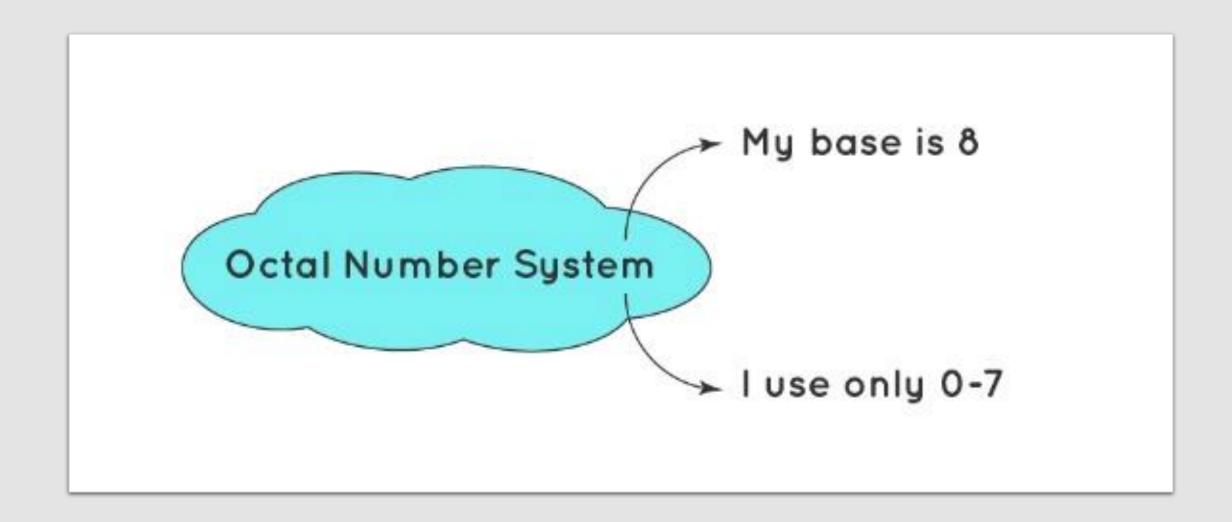
1- Decimal Number System



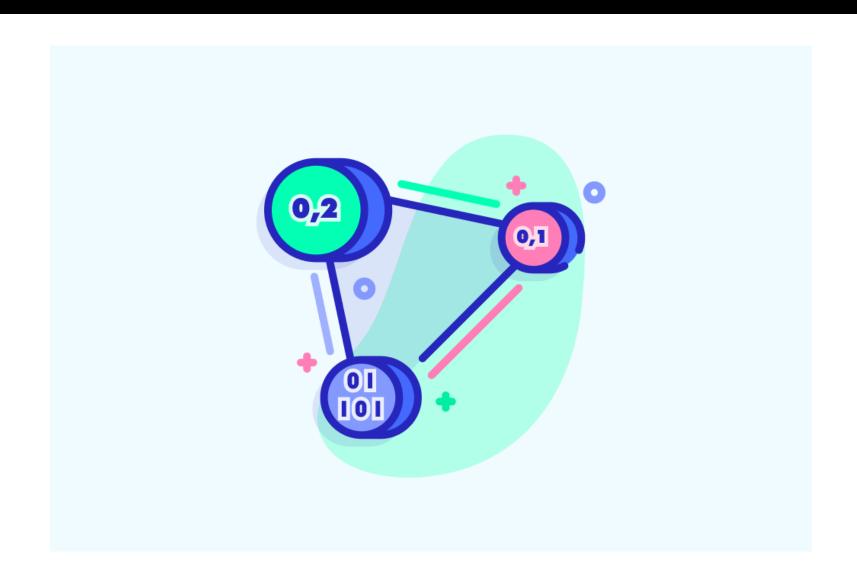
2- Binary Number System



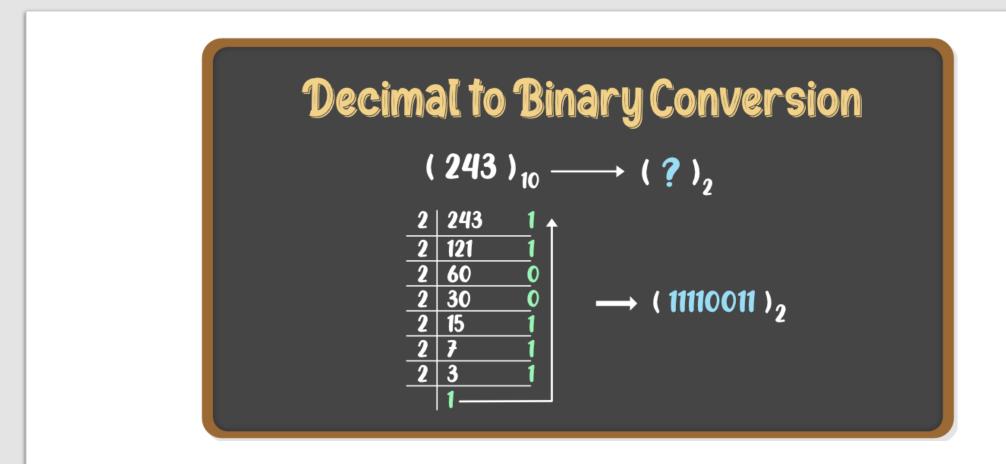
3- Octal Number System



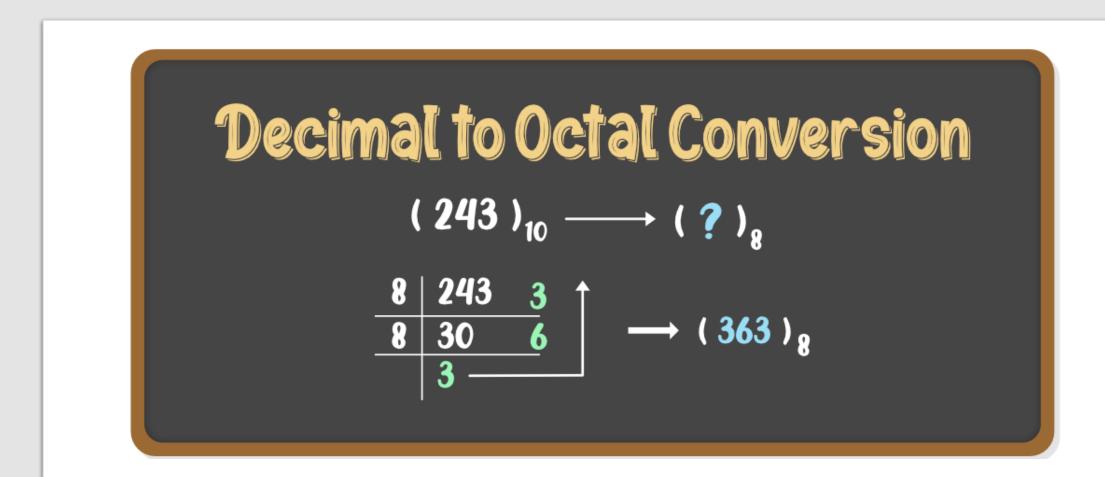
Convert from one number system into another.



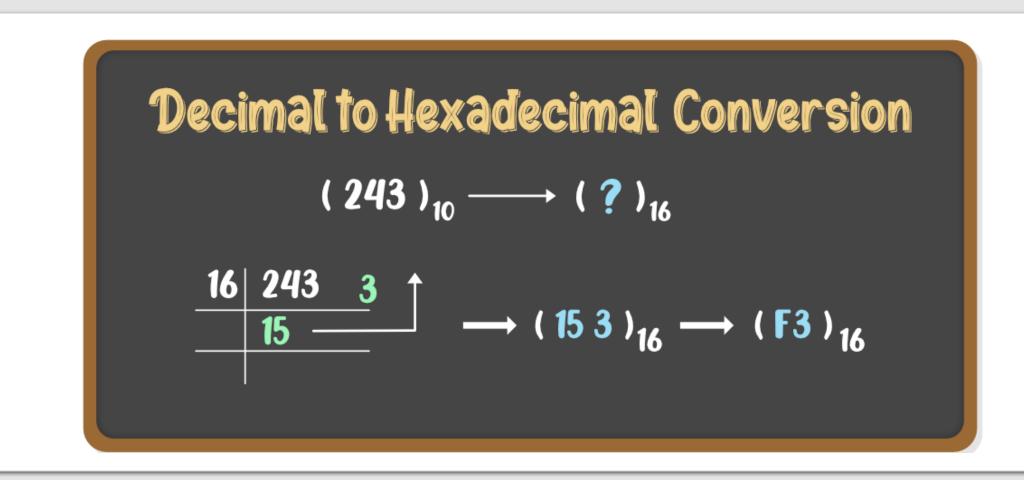
1- Decimal to Binary Conversion



2- Decimal to Octal Conversion



3- Decimal to Hexadecimal Conversion



4- Binary to Decimal Conversion

Binary to Decimal Conversion

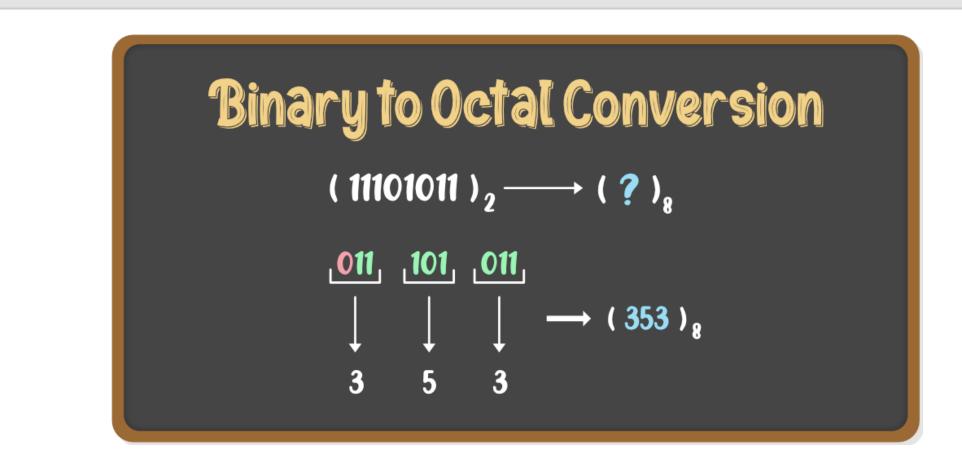
$$(11101011)_{2} \longrightarrow (?)_{10}$$

$$1 \times 2^{7} + 1 \times 2^{6} + 1 \times 2^{5} + 0 \times 2^{4} + 1 \times 2^{3} + 0 \times 2^{2} + 1 \times 2^{1} + 1 \times 2^{0}$$

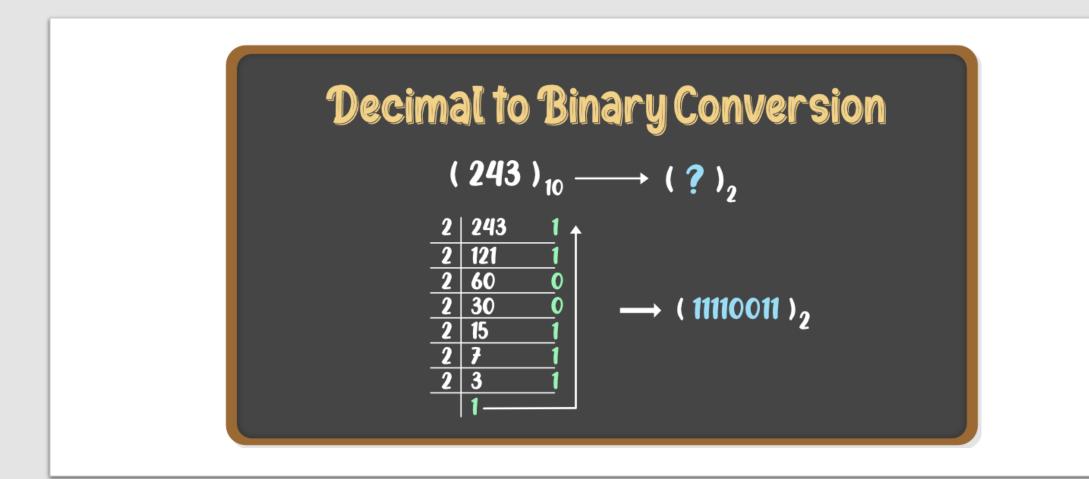
$$128 + 64 + 32 + 0 + 8 + 0 + 2 + 1$$

$$(235)_{10}$$

5- Binary to Octal Conversion



6- Binary to Hexadecimal Conversion



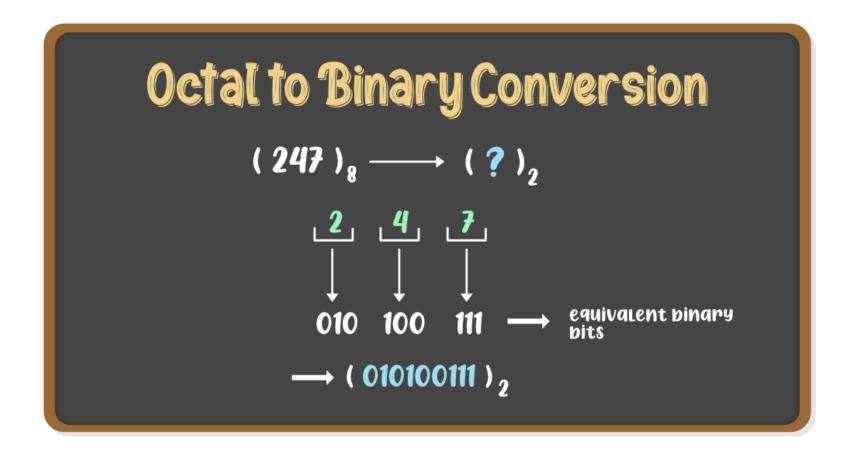
7- Octal to Decimal Conversion

Octal to Decimal Conversion

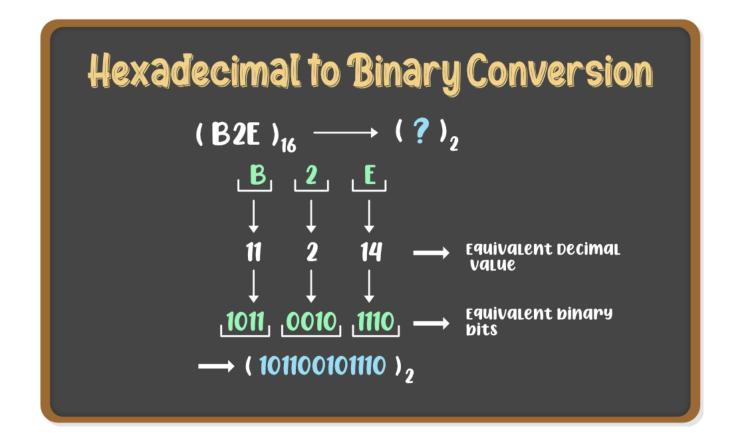
$$(247)_{8} \longrightarrow (?)_{10}$$

 $2 \times 8^{2} + 4 \times 8^{1} + 7 \times 8^{0}$
 $2 \times 64 + 4 \times 8 + 7$
 $128 + 32 + 7$
 $(167)_{10}$

8- Octal to Binary Conversion



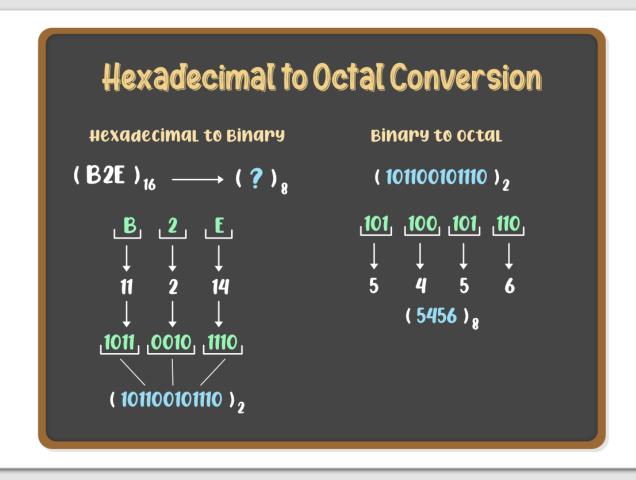
10- Hexadecimal to Binary Conversion



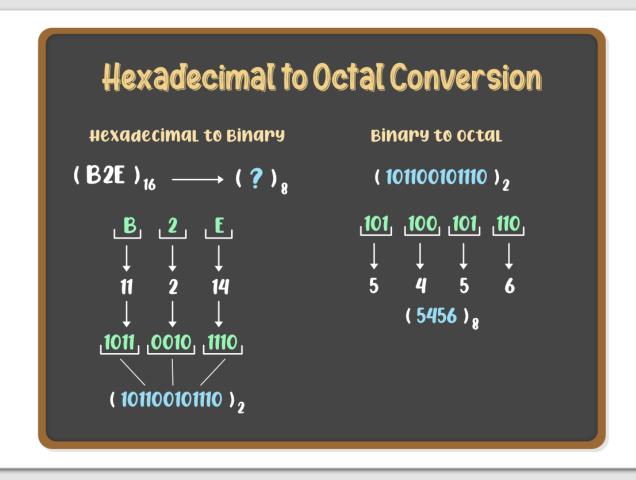
11- Hexadecimal to Decimal Conversion

Hexadecimal to Decimal Conversion $(8EB4)_{16} \longrightarrow (?)_{10}$ 8 14 11 4 $8 \times 16^3 + 14 \times 16^2 + 11 \times 16^1 + 4 \times 16^0$ 32768 + 3584 + 176 + 4 (36532)10

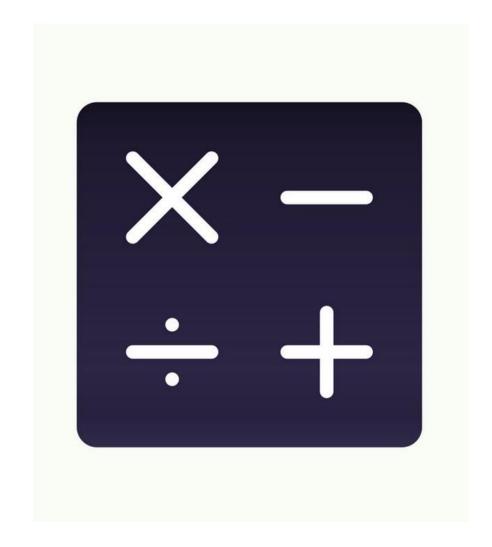
12- Hexadecimal to Octal Conversion



12- Hexadecimal to Octal Conversion



Apply arithmetic operations to binary numbers.



1-Binary Addition

Binary Number 1	Binary Number 2	Addition	Carry	
0	0	0	0	
1	0	1	0	
0	1	1		
1	1	0	1	

2-Binary Subtraction

Binary Number 1	Binary Number 2	Subtraction	Borrow
0	0	0	0
1	0	1	0
0	1	1	1
1	1	0	0

Text in Binary

$$A \rightarrow 1000001$$
 $B \rightarrow 1000010$

ASCII Table

		II control aracters			
	I Constitute				
00	NULL	(Null character)			
01	SOH	(Start of Header)			
02	STX	(Start of Text)			
03	ETX	(End of Text)			
04	EOT	(End of Trans.)			
05	ENQ	(Enquiry)			
06	ACK	(Acknowledgement)			
07	BEL	(Bell)			
08	BS	(Backspace)			
09	HT	(Horizontal Tab)			
10	LF	(Line feed)			
11	VT	(Vertical Tab)			
12	FF	(Form feed)			
13	CR	(Carriage return)			
14	SO	(Shift Out)			
15	SI	(Shift In)			
16	DLE	(Data link escape)			
17	DC1	(Device control 1)			
18	DC2	(Device control 2)			
19	DC3	(Device control 3)			
20	DC4	(Device control 4)			
21	NAK	(Negative acknowl.)			
22	SYN	(Synchronous idle)			
23	ETB	(End of trans. block)			
24	CAN	(Cancel)			
25	EM	(End of medium)			
26	SUB	(Substitute)			
27	ESC	(Escape)			
28	FS	(File separator)			
29	GS	(Group separator)			
30	RS	(Record separator)			
31	US	(Unit separator)			
127	DEL	(Delete)			

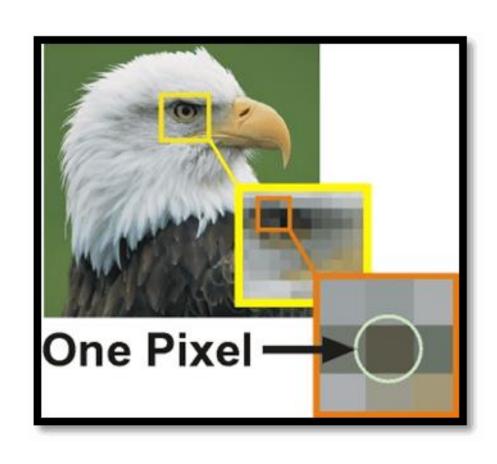
	A		orintal acters		
32	space	64	@	96	5558
33	1	65	Α	97	а
34		66	В	98	b
35	#	67	C	99	C
36	\$	68	D	100	d
37	%	69	E	101	е
38	&	70	F	102	f
39	- 4	71	G	103	g
40	(72	Н	104	h
41)	73	1	105	i
42		74	J	106	j
43	+	75	K	107	k
44	,	76	L	108	- 1
45		77	M	109	m
46		78	N	110	n
47	1	79	0	111	0
48	0	80	P	112	р
49	1	81	Q	113	q
50	2	82	R	114	r
51	3	83	S	115	S
52	4	84	T	116	t
53	5	85	U	117	u
54	6	86	٧	118	٧
55	7	87	W	119	w
56	8	88	Х	120	x
57	9	89	Y	121	У
58	:	90	Z	122	Z
59	;	91	1	123	{
60	<	92	1	124	1
61	=	93]	125	}
62	>	94	٨	126	~
63	?	95	-		

		E		ed AS acters			
128	Ç	160	á	192	L	224	Ó
129	ü	161	í	193	1	225	ß
130	é	162	Ó	194	т	226	Ô
131	â	163	ú	195	Ŧ	227	Ò
132	ä	164	ñ	196	-	228	ő
133	à	165	Ñ	197	+	229	Õ
134	à	166		198	ā	230	μ
135	ç	167	0	199	Ă	231	þ
136	ê	168	3	200	L	232	Þ
137	ë	169	®	201	F	233	Ú
138	è	170	7	202	1	234	Û
139	ï	171	1/2	203	Ŧ	235	Ù
140	î	172	1/4	204	Ī	236	ý
141	ì	173	i	205	=	237	Ý
142	Ä	174	«	206	#	238	100
143	A	175	»	207		239	*
144	É	176	*	208	ð	240	≡
145	æ	177	-	209	Đ	241	±
146	Æ	178		210	Ê	242	_
147	ô	179	T	211	Ë	243	3/4
148	ö	180	+	212	È	244	1
149	ò	181	À	213	- 1	245	§
150	ū	182	Â	214	ı	246	÷
151	ù	183	À	215	Î	247	
152	ÿ	184	©	216	Ï	248	ó
153	Ö	185	4	217	J	249	**
154	Ü	186	4	218	Г	250	
155	ø	187	7	219		251	1
156	£	188]	220		252	3
157	Ø	189	¢	221	T	253	2
158	×	190	¥	222	i	254	
159	f	191	٦	223		255	nbsp

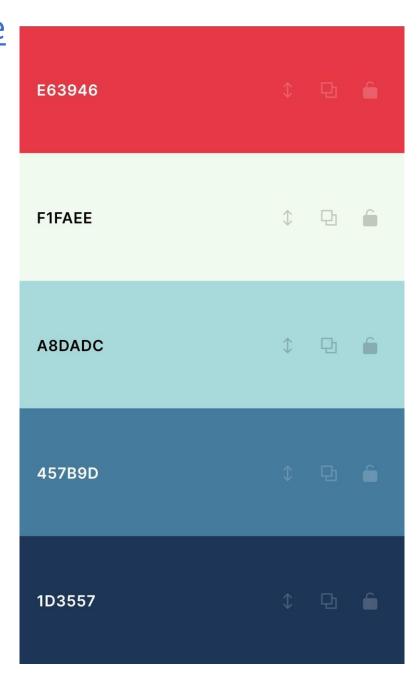
[HELLO WORLD]

hi! In Binary

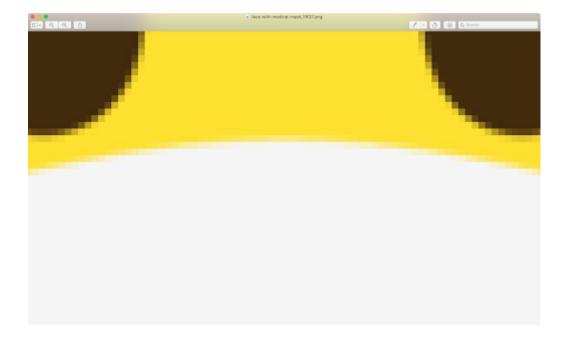
Images Making



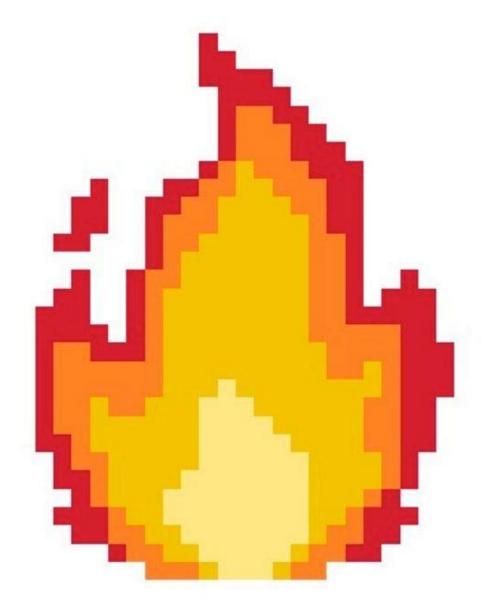
Colors In Hexadecimal Code







Images Contains Pixels



Video Making



Thank You So Much!